

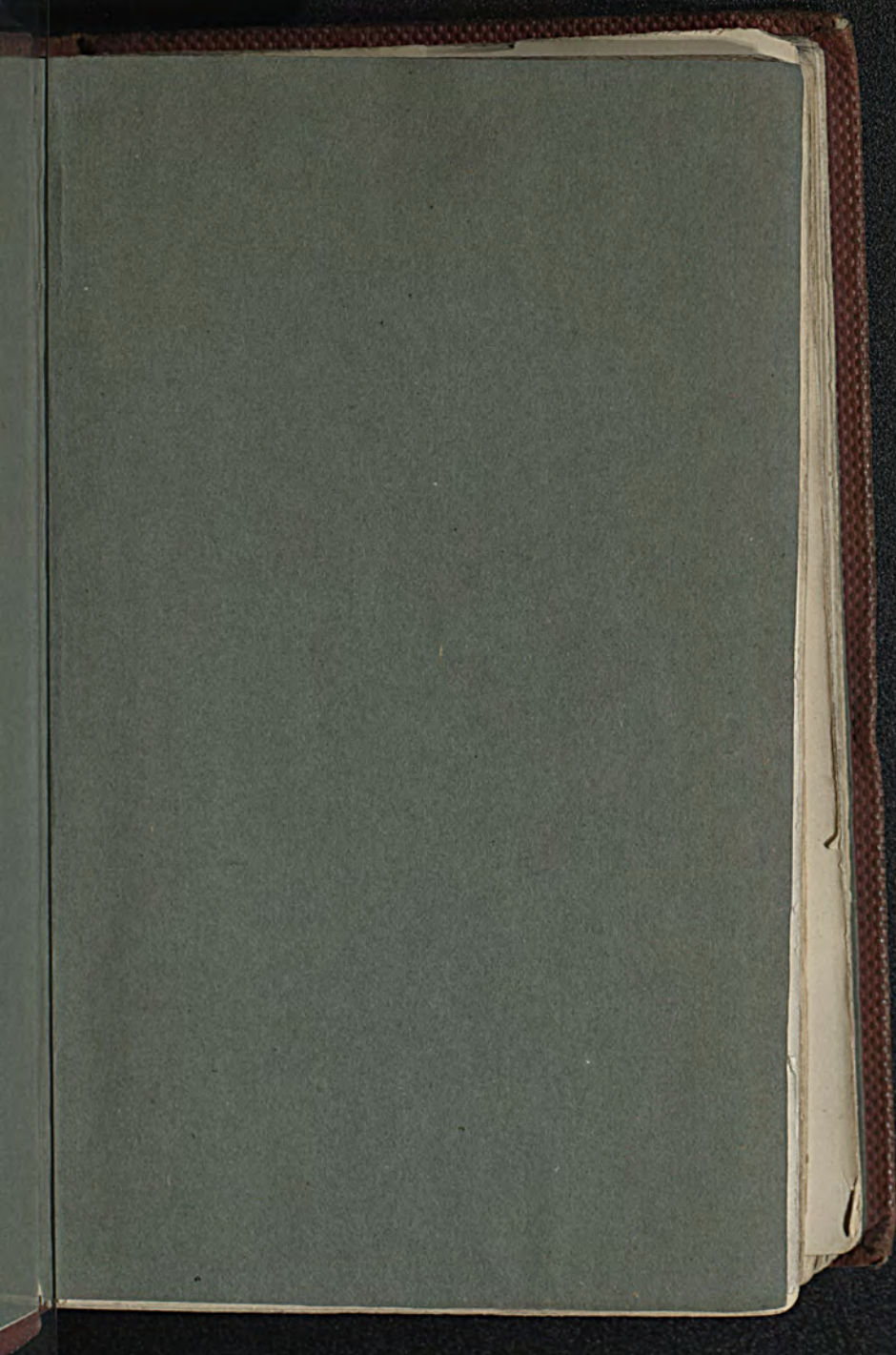
EDGEWORTH'S
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Frank and his mamma at the horse-chestnut-tree.

EARLY LESSONS.

BY

MARIA EDGEWORTH.

"LITTLE DOG TRUST," "THE ORANGE,"

AND "THE CHERRY-ORCHARD."

A New Edition. Illustrated by Eliza Follen.

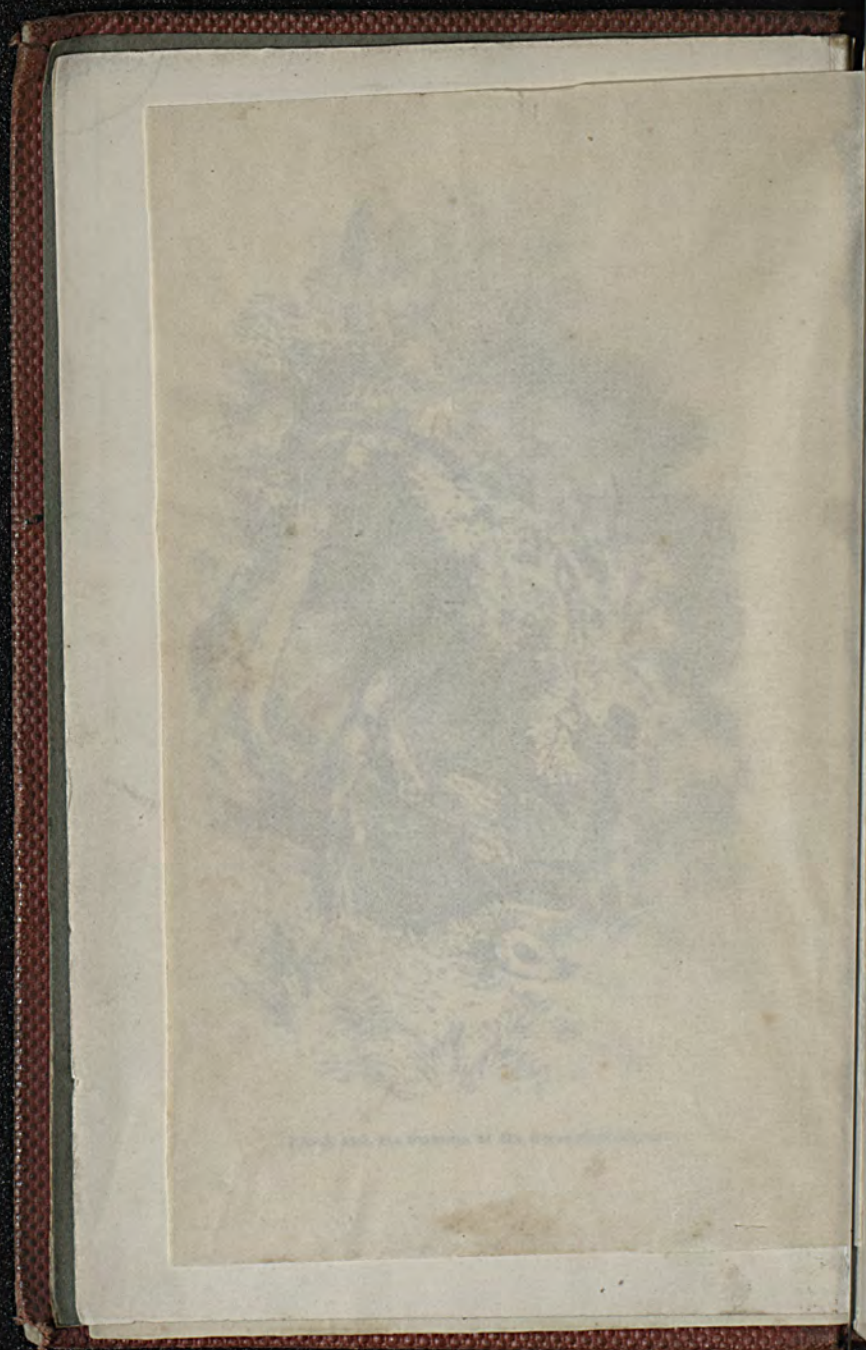
LONDON:

ROUTLEDGE, WARNE & ROUTLEDGE,

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NEW YORK: 45, WALKER STREET.

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15, N. B. STREET, W. & A. STREET, E.
1852.

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CONTENTS.



ROSAMOND	<i>Page</i> 1
LITTLE DOG TRUSTY	141
THE ORANGE-MAN	147
CHERRY-ORCHARD	152
FRANK	164
HARRY AND LUCY	309

CONTENTS

101	THE GRASS-MAN
102	THE GRASS-MAN
103	THE GRASS-MAN
104	THE GRASS-MAN
105	THE GRASS-MAN
106	THE GRASS-MAN
107	THE GRASS-MAN
108	THE GRASS-MAN
109	THE GRASS-MAN
110	THE GRASS-MAN
111	THE GRASS-MAN
112	THE GRASS-MAN
113	THE GRASS-MAN
114	THE GRASS-MAN
115	THE GRASS-MAN
116	THE GRASS-MAN
117	THE GRASS-MAN
118	THE GRASS-MAN
119	THE GRASS-MAN
120	THE GRASS-MAN
121	THE GRASS-MAN
122	THE GRASS-MAN
123	THE GRASS-MAN
124	THE GRASS-MAN
125	THE GRASS-MAN
126	THE GRASS-MAN
127	THE GRASS-MAN
128	THE GRASS-MAN
129	THE GRASS-MAN
130	THE GRASS-MAN
131	THE GRASS-MAN
132	THE GRASS-MAN
133	THE GRASS-MAN
134	THE GRASS-MAN
135	THE GRASS-MAN
136	THE GRASS-MAN
137	THE GRASS-MAN
138	THE GRASS-MAN
139	THE GRASS-MAN
140	THE GRASS-MAN
141	THE GRASS-MAN
142	THE GRASS-MAN
143	THE GRASS-MAN
144	THE GRASS-MAN
145	THE GRASS-MAN
146	THE GRASS-MAN
147	THE GRASS-MAN
148	THE GRASS-MAN
149	THE GRASS-MAN
150	THE GRASS-MAN
151	THE GRASS-MAN
152	THE GRASS-MAN
153	THE GRASS-MAN
154	THE GRASS-MAN
155	THE GRASS-MAN
156	THE GRASS-MAN
157	THE GRASS-MAN
158	THE GRASS-MAN
159	THE GRASS-MAN
160	THE GRASS-MAN
161	THE GRASS-MAN
162	THE GRASS-MAN
163	THE GRASS-MAN
164	THE GRASS-MAN
165	THE GRASS-MAN
166	THE GRASS-MAN
167	THE GRASS-MAN
168	THE GRASS-MAN
169	THE GRASS-MAN
170	THE GRASS-MAN
171	THE GRASS-MAN
172	THE GRASS-MAN
173	THE GRASS-MAN
174	THE GRASS-MAN
175	THE GRASS-MAN
176	THE GRASS-MAN
177	THE GRASS-MAN
178	THE GRASS-MAN
179	THE GRASS-MAN
180	THE GRASS-MAN
181	THE GRASS-MAN
182	THE GRASS-MAN
183	THE GRASS-MAN
184	THE GRASS-MAN
185	THE GRASS-MAN
186	THE GRASS-MAN
187	THE GRASS-MAN
188	THE GRASS-MAN
189	THE GRASS-MAN
190	THE GRASS-MAN
191	THE GRASS-MAN
192	THE GRASS-MAN
193	THE GRASS-MAN
194	THE GRASS-MAN
195	THE GRASS-MAN
196	THE GRASS-MAN
197	THE GRASS-MAN
198	THE GRASS-MAN
199	THE GRASS-MAN
200	THE GRASS-MAN

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EARLY LESSONS

ROSAMOND.

THE PURPLE JAR.

ROSAMOND, a little girl about seven years old, was walking with her mother in the streets of London. As she passed along, she looked in at the windows of several shops, and saw a great variety of different sorts of things, of which she did not know the use, or even the names. She wished to stop to look at them, but there was a great number of people in the streets, and a great many carts, carriages, and wheelbarrows, and she was afraid to let go her mother's hand.

"O, mother; how happy I should be," she said, as she passed a toy-shop, "if I had all these pretty things!"

"What, all! Do you wish for them all, Rosamond?"

"Yes, mamma, all."

As she spoke, they came to a milliner's shop, the windows of which were decorated with ribands and lace, and festoons of artificial flowers.

"Oh, mamma, what beautiful roses! Won't you buy some of them?"

"No, my dear."

"Why?"

"Because I don't want them, my dear."

They went a little further, and came to another shop, which caught Rosamond's eye. It was a jeweller's shop, and in it were a great many pretty baubles, ranged in drawers behind glass.

"Mamma, will you buy some of these?"

"Which of them, Rosamond?"

"Which? I don't know which; any of them will do, for they are all pretty."

"Yes, they are all pretty; but of what use would they be to me?"

"Use! Oh, I'm sure you could find some use or other for them if you would only buy them first."

"But I would rather find out the use first."

"Well, then, mamma, there are buckles; you know that buckles are useful things, very useful things."

"I have a pair of buckles, I don't want another pair," said her mother, and walked on. Rosamond was very sorry that her mother wanted nothing. Presently, however, they came to a shop, which appeared to her far more beautiful than the rest. It was a chemist's shop, but she did not know that.

"Oh, mother, oh!" cried she, pulling her mother's hand, "look, look! blue, green, red, yellow, and purple! Oh, mamma, what beautiful things! Won't you buy some of these?"

Still her mother answered as before, "Of what use would they be to me, Rosamond?"

"You might put flowers in them, mamma, and they would look so pretty on the chimney-piece. I wish I had one of them."

"You have a flower-pot," said her mother, "and that is not a flower-pot."

"But I could use it for a flower-pot, mamma, you know."

"Perhaps, if you were to see it nearer, if you were to examine it, you might be disappointed."

"No, indeed; I'm sure I should not; I should like it exceedingly."

Rosamond kept her head turned to look at the purple vase, till she could see it no longer.

"Then, mother," said she, after a pause, "perhaps you have no money."

"Yes, I have."

"Dear me, if I had money I would buy roses, and boxes, and buckles, and purple flower-pots, and every-

thing." Rosamond was obliged to pause in the midst of her speech.

"O mamma, would you stop a minute for me? I have got a stone in my shoe, it hurts me very much."

"How comes there to be a stone in your shoe?"

"Because of this great hole, mamma—it comes in there: my shoes are quite worn out. I wish you would be so very good as to give me another pair."

"Nay, Rosamond, but I have not money enough to buy shoes, and flower-pots, and buckles, and boxes, and everything."

Rosamond thought that was a great pity. But now her foot, which had been hurt by the stone, began to give her so much pain that she was obliged to hop every other step, and she could think of nothing else. They came to a shoemaker's shop soon afterwards.

"There, there! mamma, there are shoes; there are little shoes that would just fit me, and you know shoes would be really of use to me."

"Yes, so they would, Rosamond. Come in." She followed her mother into the shop.

Mr. Sole, the shoemaker, had a great many customers, and his shop was full, so they were obliged to wait.

"Well, Rosamond," said her mother, "you don't think this shop so pretty as the rest?"

"No, not nearly; it is black and dark, and there are nothing but shoes all round; and, besides, there's a very disagreeable smell."

"That smell is the smell of new leather."

"Is it? Oh!" said Rosamond, looking round, "there is a pair of little shoes; they'll just fit me, I'm sure."

"Perhaps they might; but you cannot be sure till you have tried them on, any more than you can be quite sure that you should like the purple vase *exceedingly*, till you have examined it more attentively."

"Why, I don't know about the shoes, certainly, till I have tried; but, mamma, I am quite sure that I should like the flower-pot."

"Well, which would you rather have, that jar, or a pair of shoes? I will buy either for you."

"Dear mamma, thank you—but if you could buy both?"

"No, not both."

"Then the jar, if you please."

"But I should tell you, that in that case I shall not give you another pair of shoes this month."

"This month! that's a very long time indeed! You can't think how these hurt me; I believe I'd better have the new shoes. Yet, that purple flower-pot. Oh, indeed, mamma, these shoes are not so very, very bad! I think I might wear them a little longer, and the month will soon be over. I can make them last till the end of the month, can't I? Don't you think so, mamma?"

"Nay, my dear, I want you to think for yourself; you will have time enough to consider the matter, whilst I speak to Mr. Sole about my clogs."

Mr. Sole was by this time at leisure, and whilst her mother was speaking to him, Rosamond stood in profound meditation, with one shoe on, and the other in her hand.

"Well, my dear, have you decided?"

"Mamma!—yes,—I believe I have. If you please, I should like to have the flower-pot; that is, if you won't think me very silly, mamma."

"Why, as to that, I can't promise you, Rosamond; but, when you have to judge for yourself, you should choose what will make you happy, and then it would not signify who thought you silly."

"Then, mamma, if that's all, I'm sure the flower-pot would make me happy," said she, putting on her old shoe again; "so I choose the flower-pot."

"Very well, you shall have it; clasp your shoe, and come home."

Rosamond clasped her shoe, and ran after her mother. It was not long before the shoe came down at the heel, and many times she was obliged to stop to take the stones out of it, and she often limped with pain; but still the thoughts of the purple flower-pot prevailed, and she persisted in her choice.

When they came to the shop with the large window,

Rosamond felt much pleasure upon hearing her mother desire the servant, who was with them, to buy the purple jar, and bring it home. He had other commissions, so he did not return with them. Rosamond, as soon as she got in, ran to gather all her own flowers, which she kept in a corner of her mother's garden.

"I am afraid they'll be dead before the flower-pot comes, Rosamond," said her mother to her, as she came in with the flowers in her lap.

"No, indeed, mamma, it will come home very soon, I dare say. I shall be very happy putting them into the purple flower-pot."

"I hope so, my dear."

The servant was much longer returning home than Rosamond had expected; but at length he came, and brought with him the long-wished for jar. The moment it was set down upon the table, Rosamond ran up to it with an exclamation of joy: "I may have it now, mamma?" "Yes, my dear, it is yours." Rosamond poured the flowers from her lap upon the carpet, and seized the purple flower-pot.

"Oh, dear mother!" cried she, as soon as she had taken off the top, "but there's something dark in it which smells very disagreeably. What is it? I didn't want this black stuff."

"Nor I, my dear."

"But what shall I do with it, mamma?"

"That I cannot tell."

"It will be of no use to me, mamma."

"That I cannot help."

"But I must pour it out, and fill the flower-pot with water."

"As you please, my dear."

"Will you lend me a bowl to pour it into, mamma?"

"That was more than I promised you, my dear; but I will lend you a bowl."

The bowl was produced, and Rosamond proceeded to empty the purple vase. But she experienced much surprise and disappointment, on finding, when it was entirely empty, that it was no longer a *purple* vase. It

was a plain white glass jar, which had appeared to have that beautiful colour merely from the liquor with which it had been filled.

Little Rosamond burst into tears.

"Why should you cry, my dear?" said her mother; "it will be of as much use to you now as ever, for a flower-pot."

"But it won't look so pretty on the chimney-piece. I am sure, if I had known that it was not really purple, I should not have wished to have it so much."

"But didn't I tell you that you had not examined it; and that perhaps you would be disappointed?"

"And so I am disappointed, indeed. I wish I had believed you at once. Now I had much rather have the shoes, for I shall not be able to walk all this month; even walking home that little way hurt me exceedingly. Mamma, I will give you the flower-pot back again, and that purple stuff and all, if you'll only give me the shoes."

"No, Rosamond, you must abide by your own choice, and now the best thing you can possibly do is to bear your disappointment with good humour."

"I will bear it as well as I can," said Rosamond, wiping her eyes, and she began slowly and sorrowfully to fill the vase with flowers.

But Rosamond's disappointment did not end here. Many were the difficulties and distresses into which her imprudent choice brought her, before the end of the month. Every day her shoes grew worse and worse, till at last she could neither run, dance, jump, or walk in them. Whenever Rosamond was called to see anything, she was detained pulling her shoes up at the heels, and was sure to be too late. Whenever her mother was going out to walk, she could not take Rosamond with her, for Rosamond had no soles to her shoes; and at length, on the very last day of the month, it happened that her father proposed to take her with her brother to a glasshouse, which she had long wished to see. She was very happy; but, when she was quite ready, had her hat and gloves on, and was making haste down stairs

to her brother and father, who were waiting for her at the hall door, the shoe dropped off. She put it on again in a great hurry, but as she was going across the hall, her father turned round. "Why are you walking slipshod? no one must walk slipshod with me. Why, Rosamond," said he, looking at her shoes with disgust, "I thought that you were always neat; go, I cannot take you with me."

Rosamond coloured and retired. "O, mamma," said she, as she took off her hat, "how I wish that I had chosen the shoes! They would have been of so much more use to me than that jar: however, I am sure—no, not quite sure, but I hope I shall be wiser another time."

THE TWO PLUMS.

"WHAT are you looking for, Rosamond?" said her mother.

Rosamond was kneeling upon the carpet, and leaning upon both her hands, looking very earnestly for something.

"Mamma," said she, pushing aside her hair which hung over her face, and looking up, with a sorrowful countenance, "I am looking for my needle; I have been all this morning, ever since breakfast, trying to find my needle, and I cannot find it."

"This is not the first needle that you have lost this week, Rosamond."

"No, mamma."

"Nor the second."

"No, mamma."

"Nor the third."

Rosamond was silent, for she felt ashamed of having been so careless as to lose four needles in one week.

"Indeed, mamma," said she, after being silent for some time, "I stuck it very carefully into my work when I put it by yesterday, I think, but I am not quite sure of that."

"Nor I either," said her mother. "I cannot be sure

of that, because I know you have the habit when you leave off work of leaving your needle loose, hanging by the thread."

"But I thought that I had cured myself of that, mamma: look here, mamma, I can show you in my work the very holes in which I stuck my needle. I assure you that it falls out after I have stuck it in, because I shake my work generally before I fold it up."

"I advise you to cure yourself of the habit of shaking your work before you fold it up; then the needle will not drop out; and you will not spend a whole morning crawling upon the ground to look for it."

"I am sure I wish I could cure myself of losing my needles, for I lost, besides my needle, a very pleasant walk yesterday, because I had no needle, and I could not sew on the string of my hat. The day before yesterday I was not ready for dinner, and papa was not pleased with me, and do you know, mamma, the reason I was not ready for dinner was that you had desired me to mend the tuck of my dress."

"Nay, Rosamond, I do not think *that* was the reason."

"Yes, I assure you it was, mother, for I could not come down before I had mended that tuck, and as I could not find my needle, I lost all my time looking for it, and I only found it just before the dinner-bell rang."

"Then, by your own account, Rosamond, it was your having lost your needle that was the cause of your being late for dinner, not my desiring you to mend your dress."

"Yes, mamma; but I think the reason why my sister Laura keeps her needles so safely is, that she has a housewife to keep them in, and I have no housewife, mamma, you know. Would you be so very good, mamma, as to give me a housewife, that I may cure myself of losing my needles?"

"I am glad," said her mother, "that you wish, my dear, to cure yourself of any of your little faults; as to the housewife, I'll think about it."

A few days after Rosamond had asked her mother for a housewife, as she was watering her flowers in the

garden she heard the parlour-window open, and she looked and saw her mother beckoning to her. She ran in. This happened in the evening, a little while after dinner.

"Look upon the table, Rosamond," said her mother, "and tell me what you see!"

"I see two plums, mamma," said Rosamond, smiling, "two nice ripe purple plums."

"Are you sure that you see two nice ripe purple plums?"

"Not *quite* sure, mamma," said Rosamond, who at this instant recollected the purple jar; "but I will, if you please, look at them a little nearer."

She went up to the table, and looked at them. "May I touch them, mamma?"

"Yes, my dear."

Rosamond touched them, and tried to smell them, and then exclaimed, "One is quite hard, and the other is soft. One is a great deal colder than the other. One smells like a plum, and the other has no smell at all. I am glad I was not quite sure, mamma; for I do believe that one of them is not a plum, but a stone—a stone painted to look like a plum."

"You are quite right," said her mother: "and I am glad you remembered the purple jar. Now eat the real plum, if you think you should like it."

Rosamond ate the plum, and said that it was very sweet and good. Whilst she was eating it, she looked very often at the stone that was painted to look like a plum, and said, "How very pretty it is! It is quite like a real plum. I dare say nobody would find out that it was not a plum at first sight. I wonder whether Laura, or my brother Godfrey, would find it out as soon as I did. I should like to have that stone plum, mamma. If you had given me my choice, I would rather have had it than the real plum, which I have eaten, because the pleasure of eating a plum, you know, mamma, is soon over; but *that*," said Rosamond, pointing to the plum that was made of stone, "would last for ever, you know, mamma."

"Which do you mean, my dear, that the stone would last for ever, or that the pleasure of having that stone plum would last for ever?"

Rosamond considered for a little while, and then answered, "I don't know, mamma, exactly which I meant: but I mean now that I think I should have a great deal of pleasure in showing that stone plum to Laura and my brother, and that I should like to have it for my own, because it is very pretty, and curious, and ingenious. I mean that I would much rather have had it than the plum which I have eaten, if you had been so good as to have given me my choice."

"Well, my dear," said her mother, "as you have eaten the plum, you cannot perhaps tell exactly which you would have chosen."

"Oh, yes, indeed, mamma, I am sure, almost sure, I should have chosen the stone plum. I know if you were this instant to offer me another real plum, or this," said Rosamond, taking the stone in her hand, "I know which I should choose."

Rosamond was looking so earnestly at the stone plum, that she did not for some instants perceive a housewife which her mother placed upon the table before her.

"A housewife! A red leather housewife, mamma!" she exclaimed, as soon as she saw it, and she put down the stone plum.

Her mother now placed the plum and the housewife beside one another, and said to her, "Take your choice of these two, my dear; I will give you either the housewife or the stone plum, which ever you like best."

"I hope, mamma," said Rosamond, with a very prudent look, "I hope I shall not make such a silly choice as I did about the purple jar! Let us consider; the plum is certainly the prettiest: but then to be sure the housewife would be the most useful; I should not lose my needles if I had that housewife to keep them in. I remember I wished for a housewife, and asked you for one the other day, mamma. I am very much obliged to you for getting this for me. Did you get it on purpose for *me*, mamma?"

"It does not signify, my dear, whether I did or not; you need not think about that at present, but consider which of the two things that are before you, you prefer."

"Prefer means like best. I prefer——" said Rosamond; "but stay, I have not done considering yet;—the housewife, I think. I should not be so apt to lose my needles if I choose that, and I like to cure myself of my little faults. I was very happy when you smiled and praised me, mamma, and said the other day that you were glad to see that I wished to cure myself of my little faults; and I dare say, mamma, that you will smile a great deal more, and be a great deal more pleased with me when I really have entirely cured myself."

"I don't promise you, my dear," said her mother, "that I should smile a great deal more, but I certainly should be much more pleased to see that you had really cured yourself of any bad habit, than I was to hear you say that you wished to improve yourself."

"But then, mamma," said Rosamond, "losing my needle,—the habit, I mean, of losing my needles,—is but a *very* little fault, and I think I could cure myself of that without having a housewife. You know I might, as you said, cure myself of shaking my work before I fold it up, and *that* would prevent the needle from dropping out, so that I think I might do without the housewife. What do you think, mamma? I need not ask you, because I know you will say as you did about the purple jar—'*Think for yourself, my dear.*'"

Rosamond, as she pronounced the words *purple jar*, turned her eyes from the stone plum, and fixed them upon the housewife.

"The housewife will be the most *useful* to me, certainly; I choose the housewife, mamma, and I'll cure myself of my little faults, and you shall see, I hope, that I shall not lose my needles so often. This housewife will last and be of use to me a great while, and the pleasure of seeing Laura and my brother mistake that stone for a plum would soon be over; and as to its being pretty, I should soon be tired of looking at it, and forget it, as I forgot—I remember—I mean as I remember that

I forgot the pretty gilt coach and six, after I had had it three or four days. I hope, dear mamma, that I have considered well this time, and I think that I have chosen better than I did about the purple jar."

"I think you have, my dear little girl," said her mother.

Some weeks after Rosamond had chosen the red leather housewife, her brother came to her, and said, "Can you lend me a needle, Rosamond? my father says that he will show us something that will entertain us if you can."

"Yes," said Rosamond, "I can lend you a needle; I have never lost one since I had this housewife given me." She took out of her housewife a needle, and lent it to her brother; and he said, "Thank you! come with me. Papa said, that if you had your needle safe, you should see what he is going to show to us."

Her father showed her and her brother several experiments with her needle and a magnet;* and Rosamond was much entertained with these experiments, and she was very glad that she had cured herself of the habit of losing her needles; and said, "Mother! I am glad I chose the red leather housewife that has been so useful to me, instead of the stone plum which would have been of no use to me whatever."

THE INJURED ASS.

"ARE you very busy, mamma?" said Rosamond; "could you be so good as to look at your watch once more, and tell me what o'clock it is—only once more, mamma?"

"My dear Rosamond, I have looked at my watch for you four times within this hour. It is now exactly twelve o'clock."

"Only twelve, mamma! Why, I thought that the

* These experiments are illustrated and explained in "Every Boy's Book." The work contains 600 illustrations, and may be had at the publishers. The price is 8s. 6d.

hour-glass must have been wrong: it seems a great deal more than an hour since I turned it, and since you told me it was exactly eleven o'clock. It has been a very long, long hour, mamma. Don't you think so, Laura?"

"No, indeed," said Laura, looking up from what she was doing; "I thought it was a very short hour; I was quite surprised when mamma said that it was twelve o'clock."

"Ah, that is only because you were so busy drawing. I assure you, Laura, that I, who have been watching the sand running all the time, must know best: it has been the longest hour I ever remember."

"The hour in itself has been the same to you and to Laura," said her mother: "how comes it that one thought it long, and the other short?"

"I have been waiting and wishing all the time, mamma, that it was one o'clock, that I might go to my brothers, and see the soap bubbles they promised to show me. Papa said that I must not knock at his door till the clock strikes one. Oh! I have another long hour to wait," said Rosamond, stretching herself, and gaping; "another long hour, mamma."

"Why should it be a long hour, Rosamond? Whether it shall seem long or short to you, may be just as you please."

"Nay, mamma, what can I do? I can shake the hour-glass, to be sure: that makes the sand run a little faster," said Rosamond; and she shook the glass as she spoke.

"And can you do nothing else, Rosamond?" said her mother, "to make the hour go faster?"

"Nothing that I know of, mamma. Tell me what I can do?"

"You told us, just now, the reason that Laura thought the last hour shorter than you did."

"Oh, because she was busy, I said."

"Well, Rosamond, and if you were busy——"

"But, mamma, how can I be busy, as Laura is, about drawing? You know I'm not old enough yet; I have never learned to draw; I have no pencil; I have no paper,

mamma; I have no India rubber; how can I be busy, as Laura is, about drawing, mamma?"

"And is there nothing in this world, Rosamond, that people can be busy about, except drawing? I am at work, and I am busy. Is there nothing you can do without a pencil, paper, and India rubber; and without being as old as Laura?"

"Suppose, mamma, I were to wind that skein of red silk now, which you desired me to wind before night, perhaps that would make the hour shorter. Eh, mamma! Will it, do you think?"

"You had better try the experiment, and then you will know, my dear," said her mother.

"Is that an experiment too? Well, I will try it," said Rosamond, "if you will be so good as to lend me your silk-winders, mamma."

Her mother lent Rosamond the winders, and she began to wind the silk: it happened to be a difficult skein to wind, it often got entangled, and Rosamond's attention was fully employed in trying to disengage it. "There, mamma," said she, laying the ball of silk upon the table after she had wound off the whole skein, "I have only broken it five times, and I have not been long in winding it, have I, mamma?"

"Not very long, my dear," said her mother, "only half an hour."

"Half an hour, dear mamma! surely it is impossible that it can be half an hour since I spoke last; since I was talking to you about the hour-glass." Rosamond turned to look at the hour-glass, and she was surprised to see the hill of sand in the undermost glass so large.— "This has been a very short half-hour indeed, mamma. You were right;—having something to do makes the time seem to go fast. Now, mamma, do you know that I don't particularly like winding silk; I mean entangled skeins; and I dare say that if I had been doing something that I liked better, the half-hour would have seemed shorter still. I have another half-hour, mamma, before I go to Godfrey, and the soap bubbles. Mamma, if you could think of something for me that I should like very

much to do, I might try another experiment; I might try whether the next half-hour would not seem to go faster even than the last."

"Well, my dear Rosamond," said her mother, smiling, "as you thought of something to do for yourself when I wished it, I will try if I can find something for you to do now that you will like." Her mother opened the drawer of her table, and took out of it a very small manuscript, covered with marble paper.

"What is that, mamma?" cried Rosamond.

"A little story," said her mother, "founded on fact."

"What's the name of it, dear mamma?"

"The Injured Ass."

"The Injured Ass: I'm glad of it—I like the name."

"But you cannot read writing well, Rosamond."

"But, mamma," said Rosamond, "I dare say I shall be able to make this out; it seems to be very plainly written, and in a large round hand. I am glad of that: may I read it, mamma?"

"Yes, my dear, and when you have read it to yourself, you may, if you like it, read it aloud to Laura and to me."

Rosamond took the little manuscript, and began to read it to herself; and, with Laura's assistance, she made out all the words.

"Now, mamma, may I read it to you and to Laura? I have read it all. I have not been long, have I, mamma? May I begin?"

Her mother assented, and she read the following story:—

THE INJURED ASS.

A king made a law that if any person had reason to complain of being treated with great ingratitude, the inhabitants of the city where he dwelt should be summoned together by the ringing of a bell, that the ungrateful man might be brought before his fellow-citizens, and punished by being exposed to public shame.

The inhabitants of this city were so virtuous, that a long time passed away without any person having been

accused of great ingratitude. The bell became rusty, the rotten paling which surrounded it was overgrown with grass and weeds, when late one night the unaccustomed sound of the bell was heard. The inhabitants of the city surrounded the place, and to their utmost surprise they beheld a gray worn-out ass, who had come there, and by chance got his feet entangled in the chain of the bell, and by this means rang it. The owner of the ass was discovered; the neighbours all recollected that it had been in its youth a most serviceable creature to him; by the money which its labour had earned, his master had been enabled to purchase and inclose a bit of ground which formerly belonged to the common. The owner of the ass acknowledged that it had been very useful to him in its youth, but said that it was of no use to him now, and ate more than it was worth; so he had turned it loose to pick up a living in the mountains and commons, where he thought it might have found plenty of food.

The deplorable condition of the poor creature was, however, sufficient evidence of its having been treated with great ingratitude; and the owner was condemned to pay a fine sufficient to maintain the ass comfortably for the remainder of its days; and it was farther decreed, that the part of the common which the master of the ass had been enabled to purchase by the work of this poor animal, should be thrown open again for cattle to graze upon.

"That's the end of the story, mamma," said Rosamond; and she talked for so me time about it to her mother, and the half-hour seemed to have passed away very quickly, so very quickly that she was surprised when her brother came to tell her that it was past one o'clock, and that he was ready to blow the soap bubbles.

ROSAMOND'S DAY OF MISFORTUNES.

"Many a cloudy morning turns out a fine day."

"ARE you getting up so soon?" said Rosamond to her sister; "it seems to be a cold morning; and as it is very disagreeable to get up from one's warm bed in cold weather, I shall not get up yet."

So Rosamond, who was covered up warmly, lay quite still, looking at Laura, who was dressing herself as quickly as she could.

"It is a cold morning, indeed," said Laura, "therefore I'll make haste, that I may go down and warm myself afterwards at the fire in mamma's dressing-room."

When Laura was about half-dressed, she called again to Rosamond, and told her that it was late, and that she was afraid she would not be ready for breakfast.

But Rosamond answered, "I shall be ready, I shall be ready; for, you know, when I make a great deal of haste I can dress very quickly indeed. Yesterday morning I did not begin to dress till you were combing the last curl of your hair, and I was ready *almost* as soon as you were. Nay, Laura, why do you shake your head? I say *almost*—I don't say quite."

"I don't know what you call *almost*," said Laura, laughing; "I had been drawing some time before you came downstairs."

"But I looked at your drawing," said Rosamond, "the minute I came into the room, and I saw only three legs and a back of a chair: you know that was not much; indeed it was hardly worth while to get up early to do so little."

"Doing a little and a little every morning makes something in time," said Laura.

"Very true," replied Rosamond, "you drew the whole of mamma's dressing-room, dressing-table, and glass, and everything, little by little, in—what do you call it?—

perspective—before breakfast! I begin to wish that I could get up as you do; but then I can't draw in perspective."

"But, my dear Rosamond, whilst you are talking about perspective, you don't consider how late it is getting," said Laura; "why don't you get up now?"

"Oh, because it is too late to get up early now," argued Rosamond.

Satisfied with this reflection, Rosamond closed her eyes, and turned to go to sleep again. "When you come to the last curl, Laura, call me once more," said she, "and then I'll get up."

But in vain Laura called her again, warning her that she had "come to the last curl."

Rosamond was more sleepy than ever, and more afraid of the cold. At last, however, she was roused by the breakfast-bell; she started up, exclaiming, "Oh, Laura, what shall I do? I shall not be ready; my father will be displeased with me; and I've lost my lace; and I can't find my pocket handkerchief; and all my things are gone. This will be a day of misfortunes, I'm sure—and the clasp is come out of my shoe," added she; and as she uttered these words in a doleful tone, she sat down upon the side of the bed, and began to cry.

"Nay, don't cry," said Laura, "or else it *will* be a day of misfortunes. Look, here is your pocket-handkerchief."

"But my lace!" said Rosamond, wiping her eyes with the handkerchief, "how can I be ready for breakfast without my lace? and my father will be very, very——"

"Very what?" said Laura, good humouredly; "here's the lace; sit up a minute, and I'll draw it out for you."

Rosamond laughed when she found that she was sitting upon her own lace, and she thanked her sister, who was now sewing the clasp into her shoe. "Well, I don't think it will be a day of misfortunes," said Rosamond; "you see, I'm almost dressed, Laura; and I shall be ready in pretty good time, and I shall be just as well as if I had got up an hour ago, Laura." But at this moment, Rosamond, in her violent haste, pulled the

string of her cap into a knot, which she could not untie. Laura was going out of the room, but she called her back in a voice of distress, and begged she would be so very good as to do one thing more for her; and as Rosamond spoke, she held up her chin and showed the hard knot. Laura, whose patience was not to be conquered even by a hard knot, began very kindly to help her sister; but Rosamond, between her dislike of the cold, and her fears that she should not be ready for breakfast, and that her father would be displeased with her, became more and more fretful; she repeated, "this *will* be a day of misfortunes, after all; it tires me, Laura, to hold up my chin so long." Laura knelt down to relieve her sister's chin; but no sooner was this complaint removed than Rosamond began to shiver extremely, and exclaimed, "It is so cold I cannot bear it any longer, Laura. This will be a day of misfortunes. I would rather untie the knot myself—oh, that's my father's voice, he is dressed! he is dressed, and I am not half-dressed!"

Rosamond's eyes were full of tears, and she was a melancholy spectacle when her mother at this instant opened the room door. "What! not ready yet, Rosamond! and in tears. Look at this cross face," said her mother, leading her to a looking-glass, "is that an agreeable little girl, do you think?"

"But I'm very cold, mamma! and I can't untie this knot. Laura, I think you have made it worse," said Rosamond, reproachfully.

At these words, her mother desired Laura to go down stairs to breakfast. "Rosamond," added she, "you will not gain anything by ill-humour. When you have done crying, and when you have dressed yourself, you may follow us down to breakfast."

As soon as her mother had shut the door, and left her, Rosamond began to cry again; but after some time she considered that her tears would neither make her warm nor untie the knot in her cap, she therefore dried her eyes, and once more tried to conquer the grand difficulty. A little patience was all that was necessary; she untied the knot and finished dressing herself, but she felt ashamed

to go into the room to her father and mother, and brothers and sister. She looked in the glass to see whether her eyes were still red. Yes, they were very red, and her purple cheeks were glazed with tears. She walked backwards and forwards between the door and the looking-glass several times, and the longer she delayed, the more unwilling she felt to do what was disagreeable to her. At length, however, as she stood with the door half-open, she heard the cheerful sound of the voices in the breakfast-room, and she said to herself, "Why should not I be as happy as everybody else is?" She went down stairs, and resolved, very wisely, to tell her father what had happened, and to be good-humoured and happy.

"Well, Rosamond," said her mother, when she came into the room, and when she told her father what had happened, "you look rather more agreeable now than you did when I saw you a little while ago. We are glad to see that you can command yourself. Come now and eat some breakfast."

Laura drew a chair for her sister to the table near the fire, and Rosamond would have said, "Thank you," but she was afraid to speak, lest she should cry again. She began to eat her breakfast as fast as possible, without lifting up her eyes.

"You need not put quite such large pieces in your little mouth," said her mother, "and you need not look quite so dismal. All your misfortunes are over now, are they not?"

But at the word *misfortunes*, Rosamond's face wrinkled up into a most dismal condition, and the large tears which had gradually collected in her eyes rolled over her cheeks.

"What is the matter now, Rosamond?" said her mother.

"I don't know, mamma."

"But try to find out, Rosamond," said her mother; "think, and tell me what it is that makes you look so miserable. If you can find out the cause of this woe, perhaps you will be able to put an end to it. What is the cause, can you tell?"

"The cause is, I believe, mamma—because," said Rosamond, sobbing—"because I think to-day will be a—will be a day of—a day of—a day of misfortunes."

"And what do you mean by a day of misfortunes, Rosamond? A day on which you are asked not to put large pieces of bread into your mouth?"

"No, mamma," said Rosamond, half-laughing; "but—"

"But what?—a day when you cannot immediately untie a knot?"

"Not *only* that, mamma," answered Rosamond, "but a day when everything goes wrong."

"When you do not get up in proper time, for instance?"

"Yes, mamma."

"And whose fault was that, Rosamond—yours or the day's?"

"Don't you think it was partly the day's fault, mamma, because it was so cold? It was the cold that first prevented me from getting up; and then my not getting up was the cause of my being in a great hurry afterwards, and of my losing my lace and my pocket-handkerchief, and of my pulling the strings of my cap into a knot, and of my being cross to Laura, who was so good to me, and of your being displeased with me, and of all my misfortunes."

"So the *cold*, you think, was the cause of all these misfortunes, as you call them? But do you think that nobody has felt the cold this morning except yourself? Laura and I felt the cold; and how comes it that we have had no misfortunes?"

"Oh, mamma!" said Rosamond, "but you and Laura do not mind such little misfortunes. It would be very odd indeed, mamma"—(and she burst out a-laughing at the idea)—"it would be very droll indeed, mamma, if I were to find you crying because you could not untie the strings of your cap."

"Or because I was cold," added her mother, laughing with her.

"I was very foolish, to be sure, mamma," resumed

Rosamond; "but there are two things I could say for myself, that would be some excuse."

"Say them, then, my dear; I shall be glad to hear them."

"The first is, mamma, that I was a great deal longer in the cold this morning than anybody else; therefore I had more reason to cry, you know. And the second thing I have to say for myself, is——"

"Gently," interrupted her mother. "Before you go to your second excuse, let us consider whether your first is a good one. How came you to stay longer in the cold this morning than anybody else did?"

"Because, mamma, you sent Laura down stairs, and told me I must untie the knot myself."

"And why did I send Laura down stairs, and say you must untie the knot for yourself?"

"Because I was cross to Laura, I believe."

"And what made you cross to Laura?"

"I was cross because I could not untie the knot that the strings of my cap had got into."

"*Had got into, Rosamond!* Did the strings get into a knot of themselves?"

"I mean, I pulled them into a knot."

"And how came you to do that?"

"Because I was in a hurry."

"And how came you to be in a hurry?"

"Oh! I see, mamma, that you will say it was my own fault that I did not get up in proper time. But now for the second thing I have to say for myself. The strings of my cap are a great, great deal too short; and this, more than the cold, was the cause of all my misfortunes. You and Laura might have felt the cold, as you say, as much as I did; but you neither of you had short strings to your caps, mamma," continued Rosamond, with emphasis. "But" (pausing to reflect, she added) "I do not think that the cold or the strings were the *real* cause of my misfortunes. I don't think that I should have cried the first time, and I am almost sure that I should not have cried the second and third time, if it had not been for—something else. I am afraid, mamma, to

tell you of this *something else*, because I know you will say that was more foolish than all the rest."

"But tell it to me, notwithstanding," said her mother, smiling; "because the way to prevent yourself from being foolish again is to find out what made you so just now. If you tell me what you think and what you feel, perhaps I may help you to manage yourself so as to make you wise, and good, and happy; but unless I know what passes in your little mind, I shall not be able to help you."

"I'll tell you directly, mamma: it was my thinking that to-day would be a day of misfortunes, that made me cry the second and third time; and, do you know, mamma," continued Rosamond, in a faltering, mournful voice, "I don't know why, but I can hardly help feeling almost ready to cry when the same thing comes into my head again now, mamma. Do you think to-day *will* be a day of misfortunes, mamma?"

"I think, my dear," answered her mother, "that it will depend entirely upon yourself, whether it be so or not. If you recollect, we have just discovered, that all your past *misfortunes*, as you call them——"

"Were my own fault, you are going to say, mamma," interrupted Rosamond; "that's the worst of it. That makes me more sorry, and not pleased with myself, nor with anything else, and ready to cry again, because I can't help it all now."

"Since you cannot help it all now," said her mother, "why should you cry about it? Turn your thoughts to something else. We cannot help what is past; but we can take care of the future."

"The future," repeated Rosamond: "ay, the time to come. To-morrow, let it be ever so cold, I'll get up in good time; and, as for to-day, I can't get up in good time to-day, but I may do something else that is right, and that may make me pleased with myself again; may it not, mamma? There's a great deal of this day to come yet; and if I take care, perhaps it will not be a day of misfortunes, after all. What do you think I had better do first, mamma?"

"Run about, and warm these purple hands of yours, I think," said her mother.

"And after that, mamma, what shall I do next?"

"Do that first," said her mother, "and then we will talk about the next thing."

"But, mamma," said Rosamond, casting a longing lingering look at the fire, "it is *very* disagreeable to leave this nice warm room, and to go out to run in the cold."

"Don't you remember, Rosamond, how warm you made yourself by running about in the garden yesterday; you said that you felt warm for a great while afterwards, and that you liked that kind of warmth better than the warmth of the fire."

"Yes, it is very true, mamma; one gets cold soon after being at the fire; I mean, soon after one goes away from it; but, still, it is disagreeable at first to go out into the cold; don't you think so, mamma?"

"Yes I do; but I think also that we should be able to do what is a little disagreeable, when we know that it will be for our good afterwards; and by putting off whatever is not quite agreeable to us to do, we sometimes bring ourselves into difficulties. Recollect what happened to a little girl this morning, who did not get up because the cold was disagreeable."

"True, mamma, I will go."

"And I am going to walk," said her mother.

"In the garden, mamma, whilst I run about? I'm very glad of that, because I can talk to you between times, and I don't feel the cold so much when I am talking. The snow has been swept off the gravel-walk, mamma, and there's room for both of us; and I'll run and set your clogs at the hall-door, ready for you to pop your feet into them."

THE ROBIN.

Rosamond found it cold when she first went out; but she ran on as fast as she could, singing,

"Good, happy, gay,
One, two, three, and away,"

till she made herself quite warm.

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Rosamond and the robin.

"Feel my hands, mamma," she said, "not my purple hands now—feel how warm they are. You see, mamma, I'm able to do what is a little disagreeable to me, when it is for my good afterwards, as you said; mamma;—but hush—look there, mamma."

Rosamond, who was now warm enough to be able to observe, saw, whilst she speaking to her mother, a robin redbreast perched at a little distance from her upon a drift of snow. He did not seem to see Rosamond, which rather surprised her. "He must be very cold, or very hungry, or very stupid," she said. "I'll go nearer to him." As she approached he moved back a few paces, but did not stir. "That's a queer little robin; he opens his eyes and looks at me, but he does not fly and he does not sing. I think he wants to be taken up in my hand; may I, mamma? he does not stir."

"I am afraid he is hurt, or ill; take care that you don't hurt him, Rosamond!"

"I'll take the greatest care, mamma," said Rosamond, stooping down softly, and putting her hand over the little bird—"Hush! I have him safe, mamma,—his little claws stick to the snow,—he is very cold, for he trembles—and he is frightened—there is something come over his eyes—he is ill—what shall I do with him, mamma? May I take him into the house and hold him to the fire, and then give him a great many crumbs to make him quite well?"

Rosamond's mother advised her not to hold the bird to the fire, but said that she might take him into the house and warm him by degrees in her warm hands.

"How lucky it is that my hands are warm, and how glad I am that I came out," cried Rosamond. "Pretty robin, be it lucky, mamma,—he opened his eyes—I'll take him in, and show him to Laura."

This poor robin had been almost starved by cold and hunger, but it was gradually recovered by Rosamond's care, and she rejoiced that she had saved the little bird's life. Her mother gave her some crumbs of bread for him, and whilst the robin's breast was pecking up

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the crumbs, Rosamond stood by watching him with great delight.

"What are become of all your misfortunes, Rosamond?" said her mother.

"My misfortunes! What misfortunes? Oh, I had quite forgotten—I was thinking of the robin's misfortunes."

"Which were greater than yours; eh, Rosamond?"

"Yes, indeed, mamma," said Rosamond, laughing; "my knot was no great misfortune: I wonder I could *think* about such little things. But you see, mamma, this has not been a day of misfortunes, after all. I am very happy now, I am pleased with myself, I have saved the life of this poor little robin; and if I had cried all day long, it would not have done so much good; it would not have done any good. There is only one thing I don't feel quite pleased with myself about yet. That is, Laura! I'm sorry I was cross to Laura about the knot. What can I do to make amends for that, mamma? I'll never be cross again—I'll tell her so; eh, mamma?"

"No, I advise you not to tell her so, Rosamond, lest you should not be able to keep your promise——"

"If there should come another knot to-morrow, mamma! but I think it would be a good thing to prevent that. Mamma, will you be so good as to give me two long bits of tape, and I will sew them on my cap?"

Her mother said that she thought it was wise of Rosamond to prevent *misfortunes*, instead of crying about them after they had happened. She gave her the two pieces of tape, and Rosamond sewed them on her cap.

As soon as she had finished this affair, she returned to her robin, who was now flying about the room, and Laura was looking at him. "Laura, is it not a pretty robin?"

"Very pretty, indeed," said Laura.

"Should you not like to have such a robin very much, Laura?" continued Rosamond.

"I like to see him, and to hear him sing, and to feed him," answered Laura.

"Well, but should you not like to have him in a cage for your own?" said Rosamond; and at the same moment she whispered to her mother, "Mamma, do you know, I intend to give him to Laura?"

But how much was Rosamond surprised and disappointed when her sister answered, "No, I should not like to keep him in a cage, because I do not think he would be happy. I have heard that robin redbreasts soon die if they are put in cages."

"Dear, that is very unlucky indeed," said Rosamond, "particularly as I was just going to offer to give you my robin. But you know you need not keep him in a cage, he may fly about in this room as he does now, and you may feed him every day; should you not like that, Laura? and should you not be much obliged to me then?"

Laura perceived that Rosamond was anxious she should answer *yes*, and she was unwilling to displease her by refusing to accept of her offer, she therefore hesitated a little.

"Why don't you say yes or no?" said Rosamond, in rather an impatient tone. She had at this instant need of all her command over herself, to keep to her late excellent resolution, "*never to be cross again.*" Her mother's eye luckily was upon her, and with a sudden change of countenance Rosamond smiled and said, "No, mamma, I have not forgotten, you see, I am good-humoured. I am only a little sorry that Laura does not seem to like to have my little robin; I thought she would be so pleased with him."

"So I am pleased with him," replied Laura, "and very much obliged to you for offering to give him to me, but I do not wish to keep him; I once took care of a poor robin, and fed him almost all the winter, but at last a sad accident happened to him; don't you remember, Rosamond, he flew upon the bars of the grate in mamma's dressing-room, and he was terribly burnt! and he died."

Rosamond was touched by the recollection of this poor bird's sufferings, and, after expressing some regret at the thoughts of parting with the pretty robin, which was now

upon the table, she determined to open the window, and to let the bird fly away, or stay, whichever he liked best. The robin fluttered for some time near the window, then returned to the crumbs upon the table, pecked them, hopped about, and seemed in no haste to be gone. At last, however, he flew off. "Oh, mamma, he is gone for ever!" said Rosamond; "but I did right to let him do as he pleased, did I not, mamma? It was very disagreeable to me indeed to open the window; but you know, mamma, you told me that we must sometimes do what is disagreeable, when it is to be for our good afterwards; this is not for my good, but for the bird's good. Well, I hope it will be for his good! at any rate, I have done right."

Whilst Rosamond was speaking, the robin returned and perched upon the window-sill. Laura scattered some crumbs upon the floor within sight of the window; the bird hopped in, and flew away with one of the crumbs in his beak. "I dare say," said Rosamond, "he will often come back; every day, perhaps, Laura. Oh, how glad I should be of that! would not you, mamma?"

"My dear little girl," said her mother, "I should be glad of it. I am very much pleased to see that you can command your temper, and that you can use your understanding to govern yourself." Rosamond's mother stroked her daughter's hair upon her forehead as she spoke, and then gave her two kisses.

"Ah, mamma," said Rosamond, "this has not been a day of misfortunes, indeed!"

"No, my dear," said her mother, "it has not, and I wish in all your little and great misfortunes you may manage yourself as well as you have done to-day."

Rosamond's prudent precaution in sewing longer strings to her cap proved successful; for a whole month she was dressed in proper time, and her father, to reward her for keeping her good resolutions, lent her a nice little machine of his, for drawing perspective. She was only allowed to use it before breakfast, and she felt the advantage of getting up in proper time.

The robin redbreast returned regularly every day to

the window to be fed, and when the window happened to be shut, he pecked at it with his little beak till it was opened for him. He at last grew so familiar that he would eat out of Rosamond's hand.

"How much pleasure I should have lost, mamma," said Rosamond, one morning, when the bird was eating out of her hand, "if I had not done what was a little disagreeable to me on that cold day, which I thought would have been a day of misfortunes."

RIVULETTA.

In the spring, Rosamond and Laura went with their father and mother into the country, and they were very eager, the evening of their arrival, to walk out to look at the flowers and shrubs, and to visit all their favourite walks.

"As soon as ever dinner is over, mamma, I will go out, if you please, and run down to the water-side to see the early-rosetree that you planted last year. I remember the place exactly; and, mamma, if there is a rose blown, may I gather it for you?"

"Yes, my dear," said her mother; "but I advise you not to raise your expectations too high, lest you should be disappointed. Look at that dark cloud; I think we shall have a storm of hail."

"Oh no, mamma," said Rosamond, "it will blow over. You see, we have just done dinner. There! the cloth is gone now, and I shall have time, before it hails, to run as far as the early-rosetree and back again."

Rosamond put on her hat and ran away. She returned soon afterwards, quite out of breath, with an early-rosebud in her hand, if rosebud that might be called in which scarcely a streak of red was visible.

"Here, mamma, is the first rose you've had this year!" cried Rosamond, as soon as she had breath enough to express her admiration. "Is it not beautiful? and, you see, I had quite time enough, mamma; it only just began to hail as I came in."

"I see a few hailstones melting upon your hat, however, Rosamond; and have you not been in rather too great a hurry to gather this beautiful rose? It might have been a pretty rosebud if you had had patience to wait till to-morrow, or the day afterwards."

"But that would have been a great while to wait, mamma; I can pull the red leaves open, and make it a full-blown rose in a minute."

"I think it would be better to put it in water, and leave it to blow," said her mother: "if you pull it open, you will spoil it; and to-morrow will come; therefore we had better think of to-morrow as well as of to-day."

Rosamond paused—"Yes, mamma," she said, "I think it will be better to wait till to-morrow. I'll put the rosebud into water, if you will be so good as to lend me a tumbler."

Her mother poured some water into a tumbler; Rosamond put the rosebud into it, and, as she placed it on the chimney-piece, exclaimed, "I wish to-morrow was come!"

"And why should we lose to-day?" said her mother.

"Because, mamma, don't you see that it is hailing as hard as it can hail, and there will be no more pleasure to-day! the grass will be so wet, even if the storm should blow over before sunset, that I shall not be able to run upon it any more."

"And cannot you possibly be happy without running upon the grass? You did not run upon the grass yesterday evening, and I think you were tolerably happy."

"Yes, mamma; but do you think the storm will soon be over or not? I will stand at the window and watch that great black cloud."

In vain Rosamond watched the clouds; there was no hope that the evening would clear up; and she turned to Laura to ask her whether this was not very provoking; but Laura was reading instead of watching the clouds.

Rosamond thought that what Laura was reading must be very interesting, as it could fix her attention in such a moment as this; and, going up softly behind her sister, she exclaimed, as she read the title,—*"Rivuletta! Dear*

Laura, my mother gave you *that*, I remember, a whole week ago, and you have kept it all this time. Have you not read it before?"

"No," said Laura, "because I happened to have a great many other things to do, and I reserved the pleasure of reading this till the last; and now this rainy evening I have something to make me amends."

"For not going out," said Rosamond; "I should like to see whether it would make me amends too. I am glad you kept it for a rainy evening; that was very *prudent*, as mamma says. Now you have only read one page, will you be so very good as to begin again, and read it to me?"

Laura kindly complied with her sister's request, and as soon as Rosamond had settled herself to her satisfaction, began to read the story.

RIVULETTA, A DREAM.

"A dream! I like dreams," said Rosamond; "but I won't interrupt you."

It happened towards the middle of June, that I rose remarkably early to take a walk through the country, before the sultry beams of the sun had yet heated the atmosphere. Wandering wherever the windings of the path led me, I arrived at the gate of a magnificent garden: the gardener immediately perceiving me, desired that I should walk in, with which request I readily complied, and surveyed with delight the variety of shrubs and flowers which the garden produced. At length, reposing myself among the twisting branches of a honeysuckle within full view of a large and costly bed of tulips, Morpheus closed my eyes, and sent to me from heaven the following dream:—

On the tallest, largest, finest tulip that bloomed in the garden, methought there settled a butterfly of uncommon beauty, between whose downy wings reclined a little fairy. Her form was inexpressibly elegant; sweetness, and gaiety, and youth were so blended in her countenance, with innocence and unaffected grace, that she seemed as

if she were that moment come to life. Her flowing robe was tintured with all the variety of colours that it was possible for nature or art to conceive; her eyes were of a vivid blue, and her flaxen hair waved in ringlets upon her shoulders. Small though she was, I could distinguish every fold in her garment, nay, even every azure vein that wandered beneath her snowy skin. As I was thus contemplating her with attention, she disengaged herself from the butterfly, which she managed with a silken rein, leaving it to range about the garden at pleasure, and perching herself upon the stem of the tulip, she began to diversify it with the very finest tinctures. She placed in her lap a little tablet covered with a numberless variety of different colours, which she by degrees laid on the surface of the flower with a pencil made of the softest hairs imaginable, wetting it every now and then with the dewdrops that still remained scattered up and down the leaves. Methought, as I gazed upon her, that I never in my life beheld a more beautiful picture. And now that her morning work was just completed, she gathered a handful of farina* off a neighbouring flower, and began to sprinkle it over the yet moist tulip, to give it that velvet gloss which is so peculiarly beautiful, when I happened to turn my head, and, to my great surprise, I beheld my youngest daughter running to seize hold of the butterfly, which she was just on the point of catching, when her foot slipped, and she crushed at once by her fall the flower and the pretty little object of her wishes; even the fairy had but a narrow escape, by concealing herself under a shell that chanced to be beneath the tulip.

The beauty of the scene had now entirely vanished, and I saw nothing but the bruised flower and the dying insect. A number of confused ideas danced before my eyes, and my ears were filled with a variety of discordant sounds. At length a small, shrill voice distinctly articulated the following words:—

“He who now speaks to you,” said the invisible

* A kind of small dust found in flowers.

being, "as the deity of the fairies; and as your curiosity has been excited with respect to the little fairy you have just seen, it shall be satisfied. Her name is Rivuletta, and she belongs to the most delicate species of fairy that exists, to whom the care of the vegetable creation is given. 'Tis they who, every revolving season, enliven and beautify the scenes of nature with such a variety of tinctures; and as they are continually employed in giving pleasure, they are peculiarly happy. What occupation can be more delightful than theirs?

"Yet think not from this partial view that they are exempted from the universal lot of every being; they have their miseries, in common with others. Are there not frosts to nip? Are there not heats to parch? Are there not rains to drown, and blights to blast the fairest of their produce? Nay, have they not more to fear than all these? Has not their sad experience taught them that many a flower wastes its sweetness, and dies neglected by mankind?*

"And consider what those must feel who are doomed to toil upon such neglected beauties. Have they not likewise learned what to expect from Man, who robs them of their choicest sweets ere they arrive at full perfection?

"To all these various evils the little fairies are continually subject, and fortunate, indeed, is she who escapes them all. And now look yonder," said the invisible being; "observe that tulip and that insect which formerly constituted the whole happiness of the unfortunate Rivuletta. She is now, by the folly of a child, deprived for ever of it, and rendered miserable for the rest of her life. How often have I viewed her proudly mounted on her gilded butterfly ascend to the higher regions of the sylphs, with them

To sport and flutter in the fields of air,

-
- * Full many a gem of purest ray serene,
The dark, unfathom'd caves of ocean bear;
Full many a flower is born to blush unseen,
And waste its sweetness on the desert air.

GRAY'S *Elegy* written in a Country Churchyard.

and then descend with equal joy upon her favourite flower, the loss of which by one of the laws of her society, dooms her to perpetual slavery."

Methought that the deity was just going to explain the reason of this, when my attention was unexpectedly diverted by the appearance of the fairy, who was slowly riding on a sable moth. Her robes, which but a little while before had looked so gay, were now of the darkest green colour; her countenance was pale and wan, and I discovered that she really had become a slave since I had seen her; for as she drew nearer to the remains of her butterfly, and stretched out her hand to reach them, I heard the sound of a heavy chain upon her little feeble arm.

I here gave a deep sigh, and with the violence of my emotion I awoke, and, hearing the buzzing of the bees, I suddenly recollected myself. I arose from my seat to pursue my walk homewards, painting upon every butterfly that I saw the image of Rivuletta.

As I was thus recalling to my memory the delightful vision which I had just beheld, I found that what at first so strongly caught my senses now began to touch my heart, and that even in the wildest flights of the imagination reason can trace a moral. The familiar shape and humble species of the insect had made me look with indifference on its sufferings, though it expired in agony at my feet; whilst the fair form, graceful motion, and elegant attire of the fairy had given importance to her imaginary distress, and wrung my heart with the tenderest compassion.

After Laura had finished reading, Rosamond exclaimed, "Is that all? I wish there were more of it!"

"Why, Rosamond," said her mother, smiling, "you forget that the grass is wet, and that it has not done raining."

"Yes, mamma; and I was quite wrong when I said there would be no more pleasure to-day. There are different sorts of pleasure, mamma. I was happy whilst Laura was reading to me, and I was happy when I was

running on the grass a little while ago; and when I can't have one thing that I like, I may still find out something else that will entertain me. Thank you, Laura, for reading Rivuletta. I remember the pretty fairy's name. Mamma, is it true that somebody really dreamt this nice dream; and who was it, mamma? Do you know the person?"

"It is not true, my dear; it was invented and written by a very young person."

"The same boy who wrote 'The Injured Ass,' mamma?"

"No, my dear, but a sister of his."

"How old was she when she wrote it, mamma?"

"She was just thirteen."

"Was she good, mamma? Was she like Laura, or was she vain or proud?"

"She was good. She was neither vain nor proud, though she was uncommonly beautiful, and superior in understanding to any person of her age that I ever was acquainted with."

"*Was*, mamma," said Laura.

"*Was*, my dear; she is no more. Her parents lost her when she was but fifteen!"

THE THORN.

"HERE is the rosebud, mamma, that we put into water yesterday," said Rosamond; "look how prettily it has blown; and smell it; it has some smell to-day. I am glad I did not pull it open. The *to-morrow* that I wished for is come; '*To-day is the to-morrow of yesterday*.'* May I go and gather a bit of sweet-brier, mamma, for you, to wear with this rose?"

"Yes, my dear," said her mother; "and then follow us along the west shrubbery-walk. We are going to look at the hyacinths."

"Hyacinths! Then I'll make a great deal of haste."

Impatient to follow her mother along the west shrub-

* The words used by a child, five years old.

bery-walk, and to see the hyacinths, Rosamond unluckily forgot that sweet-brier has thorns. She plunged her hand into the first sweet-brier bush she came to, but hastily withdrew it, exclaiming—"How sweet-brier pricks one!" She next selected, with rather more care, a slender sprig on the outside of the shrub; but though she pulled, and pulled, she could not break off this twig, and she shook the whole bush with her efforts. A straggling overgrown branch, armed with thorns, bent down as Rosamond shook its neighbours, and caught fast hold of the riband of her straw hat. She struggled; but it was in vain to struggle, so at last she quietly untied her hat, drew her head out of danger, disengaged her riband, and at length, with scratched hands and a thorn in her finger, followed her mother to the hyacinths.

"Here, mamma, is the sweet-brier," she said, "but I don't like sweet-brier; for I have run a thorn into my finger in gathering it; it is full of thorns. I don't like sweet-brier."

"You do not like thorns, I fancy you mean," said her mother. "Come here, and I will take the thorn out for you; where is this terrible thorn?"

"You can't see it, mamma, because it is gone a great way into my finger, below the skin. Oh!—that hurts me very much," cried Rosamond, shrinking back as her mother touched the finger.

"I am trying, my dear," said her mother, "to find out whereabouts the thorn is."

"It is there," just under your finger, mamma," said Rosamond.

"Then if you can lend me a needle, Rosamond, I will take it out in a moment."

"Here is a needle," said Rosamond, producing, with an air of satisfaction, her red morocco housewife, "here's a small needle, mamma; but you will not hurt me, will you?"

"As little as I possibly can, my dear," said her mother; "but I must hurt you a little."

"Then, mamma," said Rosamond, putting her hand

behind her, "if you please, I had rather not have the thorn taken out at all."

"Oh, Rosamond! what a coward you are," exclaimed her brother, who was standing by, and he began to laugh in rather an insulting manner; but he stopped himself when his mother said, "Had not we better reason with Rosamond than laugh at her?"

"Yes, mamma," let us reason," said Rosamond; but she still kept her hand behind her.

"Would you rather bear a great deal of pain or a little?" said her mother.

"A little, mamma," said Rosamond; "and that is the reason that I say I would rather bear to have the thorn as it is, in my finger, than bear the great pain of having it pulled out."

"But how do you know that it would give you a great deal of pain to have the thorn pulled out?"

"I don't *know*, mamma, *but* I fancy—I believe it would," said Rosamond, fixing her eyes upon the point of the needle which her mother held in her hand.

"Do you remember ever having had a thorn taken out of your finger?"

"No, mamma; and that is the very reason I am afraid of it; so I had rather bear the pain of the thorn, than I do know, than the pain of having it taken out, which I do not know."

"But though you may have never felt, or never remember to have felt, what it is to have a thorn taken out of your finger, you have friends, probably, who could assist you by their experience. Here is Laura, for instance; she always speaks the truth, you can believe what she says, cannot you?"

"Oh yes, certainly."

"I took a thorn out of her hand yesterday."

"Did it hurt you much, Laura?" said Rosamond.

"Very little," said Laura; "the pain was not more than the prick of a pin."

"I could bear the prick of a pin," said Rosamond, holding out her hand, "but I think, mamma, the thorn is gone; I scarcely feel it now."

"If it is gone, my dear, I am glad of it," said her mother, "there is no occasion that you should bear even the prick of a pin for nothing. I only advised you to choose the least of two evils. But why does your little finger stick out from all the rest of your fingers?" continued her mother, observing that, as Rosamond rolled up her housewife, this little finger never bent along with its companions.

"Don't you know, mamma," said Rosamond, "this is the finger that has the thorn in it?"

"Oh, then the thorn is in it still," said her mother; "I thought it was out just now; am I to believe that it is both in and out at the same time?"

"No, mamma," said Rosamond, laughing; "but, till I tried to bend my finger, I did not feel the thorn; it does not hurt me in the least whilst I hold it still, and whilst I hold it out quite straight—so, mamma."

"And is it your intention to hold your finger out, quite straight, and quite still, Rosamond, all the remainder of your life?"

"Oh no, mamma, that would tire me very much indeed; I should be tired before I had held it in that position one day, or one hour, I'm sure; for I begin to be rather tired already."

"As long as you prefer this inconvenience to bearing the prick of a needle, it cannot be very troublesome. Here is your needle, my dear; put it into your housewife, and now let us go to the hyacinths."

"Must I put my hand in my pocket again? I must use my other hand," said Rosamond, stretching her left hand across to her right pocket, in a strange awkward manner.

"And that is the way, my dear, you intend to get things out of your pocket in future?" said her mother.

"No, mamma," said Rosamond, laughing, "nor shall I have any pleasure in looking at the hyacinths till this thorn is out. I think my finger is swelling, mamma; and it certainly is red all round the joint. Look, mamma."

"I do not in the least doubt it, my dear," said her mother, calmly.

"But can you tell me what the end of it will be?"

"The end of what, my dear?"

"The end of my leaving the thorn in my finger?"

"The consequences of it, I suppose you mean? The probable consequences are, my dear, that the finger will fester, or *gather*. You may remember——"

"Oh, I do remember, indeed," interrupted Rosamond, "last winter my foot *gathered*. I know what you mean by that; I recollect the pain that I felt then: it was much more than the pricks of a hundred pins. Mamma, will you be so good as to take the thorn out for me. Here is the needle."

Her mother took the thorn out for Rosamond; the pain was soon over; and when her mother showed her the thorn sticking upon the point of the needle, she rejoiced, and, bending her finger, exclaimed, "Now I can use my finger again! Thank you, mamma! You see, at last I did choose the least of the two evils."

"You have done prudently, and I'm glad of it," said her mother; "and now let us go and look at the hyacinths. I dare say, Rosamond, this thorn will make you remember to be more careful the next time you go to gather sweet-brier."

"Yes, that it will, mamma, I dare say; pain makes one remember things very well. And pleasure too, mamma, makes one remember things longer still, I think; for since you gave me this nice little housewife," said Rosamond, who had taken out her housewife to put by her needle, "I have never forgotten to put my needle into its place."

THE HYACINTHS.

"Oh, mamma! how beautiful they are!" cried Rosamond, running up to the hyacinth-bed—"pink, and blue, and lilac. I don't know which I like best, they are all so pretty; and they have a delightful smell, mamma! But what can be the meaning of this?" added she, pointing with a look of mournful surprise to a ridge of earth on which lay several faded hyacinths

that had been newly pulled up. They were lying with their flowers downwards, and the gardener was just going to cover them up with earth. "And must they be buried alive? What a pity! May not we save the life of this beautiful pink one, mamma? The others, to be sure, are a little withered; but this," she said, lifting up the head of a tall pink hyacinth, "look at it, now it stands upright. The new earth has soiled it a little, but we'll shake off the earth." Rosamond gave the hyacinth a gentle shake, not such a shake as she gave the sweet-brier bush; the earth still clung to the flower. Rosamond shook the stem a little more, and several of the pink flowers fell to the ground, so that only the bare green stalk now remained upright.

"Well, that may be buried," said Rosamond; but she raised another of its companions from the earth. "A blue hyacinth! quite fresh, mamma!"

"Look at the other side of it, my dear," said her mother.

"It is a little withered on the other side, to be sure, mamma," said Rosamond; "but it would look very well in a flower-pot with others. Why must they be buried?"

"The gardener, who has had more experience than you or I upon this subject, says that he buries them in this manner to strengthen their roots."

"Their roots!" said Rosamond; "but what signify those ugly roots, in comparison with these beautiful flowers?"

"These beautiful flowers, you know, come from those ugly roots."

"But why need they be strengthened any more, mamma? We have the flowers already."

"Next year we shall have fresh flowers, if we take care of these roots; but if we were to throw them away, we should see no blooming hyacinths next spring."

"Next spring; it will be a great while, mamma, before next spring."

"Yesterday, my dear," said her mother, "you thought that to-day would never come; but you see my rosebud

is blown," said her mother, taking the early-rosebud out of her nosegay.

"Ah! very true, mamma," said Rosamond; "but a year is quite another thing."

"To look forward a whole year," said her mother, "is certainly rather too much to expect from a little girl, who has only just learned to look forward a whole day; but, however, it is possible that Rosamond may in time learn to think of next year as well as of to-morrow. Now, Rosamond, take your choice. You may have either those six hyacinth-flowers that lie upon that ridge, or you may have their six roots, whichever you please."

As she finished speaking, she gathered the hyacinths; and the gardener, by her desire, picked up the roots, and placed them in a heap before Rosamond.

Rosamond looked alternately at the flowers and the roots.

"The flowers, to be sure, are withered; and next year there will be fine fresh flowers that will last a fortnight, or perhaps a month, and these will be quite gone in a few hours," said Rosamond.

Yet the idea of the present pleasure of putting the hyacinths into her flower-pot charmed Rosamond's mind; and she looked in her mother's eyes anxiously.

"Don't consult my eyes, Rosamond," said her mother, smiling; "you shall see nothing in my eyes;" and her mother turned away her head. "Use your own understanding, because you will not always have my eyes to see with."

"Look at me again, mamma, and I will use my own understanding. Do you mean, that if I choose the roots, you will give me leave to keep them in your ground? You know, if I have no ground to plant them in, they would be of no use to me, and then I had better choose the flowers."

"Very true, Rosamond," said her mother; "I am glad that you are so considerate. I *do* mean to give you some ground to plant the roots in, if you choose the roots."

"Then, mamma, I do choose the roots. Are you pleased with my choice, mamma?"

"My dear," said her mother, "I hope *you* will be pleased with it; for it is your affair, and not mine."

"But don't you think I have made a wise choice, mamma? A little while ago, when I chose to have the thorn pulled out rather than to have it in my finger, you said that I had done very prudently, to choose the least of two evils, and that you were glad of it. And now, mamma, I have chosen the greatest of two pleasures, and that is prudent too; and are you not glad of it?"

"Yes."

"Thank you, mamma. And when shall I plant the hyacinths? To-morrow, mamma?"

"No, my dear, not till next spring; leave them here, and the gardener shall take care of them for you, till it is the proper time to plant them next year."

THE RABBIT.

MANY agreeable things engaged Rosamond's attention during the year that elapsed whilst the hyacinth-roots lay buried in sand. Her mother gave her a little bit of ground for a garden; and as it was in vain to think of having hyacinths before the proper season, Rosamond begged that her mother would be so good as to give her some seeds, which she might in the mean time sow in her garden.

"What sort of seeds do you want, Rosamond?" said her mother.

"Any sort, mamma; all sorts, if you please."

"Have you room to sow all sorts of seeds, Rosamond, do you think, in your little garden? For instance, turnip, carrot, cabbage, and cauliflower seeds, and peas and beans, and——"

"Oh no, mamma; all those would take up a great deal too much room. I can't have all sorts of seeds, to be sure; therefore, if you please, I will have only flower-seeds."

"All sorts of flower-seeds?"

"No, no, mamma; you know I have not room for all;

but I should like to have those which will come up the quickest, and which will be the prettiest."

"Perhaps you cannot have both these at once. For instance, pinks and carnations you think pretty."

"Oh yes, mamma! I must have pinks and carnations in my garden. I mean, if you please; for they are beautiful."

"But I cannot please to make them grow as fast you perhaps expect, Rosamond."

"If I sow pinks and carnations this very day, mamma, how soon shall I have a nosegay of them?"

"Probably next year."

"Rosamond sighed, and said that if carnations were so long in growing, she would rather have sweet-peas, or anything else; and she asked her mother what would come up the soonest of anything she could plant. Her mother told her that she believed mustard-seed would be the most likely to answer her purpose, if she was determined upon having what would grow with the greatest expedition.

Mustard-seed, compared with pinks, carnations, sweet-peas, or sweetwilliams, did not quite suit Rosamond's fancy. She now also called to mind the dishes of peas and beans of her brother Orlando's raising, of which she had eaten last year; and she wavered long between the useful and the beautiful, between the slow and the quick-growing vegetables.

"When you have decided, my dear," said her mother, "ask your sister Laura to write down the names of the seeds that you wish to have; but do not talk to me any more about the matter, because I am going to read. I have listened to your changes of opinion now for nearly a quarter of an hour."

"I have decided entirely now, mamma," said Rosamond; "only I am sorry I can't have everything I wish."

"That you cannot, indeed, my dear, or anybody else, I assure you; therefore begin by deciding what you wish for most; then let us see if it be possible to get it; if it can be had, so much the better; if it cannot, then you

must consider what you like next best, and so on. I advise you to take a whole day to consider about it; for as soon as you have given me your list of seeds, I shall not listen to any changes of opinion afterwards."

Rosamond's list was written and rewritten by Laura many times during the course of this day. Sometimes Rosamond attended prudently to the sober counsel of her elder brother, the experienced gardener Orlando; at other times she more eagerly listened to the brilliant ideas of her younger brother Godfrey. He talked of cucumbers, and melons, and grapes, and peaches, and nectarines; whilst Orlando represented that hotbeds and hothouses would be necessary for these; that Rosamond would not know how to manage them, and that it would be safer to begin with things that would require less care and skill. He showed Rosamond a little journal of all that he had done in his garden the last year, and an account of all that it had produced. She had now the means of judging what she could do herself; and she made out her list of seeds from Orlando's journal.

"This is a very reasonable, sensible list," said her mother; "I am surprised that you, Rosamond, who have had no experience in gardening, could judge so well as you have done."

"Mamma," said Rosamond, "I judged by Orlando's journal: here it is. It tells me all that he did, mamma. It is an exact *history*, he says, of his garden; and from this I can learn, mamma, what I should do, and what I should not do, in my garden; and it will save me a great deal of trouble, and save me from making mistakes. So, though I have had no experience, as you say, myself, I can learn by Orlando's experience, mamma."

Rosamond made such good use of her brother's history, that her little garden was soon brought into good order; and she did not expect that her seeds and her flowers should grow faster than any other person's. She made, to be sure, some few mistakes, and suffered some few disappointments; for there are things which are to be learned only by *our* own experience: the advantage of perseverance, perhaps, is one of them.

Rosamond was apt to vary her plans too often to bring things to perfection. Sometimes her walks were to be straight; sometimes serpentine. She "changed round to square, and square again to round." Every new visitor found some new fault, or suggested some new improvement; and Rosamond wearied herself with perpetual endeavours to please everybody, till at length, convinced that this was impossible, since people had such different tastes, she resolved to abide by what should be decided to be best by the best judges; and one evening, when her mother came to look at her garden, she appealed to her: "I am determined, mamma, to make my garden exactly what *you* think the prettiest. Do you like my mount, mamma? Godfrey does not like my mount, though I have worked a whole week at it, mamma; and I should have had a salad by this time, in that very place, if I had not dug up the seeds in making the mount. But, dear mamma, come on, and look at my labyrinth. Godfrey told me about the labyrinth of Crete, mamma; and this is to be the labyrinth of Crete; he showed me how to make it. It is but just begun, mamma. I'm afraid you can't understand it: it is to go zig-zag—zig-gag, through this border."

"But what are these little green things? Here seems to be something coming up here."

"Only mignonette, mamma. But if you don't think you shall like our labyrinth, I won't finish it. Indeed, I believe it will be too narrow to walk in; and I had better not spoil the mignonette: I can give you nice nosegays of mignonette. But, mamma, there's another thing. We are thinking of digging a pond here."

"What! in the midst of your fine bed of turnips! And where will you get your water to fill your pond?"

"When it rains, mamma; and then, you know, it will be very useful to have a pond full of water, with which we can water the turnips and everything."

"But the turnips must be pulled up to make room for the pond."

"True, mamma," said Rosamond; "but still I shall

have mignonette, since I mean to give up the labyrinth; and mignonette must be watered in hot weather?"

"And do you think that your pond will be full of water in hot weather? Do you think the rain will never dry up in your pond?"

"Ah! that is what we are sadly afraid of, mamma; but then, in *rainy* weather, the pond will be quite full, and very useful."

"Very useful! what, to water your mignonette when it is raining? Will not the rain do as well as the rain-water out of your pond?"

Rosamond confessed that she had not made this reflection; and she gave up the scheme of the pond.

"And now, mamma," said she, "*lay out* my garden for me, as Godfrey says, exactly to your own taste; and I will alter it all to-morrow, to please you."

"I advise you, Rosamond, not to alter it," said her mother. "Wait till all the things you have planted come to perfection, and don't give up what is useful for what is useless. As to the rest, please your own taste."

"But the thing is, mamma, that if I don't alter and alter continually, I have nothing to do, and I am tired of my garden, if it looks ever so nice."

"You are in the right, my dear little Rosamond, to try to find out the cause of your own actions. So, then, you change your plans continually for want of something to do. Look at all those weeds in that shrubbery," said her mother; "those are easily pulled up, especially the groundsel."

"Yes, mamma."

"Well, employ yourself in weeding that shrubbery for me. Here is a basket. Bring your little hoe."

"I can pull the groundsel up with my hand, mamma," said Rosamond; and she set to work with great alacrity.

"Rosamond!" said her mother, "when you have weeded this piece of the shrubbery, from this variegated holly to that larch, quite clean, I will give you three of those little laburnums that you wished to have a few days ago."

"Oh! thank you, mamma," said Rosamond; "but I'm afraid I shall be a great while doing this, for I see a great many weeds."

She worked hard that day, and filled her basket quite up to the top with groundsel; and she calculated that if she filled this basket with weeds every day, she should have cleared, from the variegated holly to the larch, in a week.

For some rainy days, and some accidents, she had not allowed; but at the end of a fortnight, the work was completed, and her mother gave her the three little laburnums. Rosamond transplanted them immediately into her garden. She was surprised and rejoiced to find, that her mignonette and her turnips, during this fortnight of tranquillity, had come forward finely. A few weeds had made their appearance, but those she soon pulled up; and resolving to make no useless alterations in her garden, she returned to her mother, and asked for fresh employment.

"Go on weeding the shrubbery, from the larch to the large laurel," said her mother; "that will be a month's work—and if you do it well, I will give you the little laurel that grows near your garden."

Rosamond, in due time, earned the laurel; and she had now acquired the habit of regularly employing herself, so that she liked the work, even without thinking of her promised rewards. She earned several pretty shrubs; amongst others, a fine damask-rosetree, by her summer and autumn's work; *earned*, perhaps, we should not say; for the rewards her mother gave to her were certainly above the value of her work; but her mother said she thought that a few shrubs were well bestowed in teaching her little daughter industry and perseverance.

"The same industry and perseverance, Rosamond," said she, "that you show in weeding this shrubbery, may be turned to a great many other useful things."

"Yes, mamma, I hope when winter evenings come," said Rosamond, "you will be so very good as to teach me to write. I wish I could write the history of my garden as nicely as Orlando wrote his journal."

The history of Rosamond's garden was this year much to her credit. She had

- 4 dishes of radishes.
- 6 dishes of tongue-grass.
- 1 dish of turnips.

Peas failed for want of room. She had several nosegays of pansies, sweet-peas, and mignonette. The three laburnums which she transplanted in the spring, and which she had the courageous patience to leave in peace all the summer, flourished beyond her most sanguine expectations; and Orlando gave it as his opinion, that they would bear fine yellow flowers in the ensuing spring. But alas! early one hot morning in August, when Rosamond went with her little green watering-pot to water her favourite laburnums, she found the two finest of them broken, and the other stripped of its leaves. She ran to her brother Orlando, and asked him to come to her garden. He came—he saw the poor laburnums—but he could do them no good.

"Who can have done all this mischief?" cried Rosamond; "and why should any one do me mischief? I never do mischief to anybody or to anything! Who can have done all this?"

"I'll tell you who has done all this mischief," said Orlando, after he had closely examined the little laburnums—"I'll tell you who has done all this mischief—a rabbit. Look! here are the marks of his nibbling teeth. Look at these bitten leaves."

"Mischievous rabbit! good-for-nothing animal!" exclaimed Rosamond.

"However, for your comfort," continued Orlando, "here's one of your laburnums that may do very well yet."

"Oh, but the rabbit will come again!" said Rosamond. "What can I do? how shall I keep him away? he'll eat everything I have in the world," added Rosamond, in whose imagination this rabbit now appeared an unconquerable wild beast.

"He will not eat everything you have in the world,"

said Orlando, soberly; "but, to be sure, there is some danger of his eating your laburnums, because, unluckily, rabbits happen to be fond of laburnums; and he does not know that there is any harm in eating them."

"I wish he would only be so good as not to eat mine," said Rosamond.

"Nor mine," cried Orlando; "you would not have him eat mine? He'll come to me next, I'm afraid, as soon as he has done with you."

"Done with me! So, then, you do think he'll go on eating."

"To be sure; he will eat as long as he is alive, I suppose," said Orlando, with calm gravity; "and we have no right to kill him for eating, even your laburnums; eh?"

"Kill him!" repeated Rosamond, shrinking back: "no, I would not kill or hurt *any* animal; you know, that would be cruel. Poor rabbit! I don't want to hurt him, though he has eaten my laburnums. He did not know, as you say, that he was doing any harm. I only want to hinder him, if I can, from doing me more mischief; but I'm sure I don't know how; for I can't build a wall; and I have nothing of which I can make a hedge. I don't want to hurt the rabbit, but to hinder him from hurting me. Poor fellow!"

Orlando was much pleased by the humanity with which Rosamond spoke of her enemy, the rabbit; and he knew, by experience, how provoking it is to see the fruits of one's own labours destroyed. "I'll see about it for you, Rosamond," said he, after musing for some time. "I don't say I can do it; but we'll see what can be done. I think I can save your last laburnum."

The next morning, all the family were at breakfast before Orlando appeared. This was an unusual circumstance, for he was generally as punctual as the clock. "I know where he is," said Godfrey; "he has just run down to Rosamond's garden, to look at something."

"I am sure that's very good of him. I know that you mean my poor laburnum," cried Rosamond; "but, mamma, had not I better go and tell him it is time to eat his breakfast."

Rosamond had just slid down from her chair, when Godfrey stopped her with an eager hand. "The *something* is not a laburnum, Rosamond; and you are not to know anything about it. I am sorry I happened to say *something*, for I was desired to say nothing."

At this instant Orlando made his appearance, with a wooden box in his hand, about two feet long, sixteen inches broad, and nine inches high.

"What is that?" cried Rosamond.

Orlando placed the box on the table before her. "It is nothing," said she, "but an old box, as far as I can see." But Rosamond had not looked far, she had only looked at the sides next her. At length, observing that everybody smiled, she went round to the place where Godfrey, who seemed to see farther than she did, was standing.

"Ha!" cried she, "here's glass on this side of the box!" There was a small hole cut in this side of it, about the size of a card; and this hole was covered with glass. "I see something white behind the glass," she said.

"No, it's brown, not white," cried Godfrey.

"It was white just now," replied Rosamond. "It has changed: it moves!—it must be something alive."

Rosamond put her face closer to the spy-hole; and looking in, she saw a brown and white rabbit, crouching down, in the farthest corner of the box. "Dear Orlando! the rabbit! How did you get him? Is he hurt?" cried Rosamond.

"He is not in the least hurt," said Orlando; and he showed Rosamond how he had caught the rabbit.*

"I am glad we have caught him, and that he is not hurt," said Rosamond.

"But now, what shall we do with him?" said Orlando.

"Pretty little animal! what nice white ears and feet he has!" said Rosamond, still looking at him through the glass; "but he keeps himself squeezed up, and moves his quick eyes and his long ears continually. I wish he would come out of that corner."

* A description of this trap may be seen in "Emerson's Mechanics," plate 23, fig. 262. In the more recent octavo edition of this work, the plate is numbered 45.

"He dare not; he dare not move," said Orlando; "he's frightened almost out of his wits."

"That's a pity," said Rosamond; "for if he was not so foolish as to be frightened, he might be very happy in this box; it is quite a room to him."

"But he is not used to live in a room," said Orlando; "and, may be, that's one reason he does not like it."

"Well, he'll grow used to it, and then he'll like it," said Rosamond.

"Grow used to it!" said Orlando; "why, do you mean to keep him a prisoner in this box all his life?"

"Not a prisoner," said Rosamond; "but I should like to keep him in this box; I'll call it his house, and I would feed him; not with my laburnums, but with anything else that he likes; and I would make him the happiest little rabbit in the world, if mamma likes it."

"You had better consider how the rabbit would like it first," said her mother.

"But I mean to do everything for his good," said Rosamond.

"I have heard my father say, have not I, father?" said Orlando, "that it is contrary to the laws of England to do anybody good against his will."

"But this rabbit is not anybody," interrupted Godfrey.

"It may not be against the laws of England, then," resumed the grave Orlando, "to keep him in this box; but I think it would be cruel."

"Cruel!" cried Rosamond, "I would not be cruel; I tell you, I mean to make him as happy as the day is long."

"But he'll never be happy; you can't make him happy, Rosamond, in this box," said Orlando; "you don't consider that rabbits like to run about, and he can feed himself better than you can feed him."

"Ay, with my laburnums," said Rosamond, changing her tone; "am I to let him loose again to eat my poor laburnums—that is to say, laburnum—for I have only one left!"

At the recollection of the mischief he had done, Rosamond, notwithstanding the rabbit's pretty white ears

and feet, looked at him with dislike ; and Orlando seemed at a loss what to advise. He leaned his elbows upon the top of the box, and began to meditate.

After some minutes' silence, he exclaimed, " I never clearly understood what was right to be done about animals ; what is cruelty to animals, for if animals hurt us, or hurt our property——"

" Yes, our laburnums, for instance," interrupted Rosamond.

" We must defend them, and we must defend ourselves," continued Godfrey.

" And," resumed Orlando, " how comes it that we think so compassionately about this one rabbit, under my elbows," at the same time knocking his elbow upon the box, which made the rabbit within start, " yet we eat rabbits very often at dinner, without thinking at all about the matter ?"

" That's very extraordinary," said Rosamond ; " but then the rabbits that we eat at dinner are dead, and cannot feel ; so we are not cruel in eating them."

" But," said Godfrey, " they are killed on purpose for us to eat."

" Then the people who kill them are cruel."

" But those people would not kill them if we did not want to eat them."

" I don't want to eat rabbits," said Rosamond ; " so I hope nobody will ever kill any for me."

" But you want to eat beef and mutton," said Orlando ; " and then sheep and oxen are killed instead of rabbits."

" The best way, then," said Rosamond, " would be to leave off eating meat."

" Yes," said Godfrey, " let us begin to-day."

" Stay," said Orlando. " Consider ; how should we manage, if all sorts of animals became so numerous that there would not be food for them and for us ? There would never be wild vegetables enough ; and the animals would grow bold with hunger, and eat the vegetables in our gardens."

" Ay," said Rosamond ; " and would not it be very unjust indeed that we should work for them all day ?"

"And perhaps, at last," continued Orlando, "if we did not eat animals, they might eat us."

"I think we had better go on eating meat," said Rosamond; "but I am glad I am not a butcher."

"Sheep and oxen do not eat men; but if they increased so much as to eat all the vegetables, they would in the end destroy men as effectually by starving them as if they ate them," said her father.

"I don't think we have gone to the bottom of the business yet," said Orlando.

"Nor I," said Godfrey; "I will think more of it, and write an essay upon cruelty to animals."

"And, in the mean time, what shall we do with this rabbit?" said Orlando; "we have wandered a great way from him."

"Poor fellow!" said Rosamond, looking into his prison, "you little think we are talking about you. Orlando, I wish we could carry him to some place at a great distance from our gardens, where he might live happily, and eat what he liked, without doing us any mischief. Papa, could this be done?"

"My dear," said her father, "there is a place, about six miles from hence, called a rabbit-warren, where great numbers of rabbits live."

"Oh, father! could you be so good," said Rosamond, "as to have him carried there, and set at liberty?"

"My dear little girl," said her father, "I am glad to see that you are so humane to this animal, who has done you mischief. It is very reasonable that we should endeavour to prevent him from doing you any farther injury, and I think what you propose is sensible. I know Farmer Early, who lives near us, goes to-morrow morning, with his covered cart, to market; he passes by the rabbit-warren, and perhaps he will take charge of Orlando's box, and carry your rabbit, and set him at liberty in the warren. We will walk to Mr. Early's house, Rosamond, and ask him to do so, if you please."

This proposal was received with joy by the whole assembly; and as soon as Orlando had eaten something, they proceeded to the farmer's.

Mr. Early was out in the fields with his labourers when they arrived at his house; they were shown into a neat little room, where a woman, who looked pale and ill, was sitting at work. A little girl sat beside her, holding her pin-cushion and scissors. The woman folded up her work, and was going out of the room; but Rosamond's mother begged that she would stay, and that she would not disturb herself. Orlando put his box upon the table. The rabbit had been very restless during his journey: he had nibbled incessantly at his prison-walls, and his operations engrossed the attention of Rosamond and her brothers till farmer Early's arrival. It had been agreed that Godfrey should, upon this occasion, be the speaker; and as soon as Farmer Early came into the room, he began his speech:

"Sir, you are very hot. I am afraid you have hurried yourself. We are very sorry to have given you the trouble of walking home so fast, especially as you had men at work; but, sir, in this box there is a rabbit ——"

The farmer stooped down to look into the box, and exclaimed, "Why, Anne! if this is not your tame rabbit, that I brought home for you from Mr. Burrows's, of the Warren, as a present, on Monday last."

At these words, all eyes turned upon the little girl, who was holding the pin-cushion beside the pale work-woman. Anne (for that was this little girl's name) now came forward modestly, and, with some emotion, said, as she looked into the box, "Yes, indeed! this is my poor little rabbit. I lost him yesterday morning. I wondered what had become of him."

"And how he found his way into this box is altogether wonderful to me," said Farmer Early, "unless, *so be*, that *this here* box be in the *natur* of a trap, which, I take it, is what it can't well be, neither, as I never see no traps like it; and how, seeing it is not a trap, your rabbit, Anne, could be 'ticed into it, any how, is a thing I verily can't take upon me to understand."

"Sir," said Orlando, "it is a trap."

"Indeed, sir; then it is a most *curous*, new-fashioned

one; for I've seen a many rabbit and rat-traps, and all sorts, but never one like this."

Godfrey then explained to the farmer that this curious trap was of Orlando's making; and he gave an account of the damage that had been done to Rosamond's laburnums; but he thought that it would not be right to ask the farmer to take the rabbit to the warren and let it loose, because he had just heard that it belonged to the little girl; therefore, he stopped short in his speech, and looked at Rosamond first, and then at his father. "Anne," said Farmer Early, "this is a sad thing that your rabbit eats and spoils the young lady's laburnums."

"I wish we could keep him at home; but that is impossible," said Anne, sorrowfully; and, after a pause, with a great deal of good nature in her countenance, she added, "but since he does mischief, we had better carry him to the warren again, and give him back to Mr. Burrows."

"The very thing," exclaimed Godfrey, "that we thought of; but we did not ask it, because we were afraid you would not like to part with the rabbit."

"Anne's very fond of him, that's certain," said Mr. Early, "therefore the more I look upon it to be well thought of in her to carry him back to the warren; for you must know a live rabbit is, as one may say, quite a sight to her, for she's a Londoner; and everything in the country that we think nothing of, seeing it, as we do, every day, is quite strange to her, and a treat like: wherefore, though I don't mean to praise her, by reason she's in a manner related to me—and one should not praise one's own, if one can help it any ways—yet I may make bold to say I like Anne the better, and think the more of her, for being so ready to part with her rabbit at the first word, when it does mischief, you see."

Rosamond and all who were present seemed perfectly to agree in opinion with the farmer; and Rosamond thanked the little girl several times "for being so good-natured."

Farmer Early promised to carry the box and the rabbit in his covered cart to the warren the next morn-

ing; and thus the affair was settled to the satisfaction of all parties.

"Mamma," said Rosamond, as they were walking home, "did you observe how attentive that little girl was to the pale woman who was at work? She picked up her thread-paper, she threaded her needle, she gave her pins as fast as she wanted them, and watched her eye whenever it turned to look for anything, just as I should do, mamma, if you were ill and at work, and I was standing by. Mamma, I think that little girl was very fond of that woman, who, I suppose, was her mother. Mamma, I saw you speaking to the woman whilst we were going on talking about the rabbit. Do you know who she is, and anything more about her?"

"She is a mantua-maker, my dear; and she told me that she had been forced to work so hard to maintain herself and her little girl, that she had hurt her health very much. She was obliged to sit in a close room in a narrow street in London all day, and often worked whole nights as well as days. She was invited by this Farmer Early, who is her cousin, to pass some time with his family in the country, in hopes that the fresh country air and exercise might restore her health."

"That was very good-natured of the farmer; but she was at work still, mamma. I'm sorry for that."

"She was making a gown for the farmer's wife; for she said that she was glad to be able to do anything for those who were so kind to her."

"Oh, that's very right," cried Rosamond; "that is being grateful. Mamma, I wish I could be grateful to the little girl who was so good to me about the rabbit. I have a damask rose-tree, mamma, in my garden; the roses are not blown yet; but when they are blown, mamma, I can give them to her, and my mignonette. How glad I am that I did not dig it up to make the labyrinth of Crete! I shall have a fine nosegay for her, mamma; and you know the farmer said that everything in the country is a treat to her—so I dare say she will like my flowers."

Rosamond's damask rose-tree was, from this day for-

ward, watched with anxious eyes; as it had been transplanted rather late in the spring, it was not quite so forward as the other roses. When all the rest of the roses were gone, however, this tree was in full bloom. Rosamond gathered the last roses of the year; and these, with some sweet-briar, which she got without pricking herself, and some fine mignonette, made a charming nosegay.

"I am glad, Rosamond, to see that you do not forget your *gratitude*," said her mother; "your roses and your mignonette smell very sweet; and I hope the little girl will like your nosegay."

It was a fine evening, and Rosamond had a pleasant walk with her mother to Farmer Early's; but what was Rosamond's disappointment, when the farmer told her that Anne was gone!—that she had that morning set out in the stage-coach, with her mother, to return to London.

"And so, mamma," said Rosamond, "it is all in vain! I might just as well have forgotten my gratitude."

"Have patience, Rosamond," said her mother; "remember it a little longer. Perhaps next winter, when we go to town, we may have some opportunity of obliging this little girl, or her mother. I have her direction; and if she be a good dress-maker, as well as a good woman, I shall be able to be of some service to her."

"*You!* yes, mamma;" said Rosamond; "but what can *I* do? You know, I have nothing in this world to give, but flowers; and I shall have no damask roses in London. You know, mamma, our new house in London has no garden. But, dear mamma," said Rosamond, changing from a lamentable to a joyful tone, "I have thought of a charming thing!—my hyacinth-roots! Will you give me leave, mamma, to take them to London, when we go? and I'll show you something that Orlando showed me in the little 'Gardener's Pocket Calendar,' mamma, as soon as we get home."

"Here it is, mamma," cried Rosamond, as soon as she got home, and showed her mother, in "The Gardener's Pocket Calendar," *An improved method of blowing bulbous-*

rooted flowers with less trouble and expense than in glasses.* "May I read it to you? Pray, mamma, let me read it to you. It is not long; and I'll miss all the useless words."

"You may read it whilst we are drinking tea, Rosamond," said her mother; and at tea-time, Rosamond read some very minute and distinct directions for blowing bulbous-rooted flowers. "Hyacinths, mamma, you see," she said, "are mentioned particularly; and I think, that if I had such a little box as the man describes in the book, I could do exactly as he desires; and I should have hyacinths in full bloom in winter, or very early in spring, when we shall be in London; and then, mamma, I should have something to give to the little girl. She gave up her rabbit, which was a great amusement to her in the country, and I should be very glad if I could give her something that would be an amusement to her when she is in that close room, in that narrow street, which you talked of, mamma."

Rosamond observed, that in "The Gardener's Calendar" it was stated that these boxes for hyacinths were peculiarly adapted for the use of people who love flowers, and who have only a little yard, or perhaps a window-sill, for their garden, in London.

Her mother was pleased to observe her eagerness to oblige the little girl who had obliged her; and she told Rosamond, that if she remembered *her gratitude*, and the hyacinth-roots at the proper time, she might carry them to London.

Winter came; the hyacinth-roots were remembered in proper time. They were carried safely to town; and, in due season, they were planted carefully, by Rosamond, in a little box, which her mother gave her for this purpose.

Rosamond, before the hyacinths appeared above ground, often asked her mother whether she had heard anything of Anne; but when the hyacinths, at first, like white

* See "The Kitchen and Flower Garden," by E. S. Delamer. The work contains a coloured frontispiece and numerous illustrations, and may be had of the publishers. Price 2s. 6d.

almonds, burst through the black mould, Rosamond grew so fond of them, that she almost wished to keep them for herself. At length their green leaves and stems grew higher and higher; and the clusters of pink and blue flowers seemed to Rosamond more beautiful even than those she had seen the preceding spring, in her mother's borders. She was one morning standing at the parlour-window, contemplating her hyacinths with great delight, and smelling, from time to time, their delicious perfume, when Godfrey came eagerly into the room—"I have news to tell you, Rosamond," he cried; but, observing how intent she was upon her hyacinths, he hesitated—"I don't know," he continued, "on second thoughts, whether you will think it good news, or bad; I only know you would have thought it good news some time ago."

"Tell it to me, however," said Rosamond; "and then I'll tell you whether I think it good news, or bad."

Godfrey, without speaking, went up to the window where Rosamond was standing. The sun shone bright. He first praised her hyacinths, and then hooked his fingers, and held them up in a significant manner; but Rosamond did not comprehend what this signified, till he placed them closer to the white wall, upon which a shadow, the striking resemblance of a rabbit's head, was visible.

"Anne's come, then, I'm sure!" exclaimed Rosamond.

"Yes, Anne is come," said Godfrey; "but you are not obliged, you know, to give her your hyacinths, unless you like."

"I do like, I assure you, brother," said Rosamond, proudly; "I assure you, I have not forgotten the rabbit, nor my gratitude. Where is Anne?"

"In the next room, with my mother."

"Help me to carry the box then, will you, dear Godfrey?" said Rosamond; and she took hold of one handle of the hyacinth-box, and he of the other.

"Mamma," said Rosamond, as she carried in the box, "would you be so kind as to have the box carried home for *her*, because it is heavy, and she cannot well carry it

through the streets herself. It is a great deal heavier than our rabbit-box; and I remember I was tired with carrying *that*, part of the way, last summer, to Farmer Early's."

"I will, my dear," said her mother, "desire a servant to carry it, if Anne likes to accept of the box of hyacinths; but you have not asked her yet, have you?"

"No," said Rosamond, "because it is impossible but that she must like hyacinths."

Rosamond, rather startled, however, by her mother's doubtful look, went up to Anne, and, after thanking her for her kindness in the affair of the rabbit, asked her eagerly whether she liked hyacinths?

Now poor Anne had never in her life seen a hyacinth, and she modestly answered, "I don't know." She looked at the box an instant afterwards, and smiled, as much as to say, "If those are hyacinths, I like them very much indeed."

Rosamond immediately lifted the box nearer to her. "I am glad you like them," said she. "Mamma says I may give them to you; and when the flowers wither, I advise you to take care of the roots, because, if you do, you will have new flowers next year. I'm sure, mamma," added Rosamond, turning to her mother, "I am glad I took care of the roots; and I'm glad I chose the roots instead of the flowers."

She was going on to give Anne some particular directions, which she had learned partly from "The Gardener's Pocket Calendar," and partly from experience, concerning the management of hyacinths, and the blowing of bulbous roots, when she was interrupted by the entrance of a woman, whom she immediately recognised as the pale invalid that she had formerly seen at work at Farmer Early's. This poor woman had been resting herself in the housekeeper's room; for she had had a long walk that morning from a distant part of the town, and she was not yet strong enough to bear much fatigue.

"Well," said Rosamond's mother to her, "have you removed from that close, unwholesome street, where you formerly lived? You promised to let me know when

you heard of any lodgings that would suit you; but I have waited from day to day, and you have never sent to me."

"No, ma'am," answered the poor woman, "because we have not been able to agree with a man who has a lodging that would suit us exactly: but he has other offers, ma'am; and I'm afraid he won't let me have it. He's a gardener, at Hampstead, where I could get plenty of work, and should breathe good air, and be in quiet, and may be, get well."

"The hyacinths!" exclaimed Rosamond; but she suddenly checked herself, for she recollected that she had already given them away. No one understood her exclamation, except the little girl, who immediately smiled, and, in a timid voice, asked Rosamond whether she would permit her to part with the hyacinths, in case the gardener took a fancy to them, and should be willing to let her mother have the lodgings in return for them.

"Oh yes; do whatever you please with them," said Rosamond; "they are yours."

"And," added her mother, "you may, my good little girl, at the same time that you give the hyacinths to the gardener, tell him that I will answer for your mother's paying the rent punctually."

The gardener thought well of lodgers who had hyacinths, and better of those who offered him good security for his rent. He thanked Anne, but said he had abundance of hyacinths, and he gave Anne and her mother leave to walk in his garden whenever they pleased. Anne had the hyacinths for herself; and Rosamond had the pleasure of seeing Anne and her mother settled in their airy lodgings.

THE WAGER.

"ROSAMOND! you did not water your geraniums last night," said her mother.

"Yes, mamma—no, mamma, I mean; because I could not find the rose of the little green watering-pot."

"You did not look for it, I think, my dear. It was on

the shelf, directly opposite to you, as you go into the greenhouse."

"That shelf is so high above my head, that it was impossible I could see what was upon it."

"But, though the shelf was so high above your head, you could have seen what was upon it, if you had stood upon the stool. Could you not?" said Godfrey.

"But the stool was not in the greenhouse."

"Could you not have gone for it?" said Godfrey.

"No, I could not," replied Rosamond; "because it was very hot, and mamma had just desired me not to run any more *then*, because I was too hot."

"Run! But could you not have walked, Rosamond?"

"No, brother, I could not; I mean, that if I had walked it would have done no good, because one of the legs of the stool is loose, and I could not have carried it; and, besides, it is very dangerous to stand upon a stool which has a loose leg. Papa himself said so, Godfrey; and the other day he told me not to stand upon that stool. Besides, after all, why should I have gone for the stool? How could I guess that the rose of the watering-pot was upon that high shelf, when I did not see the least glimpse of it?"

"Good excuses, Rosamond," said Godfrey, smiling, "and plenty of them."

"No, not good excuses, brother!" cried Rosamond; "only the truth. Why do you smile?"

"Well!—not *good* excuses, I grant," said Godfrey.

"Not excuses at all," persisted Rosamond. "I never make excuses."

Upon hearing this, Godfrey burst into a loud and uncontrolled laugh; and Rosamond looked more ready to cry than to laugh. She turned to her mother, and, appealing to her, said—"Now, mother, you shall be judge. Do I *ever*—I mean, do I *often*, make excuses?"

"You have only made seven, if I remember rightly, within the last five minutes," answered her mother.

"Then, mamma, you call *reasons* excuses?"

"Pardon me, my dear, I did not hear you give one reason, one sufficient reason. Now, Rosamond, you

shall be judge, and I trust that you will be an upright judge."

"Upright! that is honest. Oh, certainly, mamma?"

"Could you not have watered the geraniums without the rose of the little green watering-pot?"

"Why, to be sure, I could have used the red watering-pot, I own."

"Ah! ah! Now the truth has come out, at last, Rosamond!" cried Godfrey, in a triumphant tone.

His mother checked Godfrey's tone of triumph, and said, that Rosamond was now candid, and that therefore this was not the time to blame or laugh at her.

"Mother," said Godfrey, "I should not have laughed at her so much this time, if she was not always making excuses; and you know——"

Their mother was called out of the room before Godfrey could finish what he was going to say. He had said enough to provoke Rosamond, who exclaimed—

"That is very unjust, indeed, Godfrey! But, if ever I make a mistake, or do anything in the least degree foolish or wrong, you always say that I *always* do it."

"I *always* say so! No, that I deny," cried Godfrey, laughing—"whatever I may think, I do not always say you are foolish."

"You should not laugh at me, Godfrey, because I am candid—mamma said so. And I am not always making excuses."

"Well, Rosamond, because I am candid, I will acknowledge that you are not *always* making excuses; but I will lay you any wager you please, that no day passes, for a week to come, without your making half a hundred, at least."

"Half a hundred! O Godfrey! I am content!—What will you lay?"

"My head to a China orange," said Godfrey.

"I would not give a China orange for your head," said Rosamond; "besides, that is a vulgar expression. But I will lay you all my kings, Godfrey, against your world, that, far from making half a hundred, I do not make one single excuse a day, for a week to come."

"I take you at your word," cried Godfrey, eagerly

stretching out his hand ; " your kings of England against my joining-map of the world. But," added he, " I advise you, Rosamond, not to lay such a rash wager ; for you will be sure to lose ; and your kings are worth more than my world, because I have lost some portions of it."

" I know that ; but I shall keep my kings, and win all you have left of the world, you will see."

" Win my world !" cried Godfrey ; " no, no, Rosamond ! Listen to me ; I will not take advantage of you. I will allow you ten excuses a day."

" No, thank you, brother," said Rosamond ; " one a day is quite enough for me."

" You abide by your wager, then, Rosamond !"

" To be sure I do, Godfrey."

" Then we begin to-morrow ; for, you know, to-day cannot be counted, because you made seven in five minutes."

" I know that," interrupted Rosamond ; " to-day goes for nothing ; we begin to-morrow, which is Monday."

Monday came ; and so strict was the guard which Rosamond kept over herself, that she did not, as even Godfrey allowed, make one single excuse before breakfast time, though she was up an hour and a half. But, in the course of the morning, when her mother found some fault with her writing, and observed that she had not crossed the letter *t*, Rosamond answered :

" Mamma, it was the fault of the pen, which *scratched* so, that I could not write with it."

" An excuse ! An excuse !" cried Godfrey.

" Nay, try the pen yourself, Godfrey, and you will see how it scratches and sputters, too."

" But let it scratch or sputter ever so much, how could it prevent you from crossing the letter *t* whenever it occurs."

" It could ; because, if I had crossed these long letters with that pen, the whole page would have been speckled and spoiled, just like this line, where I did begin to cross them."

" Could you not take another pen, or mend this, or ask mamma to mend it ? Oh, Rosamond, you know this is an excuse !"

"Well, it is only one," said Rosamond; "and you know, that if I do not make more than one in a day, I win the day."

"There is a great blot," said Godfrey.

"Because I had no blotting-paper, brother," said Rosamond.

The moment she had uttered the words, she wished to recall them; for Godfrey exclaimed:—

"You have lost the day, Rosamond! there's another excuse; for it is plain you had blotting-paper on your desk. Look, here it is!"

Rosamond was ashamed and vexed; "For such a little, tiny excuse to lose my day!" said she; "and when I really did not see the blotting-paper. But, however, this is only Monday; I will take better care on Tuesday."

Tuesday came, and had nearly passed in an irreproachable manner; but, at supper, it happened that Rosamond threw down a jug, and, as she picked it up again, she said:—

"Somebody put it so near the edge of the table, that I could not help throwing it down."

This Godfrey called an excuse, though Rosamond protested that she did not mean it for one. She pleaded further, that it would be hard indeed if she were to lose her day for only just making this *observation*, when it must be clear to everybody that it could not be meant for an excuse, because the jug was not broken by the fall, and it was empty, too. Moreover, not the least mischief had been done to anything or any creature; and no one had even blamed her, so that, as Rosamond said, she had not had the slightest temptation to make an excuse.

This was all true, but Godfrey would not allow it.

That she had no temptation to make an excuse, Godfrey was most willing to grant; but he would not admit that it was therefore certain she had made none. On the contrary, he maintained that Rosamond was in the habit of vindicating herself even when no one blamed her, and when there was no apparent cause for making any apology. To support this assertion, Godfrey recol-

lected and recalled several instances in which Rosamond, days, weeks, and months before this time, had done that of which she was now accused.

"Well," said Rosamond, "it is only Tuesday; I will give it up to you, brother, rather than dispute about it any more."

"That is right, Rosamond," said her mother.

Wednesday came. Rosamond determined, that whenever she was found fault with, she would not say anything in her own defence; she kept this resolution heroically. When her mother said to her:—

"Rosamond, you have left your bonnet on the ground, in the hall."

Godfrey listened to Rosamond's reply, in the full expectation that she would, according to her usual custom, have answered:—

"Because I had not time to put it by, mamma;" or, "because papa called me;" or, "because somebody threw it down, after I had hung it up."

But, to his surprise, Rosamond made none of these her habitual excuses: she answered:—

"Yes, mamma, I forgot to put it in its place; I will go and put it by this minute."

Godfrey attended carefully to every word Rosamond said this day; and the more she saw that he watched her, the more cautious she became. At last, however, when Godfrey was not in the room, and when Rosamond was less on her guard, she made three excuses, one after another, about a hole in her gown, which she had neglected to mend.

"Mamma, it is not my fault; I believe it was torn at the wash."

But it was proved, by the fresh edges of the rent, that it must have been torn since it had been ironed.

Rosamond next said she had not seen the hole till after she had put the gown on; and then, she could not mend it, because it was so far behind.

"Could she not have taken the gown off again?" her mother asked.

"Yes, mamma, but I had not any thread fine enough."

"But you had cotton that was fine enough, Rosamond. Three excuses!"

"Oh, mamma! have I made three excuses?" cried Rosamond. "This day, too, when I took such pains!"

Godfrey came back, and seeing his sister look sorrowful, he asked what was the matter. She hesitated; and seeming very unwilling to speak, at last she said:—

"You will be glad of what I am sorry for!"

"Ha! then I guess what it is; you have lost the day again, and I have won it!"

Godfrey clapped his hands in triumph, and capered about the room.

"My world is safe! safe! I really thought Rosamond would have had it to-day, mamma!"

Rosamond could hardly repress her tears; but Godfrey was so full of his own joy, that he did not attend to her feelings.

"After all, it is only Wednesday, brother, remember *that!*" cried Rosamond. I have Thursday, Friday, Saturday, and Sunday to come; I may win the day and win the world yet!"

"Not you!" said Godfrey, scornfully—"you will go on the same to-morrow as to-day. You see, you have acquired such a habit of making excuses, that you cannot help it, you cannot cure yourself: at least, not in a week. So I am safe."

"So that is all you think of, brother; and you don't care whether I cure myself of my faults or not?" said Rosamond, while the tears trickled down her cheeks.

"You wish, indeed, that I should not cure myself. Oh, brother, is this right? is this good-natured? is this like you?"

Godfrey changed countenance, and after standing still, and thinking for a moment, said:—

"It is not like me; it is not good-natured; and I am not sure that it is right. But, my dear Rosamond! I do care about you, and I do wish you should cure yourself of your faults; only this week I wish—in short, I cannot help wishing to win my wager."

"That is very natural, to be sure," said Rosamond;

"but I am sorry for it; for we used to be so happy together, and now, you are always glad when I am sorry, and sorry when I am glad; and when I do most wrong, you are most glad. And all for the sake of keeping your paltry world, and winning my poor kings!"

"No, indeed!" exclaimed Godfrey, "it is not for the sake of the world, or the kings; for you know I would give you my world, or anything I have upon earth, Rosamond."

"Yes," said Rosamond, wiping away her tears; "I remember you offered me your world the first day you had it, but I would not take it, and I don't want it now; I would even give up my kings to you, if it was not for my wager. You know I cannot give up my wager."

"Nor I either!" cried Godfrey; "the wager is what I cannot give up; I must prove that I am right."

"And that I am wrong? Ay, there's the thing! you want to triumph over me, brother."

"And if I do, this does you a great deal of good, because you know you do not like to be triumphed over; therefore you take care not to be found in the wrong. Do you not see that, since I laid this wager, you have taken more pains than ever you did in your life before not to make excuses?"

"True!—It may do me good in that way, but it does not do me good altogether; because it makes me angry with you, and would make me, I do believe, dislike you, if it went on long."

"*Went on long*; I do not know what that means."

"If you went on laying wagers with me that I should do wrong. I do not think such wagers are good things. Now, I will ask mamma. Mamma has not said one word, though I am sure she has heard all we have been saying, because I saw her look up from her work several times at us both. Well, mamma, what do you think?"

"I think, my dear Rosamond, that you have reasoned better than you usually do, and that there is much truth and good sense in what you have said about this wager."

Rosamond looked happy. Godfrey, without seeming

pleased, as he usually did when he heard his sister praised, said—

“Mamma, do you really disapprove of wagers?”

“I do not say that I disapprove of all wagers,” replied his mother; “that is another question, which I will not now discuss: but I disapprove of this particular wager, nearly for the reasons which Rosamond has given.”

“But, mamma, do you not think that it did her good to try to cure herself of making excuses, and that my wager made her take great care? And, you know, if she were to dislike me because she was in the wrong at last, or because she lost her wager, that would still be her fault, the fault of her temper.”

“Let us, for the present, leave out of the question whose fault it would be, and tell me, my dear Godfrey, do you wish to make your sister dislike you?”

“Oh no, mamma! you know I do not.”

“Should you like a person who was glad when you are sorry, and sorry when you are glad? Should you like a person who rejoiced when you committed any fault, who did not wish you to cure yourself of your faults? Should you like a person who told you that you could not cure yourself of your faults, especially when you were trying to improve yourself as much as you were able?”

“No; I should not like a person who did all this. I understand you, mamma. I was wrong,” said Godfrey. “It was my eagerness about that foolish wager that made me ill-natured to Rosamond. I will give up the wager, though I really think I should win it; but I will give it up if mamma advises us to give it up.”

“I really think I should win,” said Rosamond; “but I will give it up if mamma advises us to give it up.”

“I do advise you to give up this wager, my dear children,” said their mother.

“So we will, and so we do,” said both Rosamond and Godfrey, running up to one another, and shaking hands.

“And I assure you, brother,” said Rosamond, “I will take as much pains to cure myself of making excuses as if the wager was going on; and my wager shall be with

myself, that I will make not a single excuse to-morrow, or the next, or the next day, and that every day I shall be better than I was the day before. You will be glad of that, Godfrey, shall you not?"

"Yes, with all my heart," said Godfrey.

"And that will be a good sort of wager, will it not, mamma? It will be a good sort of trial with myself, mamma."

"Yes, my dear child!" answered her mother. "It is better and wiser to endeavour to triumph over ourselves than over anybody else. But now let me see that you do what you say you will do; for many people resolve to cure themselves of their faults, but few really have resolution enough to do even what they say and know to be right."

Rosamond did as she said she would do. She took every day pains to cure herself of her bad habit of making excuses, and her brother kindly assisted her, and rejoiced with her, when, at the end of the day, she could say, with truth,—

"I have not made one single excuse to-day."

Godfrey, some time afterwards, asked his mother what her objections were to wagers in general. She answered,—

"I am afraid that you cannot yet quite understand my reasons, but I will tell them to you, and, some time or other, you will recollect and understand them. I think, that the love of laying wagers is likely to lead to the love of gaming, if the wagers are about matters of chance; or to the love of victory, instead of the love of truth, if the wagers relate to matters of opinion."

THE PARTY OF PLEASURE.

"A PARTY of pleasure! Oh, mamma! let us go," said Rosamond. "We shall be so happy, I am sure!"

"What! because it is a party of pleasure, my dear?" said her mother, smiling.

"Do you know, mamma," continued Rosamond, with-

out listening to what her mother said,—“do you know, mamma, that they are to go in the boat on the river; and there are to be streamers flying and music playing all the time? And Mrs. Blisset, and Miss Blisset, and the Masters Blisset will be here in a few minutes. Will you go, mamma; and may Godfrey and I go with you, mamma?”

“Yes, my dears.”

Scarcely had her mother uttered the word “Yes,” than Rosamond made a loud exclamation of joy; and then ran to tell her brother Godfrey, and returned repeating, as she capered about the room,—

“Oh! we shall be so happy! so happy!”

“Moderate your transports, my dear Rosamond,” said her mother. “If you expect so much happiness beforehand, I am afraid you will be disappointed.”

“Disappointed, mamma! I thought people were always happy on parties of pleasure; Miss Blisset told me so.”

“My dear, you had better judge for yourself than trust, without knowing anything of the matter, to what Miss Blisset tells you.”

“But, mamma, if I know nothing of the matter, how can I judge; and how can I possibly help trusting to what Miss Blisset tells me?”

“Is it impossible to wait till you know more, my dear Rosamond?”

“But I never went with a party of pleasure in my life, mamma; therefore I cannot judge beforehand.”

“True, my dear; that is the very thing I am endeavouring to point out to you.”

“But, mamma, you said, ‘Do not raise your expectations so high.’ Mamma, is it not better to think I shall be happy beforehand? You know, the hope makes me so happy at this present minute; and if I thought I should be unhappy, I should be unhappy now.”

“I do not wish you to think you shall be unhappy, my dear. I wish you to have as much of the pleasant feeling of hope at this minute as you can have, without its being followed by the pain of disappointment. And, above all,

I wish you to attend to your own feelings, that you may find out what makes you happy, and what makes you unhappy. Now, you are going on a party of pleasure, my dear Rosamond, and I beg that you will observe whether you are happy or not; and observe what it is that pleases you, or entertains you; for you know that it is not merely the name of a party of pleasure that can make it agreeable to us."

"No, not merely the name, to be sure," said Rosamond. "I am not so foolish as to think *that*; yet the name sounds very pretty."

Here the conversation was interrupted. A carriage came to the door, and Rosamond exclaimed,—

"Here they are, mamma! Here are Mrs. Blisset, and Miss Blisset, and her two brothers. I see their heads in the coach; I will run and put on my hat."

"I assure you, mamma," continued Rosamond, as she was tying the strings of her hat, "I will remember to tell you whether I have been happy or not. I think I know beforehand what I shall say."

Rosamond went with her mother, and Mrs. Blisset, and Miss Blisset, and the two Masters Blisset, on this party of pleasure; and the next morning, when Rosamond went into her mother's room, her mother reminded her of her promise.

"You promised to tell me, my dear, whether you were as happy yesterday as you expected to be."

"I did, mamma. You must know, then, that I was not at all happy yesterday; that is to say, I was not nearly so happy as I thought I should have been. I should have liked going in the boat, and seeing the streamers flying, and hearing the music, and looking at the prospect, and walking in the pretty island, and dining out of doors under the large shady trees, if it had not been for other things, which were so disagreeable that they spoiled all our pleasure."

"What were those disagreeable things?"

"Mamma, they were *little* things; yet they were very disagreeable. Little disputes; little quarrels, mamma, between Miss Blisset and her brothers, about everything

that was to be done. First, when we got into the boat, the youngest boy wanted us to sit on one side, and Miss Blisset wanted us to sit on the other. Now, mamma, you know we could not do both; but they went on disputing about this for half an hour; and Godfrey and I were so ashamed, and so sorry, that we could not have any pleasure in listening to the music or in looking at the prospect. You were at the other end of the boat, mamma; and you did not see or hear all this. Then we came to the island, and I thought we should be happy; but one of the boys said, 'Come this way, or you will see nothing;' and the other boy roared out, 'No, they *must* come *my* way;' and Miss Blisset insisted upon our going her way. And all the time we were walking, they went on disputing about which of their ways was the best. Then they looked so discontented, and so angry with one another! I am sure they were not happy ten minutes together all day long; and I said to myself, 'Is this a party of pleasure? How much happier Godfrey and I are every day, even without going to this pretty island, and without hearing this music or seeing these fine prospects! Much happier, because we do not quarrel with one another about every trifle!'"

"My dear," said her mother, "I am glad you have had an opportunity of seeing all this."

"Mamma, instead of its being a party of pleasure, it was a party of pain! O, mamma, I shall never wish to go on another party of pleasure! I have done with parties of pleasure for ever," concluded Rosamond.

"You know, my dear Rosamond, I warned you not to raise your expectations too high, lest you should be disappointed. You have found, that unless people are good tempered and obliging, and ready to yield to one another, they make pain, as you say, even out of pleasure; therefore, avoid quarrelsome people as much as you can, and never imitate them; but do not declare against all parties of pleasure, and decide that you have done with them for ever, because one happened not to be as delightful as you had expected it to be."

THE BLACK BONNET.

ROSAMOND, at this time, was with her mother, in London. One morning, an elderly lady came to pay her mother a visit. This lady was an old friend of her mother's; but she had been for some years absent from England, so that Rosamond had never before seen her. When the lady had left the room, Rosamond exclaimed,—

"Mamma! I do not like that old woman at all. I am sorry that you promised to go to see her in the country, and to take me with you; for I dislike her, mamma."

"I will not take you with me to her house, if you do not wish to go there, Rosamond; but why you should dislike that lady I cannot even guess; you never saw her before this morning, and you know nothing about her."

"That is true, mamma; but I really do dislike her; I disliked her from the first minute she came into the room."

"For what reason?"

"Reason, mamma! I do not know; I have no particular reason."

"Well, particular or not, give me some reason."

"I cannot give you a reason, mamma, for I do not know why I do not like the woman; but you know that very often—or, at least, sometimes—without any reason—without knowing why—we like or dislike people."

"*We!* Speak for yourself, Rosamond; for my part, I always have some reason for liking or disliking people."

"Mamma, I dare say I have some reason too, if I could find it out; but I never thought about it."

"I advise you to think about it, and find it out. Silly people sometimes like, or *take a fancy*, as they call it, at first sight, to persons who do not deserve to be liked; who have bad tempers, bad characters, bad qualities.

Sometimes silly people take a dislike, or, as they call it, an *antipathy*, to those who have good qualities, good characters, and good tempers."

"That would be unlucky, unfortunate," said Rosamond, beginning to look grave.

"Yes; unlucky, unfortunate for the silly people; because they might, if they had their choice, choose to live with the bad instead of with the good; choose to live with those who would make them unhappy, instead of with those who would make them happy."

"That would be a sad thing indeed, mamma, very sad. Perhaps that woman, to whom I took a dislike, or—what do you call it?—an *antipathy*, may be a good woman, mamma."

"It is possible, Rosamond."

"Mamma, I will not be one of the silly people; I will not have an *antipathy*. What is an *antipathy*, mamma?"

"A feeling of dislike for which we can give no reason."

Rosamond stood still and silent for some moments, considering deeply; and then suddenly bursting out laughing, she laughed for some time, without being able to speak. At last she said,—

"Mamma, I am laughing at the very odd, silly reason I was going to give you for disliking that lady; only because she had an ugly, crooked sort of pinch in the front of her black bonnet."

"Perhaps that was a sufficient reason for disliking the black bonnet," said Rosamond's mother, "but not quite sufficient for disliking the person who wore it."

"No, mamma; because she does not always wear it, I suppose. She does not sleep in it, I dare say; and if I were to see her without it, I might like her."

"Possibly."

"But, mamma, there is another reason why I disliked her; and this, perhaps, is a bad and unjust reason; but still I cannot help disliking the thing, and this thing she cannot take off or put on as she pleases. I can never see her without it, mamma: and this is a thing I must always dislike; and my knowing that this is the reason

that I dislike her does not make me dislike her *the least the less.*

“‘*The least the less!*’” repeated Rosamond’s mother: “by the accuracy of your language, Rosamond, I perceive how accurately you think, at present.”

“Oh, mamma, but this does not depend on thinking; this depends on feeling, mamma; I wonder—I have a great curiosity to know—whether you took notice of that shocking thing?”

“When you have told me what this shocking thing is, I shall be able to satisfy your curiosity.”

“Mamma, if you do not know it, it did not shock you, that is clear.”

“Not perfectly clear.”

“Then, mamma, you did see it, did you? And how could you help being shocked by it?”

“Will you tell me what you mean, Rosamond?”

“Then, mamma, you did not see it?”

“It, what?”

“When her glove was off, mamma, did you not see the shocking finger, mamma; the stump of a finger, and the great scar all over the back of her hand? Mamma, I am glad she did not offer to shake hands with me, for I think I could not have touched her hand; I should have drawn mine back.”

“There is no danger that she should ever offer to shake hands with you, Rosamond, with that hand; she knows that is disagreeable. If you observe, she gave me her other hand.”

“That was well done. So she knows it is disagreeable. Poor woman! how sorry and ashamed of it she must be.”

“She has no reason to be ashamed; she has more reason to be proud of it.”

“Proud of it! Why, mamma? Then you know something more about it. Will you tell me all you know, mamma?”

“I know, that she burnt that hand in saving her little granddaughter from being burnt to death. The child, going too near the grate, when she was in a room by herself, set fire to her frock, and the muslin was in

flames instantly; as she could not put out the flame, she ran screaming to the door. The servants came—some were afraid, and some did not know what to do. Her grandmother heard the child's screams, ran up stairs, and saw all her clothes and her hair on fire. She instantly rolled her up in a rug that was on the hearth. The kind grandmother did not, however, escape unhurt, though she did not at the time know or feel how much. But when the surgeon had dressed the child's burns, then she showed him her own hand. It was so terribly burnt that it was found necessary to cut off one joint of the finger. The scar which you saw is the mark of the burn."

"Dear, good, courageous woman! And what a kind, kind grandmother!" cried Rosamond. "Oh, mamma, if I had known all this! Now I do know all this, how differently I feel! How unjust, how foolish, to dislike her! And for a pinch in a black bonnet! And for that very scar!—that very hand! Mamma, I would not draw back my hand if she were to offer to shake hands with me now. Mamma, I wish to go to see her now. Will you take me with you to her house in the country?"

"I will, my dear."

THE INDIA CABINET.

It will be a great while before we come to the India cabinet. First, there are arrangements for several journeys to be made. Whoever has a clear head for these things, and who can understand, at first hearing it told, how various people intend to go and to come, and to meet upon the road, may, if they please, read the following page. Others had better skip it, because they certainly will not understand it.

Rosamond's father was, at this time, absent. He was gone to place Orlando at a public school, and he had taken Godfrey with him, that he might have the pleasure of the journey with his brother: but Godfrey was not to be left at the school, as he was not yet sufficiently prepared for it. He was to return with his father; and

his father, on his way home, was to call at his sister's house to bring back Laura: she had been for some time with her aunt, who had not been well.

Rosamond's mother in the mean time determined to go to Egerton Grove, to see the *lady of the black bonnet*; and Rosamond was now eager to accompany her.

Mrs. Egerton, for that was the name of the lady of the black bonnet, had also invited Rosamond's father and sister to Egerton Grove, and they were to meet Rosamond and her mother there on their way home.

Rosamond, with her mother, arrived at Mrs. Egerton's. With feelings very different with those with which she had seen Mrs. Egerton the first time, Rosamond now saw this lady; and, quite forgetting whether her bonnet was black or white, was struck with the old lady's benevolent countenance and good-natured smile. Mrs. Egerton introduced her to her granddaughter, Helen, the little girl who had been so much burnt. Rosamond, as soon as she had an opportunity, began to talk to Helen about that accident; and Helen told her the whole history of it over again, adding many little circumstances of her grandmother's kindness and patience, which increased Rosamond's present disposition to admire and love her. Not a day, and scarcely an hour, passed, but Rosamond liked her better and better; and with good reason, for not a day or hour passed without Rosamond's hearing something instructive or entertaining from this old lady, who was particularly fond of children, and who knew how to please and amuse without flattering or spoiling them.

One morning Mrs. Egerton took Rosamond into her dressing-room, where there was a large India cabinet. She opened the doors of this cabinet, and told Rosamond that she might look at all the contents of the twelve drawers of this cabinet. The first drawer which Rosamond opened was full of shells; and the first shell which caught Rosamond's attention was one which looked, as she said, like a monstrously large snail shell, about eight inches across, or as wide as the breadth of a sheet of paper. As she laid it down upon a sheet of letter-paper

which was on the table, it nearly covered the whole breadth of it. The shell looked as if it was made of thin, transparent white paper. It was a little broken, so that she could see the inside, which was divided into a number of partitions, or distinct cells. Of these she counted about forty, and through each there was a hole large enough, as Rosamond thought, to admit a pencil or a pen.

Mrs. Egerton told her that this was the shell of the nautilus.

"Ha!" cried Rosamond, "how glad I am to see the nautilus!

'Learn of the little nautilus to sail,
Spread the thin oar, and catch the driving gale.'

But how does the nautilus sail? Where is the thin oar? I do not see anything here like oars or sails."

Mrs. Egerton told her that what the poet calls the sails and the oars belong to the fish itself, and not to the shell. "You can read an account of the nautilus, my dear, in several books which, I dare say, your father has; and I believe I can show you——"

"Thank you," interrupted Rosamond, "but will you tell me just a little about it now, and I will look for the rest afterwards."

Mrs. Egerton then told her, that the nautilus is said to have eight arms or legs, whichever they should be called; and that its feet or hands are webbed, like a duck's foot. When the nautilus wants to sail, it sets up some of these arms above the water, and above the top of the shell, and it spreads out its wide webbed hands which serve for sails. Sometimes it sets up and spreads six of these sails at once, while two of its arms, which are longer than the others, serve for oars; and with these it rows itself on in the water.

"I wish I could see it!" cried Rosamond; "I wish I could see it rowing, and with all its sails up sailing away! Are these fish often seen sailing, and where are they seen?"

"In fine weather they are often seen sailing on the

Mediterranean sea; but when they fear a storm, or when they are in danger from any of their enemies, they instantly furl their sails—that is, draw them down—pull their oars into their shell, turn their whole shell upside down, and sink themselves below the surface of the water by a curious method.”

“How very convenient!” said Rosamond; “but what is the curious method?”

“When he wants to sink, the nautilus lets water into some of those divisions, or cells, which you see; and he lets in water till he and his shell, and the water in it, become altogether so heavy that they can no longer float on the sea. Then he sinks.”

“‘Then he sinks,’” repeated Rosamond; “that I understand—but how does he rise again? for how can he get the water out of his shell when there is water all round him?”

“It is said,” replied Mrs. Egerton, “that he has the power of pressing his body in such a manner into the cells, that he can expel, or push out, the water from them at pleasure; and the air in these cells being lighter than the water, he rises again, and comes to the surface of the sea. And in the same way, by letting water into the cells, or by filling them with air, he can make one side or the other, or one end or the other, of his shell heavier, so as to set it in any direction, with either side or end uppermost, just as he pleases; by these means he can *trim* or balance his boat with the greatest nicety.”

“How very happy he must be!” said Rosamond. “I wish men could learn, from the little nautilus, to make such a boat, as well as learn from him to sail. But what is this other shell, which has this tuft, or tassel, of fine silk sticking to it?”

Mrs. Egerton told her that this, which looked like silk, is called the *beard* of the fish that formerly lived in the shell. Of this silky substance, when it has been collected from a number of this kind of fish, fine and remarkably warm gloves and stockings have been made. “This animal,” said Mrs. Egerton, “has been called the *silkworm of the sea*. Its name is the pinna.”

On the slip of paper on which this name was written, Rosamond saw two lines of poetry, which she read, and of which she asked an explanation.

"Firm to his rock, the silver cords suspend
The anchor'd pinna, and his cancer friend."*

Mrs. Egerton told her, "that this fish fastens itself, by these silky threads, to the rocks, twenty or thirty feet beneath the surface of the sea; and it fastens itself so firmly, that fishermen, to pull it up, are obliged to use strong iron hooks at the end of long poles, with which they tear it from the rocks. It is called by the poet, 'the anchored pinna,' because it is fastened, or anchored, by these silken threads to the rocks, as a ship is fastened by ropes to the anchor."

"But what is meant by his '*cancer friend*?' " asked Rosamond.

"It is said," replied Mrs. Egerton, "that a sort of little crabfish, called cancer, who has no shell of his own, lives in the shell of the pinna, and is very useful to him in procuring him food, and in giving him notice when his enemy, the eight-footed polypus, is coming near. The cancer goes out of the shell to search for food. He has, I am told, remarkably quick eyes; and when he sees the polypus coming, he returns immediately into the shell of his friend the pinna, warns him of the danger, and instantly the pinna shuts his shell, and they are both safe, for the polypus cannot get at them when their shell is shut. I am told, also, that the cancer divides with his friend pinna all the booty, or food, which he brings home to his shell."

"How curious!" cried Rosamond. "I did not think that fish could be such good friends! But is this really true? are you certain of it? for I observe you said, 'I am told,' or, 'it is said.'"

"As I have not seen the cancer and pinna myself," said Mrs. Egerton, "I cannot be certain; I can only tell you what I have read and heard asserted by persons

* Botanic Garden, canto iii. line 67; and note xxvii. page 72.

whose truth I have no reason to doubt. When the poet speaks of friendship, you cannot suppose that friendship really exists between these fish; but there is some mutual interest, which makes them perform services for each other."

Rosamond found so many other curious shells, and had so many questions to ask about them, that she had scarcely time, during the morning, to look through the drawer of shells before the hour for her daily walk arrived.

"Oh, ma'am, you are looking at your watch! I am afraid you are going," said Rosamond. "And here is mamma coming to ask you to walk."

"Yes, I must go now," said Mrs. Egerton; "but I hope that I shall be able, to-morrow morning, to answer any other questions you may wish to ask."

Rosamond thanked her, but was very sorry that she was going. "I have looked over but one drawer yet, and I long to see some more; but then, if I look at them by myself, I shall not have half so much pleasure; all the pleasure of talking and hearing I shall lose. I shall forget, to-morrow, to ask the questions I may want to ask; and then I shall lose, perhaps, a great many such entertaining facts, mamma, as Mrs. Egerton has told me to-day. I wish she was not going out to walk; but perhaps if she stayed she would be tired of telling me these things."

"Most probably you would be sooner tired," said Mrs. Egerton, "of listening to them."

"Oh no," said Rosamond. "And yet," added she, "I know that listening to the most entertaining things for a very long time together does tire at last. I recollect being once tired of hearing Godfrey read the fairy Paribanon, in the 'Arabian Tales;' and yet *that*, all the time, entertained me excessively."

"Suppose, then," said Rosamond's mother, "that you were to divide your entertainment, and thus make the pleasure last longer."

"Mamma, I know you are going to advise me to shut this cabinet, and reserve the pleasure of seeing the other

drawers till to-morrow; but then I am so very curious, and I want so much to see what is in them."

"But if you put off the pleasure, it will be greater," said her mother. "Mrs. Egerton will be with you, and will tell you all you want to know, and you say *that* increases the pleasure; I think you said you should not have half the pleasure without her."

"Half! No, not a quarter, I am sure," said Rosamond.

"Then, Rosamond, the question is," said her mother, "whether you choose a little pleasure now, or a great pleasure to-morrow?"

Rosamond took hold of one of the doors of the black cabinet, as her mother spoke, as if she was going to shut it.

"Four times the pleasure, if you put it off till to-morrow, Rosamond."

Rosamond shut one door; but paused, and hesitated, and held the other open.

"Mamma, in that drawer, which is not quite closed, I see some beautiful little branches of red sealing-wax. Might I open that one drawer *now*?"

"No, no; you must make your choice, and be content."

"But, perhaps," said Rosamond—

"Finish your sentence, my dear, or shall I finish it for you—perhaps to-morrow will never come."

"No, no, mamma; I am not so foolish."

"Perhaps, then, you mean to say, that you cannot look forward so far as till to-morrow."

"Mamma, you know that, two summers ago, I learned to look forward about the blowing of my rosebud; and last year, I looked forward a whole twelvemonth about my hyacinths. Oh, mamma!"

"You were very prudent about the hyacinths; and were you not rewarded for it by having more pleasure than you would have had if you had not been prudent and patient?"

"Yes, mamma—but that was worth while; but I think it is not worth while to be prudent and patient, or to make such wise judgments and decisions, about every little trifle, mamma."

"I think, on the contrary, that it is very well worth while to be patient and prudent, and to make wise judgments and decisions even about trifles, because then we shall probably acquire the habit of being patient and prudent; and, when we come to judge and choose about matters of consequence, *we* shall judge and choose well."

Rosamond shut the other door of the cabinet, and, turning the key in the lock slowly, repeated, "'Four times as much pleasure to-morrow.' It is worth while, certainly; but, mamma, though I see that it is worth while, you know it requires some resolution to do it."

"That is true, my dear Rosamond. And the having or the not having resolution to submit to self-denials, and to do what is known to be best, makes the chief difference between foolish and wise people; and not only between the foolish and the wise, but between the bad and the good."

"Between the bad and the good, mamma! How can that be?"

"Yes, my dear. It is seldom for want of knowing what is right, but for want of having resolution to do it, that people become bad; for want of being able to resist some little present temptation, for want of being able steadily to prefer a great future to a little present pleasure."

Rosamond turned the key decidedly; "I shall always have resolution enough, I hope," said she, "to prefer a great future to a little present pleasure."

"Do so in trifles, my dear daughter," said her mother, kissing her, "and you will do so in matters of consequence, and you will become wise and good, and you will be the joy and pride of your mother's heart."

"And of my father's, mamma."

Well pleased with herself, Rosamond presented the key of the India cabinet to Mrs. Egerton, who desired her to keep it herself.

The next morning, at the appointed time, Mrs. Egerton was in her dressing-room, and Rosamond's mother was there also; and Rosamond opened the India cabinet, and

fully enjoyed all the pleasure she had expected, and all the advantage of Mrs. Egerton's instruction.

The first drawer she opened was that in which she had seen a glimpse of what she called *little trees of red sealing-wax*. They were each about a foot high, somewhat in the shape of branches of trees, without leaves; and having the appearance and colour of red sealing-wax. When Rosamond took up one of these branches, she was surprised to feel its weight; for it was much heavier than sealing-wax, or than a wooden branch of the same size would have been.

"Is it a vegetable? is it a stone? or is it made by men? and what is it made of?" said she; "or where does it come from? and what is it called, ma'am?"

Mrs. Egerton could not answer all these questions at once; but she began with the easiest, and answered, that it was called *coral*. Rosamond immediately recollected *the coral* which she had seen hanging round the neck of one of her little cousins, who was an infant. Then she repeated: "But what is it? or how is it made?"

Mrs. Egerton told her that people are not yet quite certain what it is; that it is found under the sea, generally fastened to rocks; that for many hundred years people believed it was a vegetable, but that within this last hundred years they believe it to be an animal substance—a substance made by little animals: it has been discovered that there are innumerable small cells in coral, which are inhabited by these animals; and it is supposed that the animals make these cells.

"It is supposed!" repeated Rosamond; "only *supposed*."

Rosamond was rather impatient of the doubtful manner in which Mrs. Egerton spoke; she wondered that people had been so many years *believing* wrong, and wished that somebody would decide. Rosamond, as she spoke, looked from Mrs. Egerton to her mother, and from her mother to Mrs. Egerton. But neither of them would decide. Mrs. Egerton said that she did not know facts sufficient; and Rosamond's mother said that if people would avoid being in the wrong, they must often have patience to

wait till they obtained more facts, before they attempt to decide.

Rosamond thought this disagreeable; but she said that, rather than be in the wrong, which was still more disagreeable, she would try to have patience. Rosamond shut the drawer of corals, and opened another drawer. This contained a set of Chinese toys—men and women rowing boats, or seeming to draw water in buckets from a well; or tumblers, tumbling head over heels down stairs, and performing various feats of activity. These toys were set in motion by touching or winding up some machinery inside, which was concealed from view. For some time Rosamond was amused so much by seeing their motions, that she could think of nothing else; but after she had seen the boatmen row the boat ten times round the table, and after she had seen the watermen pull up and let down their empty buckets twenty times, and the tumblers tumble down stairs fifty times, she exclaimed,—

"I wish I knew how all this is done! Oh, if papa were here! How I wish that my father and Godfrey were with us! Godfrey would delight in them, and I should so like to see his surprise? And my father would perhaps explain to me how they are all moved. And Laura! Oh! if Laura were here, how I should like to show her these strange drawings on these Chinese screens!" continued Rosamond, taking one of them in her hand and laughing. "They are very different from the nice tables and chairs in perspective which Laura draws! Look at those men and women sitting and standing up in the air as nobody ever could sit or stand! and the cups and saucers and teapot all sliding off that ridiculous table! Laura, my dear Laura, I wish you were here! Mamma, I have not nearly so much pleasure in seeing all these entertaining things as I should have if Laura, and Godfrey, and papa were looking at them with me. Mamma, when will they come?"

"They will be here next Monday, I hope, my dear."

"Three whole long days till Monday!" said Rosamond, considering seriously. "Mamma, do you know, I am

going to have a great deal of resolution : I shall put off seeing the rest of these things for three days, because I know I shall have so much more pleasure if I do ; and, mamma, I show you now, and always, whenever I have an opportunity, I will prove to you that I have resolution enough to choose—as you say Laura does—the great future pleasure instead of the present little pleasure. I am very curious about some things in those other drawers, but I will conquer my impatience ; and now I shut the doors of the India cabinet till Monday.”

Rosamond courageously closed the doors and locked the cabinet.

“Mamma, there is a sort of pleasure in commanding oneself, which is better, after all, than seeing Chinese tumblers or anything else.”

“I am glad you experience that pleasure, my dear, and I hope that you will often feel it : that is always in your power ; and this is more than can be said of most other pleasures.”

Rosamond occupied herself in several different employments during the three following days ; and they did not appear to be *long days*. Monday came ; her father, and Laura, and Godfrey arrived ; and she was very happy to see them, and they were all glad to see her. Several times, while they were talking of other things, and telling what had happened and what they had seen during their absence, she was going to begin a sentence about the India cabinet ; but her mother smiled, and whispered,—

“Not a good time yet, my dear.”

“So she waited with heroic patience till the happy moment came, when all had finished what they wished to say, and when they seemed as if they had nothing that they were particularly anxious to do.

“Now, mamma, is it a good time ?”

“Very good.”

Rosamond then asked them if they would come with her ; for she had something to show them. She led the way to the India cabinet, unlocked it, displayed to Godfrey’s wondering eyes the treasures it contained—made the boatmen row and the watermen work with

their buckets, and the tumblers tumble. She showed Laura the bad perspective, and told her the history of pinna and his cancer friend—asked her if she knew whether coral was a vegetable, animal, or mineral substance? Rosamond spoke and moved all the time with a rapidity that is indescribable, but not inconceivable to those who are used to lively children. Her mother and Mrs. Egerton, with some difficulty, found time to state what Rosamond had forgotten to explain; that she had deferred looking at the remaining nine drawers of this cabinet that she might have the pleasure of looking at them in company with Laura, Godfrey, and her father.

They were quite as much pleased and as much obliged to her as she had expected that they would be, and she was fully rewarded for her self-denial and patience. With Mrs. Egerton's permission, her father opened the Chinese boat, so as to show the inside; and he explained to her and Laura, and to Godfrey, who was remarkably fond of mechanics, how it was set in motion. It was moved by a common piece of clockwork, as a chamber clock is kept in motion by a spring, not by a weight. The tumblers were very ingeniously constructed. They held between them a little chair, supported by poles, like those of a sedan chair. At first they stood at the top of a flight of steps, and when the hindmost, or second figure, was once lifted up, he was instantly carried over the first or foremost figure, as if he jumped over his companion's head, between the chair-poles, to a step lower than that on which he stood. Without any further assistance, the first figure, which now became the hindmost, jumped in his turn over his fellow chairman's head, the poles turning, and the chair remaining steady; and so on to the bottom of the steps.

"How was all this performed?"

Each of the children guessed. Godfrey, as usual, decided immediately, and said it was done by a spring.

Rosamond said she was sure that the figures were not alive, and that the chairmen were neither magicians nor fairies; but this was all of which she was certain. Laura

acknowledged that she could not imagine how it was done.

Their father then told them that the *power* or *force* which set the figures in motion was, he believed, a little quicksilver or a grain of shot, which ran down the chair-poles, which were hollow. But how it continued to move the figures after the first tumble would be more, he thought, than he could make them understand till they were better mechanics. Rosamond was for the present quite satisfied.

The only thing this happy day which vexed Rosamond a little was Godfrey's saying that, though these Chinese toys were very ingenious, he did not think that they were of any great use; that his father had shown him some machines—large *real* machines—which were much more useful, and which, therefore, he liked better.

"Well! Let us go on, Godfrey, to the other nine drawers," said Rosamond.*

* * * * *

THE SILVER CUP.

WHEN Rosamond, Laura, and Godfrey were travelling home with their father and mother, they began to talk of the different people whom they had lately seen. They proceeded to describe them, and mention which of them they liked or disliked.

"Godfrey, pray what sort of a man is Orlando's schoolmaster?" said Rosamond.

"I do not know him well," said Godfrey, "for I only just saw him for a minute; papa stayed talking with him a great while, but I went off to the play-ground, because I wanted to see the boys playing at ball."

"I am sorry you did not see something of Orlando's schoolmaster," said Laura, "for I wished to know how you liked him."

"That I can tell you at once," said Godfrey; "to save trouble, I don't like him at all."

* The history of the other nine drawers of the India Cabinet has not yet been found.

"I do not see how that will save trouble," said Laura.

"It does save trouble," replied Godfrey; "it saves the trouble of long explanations. You, Laura, always ask WHY one likes, and WHY one does not like a person!"

"So much the better! Laura is quite right; is she not, mother?" cried Rosamond, starting forward from the corner where she sat.

"You need not disturb my mother about it," said Godfrey; "do you not see that she is busy reading her letters?"

"I will ask my father, then," said Rosamond, springing up, and stepping across to her father, who was sitting, reading the newspaper; but a sudden motion of the carriage threw her forward, and she fell with her nose upon her father's knee. Her father, putting aside his newspaper, helped her up, and advised her never to stand in a carriage without holding by something. Then he went on reading the newspaper; and Rosamond, not liking to interrupt him again, retired to her corner, whilst Godfrey laughed, and said—

"Rosamond, you have not gained much by that motion."

But Rosamond, knowing that she was, as she said, "for once in the right," and perceiving by Laura's countenance that Laura was of the same opinion, would not be laughed out of her reason. She brought forward the example of her own past folly in support of her present wisdom; and gave Godfrey an account of her "foolish antipathy, that is, *dislike at first sight*, without reason, to poor, dear, good Mrs. Egerton;" and repeated pretty correctly all that her mother had said to her upon that occasion.

"And now, Godfrey," concluded she, "only do consider how much I was mistaken, and how much I should have lost if I had not gone with mamma to see Mrs. Egerton. At first, do you know, I wished very much not to go, and begged mamma would not take me with her; but when mamma advised me to try to find out WHY I disliked her —"

"*Her!*" interrupted Godfrey. "Did you dislike mamma?"

"No, no; but Mrs. Egerton; you know very well; and when I could find no reason but the pinch in the black bonnet, and the poor scarred hand; and when I saw the one reason was so foolish, and when I heard the story about the fire, my opinion changed; and well it was for me that it did!"

"Well for you, indeed," said Godfrey; "but you were excessively foolish at first, my dear Rosamond. You don't think that I could be so foolish to dislike anybody for a pinch in a black bonnet? In the first place, I don't know what you mean by a *pinch in a bonnet*."

"May be not," said Rosamond; "but I dare say you might dislike a person yourself for no better reason."

"My dear Rosamond! Impossible! impossible! quite impossible!" repeated Godfrey, rolling backwards and forwards with laughter at the bare idea. "I dislike a person for a pinch in a black bonnet!"

"Well! what is your reason for disliking Dr. —, what is his name? Orlando's schoolmaster."

Godfrey repeated, in his own defence, four lines which he had learned from the schoolboys with whom he had been playing at ball; four lines, which, changing the name, most schoolboys think applicable to every schoolmaster:—

"I do not like you, Doctor Fell;
The reason why I cannot tell;
But this I know full well,
I do not like you, Doctor Fell."

Rosamond did not pursue the subject further till she had learned by heart these rhymes, which were new to her. Laura, however, thought the lines not worth getting by heart; and before this point had been settled, the attention of all the disputants was turned to another object. They came within sight of a large town, through which they were to pass; and their father said to their mother—

"We stop here; and while the horses are feeding, I think we can have time, my dear, to go to the cotton manufactory; and if we have, I shall like to show it to the young people."

"O, thank you, papa!"

"Pray do, papa!"

"I am sure you will have time!" exclaimed Laura, Godfrey, and Rosamond. Their father and mother determined to stay an hour longer than they intended, on purpose to give their children the pleasure and advantage of seeing what they could not see so well anywhere else; and what they might not again for some time have so good an opportunity of seeing.

"Now, Rosamond," said Godfrey, "you will see some really useful machinery; much more useful than those Chinese toys; but you must not expect to understand all about them; for, do you know that I do not understand half, nor a quarter of the things I saw in one of the cotton manufactories; and though papa explained a great deal to me, he told me still there was a great deal that I could not possibly understand yet, and a great deal that he does not understand himself. And at first when you go in, you will hear such a noise of whirling and whirring—*whirr—whirr—whirr*—and you will see so many wheels spinning round, round, and round, without knowing what moves them; then such numbers of pale-faced men, women, and children! such numbers everywhere, so busy, none of them thinking of, or caring for you! and there will be such a dust! and such disagreeable smells! and want of fresh air! and, Rosamond! you will not be able to hear a word that is said, nor to make anybody hear what you say, without bawling as loud as I do now."

Rosamond looked much alarmed, especially at this last danger, and she said,

"I am afraid to go; and I am sure I shall not understand anything. You are aware that I know nothing of machines, brother."

"Afraid! Oh, don't be afraid; I will take care of you. There's no danger, if you keep out of the way of the wheels, and don't touch anything about the machines. Hold fast by my arm," said Godfrey, drawing Rosamond's arm within his, "and I will take care of you, my dear Rosamond, and you shall understand everything, for I

will explain all to you—I mean, everything that I understand myself.”

His father smiled, and told Godfrey that was a good correction of his first assertion.

“After all, my dear,” said he, turning to his wife, “I think Rosamond is too young, and knows too little of these things, to be amused or instructed by going with us to the cotton manufactory. When I spoke of showing it to the young people, I thought only of Laura and Godfrey.”

Rosamond’s countenance changed, and she looked mortified and disappointed.

“Papa, do pray take Rosamond,” cried Godfrey; “she will understand something; and I will take such care of her, and it will be such a pleasure to me, papa.”

“And to me, too,” added Laura—“and, papa, Rosamond last summer saw cotton wool in its pod, or husk, on the cotton-tree in the hothouse; and she wanted to know how it was spun into cotton thread such as we use.”

Rosamond’s eyes were fixed upon her mother, and she waited anxiously to hear what her mother would say. Her mother said that she thought as Godfrey did, that Rosamond would be able to understand something, though perhaps very little, of what she might see; but that, however little she might be able to understand at first, yet it would be useful to Rosamond to see real things that might entertain her; because she was rather too fond of imaginary things, such as fairy tales, and stories of giants and enchanters; and it would be advantageous to give her a taste for truth and realities.

These reasons influenced Rosamond’s father, and he took her with them to the cotton manufactory.

At first going into one of the large rooms where the machines were, and where the people were at work, she felt nearly as Godfrey had foretold that she would—almost deafened by the noise, and dizzy from the sight of a multitude of wheels spinning around. The disagreeable smells, and dirt, and want of fresh air which Godfrey had described, Rosamond did not perceive in this manufactory; on the contrary, there was plenty of fresh air, and but

little dust: nor were the faces of the men, women, or children who were at work, pale or miserable; they had, indeed, a healthy colour, and their looks were lively and cheerful. This manufactory was managed by a very sensible, humane man, who did not think only of how he could get so much work done for himself, but also how he could preserve the health of the people who worked for him, and how he could make them as comfortable and happy as possible.

This gentleman, who was a friend of Rosamond's father, went to them as soon as he was informed of their arrival, and kindly offered to take the trouble of showing them the whole of his manufactory.

While this gentleman was speaking, Godfrey had carried Rosamond to the farthest end of the long room, to show her some part of the machinery. His father went after him, and brought them back; and as soon as they went out of this room, and away from the noise of the wheels, Godfrey said, "I have shown Rosamond a great many things already, papa;" but he answered—

"I advise you, Godfrey, not to drag your sister about to show her a variety of things so quickly; for if you do, she will have no clear idea of any one thing. I recommend you to come with us, and to keep as close as you can to this gentleman; to look at each thing as he shows it to you; to look at but one thing at a time; and to listen to every word he says."

"I will listen; but I am afraid I shall not be able to hear him," said Rosamond; "for though I tried to hear Godfrey, and though he roared in my ear, I could not make out half of what he said. I thought he said *hand* when he said *band*, and I could not see any hand, so I could not understand at all."

Rosamond found, however, that she could hear better after she had been a little accustomed to the noise; and that she could understand a little better when but one thing at a time was shown to her, and when she went on in regular order from the beginning, from that which was easy to that which was more difficult.

But presently they came to some part of the machinery

which Rosamond could not comprehend, though she looked, or tried to look, at but one thing at a time; and though she stuck close to the master of the manufactory, and listened to every word he said. Her father, who had been so intent on what he was about that he had forgotten Rosamond, chanced, however, to see her looking up, and listening, and frowning with the pain of attention; he touched her shoulder, and she started.

"My dear little girl," said he, speaking so loud that she could hear, "I was wrong to bid you listen to *all* this gentleman says; do not listen to this, you cannot understand it. Rest, and I will touch you again when there is anything to be heard or seen that you can understand."

Rosamond was right glad to rest her eyes, ears, and understanding.

From this time forward she looked and listened only when her father touched her shoulder, though Godfrey gave her many a twitch, and many a push by the elbow, to force her admiration of things which were beyond her comprehension. At last, when they had gone through the manufactory, Godfrey said—

"Now, Rosamond, you have missed seeing a great deal, I assure you; you had better just run back with me, and I will show you all that you have missed."

But to this her father objected; and she was glad of it, and quite of his opinion, that she had seen and heard enough already.

The hospitable gentleman, who had shown them his manufactory, now invited them to rest themselves, and to eat some fruit which he had prepared for them. Cherries—ripe cherries—strawberries, and cream, soon refreshed them; and when Godfrey had finished eating his fruit, he turned to Rosamond, and said—

"Rosamond, my dear, you have eaten your cherries, have you not? and you are quite rested; now I want to know whether you remember all you have seen and heard?"

"Impossible, Godfrey!" interposed her father; "you expect impossibilities from your sister; you forget what you were yourself at her age."

"It is so long ago," said Godfrey. "But, at any rate, I wish Rosamond would tell us all she remembers."

Rosamond blushed and hesitated, and said she remembered very little; but her father encouraged her by assuring her that he did not expect that she should remember much; that if she remembered anything distinctly, it would satisfy him, because it would be a proof that she had paid attention; and that was all, he said, that he expected from her. As he spoke, he drew her towards him, and seating her upon his knee, bade her begin and tell anything that she could clearly recollect.

The first thing which Rosamond said she clearly recollected seeing was a large quantity of cotton wool, which was not nearly so fine, or so white, or so soft, or so light, as some which she afterwards saw, which had been cleaned. The former had not been cleaned; there was a number of little seeds in it, and a great deal of dust; and the gentleman told them that the first thing to be done was to clean the cotton, and take out of it all the seeds and dust. This, he said, used formerly to be done by old women and children, who picked it as clean as they could; but they were a great while about it, and he had at last invented a way of doing it by a machine.

Here Rosamond paused, and Godfrey began with—"Don't you remember, Rosamond?"

But his father stopped him. "Give her time to recollect, and she will remember."

"There was a great noise and a great wind, papa, just at that time; and I do not recollect exactly how it was done."

"What cleaned the cotton, or how was it cleaned, my dear?"

"I don't know, papa; because I could not see the inside of the machine; and there was something about a door, a valve, and moving first in one direction and then in another *direction*; I never rightly understood about the direction."

"The word *direction* seems to have puzzled you; but let that alone for the present, and tell us simply what you saw."

"I saw a sort of large box, larger than this table, with an iron grating, like the grating of a fender, all over the top of it; and when I looked through this grating, I saw bits of cotton wool which appeared like flakes of snow driven about by a high wind; first blown up against the grating in one part, and then falling down at another part of the box."

"Was there any dust?"

"A great deal of dust was blown through the grating."

"Where do you think that dust came from, or what made it?"

"The dust came from the cotton wool, I believe; and it was blown out by the wind. But I don't know about the rising and falling; I do not know about the valve or the door."

While Rosamond spoke, Godfrey had pressed closer and closer, and bit his lip with impatience, and at last said—"Papa, do let me just ask her one question; it will not put her out; indeed, it will assist her in forming a clear conception of the process."

"Well, ask it, Godfrey, lest you should burst in ignorance," said his father.

"Did you never see a machine like it, Rosamond?" cried Godfrey; "I do not mean quite like it, because it is very different in some respects, but like it in general."

"No," said Rosamond.

"Recollect, my dear Rosamond! at home, last autumn, in the barn."

"Oh! now I recollect! for you have almost told me; you mean the winnowing machine. Yes; I thought of that once, but I was puzzled about the door."

"Let that alone, my dear," said her father. "Now you have told us all that you understand, or can recollect, of that machine, have you? Do you remember what is done next to the cotton?"

"Yes; it is combed out, and made smooth, and thin, and flaky—*carded*—but not as I have seen a woman card wool, with little flat boards with pins stuck upon them but with great large rollers with pins stuck upon them; and the pins, like the teeth of a comb, comb the cotton

that is drawn over them ; but I do not exactly know how. Then comes the spinning."

"Take breath; you shall have time; do not hurry yourself."

"I cannot recollect any more, papa; after this all is confusion. There was such a number of little wheels spinning, and large wheels underneath, and bands round them."

"My dear, it is impossible that you should understand the motions and uses of the motions of all those wheels; but, I dare say, you know the general purpose or use of them."

"Yes; to make the cotton wool into cotton thread; to spin it."

"And do you recollect the name of the spinning machine?"

"I remember that perfectly—*spinning Jennies*."

"Why was that name given to them; can you tell?"

"Because *Jenny* is a woman's name, you know; and Jenny, I suppose, spun; and when these machines were made to spin, instead of women, they were called *spinning Jennies*."

"Then cotton was formerly spun by women, and with spinning-wheels?" said her father.

"Yes, papa; so the gentleman said."

"And why, Rosamond, do they not continue to spin it in the same manner?"

"Because the spinning Jennies spin much more quickly. A woman moved with her foot and hands only one spinning-wheel, but these machines do the work of a hundred spinning-wheels at once in the same time. I saw them all in rows working, pulling the cotton out, and twisting it, just like so many spinning-wheels, only better and faster. How were they moved? That is the thing I don't know, papa! I could not understand how it was done, and I am tired now of trying to recollect."

"You have understood and recollected more than I expected that you could, my dear," said her father, "especially as you have not been used to such things. I am glad you have attended so carefully. It may not be ne-

necessary for you ever to understand perfectly the construction of these or of any other machines; but it is always useful, and will often be necessary for you, to command your attention, and to turn it to observe real things. Some other time, I will bring you here again, if this gentleman will give me leave, and if you wish to come yourself."

The gentleman kindly said that he should be glad to see Rosamond again, and that he would then try to explain to her anything she might wish to know.

Rosamond thanked this good gentleman, and was glad that her father was pleased with her. She said that, some other time, she should like to see the way in which the pretty little balls of cotton are wound; "That was what Godfrey was showing me, papa, when you called us away."

"I am glad I did call you away, my dear, because you could not have understood it, and Godfrey would only have puzzled you."

"Look, look, papa! look, mamma! out of this window!" cried Godfrey. "All the people are going from work; look, what numbers of children are passing through this great yard!"

The children passed close by the window, at which Godfrey and Rosamond had stationed themselves; among the little children came some tall girls; and, among these, there was one, a girl about twelve years old, whose countenance particularly pleased them. Several of the younger ones were crowding round her.

"Laura! Laura! look at this girl! what a good countenance she has!" said Rosamond, "and how fond the little children seem of her!"

"That is Ellen. She is an excellent girl!" said the master of the manufactory; "and those little children have good reason to be fond of her."

Rosamond and Godfrey asked "Why?" and the gentleman answered—

"It is a long story; perhaps you would be tired of hearing it."

But they begged he would tell it; and he complied.

"Some time ago," said he, "we had a benevolent clergyman here, who gave up several hours of his time every week to instruct the children in this manufactory. He taught them to read and write, and he taught them arithmetic; he taught them much more, for he taught them the difference between right and wrong, and explained to them the use of doing right, and its good consequences—the happiness that follows from it; and the evil and unhappiness that follow from doing wrong. He was so kind and gentle in his manner of teaching, that these children all liked him very much. At last, news came that this good clergyman was to leave the place. He had been appointed master of a large school, and a living was given to him in another county, at a considerable distance. All the children in the manufactory were sorry that he was going away; and they wished to do something that should prove to him their respect and gratitude. They considered and consulted amongst themselves. They had no money; nothing of their own to give, but their labour; and they agreed that they would work a certain number of hours beyond their usual time, to earn money to buy a silver cup, which they might present to him the day before that appointed for his departure. They were obliged to sit up great part of the night to work, to earn their shares. Several of the little children were not able to bear the fatigue and the want of sleep. For this they were very sorry; and when Ellen saw how sorry they were, she pitied them, and she did more than pity them. After she had earned her own share of the money, to be subscribed for buying the silver cup, she sat up every night a certain time to work, to earn the shares of all these little children. Ellen never said anything of her intentions, but went on working steadily, till she had accomplished her purpose. I used to see her, night after night, and used to fear she would hurt her health, and often begged her not to labour so hard; but she said—'It does me good, sir.' When she had completed her work, the wages were paid to her; and all the wages were paid to those who had worked extra hours—that is, hours beyond their usual hours of

working. A clerk was sitting at a table, to receive the subscriptions for the silver cup; and those who had earned their contribution went up proudly, one by one, and laid down the money on the table, saying,—‘Write down my name, sir, if you please; there is my subscription.’

“The poor little children who had nothing to give were sadly mortified, and stood behind ready to cry. Ellen went to them, and took them out of the room with her; and, without letting anybody see her but themselves, she put into their hands their share of the subscription money, that they might have the pleasure of subscribing for themselves.”

Everybody was pleased with this anecdote of Ellen, and were glad that they had seen her. Rosamond said, in a low voice, to her mother, that if Laura had been a poor girl in the same situation she would have done just as Ellen did.

Rosamond was going to say more, but her attention was now drawn to another subject. The master of the manufactory opened a desk, and produced the copy of the inscription which had been engraved upon the silver cup. Godfrey, into whose hand it happened first to be put, began to read it; but, the moment he saw the clergyman’s name, he laid down the paper and exclaimed—

“To Dr. Bathurst; that is the name of Orlando’s schoolmaster! Can it be the same Dr. Bathurst?”

Godfrey asked for a description of Dr. Bathurst, and he found it agreed exactly with that of the schoolmaster; and it was proved that the good clergyman and the schoolmaster to whom Godfrey had taken a dislike were one and the same person.

Rosamond and Laura looked at one another and smiled; and Rosamond could not forbear whispering,

“I do not like you, Doctor Fell;
The reason why I cannot tell——”

But Rosamond stopped; for she saw that Godfrey looked so much ashamed of himself, that she would not then laugh at him.

The carriage came to the door; and after thanking the gentleman who had received them so hospitably, and who had given up so much time to show them his manufactory, they took leave of him, and got into their carriage, and pursued their journey. As they drove on, they began to talk of what they had seen and heard; and, first, about Dr. Bathurst and the silver cup. In general, Godfrey was apt to think himself in the right; but when he was clearly convinced that he had been mistaken, he always acknowledged it candidly. He now confessed that he had been quite mistaken in his opinion of Dr. Bathurst; and that his disliking him merely because he was a schoolmaster, and because some schoolboys had repeated four nonsensical lines, was almost as foolish as Rosamond's dislike to Mrs. Egerton for *the pinch* in her black bonnet. Then Godfrey and Rosamond began to talk over the causes for liking or disliking every person they knew; and presently grew vehement in maintaining the justice of these causes, and the excellence of their several reasons.

"I like Mrs. Allen, because she is always cheerful," said Rosamond.

"I like Mr. Ormond, because he is so honest," cried Godfrey.

"I love Mrs. Ellis, because she is so good-natured," said Rosamond.

"I like Mr. Brooke, because he is always entertaining," said Godfrey.

Being cheerful, honest, good-natured, and entertaining, Laura, who was appealed to as judge, allowed to be good reasons for liking people; but when it came to the degrees of liking, and to the question, which ought to be most liked and esteemed, the case became more difficult. Laura presently began to make a catalogue of all the virtues, and, as well as the motion of the carriage would allow, she wrote them down in the order in which she thought they deserved to be placed; "and then," said she, "we can try all your favourites by our list." But the list was not soon arranged. It was easy enough to settle the names of the virtues; but it was difficult to

put them into their proper order. Truth and honesty Godfrey and Rosamond readily allowed to come first. But there was great debating about cheerfulness and neatness; and, "as for a person's being entertaining," Rosamond said, "that was no *virtue*," though she acknowledged she liked people for being entertaining. After talking long and loud, till at last they did not understand one another or themselves, they appealed to their father, and asked him if he could help them to settle their debate. Their father said, that they had, without knowing it, got into a very difficult question; "I am afraid that I cannot answer you, without going deeper still."

"Do then, papa, if you please," said Godfrey; "and I will follow you. I love to argue with Laura, because she will go deep; but Rosamond never will."

"I do not know what you mean by going deep," said Rosamond.

"Consider how young she is!" said Laura.

"Well! let us hear what my father was going to say. Which virtue should stand highest in our list, papa? which next, and so on?"

"The most useful, I think, should come first," replied his father; "and you might, I believe, arrange them all by their degrees of usefulness or utility."

"Useful! papa," cried Godfrey; "but are there not many virtues which are not at all useful?"

"Which are they?"

"Generosity, for instance," said Godfrey.

"If it be useless generosity, I think, it is no virtue," replied his father.

Godfrey thought again, but he could not name any virtue that was not useful.

"But, papa," said Laura, "it will still be very difficult to settle which is the most useful virtue. How shall we ever do that?"

"Deeper and deeper, indeed, Laura, we must go to determine that," said her father; "deeper than you can go, or I either; for we must know what contributes most to the happiness of the greatest number of people, and for the greatest length of time. Of this, my children,

you cannot judge till you have a great deal more experience and more knowledge."

"I am glad that is settled," said Rosamond; for they had long got beyond her depth, and she had been obliged to have recourse to looking out of the window for amusement.

"Now, mamma, will you tell me something very entertaining, which I heard the gentleman at the manufactory telling you, while I was eating my fruit—something about a girl's mistaking a bee for a cow?"

THE BEE AND THE COW.

"A GIRL, who mistook a bee for a cow! She must have been an idiot," cried Godfrey. "My dear Rosamond, there never could have been such a girl! This must be some great mistake of yours."

"Now, mamma, did I not hear that gentleman say so? Mamma, it is not a great mistake of mine, is it?" cried Rosamond.

"No, only a little mistake of yours, my dear Rosamond," answered her mother. "You did hear that gentleman telling me something about a girl, and a bee, and a cow; but you are not clear in the story."

"No; because of the cherries, which *distracted* my attention, as you say, mamma. Will you be so good as to tell us the story, and then I shall know it clearly?"

"The fact was simply this. A lady was teaching a poor little girl, who had been constantly employed in a manufactory, to read. And one day this child was reading in a book, called Harry and Lucy, an account of a girl's being stung by a bee. The child read badly, and as if she did not in the least understand what she was reading; and the lady said to her, 'I think you do not understand what you are reading.' 'No, madam, I do not.' The lady questioned the child further, and, from her answers, began to think that she had never seen a bee; and she asked the child whether she had ever seen a bee. The child answered, 'Yes, ma'am.' 'What is a bee

like ?' said the lady. The child answered, 'It is like a cow.'"

Godfrey, Rosamond, and even the sage Laura, laughed at this strange answer; and they wondered how it was possible that such an idea could come into the child's head.

"It was clear," Godfrey said, "that the child had never seen a bee;" but Laura did not think this was quite certain.

"The child," she observed, "might have seen a bee without having been told the name of it."

Laura recollected having heard her mother read, in the "Monthly Magazine," a letter from a lady, who described the ignorance of some children, either in a manufactory or a charity-school. It was said that they did not know the names of a hog or a calf, when the animals were shown to them.

"But why did the girl, when she was asked what a bee was like, say that it was like a cow?"

Godfrey and Rosamond thought that the girl said a cow, only because she had nothing else to say; because it was the name of the animal that first occurred to her.

Laura thought that there was some other reason for it. Her father said he believed he had discovered the reason; and Godfrey immediately begged that he would not tell, but that he would leave to them the pleasure of guessing or inventing it.

"I would willingly, my dear," said his father, "but that I believe you do not know a certain fact, which is absolutely necessary to be known, Godfrey, before you could guess or invent it. Some children, particularly some of the poorer class, are taught their letters in *picture books*, as they call them, where, to each letter of the alphabet, a little *picture*, or, properly speaking, some print, is joined, and the thing represented usually begins with the letter to be taught: as A, for *apple*; C, for *cat*. Now, I remember to have seen, in some of these little books, B, for *bull*; and the letter B stands at the foot of the picture of a *bull*. It is a vulgar saying, meant to express that a person is ignorant, *such a one does not know the letter B from a bull's foot*. This saying led me

to think of the cause of the child's mistake. And it appears to me that the sound of the letter, which is pronounced like the name of the insect, *bee*, was joined in the child's mind with the idea, or picture, of a bull or cow. Therefore, when she was asked what a *bee* was like, the recollection of a cow came into her head."

Godfrey, with some difficulty, understood this, and allowed it to be possible. Rosamond, who was eager to prove that the poor girl was not an idiot, comprehended her father's explanation quickly, and pronounced it very ingenious.

Still Godfrey maintained that the child must have been uncommonly silly, to have made such a mistake. This assertion of Godfrey's led Rosamond and Laura to recollect and to mention several odd instances of their own misunderstanding of things which they had read, or heard in conversation, when they were little children. Laura mentioned a passage in a story she once read, which appeared to her absolute nonsense, because it was badly punctuated, or because, in reading it to herself, she had stopped in the wrong place. The sentence was as follows:—

"Leonora walked on, her head a little higher than usual;" which, by one method of reading it, may represent Leonora as walking on her own head, and consequently being a little higher than usual.

"However absurd this mistake may seem to us now," said Laura, "I assure you it was really made."

"And not by an idiot, nor by a very silly child, neither," said her mother.

Rosamond next reminded Godfrey of a mistake which he had made, but which he could now hardly believe till both his sister and his mother joined in bearing witness, and in bringing the time and place to his mind.

"Godfrey, I remember perfectly," said Rosamond, "your telling me, you thought that there were two worlds; and that America was in the other, and not in this world; that is, not on this earth—not on this globe. And you thought so, because America is called the New World, and all other countries the Old World."

"It was a natural mistake for a child to make," said his mother; "and I dare say every child may recollect having made a hundred such. Sometimes, not till after people have grown up, do they discover the sense of what they learned when they were children. I can recollect lines of poetry, which I was obliged to learn when I was a child, and which, half my life afterwards, I never understood."

"Thank goodness!" cried Rosamond; "thank your goodness, mamma, we have none of us been forced to learn poetry which we did not understand."

"But are you sure, my dears, that you have not, without being forced to do so, learned by heart any poetry that you do not understand?" said her mother.

Rosamond answered by beginning to repeat her favourite little poem,

THE ROBIN'S PETITION.

WHEN the leaves had forsaken the trees,
And the forests were chilly and bare;
When the brooks were beginning to freeze,
And the snow waver'd fast through the air;

A robin had fled from the wood,
To the snug habitation of man;
On the threshold the wanderer stood,
And thus his petition began:

"The snow's coming down very fast,
No shelter is found on the tree;
When you hear this un pitying blast,
I pray you take pity on me.

"The hips and the haws are all gone,
I can find neither berry nor sloe;
The ground is as hard as a stone,
And I'm almost buried in snow.

"My little dear nest, once so neat,
Is now empty, and ragged, and torn;
On some tree should I now take my seat,
I'd be frozen quite fast before morn.

"O, throw me a morsel of bread!
Take me in by the side of your fire;
And when I am warmed and fed,
I'll whistle without other hire.

"Till the sun be again shining bright,
And the snow is all gone, let me stay;
O, see what a terrible night!
I shall die, if you drive me away!

"And when you come forth in the morn,
And are talking and walking around;
O, how will your bosom be torn,
When you see me lie dead on the ground?

"Then pity a poor little thing,
And throw me a part of your store;
I'll fly off in the first of the spring,
And never will trouble you more."

"I am sure I understand all this, mamma," said Rosamond; "and 'The poor Piedmontese and his Marmot.'"^{*}

So far, so good; but Rosamond went on to "Gray's Elegy in a Country Churchyard."

"Take care, Rosamond," said her mother; "you know I warned you that you could not yet understand it, when you wanted to learn it by heart."

"But the lines sound so very pretty, and Laura has them all by heart."

"But I never learned them by heart till I understood them; and I never understood them till they had been explained to me."

"I think I understand them well enough," said Rosamond.

"Begin, and let us hear," cried Godfrey.

"The curfew tolls the knell of parting day."

"What is meant by 'curfew?'—What is meant by 'tolls?' and what is a 'knell?' and what is meant by 'parting day?'"

"Godfrey, I cannot tell the meaning of every word; but I know the general meaning. It means that the day is going; that it is evening; that it is growing dark. Now let me go on."

"Go on," said Godfrey, "and let us see what you will

^{*} See Miss Lucy Aiken's "Poetry for Children."

do when you come to 'the pomp of heraldry;' to 'the long-drawn aisle and fretted vault;' to 'the village Hampden;' to 'some mute inglorious Milton;' and to 'some Cromwell, guiltless of his country's blood.' You! who have not come to Cromwell yet in the History of England!"

"Well, I give it up," said Rosamond, overpowered with all these difficulties; "but, at least, I know the meaning of

"The swallow twitt'ring from the straw-built shed."

"Oh, I grant you the swallow," said Godfrey; "but not 'the cock's shrill *clarion*.'"

"It means the cock's crowing, which is like a clarion, or trumpet."

"How came you to know that?"

"Because Laura told me."

"And now, Godfrey, you, who have been so severe upon your sister, do you understand all the poetry you have learnt by heart?" said his father.

"Try me," said Godfrey. He began with some lines from Pope's Homer, in Sarpedon's speech to Glaucus—

"Why, on these shores, are we with joy survey'd—
Admired as heroes, and as gods obey'd?"

He went on to—

"Brave, though we fall, and honour'd if we live;
Or let us glory gain, or glory give."

And though he was a little perplexed to explain the last line, yet he convinced his judges that he understood it; that he was master of the sense, and felt the spirit of the whole speech. Elate with this success, he cast a look of triumph upon Rosamond, and began, in a heroic tone—

"Ruin seize thee, ruthless king!
Confusion on thy banners wait;
Though fann'd by conquest's crimson wing,
They mock the air in idle state;
Helm, nor hawberk's twisted mail,
Nor even thy virtues, tyrant, shall avail."

"Gently, gently, my boy! Tell us, Godfrey," said his father, "who is this 'ruthless king,' and why is ruin to seize him? and what are 'banners?' how were they 'fann'd by conquest's crimson wing?' and what is 'helm or hawberk's twisted mail?'"

Fortunately for Godfrey, he had read carefully certain notes of Mason's to this poem; and he answered readily, that "the ruthless king" was Edward the First, who conquered Wales; and when he conquered Wales, had put all the Welsh bards, or poets, to death; that it was for this crime ruin was to seize him, though his banners, that is, the colours his soldiers carried in battle, were then victorious. "'Fanned by conquest's crimson wing,' was only another way of saying this," Godfrey observed. "Hawberk's twisted mail," he explained satisfactorily to be a kind of armour, made of rings of steel. Godfrey went on victoriously, showing that he knew all the kings of England and France, and all the facts in history alluded to in this poem. But, presently, as he went on with the poem, he came to a passage in which his historical notes gave him no assistance—

"No more I weep. They do not sleep :
On yonder cliffs, a grisly band,
I see them sit ; they linger yet,
Avengers of their native land :
With me, in dreadful harmony they join,
And weave, with bloody hands, the tissue of thy line."

Godfrey could not make any sense of this passage; he did not know who wept; who slept; who the grisly band were; what dreadful harmony they joined, or what they wove with bloody hands.

Moreover, it now appeared that Godfrey did not clearly know whether the person who had been speaking from the beginning of the poem till this moment was the ghost of a bard, or the bard himself.

"Ha! ha!" said Rosamond. "Even Godfrey, you see, does not understand all the poetry he has by heart."

"Who does?" said her father, smiling.

"Laura does, I dare say," cried Rosamond.

"I dare not say so," said Laura.

"Do, pray, let us see," said Godfrey. "Laura, what poetry do you know?"

"Very little," said Laura. Conscious of the difficulty, she began with more timidity than her younger brother and sister had done. She repeated first, from the "Rape of the Lock," the parody of that speech of Sarpedon's, which Godfrey had recited, beginning with—

"Why round our coaches crowd the white-gloved beaux "
and ending with—

"And trust me, dears, good humour can prevail,
When airs, and flights, and screams, and scoldings fail;
Beauties in vain their pretty eyes may roll,
Charms strike the sight, but merit wins the soul."

The lines she well understood, but she found it difficult to explain the nature of a parody. However, this difficulty was conquered; and her judges, even Godfrey, the most severe among them, admitted that she was not guilty of ever having learned any poetry by heart which she did not understand; but Laura herself could not allow this to be true. She at once surprised them all, and made them laugh, by confessing, that, when first she committed to memory Collins's "Ode to Evening," which begins with—

"If aught of oaten stop, or pastoral song,
May hope, chaste Eve, to soothe thy modest ear,"

she did not know the meaning of "oaten stop;" and she thought that "Eve" meant our first parent, instead of *evening*. At this strange mistake of Laura's, Godfrey laughed for some minutes. At last, Rosamond turned, with uncommon seriousness, to her mother, and said—

"Mamma, now I am quite convinced that it would be foolish in me to go on learning all the poetry which I happen to hear other people repeat; for, if Laura does not understand it all, how can I?"

"It is not only foolish to learn mere words, or merely pretty sounds, by heart, Rosamond," said her father, "there is another reason why it will be better to put off learning poetry till you can understand it; you will, if

you read it before you have the necessary knowledge, lose a great pleasure, which you may enjoy if you wait till that time. I can give you an example of what I mean. I will repeat to you a few lines, which describe something you have seen this day. I am not sure that you will understand them all; but I am sure that you will understand more of them to-day than you could have done yesterday. Before you had seen, or had any knowledge of the machine that is described, the lines could only have been nonsense to you, and could have given you no pleasure, except, perhaps, that arising from their harmonious, or, as you say, Rosamond, their *pretty* sound."

He then repeated the following lines:—

"With wiry teeth revolving cards release
The tangled knots, and smooth the ravell'd fleece :
Next moves the iron hand, with fingers fine,
Comes the wide card, and forms th' eternal line ;
Slow, with soft lips, the whirling can acquires
The tender skein, and wraps in rising spires ;
With quicken'd pace successive rollers move,
And these retain, and those extend the rove :
Then fly the spoles, the rapid axles glow,
And slowly circumples the labouring wheel below."

"The Spinning-Jennies; the cotton machine, papa!" cried Rosamond. "I understand and like a great deal in these lines, and all I understand I like."

Here Rosamond was interrupted by the postillion's stopping to ask which road they were to go.

THE HAPPY PARTY.

WHICH road should they go, was the question.

They had come to a place where three roads branched off from the main road; each of these roads led to objects that the young people wished to see. These were an old castle, with a beautiful park; a china manufactory; and a town, where there was a ropewalk.

Their father and mother said that they would go whichever way Godfrey, Rosamond, and Laura agreed in preferring; and they gave the young people five minutes to

decide, while their father took a sketch of a gateway which was within view. Godfrey immediately decided, "The rope-walk, then, the rope-walk! I vote for the rope-walk! Rosamond, don't you?"

"No, indeed," said Rosamond, "I would rather see the china manufactory than all the ropes in the world. Would not you, Laura? My dear Laura, you will vote for the china manufactory, will you not?"

"For my own part," said Laura, "if I were to say what I wish for most myself, it would be to see the old castle, and to walk in the beautiful grounds, and to see the fine conservatory; but——"

Before Laura could say another word, Godfrey and Rosamond both interrupted, exclaiming at the same moment—

"Conservatory! castle! park!—Is it possible, Laura, that you would rather see those foolish things than a rope-walk? than a china manufactory?"

"I would," said Laura, smiling; "I confess that I am so very foolish; but I do not call the rope-walk and china manufactory foolish things. On the contrary, if you will settle between you, Godfrey and Rosamond, which you choose, I will give up my wish and follow yours."

"Oh, that is very good-natured! thank you, Laura; thank you, dear Laura," said Rosamond; "you are always so ready to give up. Now, Godfrey, what pleasure can you expect in seeing ropes, dirty ropes, all smelling of pitch and tar?"

"The way of making them is very ingenious; and ropes are much more useful than china," replied Godfrey. "What paltry things are china cups and saucers compared with ropes! The nation, the royal navy, could not exist without ropes; consider that, Rosamond!"

"I have nothing to do with the royal navy," said Rosamond; "but I want to know how china teacups and saucers are made; they are used every day, and twice a day; and you do not think them such paltry things at breakfast or tea time, Godfrey; consider that too, Godfrey."

"Consider, Rosamond," whispered Laura, "that my

father has just finished sketching his gateway, and the five minutes are almost over; look at the minute hand of the watch; three minutes and a half are gone. If we do not agree and decide, we shall not go to see any of these things."

"And, *instead of a party of pleasure*, Rosamond," added her mother, "*it may turn out a party of pain.*"

These words brought instantly to Rosamond's recollection the disagreeable day she had passed with the Masters and Miss Blissets, who had disputed about every trifle. She also recollected her own resolution never to imitate them; so, turning to her brother, she said with a good-humoured smile:—

"Well, Godfrey, Laura has given up her choice to please us, and I will give up my wish to please you, and we will all agree to go to the rope-walk."

"No, no, my dear Rosamond," said Godfrey,—"no, no, my dear Laura, you shall not both give up your wishes to me, that would not be fair; let us draw lots."

"Here!" said Godfrey, holding up three slips of paper, "draw one of these out of my hand, each of you; whoever has the longest shall choose which way we shall go."

Laura drew the longest slip of paper; Godfrey and Rosamond smiled, and said she deserved it best, because she had been the most ready to yield.

"Laura has her wish, and we are both glad of it," said Rosamond; "and we agree, and are happy, mamma. We shall not dispute, like those foolish boys and that girl who turned pleasure into pain. I think, mamma, there is a sort of pleasant feeling in giving up instead of disputing."

Her father smiled, and holding out his hand to Rosamond, said,—

"That is right, my little girl."

"And trust me, dears, good humour can prevail,
When airs, and flights, and screams, and scoldings fail."

Rosamond was in such good humour with herself, that she doubly enjoyed everything she saw and heard.

"My dear Godfrey, look at those honeysuckles in the

hedge! did you ever see such fine honeysuckles? and did you hear that bird? I do believe it was a nightingale."

"No, it was only a robin; but a robin, when people are inclined to be pleased, sounds sweeter than a nightingale when people are not disposed to be satisfied."

"Now, Laura, we are come within sight of the castle; look out of this window—here—you can see it best," said Rosamond; "and do you know, Godfrey, you will see a drawbridge and hear a gong?"

"Indeed!" said Godfrey, "then I do not regret the rope-walk."

When they arrived at the inn, their mother ordered dinner to be got ready as soon as possible; and they dined as quickly as they could, that they might have the more time to walk and see the castle. When they had finished their meal, they walked to the castle. Godfrey's object was to see the drawbridge, and hear the gong; Rosamond's to run up and down the terrace, and to discover where the walks led to in the grounds. Laura wished particularly to have time to see the conservatory; and their father and mother desired to look, while there was yet light enough, at the architecture of the castle, and at several fine pictures which were in some of the rooms. Now, it was impossible that each person's wish could be gratified at the same moment without a separation; but by each yielding a little, and all being desirous to accommodate and give pleasure to one another, the pleasures of all were secured and increased. First, they looked at the outside of the castle. Godfrey and Rosamond had never before seen a Gothic castle. Their father told them what was meant by Gothic architecture; and, as they passed through a gallery of prints, he showed them prints of Grecian and Roman buildings. Then he left them, and went to look at the pictures. Rosamond and Godfrey were too young to have much taste for paintings; but, instead of being impatient till their father and mother had finished examining the pictures, they amused themselves by looking at some prints of celebrated persons, with which one gallery was hung.

Presently their father and mother returned to the

gallery where they had left Godfrey and Rosamond, and said that they were now ready to go back with Godfrey to the drawbridge. His father added, that he would show him how it was constructed, and how it was moved. In going there Rosamond had a fine run upon the terrace, and Godfrey ran a race with her; she, in return, had the complaisance to stand quite still, and to attend when he wanted her to look at the drawbridge. Then they went on to Laura's object, the conservatory. Godfrey had no great wish to go, for he said he hated to look at ugly plants, with long, hard names, upon which some people seemed to set a great value, he did not know why; however, as Laura wished to see this conservatory, he would go with her; and he would not laugh at her, nor call the plants wretched weeds, because she had been so good-natured to him as to stay in the gallery of prints on purpose to tell him the names and histories of some of the celebrated portraits. He knew that Laura all that time would rather have been with her father and mother looking at the paintings.

They had a pleasant walk through the park to the conservatory. This conservatory was not filled with ugly-looking plants, with long, hard names. Some of the flowers and shrubs were so beautiful, both in form and colour, that they charmed even Godfrey; and he found so many of which he wished to speak, that it became rather convenient to him to know their names, instead of calling one the great red flower, or the little blue flower, or the beautiful white *thing*. There were so many red, blue, and white flowers, that, without a more particular description, no one could, with their best endeavours, understand which he meant; and to describe the whole flower or shrub accurately every time he wanted to speak of it would have been rather troublesome.

In this conservatory there were several plants which Rosamond and Godfrey had never seen before, and which they had often wished that they could see.

"Oh, Godfrey, here is the tea-tree! and here is the coffee-tree! look here, with its beautiful scarlet berries! and the sago-tree, Godfrey!"

"But, Rosamond, come this way!—make haste, run!" cried Godfrey.

Rosamond ran; but when she came opposite to the plant to which her brother was pointing, she stood still, disappointed.

"I see nothing, brother, that is pretty."

"No, but you see something that is useful; or, at least, that was very useful formerly. This, papa says, is the papyrus, or *paper rush*."

"Very likely," said Rosamond; "but I see nothing like paper, nor like a rush."

"It is not like the little rushes you have seen in the fields, Rosamond; but papa told me that it is a kind of rush, and it grew originally on the banks of the Nile, in Egypt, you know."

"Yes, I know the Nile is a river in Egypt."

"And the Egyptians used to write all their books upon it, and all that they wrote, because they had no such paper as we use now."

"Very likely," said Rosamond; "but I cannot imagine what part of it they wrote upon, or how they wrote upon it."

"Papa told me all about it, and I will explain it to you, my dear. Look at this stem of the plant; it is composed of thin leaves, laid, as it were, one over the other. It was on these they wrote; of these, when unfolded, that they made their paper. They cut off the top of the plant and the root, which were of no use; and, with a sharp knife, they separated these leaves or rinds of the stem, and flattened them, and put one over the other, crosswise, so that one leaf lay breadthwise, and the other lengthwise; and stuck them together with the muddy water of the Nile, or with a sort of paste; and then the leaves were dried, and pressed with heavy weights; and sometimes they were polished by rubbing them with a smooth stone."

"Rub as they would," said Rosamond, "they could never make it into such nice paper as ours; they could not make it white."

"No; but it was better than none. The Romans used to write upon it a great while after the Egyptians."

"And how could they write with a pen and ink upon this leafy paper?"

"They wrote with a hard sort of pencil, that made marks on the papyrus."

In return for all this information about the papyrus which Godfrey was proud to be able to give her, Rosamond, with equal eagerness, told him all she had heard from her mother about the tea-tree. She told him that the leaves are rolled up over hot plates and dried; and that Chinese people fan the leaves with large fans, whilst they are being dried. Rosamond was surprised, she said, at the difference between the leaf of the tree and the tea, which she saw every day put into the teapot; but she recollected having seen the leaves unrolled and unfolded in the hot water; and she and Godfrey determined to look at them more particularly this very evening. Laura next took them to look at the coffee-tree and the cocoa-tree. From the nuts of the cocoa-tree, she told them, both cocoa and chocolate are made; "and the berries of the coffee-tree, when roasted, make the coffee, of which you are so fond, Godfrey."

Godfrey was glad to see the coffee-tree, and proud to tell Rosamond something more that he knew, or rather that he had heard, about coffee; "that monks used to drink it to keep themselves awake; and that they had learned the knowledge of the power which coffee has to keep people awake from a goatherd, or keeper of goats, who had observed that whenever his goats browsed upon the leaves of the coffee-tree, they became unusually wakeful."

Laura was considering whether this was likely to be true or not; and she was just going to ask whether it was certain that the leaves of the coffee-tree have the same effect as the berries have; but she forgot her doubts and her question, for the master gardener, who had the care of the conservatory, came towards them, and began to talk to Godfrey. Finding that these young people were intelligent and eager to acquire knowledge, he was, as he said, ready to give them any information in his power. Rosamond asked him where the coffee-tree came from first.

He answered, that some travellers say that it was originally found in Abyssinia; but that he believed it was first brought into Europe from Arabia; that the Turks drank the beverage long before it was known in Europe; and that it was first brought into France by some French gentlemen who had been to Constantinople.

"Constantinople! that, you know, is the capital of Turkey," whispered Godfrey to Rosamond.

"I know that very well," said Rosamond. "But, sir, how long is it since coffee was first brought to England?"

"In the time of Charles the Second, miss."

Rosamond had not yet got so far in English history as the reign of Charles the Second; but Godfrey had read it, and he told her that it was nearly two centuries ago.

Her father, who heard what was said, told Rosamond, that, about forty years after coffee was brought to England, some magistrates of Amsterdam ——

"Amsterdam!—that is the capital of Holland," said Rosamond.

"Some magistrates of Amsterdam procured some coffee-plants from berries, which had been originally procured from Mocha, in Arabia Felix ——"

"Mocha!" interrupted Godfrey, "that is the reason some coffee is called Mocha coffee."

Rosamond looked back at Laura, as much as to say, "I do not know where Mocha or Arabia Felix is."

Laura whispered, "I will show you where they are, on the map of Asia, when we go home."

"And these Dutch magistrates," continued her father, "sent a present of a fine coffee-tree, in full bearing, that is, with ripe fruit upon it, as a present to Louis the Fourteenth."

Rosamond looked puzzled again.

"Louis the Fourteenth, king of France," said Godfrey.

"From the berries of this tree other coffee-trees grew; and, about four years afterwards, several young coffee-trees were sent from France to Martinico, one of the West India islands. The voyage was long, and the weather not favourable, and all the plants died except

one. The people in the ship were at last reduced to such distress for want of water, that each person had only a very small quantity every day. The gentleman to whom the coffee-tree had been intrusted divided his share of water every day into two parts, and he drank but one half of his allowance himself, and gave the other to the tree, of which he had the charge. The tree was saved; he brought the plant, which had been committed to his care, safely to Martinico, where it grew and flourished; and from this one plant that whole island, and afterwards all the neighbouring West India islands, were supplied."

Rosamond was delighted with this man's care of the tree which had been intrusted to him; but her pleasure in hearing what her father told her was a little lessened by the shame she felt at being ignorant of several things which Godfrey knew very well, and which he seemed to think she ought to know. However, when he saw what she was thinking of, he, in a good-natured manner, drew her to another part of the greenhouse, and whispered to her,—

"It is very easy to learn all that, Rosamond; and I have a nice *wee-wee* history of England and of France, that I bought with my grandmother's crown, on purpose for you. I have them in papa's coach-seat, and you shall have them as soon as we get to the inn. I can tell you they are bound in red morocco, and not much larger than mamma's little red pocket-almanack; and they have prints—a great many prints!"*

It was now growing late and dusk in the evening, and they had time only to look at the sensitive plant—the mimosa. They saw it close; and it seemed to shrink from contact with anything. Laura wished to remain a little longer with the mimosa; but she knew that if she did, there would not be time for Godfrey to hear the gong sounded, which he and Rosamond very much wished to hear. So Laura, ever ready to resign her own wishes for the sake of giving pleasure to her brothers and sister,

* Pictures of England, designed by Alfred Mills, printed for J. Harris. See Messrs. Routledge's Catalogue for several works of this description.

left the conservatory, and walked as fast as she could back to the castle with Godfrey and Rosamond, who thanked her as they went, and pronounced that "she was one of the most good-natured sisters that ever was born."

They heard the gong till all but Godfrey said they had had enough of the sound.

"Mamma," said Rosamond, "I am sure you are tired of hearing this loud noise. Now, Godfrey, do not ask to have any more of it."

Godfrey stopped the hand of the man who was going to strike the gong again.

"Mamma," how very different this party of pleasure has been from the *ill-humoured party!*" said Rosamond; "we have all been good-humoured; have we not, mamma? We have not disputed, nor wanted to have everything our own way. I am sure if those quarrelsome children—you know whom I mean, mamma—had been with us, they would have quarrelled about every trifle; and they would have spoiled the pleasure of seeing the castle, and the drawbridge, and the tea-tree, and the cocoa-tree, and the coffee-tree, and the gong, just as they spoiled the pleasure of going on the water and hearing the music. Ours has been really a party of pleasure, mamma; a happy party! Good night, mamma."

As Rosamond was going out of the room, she heard her father say to her mother—"How easy it is to entertain children who are good-tempered, and who have some taste for knowledge; and how difficult it is to make children happy who are ill-humoured, and who have no taste for anything but eating, and drinking, and *idling!* With such children it is impossible to have a happy party."

WONDERS.

"ROSAMOND, if you are sleepy, you had better go to bed," said her mother to Rosamond, who was yawning and stretching herself one morning soon after breakfast.

"To bed! mamma, at this time! Oh no, I am not sleepy, I am only tired."

"Tired of what, Rosamond?"

"I really do not know what makes me feel so very much tired, as I do this morning. I suppose it must be my journey yesterday and the day before."

"But you were not tired last night, nor the day before yesterday, though you had been travelling, and walking, and running, and taking a great deal of exercise."

"That is true; but one does not always feel tired just at the time. Sometimes one feels tired afterwards."

"How does it happen that Laura and I are not tired, nor your father, nor your brother? The journey was the same for all of us. Are you ill, Rosamond?"

"Not that I know of, mamma. Why should you think that I am ill?"

"Because you do not seem to be able to do anything. You have done nothing but lounge from window to window, from table to table, leaning on both your elbows, and yawning, this half-hour."

"I suppose I must be ill. I do not know what is the matter with me. Mamma, I am so very, very——"

"Lazy."

"No, not lazy, mamma."

"Idle, then."

"Because I have nothing to do, mamma."

"Have you not all your usual employments, Rosamond?"

"Employments, mamma! You mean that I have not done my sum, nor read French or English, nor written. No—but then I meant——"

"You meant, perhaps, that you have nothing that you like to do."

"That is just the thing, mamma."

"But you used to like all these employments, Rosamond."

"So I did, mamma; and so I do," added Rosamond, yawning again as she spoke.

"So it seems, Rosamond."

"I do, really, only just this morning—I do not like to set about anything; and I do not know why everything seems dull."

"Shall I tell you why, Rosamond?"

"If you please, if you can, mamma; and if you are not going to say that it is all my own fault."

"I am not going to say that it is all your fault, Rosamond; it is partly mine, and partly nobody's."

"Well! my dear mother, begin with the part that is nobody's fault; and then tell your part; and, last of all, mine, if you please."

"After having been unusually entertained and interested, it is natural, Rosamond, to every human creature, as well as to you, to feel as you do now—worn, you do not know why—not inclined to like your common employments—and unwilling to exert yourself."

"But this is no fault of mine, mamma, you say."

"The feeling is no fault, my dear; but not trying to conquer it would be a fault, and the punishment would be——"

"Oh, mamma, before we go to that," interrupted Rosamond, "tell me the next part, which you said was your fault."

"It was my fault, Rosamond, I believe, that I gave you too much entertainment for some days past. You had so much amusement when you were at Mrs. Egerton's, and when you were travelling with us, that it has made home and your common employments seem dull and tiresome to you; and since I find this to be the case, I must take care not to let it happen again; for you know, my little daughter, I must not make you discontented with home, where you are to live; and I must not disgust you with your common employments, else you would never do or learn what is useful; and you would grow up a helpless, ignorant, wretched creature."

"Instead of growing up to be like Laura," said Rosamond. "Mamma, I will not yawn any more; I will conquer my laziness, or my idleness, whichever it is, and I will do something useful, as Laura does; and I know, mamma, that when I have done *my little duties*, as you call them, I shall feel better satisfied. I recollect my old *day of misfortunes*, mamma, when I was a little child. I remember how much better pleased I was after I had

conquered myself; so no more yawning. Laura, will you mend a pen for me? Mamma, will you set me a sum? a difficult sum, you may now, for I am in earnest!"

In earnest Rosamond set about her little duties, and in time accomplished them all, and enjoyed the satisfaction of having conquered her inclination to idleness, and of having earned her mother's and her own approbation.

It was a rainy day, and as Rosamond could not go out, Laura, with her usual good-nature, complied with her request to play at battledore and shuttlecock with her. But this could not last all day; and before the morning was over, Rosamond began to feel some returns of her old complaint, and another fit of yawning came on.

"Because, mamma," she said, "Godfrey has been so long at his Latin lessons, or in the workshop with his tools. May I go and see whether he can come now, and swing me?"

"You may go, if you please, my dear; but you know that your brother said that he would come as soon as he could."

Rosamond went, nevertheless, and returned with a disappointed countenance. "He cannot swing me yet, mamma; he has something to do first."

"I am sorry for it, my dear—no—I mean that I am sorry you have nothing to do."

"Oh, mamma! if I had but the India cabinet here!—some of those curiosities, and wonderful things, and animals from other countries, then I should have amusement enough this rainy day."

"Rosamond, though there is no India cabinet here, and no wonderful things from other countries, yet there are, even in this room, many curious things, and wonderful animals, with which you are not acquainted, and which might afford you amusement enough this rainy day."

"Curious things! where are they, mamma?" said Rosamond, looking round—"there's nothing new in the room, nothing that I have not seen a hundred times. Wonderful animals!—mamma, there is not an animal in the room, but you, and Laura, and myself."

"Look again, Rosamond."

Rosamond looked under the sofas, and under the tables, and under her mother's gown, and under Laura's.

"Mamma, I have looked again, and there is no animal of any kind; not a dog, a cat, nor even a mouse."

"And are there no animals, but dogs, and cats, and mice?"

Rosamond saw Laura smile, and look towards the window.

"A fly! Oh, I see what you mean now, mamma. A fly is an animal, to be sure; but what is there wonderful in a fly?"

"There are more wonders in a fly's wing, a fly's eye, and a fly's foot, little as you may think of a fly, Rosamond, than you could comprehend or I explain in a whole day."

"Indeed!" said Rosamond, looking at the fly with an incredulous countenance. "Come upon my finger, fly," added she, going to the window, and holding her finger for the fly to walk upon. "There! walk upon my hand, and let me look at you."

"You may look at him, yet without seeing all the wonders, I speak of, Rosamond."

"Why, mamma, how did other people see them? and have I not eyes, mamma, and good ones, as you sometimes say?"

"You have, my dear; but, however good they may be, they cannot see as much as eyes can with certain helps."

"Spectacles, do you mean? Do you know," said Rosamond, "I never could see well with spectacles."

"Very likely, my dear; but I am not speaking or thinking of spectacles."

"What can you be thinking of then, mamma? Oh! what papa has in the study. You know its use, Laura."

"A microscope, do you mean?"

"Yes, a microscope, a solar microscope. I will run and ask papa this minute to lend it to me," cried Rosamond.

"Stay, Rosamond; he is probably busy, and cannot give up his time to fix it for you."

"But papa is so very good! I dare say he will, mamma, if he is not *terribly* busy. Just let me run and ask him, mamma."

"Listen to me, and shut the door; there is not sunshine enough to-day for the solar microscope."

"Solar! ay, I remember Godfrey's telling me *solar* is *of or belonging to the sun*."

"It is a pity it is a rainy day," continued Rosamond; "but a gleam of sun came out just now—perhaps it will peep out again."

"In the mean time," said Laura, "if you like it, I can show you, Rosamond, some of the *wonders of the microscope*, the pictures of some of the things and insects that have been seen magnified in a solar microscope."

"Yes do, pray, Laura; you are always so good! and you know where everything is."

Laura took down from the shelf a thin folio book.

"What book is it? What is it called?"

"It has a long name, which, perhaps, you will not be able to pronounce; but, though it has a hard name, the book is easy to understand," said Laura. "I used to love looking at it when I was your age, and I love it still."

"But what is its name?" said Rosamond, looking at the back: "Hook's Microg."

"The name is not all printed on the back; look at the title-page," said Laura, "the first page, you know. Here it is! I will read it for you: 'Hook's Micrographia Restaurata; or, the Copper Plates of Dr. Hook's Wonderful Discoveries by the Microscope, *reprinted*—'"

"I don't care for that," interrupted Rosamond, "miss about *reprinted*—"

"And fully explained."

"Ha! fully explained! I am glad of that, particularly if it be true," said Rosamond. "Now for the pictures."

"Prints they are. Here is the print of the sort of fly you were looking at just now—a bluebottle fly."

"But, my dear Laura! this cannot be meant for the

picture of a fly, or the print of a fly, for it is almost as large as a bird, as a robin. Look, mamma!"

"The fly was magnified, that is, made to look large, by the magnifying-glasses in the microscope in which it was seen," said her mother.

"But you have a magnifying-glass, now I recollect. Will you lend it to me for one minute?"

Her mother unlocked her writing-desk, lent Rosamond a magnifying-glass, and she immediately ran to the window, and caught the fly.

"It won't stand still for me to look at him. There, now he is quite still—his wing! I see all the parts of it so plainly; and it is like thin gauze, or like the skeleton of a leaf, which I saw yesterday on the walk; or like—and his head and eyes—oh! I saw his eyes—but his head looks only about three times as large as his real head. And the whole fly, now I see it altogether, seems only about three times as large as it is in reality; nothing like the size of the fly there in the book. I am afraid the man who wrote that book did not tell truth, Laura. What do you think, mamma? What can be the reason that I do not see this fly as large as he says he saw it with a magnifying-glass?"

"My dear, you have not the same magnifying-glass which he had." Her mother then told her, that with different glasses objects appear of different sizes. Rosamond next wanted to know, how it happens that one bit of glass, which looks much the same, she said, as another bit of glass, can produce such different effects; and, in short, she wished to know how glasses magnify. Her mother told her, that she could not explain this to her.

"Can papa?"

"Not till you know more than you do now, my dear."

"Then, for the present, I had better go on looking at these prints," said Rosamond, seating herself comfortably to examine them. She read the titles, as she turned over the leaves; and every now and then stopped to look at something that caught her attention in the descriptions of the prints: "'Foot of a fly—three joints—little claws, which it clasps about things, as it walks.' I have often

wondered how it walked on smooth glass. Mamma, it could not walk if the glass were quite smooth; but there are bits of dirt and roughness on the glass, which we do not see, into which, or round which, it sticks its little talons. What comes next?

“‘Tufted, or brush-horned gnat;’ what a beautiful tuft he has on his head! But, troublesome creature! how often he has teased me, when I have been going to sleep; and how he stings!”

Rosamond was silent for a minute, and then resumed: “Mamma, do you know, this man says that he has four darts.”

“Ha! has four darts.”

“The gnat has four darts, in a kind of sheath, under his throat, and he can push them out or draw them in, as he pleases, to sting us or not—barbed darts. Mamma, what is a *barbed* dart?”

Laura drew for Rosamond the shape of a barbed dart; and then she saw why it must hurt any one to draw it out.

Rosamond went on turning over the leaves.

“‘Piece of a stinging nettle.’ Mercy! what sharp spikes! Laura, my dear, do you know how a nettle stings? I can tell you—this man says that there is a poisonous juice at the bottom of each spike, and that this is pressed out when we squeeze the spikes down.

“‘Sting of a bee!’ Bag of poison, too, at the bottom—same way—not quite—‘Wild oat beard; cloth-worm; wandering mite; cheese mite’—Oh, cheese mite!—what a curious mite you are!—‘poppy seeds; pansy seeds; moss; fine muslin; silkworms—way to rear them.’ Oh, delightful!—‘flakes of snow.’ This Doctor Hook caught flakes of snow on a black hat, and watched their shape when melting. I could do that on Godfrey’s hat, as well as any doctor; and I will, the next time it snows. ‘Hunting spider—’”

“My dear Rosamond, at the rate you go on, you will have such a confusion of hunting spiders, flakes of snow, silkworms, pansy seeds, cheese mites, stings of bees, stings of nettles, stings of gnats, and feet of flies, that

you will know nothing, and remember nothing distinctly."

"True, mamma; one thing at a time, as papa says—so I will stick to the hunting spider; or, mamma, suppose, the stings of bees, or cheese mites?"

"Whichever—whatever you please, my dear; but now let me read, and read to yourself."

"Yes, mamma; only just this bit about the hunting spider. In the first place, you must know, 'it is a small gray spider, with spots of black over its whole body, which are found by the microscope to be made up of feathers, like those on the wings of butterflies'—feathers, mamma, on a spider's back!—'It runs sometimes very nimbly, and at other times jumps, like a grasshopper, and turns round so quickly, that it seems to face every way: it has six eyes, two in front, looking directly forwards; two by the side of these, pointing both forwards and sideways; and two others, on the middle of the back, which are the largest of all, and look backwards and sideways: they are all black.'"

"Very well; now have you done, my dear Rosamond?"

"Oh no, my dear mamma, I was only just beginning. I was only telling you what sort of a creature this spider is, that you might know before I go on."

"But I knew all this a great while ago, my dear."

"But, mamma, you do not know what is coming; just listen one minute more, mamma. Mr. Evelyn—you do not know Mr. Evelyn, do you? No; that is lucky. Well, Mr. Evelyn says, he observed a spider, at Rome, which, espying a fly, at three or four yards' distance, upon the balcony where he stood, would not make directly to her, but crawl underneath the rail, till, having arrived exactly against her, it would steal up, and, springing on her, seldom miss its aim. If the fly did not happen to be within its leap, the spider would move towards her so softly, that the motion of the shadow on the dial is scarcely more imperceptible."

"You need not go to Rome to see all this, my dear Rosamond," said her mother; "you may, if you observe—"

"Yes," interrupted Rosamond; "but there is something more coming. May I go on, mamma?"

Her mother gave her leave to go on.

"You conquered your inclination to be idle to-day, Rosamond, and, to reward you, I willingly give up a little time to hear you read what you wish me to hear about this fly and the spider."

"Thank you, mamma." Rosamond went on instantly.

"If the fly moved, the spider would move also, in the same proportion, either forwards or backwards, or on either side, without turning its body at all, keeping the same just time with the fly's motion, as if the same soul animated the bodies of them both; but if the fly took wing, and pitched upon some other place, behind the spider, it would whirl its body round with all imaginable swiftness, pointing its head at last towards the fly. Being got near by such indiscernible approaches, it would then make a leap, swift as lightning, upon the fly, and, catching him by the pole—"

"The pole! What is meant by the pole, mamma?"

"The head."

"Never afterwards quits its hold, till——poor fly!——the spider eats it up; or, at least, eats as much as he can eat, and carries the rest home. Ha! just what you told me, mamma," said Rosamond, as she turned over the leaf. "You told me, I need not go to Rome, or to Mr. Evelyn, to see such things."

"These spiders are to be found with us, on garden walls, in the spring, when the weather is very hot."

"And here is an account of different sorts of spiders, that weave nets, make cobwebs——"

"Nay, nay, Rosamond, I did not undertake to hear of all the different sorts of spiders," said her mother. "Now, take the book away."

"Well, I will just finish it to you, Laura, my dear," said Rosamond, carrying the great book to Laura; and leaning it on her shoulder, she went on reading:—

"Spiders that make webs——" Laura, do you know that cobwebs are made 'of a gummy liquor, that comes out of the spider's body, which *adheres* (that means *sticks*,

does it not?) to anything it is pressed against; and, being drawn out, hardens instantly in the air, becoming a string, or thread, strong enough to bear five or six times the spider's body, and yet of an amazing fineness!

"How curious!—How entertaining this is," said Rosamond. "Mamma might well tell me that, though we have no *India cabinet*, I might find curious and wonderful things enough, even in the commonest little insects, spiders and flies, and ants and bees; and the commonest vegetables, too; the nettle, you recollect, and mould. Look at this picture of mould: it is like mushrooms—even mould, such as I saw to-day, on the paste we threw away, Laura, appears to me now as wonderful as anything I saw in the *India cabinet*."

Here Rosamond was interrupted in her speech by the entrance of her brother Godfrey, who came to summon her to the swing.*

THE MICROSCOPE.

ONE fine morning, Rosamond had a difficult, or what appeared to her a difficult, sum in division, to do. She had made a mistake in it, and had just wiped away a tear, and rubbed out half what she called *a long ladder of figures*, when she heard Godfrey's voice at the window, calling to her.

"Rosamond! Rosamond, come out! Come here!"

She ran to the window, and saw Godfrey, with a green helmet of rushes on his head, holding another in his hand, on the top of a spear; and he had a bow and arrow slung across his shoulders.

"Come, Rosamond, come directly; here is your helmet, that I have made for you; and here's a bow and arrow for you: I am to be Aurelian, the Roman Emperor, and you shall be Zenobia, Queen of the East."

"Yes," said Rosamond, "when I have done my sum in division."

* "The Microscope; its History, Construction, and Applications," by Jabez Hogg, may be had of the publishers. It is profusely illustrated, and the price, bound in cloth, is 7s. 6d.

"When you have done what? I don't hear you."

Rosamond held up her slate, to show him what she was about.

"Oh, is that the thing! Have you not done your sum yet? How can you be so long doing your sum?"

"Very easily," said Rosamond, sorrowfully; "because it is a very difficult sum."

"Difficult! Nonsense: I do sums ten times as difficult every day. I am sure I could do it in five minutes."

"I dare say you could," said Rosamond, sighing; "but, you know, you are so much older."

"Well, make haste," said Godfrey; "you'll find me on the field of battle, at the bottom of the hill."

"Very well. The nines in forty-nine will go how many times?" said Rosamond to herself, trying to withdraw her attention from the sight of Godfrey, who was running down the hill, brandishing his spear. Suddenly he turned about, and came back to the window.

"Rosamond, pray, did mamma desire you to finish that sum before you went out?"

"No: she did not quite desire it; but I believe I ought to do it."

"But, if she did not *desire* it, come out, and you can finish the sum afterwards."

"When?"

"Any time in the day. Surely, in the course of the day you can find time to do it."

"But if I once go out with you, and begin being Zenobia, Queen of the East, I shall forget to come in to finish my sum. No, I will stay and finish it now."

"That is right, Rosamond," said Laura, who was at the other end of the room, but who now came to the window to Rosamond's assistance. "You will soon have finished it, Rosamond; then you will have done all you ought to do, and then you can be Queen of the East as long as you please."

"In peace and comfort," said Rosamond. "The nines in forty-nine will go——"

"Are you still at the nines in forty-nine?" cried Godfrey.

"Yes; because you interrupted her," said Laura.

"Will you come, or will you not, Rosamond?" said Godfrey.

Rosamond looked at Laura; then at the helmet; and then at Laura again.

"No, brother; I will do this first: because I ought."

"That's right, Rosamond," said Laura.

The Emperor of the Romans whistled, and walked away. Rosamond was afraid that he was angry with her; but Laura, who saw what was passing in her thoughts, said—

"Never mind that, my dear Rosamond; you are in the right."

Rosamond fixed her attention, with difficulty, upon her slate; answered the question she had asked herself so often about the nines in forty-nine; and completed the sum in long division.

"Now, all is right, I hope," said she.

Laura looked at it, and Rosamond watched her face.

"I know, by your smile, Laura, that all is right," said Rosamond.

"Quite right," said Laura.

Scarcely had the words passed Laura's lips, when Rosamond seized her bonnet, threw open the glass door which led to the lawn, and ran down the hill, to the field of battle.

How happy she was, as Queen of the East, with her helmet of rushes, and her bow of sallow, is not to be told; but may be guessed, by her continuing two whole hours untired of the war with the still more indefatigable Emperor of Rome. At last, as they halted for a moment, breathless, their lengthened shadows reminded them of the time of day; and, now, as the Emperor had been severely wounded, in searching among the brambles for his last arrow, and the Queen of the East was likewise hopeless of finding hers, which had been shot into the long grass, a truce was agreed upon for this day. They hung their bows under the beech-tree, laid aside their helmets, resumed the hat and bonnet, and Godfrey and Rosamond were themselves again.

In the mean time, at home, new pleasures were pre-

paring for Rosamond. Laura, having given her mother a full and true account of Rosamond's heroic resolution to finish her long sum in division, in spite of all temptations to the contrary, her mother was pleased to have this opportunity of bestowing upon her a mark of approbation. When Rosamond went into her room to dress, she found, lying on her table, two little books, in which her name was written.

"'On the Microscope,' my dear Laura. The very thing I wished for when I heard mamma read the title in the newspaper the other day, and the very thing Godfrey wished for."

The moment she was dressed—and she was dressed this day with singular expedition—she ran to thank her mother for the books, and then to show them to Godfrey.

Godfrey opened the first volume and read:—"Microscope described; its uses. Magnifying-glasses; discoveries made by"—I shall like, I believe, to read this." Then, turning to another chapter—"Principle of the telescope; refraction; limits of distinct vision; principle of concave lenses explained."*

"But, my dear Rosamond, did my mother give this to you? You can no more understand this than you can fly."

"I know that, brother," replied Rosamond, looking a little mortified; "but mamma did give *me* the books, and she told me to begin here, at 'poppy seeds' and 'the blessed thistle,' which I can understand as well as anybody; and whatever I do not understand I need not read yet. Look at these prints. Here are all my old friends, the spiders, and beetles, and caterpillars, and gnats."

"So I see," said Godfrey; "and while you are busy with those in the second volume, you can lend me the first, because I shall begin at the beginning; for I can understand about the laws of vision and refraction."

"Do not be too sure of that," said Rosamond, nodding her head; "for I can tell you mamma said she was not

* "Dialogues on the Microscope," by the Rev. J. Joyce. See "The Microscope," by Jabez Hogg. Routledge and Co., London and New York.

sure that even *you* could understand all *that*, without a great deal of help and explanation from papa."

"We shall see," said Godfrey.

He sat down and began at the beginning, whilst Rosamond looked first at the prints of the spiders and caterpillars.

"But, Godfrey," resumed she, after being silent a few minutes, "I forgot to tell you why mamma gave me these nice books. It was because I remained with so much resolution to do my DUTY this morning; to finish my long sum, instead of going out with you, first, to be Queen of the East."

"RESOLUTION! DUTY!" repeated Godfrey. "What a fine emphasis, Rosamond! as if it was such a grand duty, such a great exploit!"

"Grand or not, it was my duty, and I did it," said Rosamond; "and Laura and mamma said I was right, and I know I was right."

"I do not say you were wrong, but I do not see the great resolution."

"No, not *great* resolution, may be; but great for me, for a little girl like me."

"That makes a difference, to be sure," said Godfrey. "Well! I grant you, *great* for *you*."

Not quite satisfied with Godfrey's manner of granting this, Rosamond could not refrain from praising herself a little more. Partly talking to herself, she went on—

"Mamma, I know, says—and Laura says, too—that I am learning to have a great deal of resolution, and prudence, too; for now I always—almost always—think as mamma advises, and as Laura does, of the future; and I always, that is, generally, prefer the great future pleasure to the little present pleasure."

"You would give me a little present pleasure, if you would hold your tongue, Rosamond," said Godfrey.

The dinner-bell rang at this moment, just as the colour was rising in Rosamond's face, and as the words, "Godfrey, you are very provoking," were going to be said. They were not uttered, and Rosamond was glad of it, she resolved not to be provoked; a wise resolution, in

which a good dinner, as Godfrey observed, much strengthened her.

In the course of the evening, however, something led to the renewal of the conversation. Laura was in the room when the dispute began; but she was playing on the pianoforte, and singing, so that she did not hear what was going on. Presently, Rosamond came and stood at her elbow, silent and still. As soon as she had finished the lesson she was playing, Laura began the accompaniment of

"Merrily every bosom boundeth,
Merrily, oh!—merrily, oh!"

"Come, Rosamond, we can sing this together.—Begin."

But Rosamond could not begin. She was in no condition for singing, she could not command her voice; she struggled, and struggled in vain, and at last burst into tears. Laura, surprised, stopped playing.

"What is the matter, my dear Rosamond?" said she.

"Oh! Because, because," said Rosamond, sobbing, "because Godfrey says that it is all selfishness——"

Laura wiped the tears from Rosamond's eyes, and waited till her sobs and indignation would allow her to give a clearer account of the matter.

"He says he thinks that all my prudence is selfishness."

"No, no," cried Godfrey; "I only said, Where's the generosity, Rosamond?"

"Yes; but you said, that all that about giving up a present pleasure, Godfrey, for a greater future pleasure, was not generous."

"Well, so I did; and I say it again. Where's the generosity, Rosamond, of choosing for yourself the greater of two pleasures? You can't call that generous."

"There now! Do you hear *that*, Laura?" said Rosamond, and her tears flowed again.

"I hear it," said Laura; "but I do not know why it should make you cry so, my dear Rosamond."

"I only know it does make me very unhappy; because, if mamma tells me one thing is right, and Godfrey tells me another, I don't know what is right, and what is wrong, and I don't know what to do. I thought it was right to be prudent, and mamma said so; and now Godfrey says it is not generous."

"But don't cry so, Rosamond," said Laura; "he did not say *you* are not generous, did he?"

"He did not say that, quite; but he said, that, if I go on so, he thinks I shall become selfish."

"And so I do," said Godfrey.

"If she goes on how, Godfrey?" said Laura.

"If she goes on always as she has learnt to do lately, considering, and calculating only how she is to secure, upon every occasion, the greatest quantity of pleasure; in short, how she is to make herself the happiest—I say, that may be very prudent, but it is not generous—it is all selfishness."

"There! there! Now do you hear him?" cried Rosamond.

"But we all try, and ought to try, to make ourselves as happy as we can, without hurting anybody else," said Laura, coolly. "You may say, that the wisest and best person in the world is selfish, at that rate. And the most generous persons have pleasure, I suppose, in being generous—it makes them happy, or they would not be generous; so far, they look forward to their own pleasure. But if you call this being *selfish*, it is only making a wrong use of the word."

"Oh! that is very fine," said Godfrey; "but we all know what is meant by generosity; and people that are generous are never calculating and weighing about their own happiness; they are ready to give up their own pleasures to others. And I repeat it," added he, partly, perhaps, for the pleasure of teasing Rosamond, and partly for the sake of persisting in his first assertion—"if Rosamond goes on as she is going on now, I think she *will* become selfish."

Godfrey was called away at this moment by his father.

"He is not in earnest, I am sure," said Laura, as he

left the room; "he is only trying your temper, Rosamond."

"It is so unjust!" said Rosamond. "Selfish! He forgets about the Indian cabinet, for instance; that I put off, for three long days, the little present pleasure of seeing it by myself, for the greater pleasure of seeing it afterwards with him and you. Was that selfish? Was that selfishness?"

"No, indeed, it was not," said Laura; "but I am glad you did not put him in mind of that just now. One should never reproach anybody with any kind thing we have done for them."

"No; I did not mean to reproach, but only to put him in mind; to convince him, you know."

"Better wait till another time," said Laura.

"But, Laura, you don't think, then, that I am *going the way* to become selfish?"

"No, indeed, my dear Rosamond, I do not," said Laura; "for the more you practise, even in the least things, the sort of resolution you showed this morning, the more, I think, you would have resolution to be really generous; that is, to give up your own pleasures for other people."

"I think so. I am so glad *you* think so," said Rosamond, wiping away her tears; "and, perhaps," continued she, her whole face brightening as she spoke, "perhaps, Laura, some time or other I shall make Godfrey think so too."

"I dare say you will," said Laura; "Godfrey is very candid, and he has amused himself with trying your temper; yet, when he is convinced he is wrong, I am sure he will acknowledge it."

"Oh, Laura! you are what mamma calls you—the *peacemaker*," said Rosamond. "Now I am ready to sing with you,

'Merrily every bosom boundeth.'"

It was not long before Rosamond had an opportunity of convincing her brother Godfrey that she was not in any danger of becoming selfish; and that her practising prudence had not diminished her desire to be generous, but, on the contrary, had increased her resolution to

make those sacrifices of present to future pleasure, without which no one can be really generous.

Godfrey, after reading the account of the microscope, in Rosamond's little book, was seized with an ardent desire to have a microscope of his own. His father had a small pocket microscope, in a case, which usually stood upon the mantelpiece, in his study. This was exactly the sort of thing which Godfrey wished to possess.

One day, when he had been examining it for some time, in silence, his father said that he would give Godfrey this microscope if he would do a laborious job, which he much wanted to have done immediately.

"Oh, father, what is it?" cried Godfrey. "I will do it with pleasure."

"And I shall give it to you to do with pleasure," said his father; "because it will not only save me some trouble, but do you some good; it will improve your hand-writing, and, perhaps, it may increase your habits of order and patience."

"But what is it?" said Godfrey.

"It will, perhaps, cost you a week's hard labour," said his father.

"I hope I shall be able to bear it," replied Godfrey, laughing. "But pray tell me what it is, father."

"Did you see the two large packing-cases?"

"Which came down this morning for you by the waggon? Yes; and I wondered what was in them."

"Your uncle's library, which must be unpacked, and put up in the new bookcases, in my study."

"And is this the job I am to do? I am glad of it. I shall like to do it very much," said Godfrey.

"But you are to write a catalogue—an alphabetical catalogue—of all the books; and arrange them under the heads history, poetry, miscellaneous, according to the titles of the bookcases."

The writing the catalogue was a task which Godfrey did not much like, for he had not yet learned to write quickly and well.

"May I have anybody to help me?"

"Yes, your sisters Laura and Rosamond, if you can persuade them to help you; no one else."

It proved a more laborious and tedious undertaking than Godfrey had foreseen. He applied to Laura and Rosamond for assistance. And it was now that Rosamond had an opportunity of showing her readiness to give up her own pleasure to serve him. Every day, for a whole week—and a week is a long time at Rosamond's age—she worked hard, reading the names of the books to him as he was making his catalogue; then arranging the volumes ready for Laura, and at last carrying them for Laura and Godfrey to put up. Hard, tiresome work! And it was fine weather, and her father and mother took pleasant walks every evening, and Rosamond loved to walk with them; but every evening, when her mother asked if Rosamond would come with them, or stay to help her brother, she chose to stay to help her brother.

Godfrey said nothing, but he felt a good deal; he felt how unjust he had been; and he loved Rosamond for never reproaching him, and for showing such good temper, as well as generosity. The catalogue was at last finished, and the books were all arranged on their shelves. Godfrey announced to his father that he had completed his undertaking, and presented to him the catalogue. His father examined it, saw that it was well done, and put the microscope into Godfrey's hands, telling him that he had well earned it, and that he was glad he had so soon accomplished his business.

"Father, I should not have finished it this month—I think I should never have got through it—without the help of Laura and Rosamond—

"And Rosamond," said he, turning to her, with tears in his eyes, which he tried to prevent from coming into them, but could not, "I am sure you have done more for me than I deserved. I acknowledge I was unjust, and you are not selfish."

"Oh, Laura," cried Rosamond, "do you hear *that*?"

"And if you forgive me, Rosamond, will you accept this microscope from me?"

"No, Godfrey, I cannot," said Rosamond, putting both her hands behind her. "I don't mean that I cannot forgive you, for that I do with all my heart, and did long ago; but I cannot take the microscope."

THE LITTLE DOG TRUSTY;

Or, the Liar and the Boy of Truth.

FRANK and Robert were two little boys, about eight years old. Whenever Frank did anything wrong, he always told his father and mother of it; and when anybody asked him about anything which he had done or said, he always told the truth; so that everybody who knew him believed him. But nobody who knew his brother Robert believed a word which he said, because he used to tell lies. Whenever he did anything wrong, he never ran to his father and mother to tell them of it; but when they asked him about it, he denied it, and said he had not done the things which he had done.

The reason that Robert told lies, was because he was afraid of being punished for his faults, if he confessed them. He was a coward, and could not bear the least pain. Frank was a brave boy, and could bear to be punished for little faults; his mother never punished him so much for such little faults as she did Robert for the lies which he told, and which she found out afterwards.

One evening, these two little boys were playing together in a room by themselves. Their mother was ironing in a room next to them, and their father was out at work in the fields, so there was nobody in the room with Robert and Frank; but there was a little dog, Trusty, lying by the fireside. Trusty was a pretty, playful little dog, and the children were very fond of him.

"Come," said Robert to Frank, "there is Trusty lying beside the fire, asleep; let us go and arouse him, and he will play with us."

"O yes, do, let us," said Frank. So they both ran together towards the hearth, to waken the dog.

Now there was a basin of milk standing upon the hearth; and the little boys did not see whereabouts it stood, for it was behind them. As they were both playing with the dog, they kicked it with their feet, and threw it down; and the basin broke, and all the milk ran out of it over the hearth and about the floor. And when the little boys saw what they had done, they were very sorry and frightened; but they did not know what to do. They stood for some time looking at the broken basin and the milk, without speaking. Robert spoke first.

"So we shall have no milk for supper to-night," said he; and he sighed.

"No milk for supper! why not?" said Frank; "is there no more milk in the house?"

"Yes, but we shall have none of it; for do not you remember, last Monday, when we threw down the milk, my mother said we were very careless, and that the next time we did so we should have no more; and this is the next time; so we shall have no milk for supper to-night."

"Well, then," said Frank, "we must do without it, that's all. We will take more care another time; there's no great harm done. Come, let us run and tell my mother. You know she bid us always tell her directly when we broke anything; so come," said he, taking hold of his brother's hand.

"I will come, just now," said Robert. "Don't be in such a hurry, Frank—can't you stay a minute?" So Frank stayed; and then he said, "Come now, Robert." But Robert answered, "Stay a little longer; for I dare not go yet. I am afraid."

Little boys, I advise you, never be afraid to tell the truth. Never say "*Stay a minute*," and "*Stay a little longer*," but run directly, and tell of what you have done that is wrong. The longer you stay the more afraid you will grow, till at last, perhaps, you will not dare to tell the truth at all. Hear what happened to Robert.

The longer he stayed, the more unwilling he was to go to tell his mother that he had thrown the milk down;

and at last he pulled his hand away from his brother, and cried, "I won't go at all, Frank; can't you go by yourself?"

"Yes," said Frank, "so I will; I am not afraid to go by myself; I only waited for you out of good-nature, because I thought you would like to tell the truth, too."

"Yes, so I will; I mean to tell the truth when I am asked; but I need not go now, when I do not choose it. Why need you go either? Can't you wait here? Surely my mother can see the milk when she comes in."

Frank said no more; but, as his brother would not come, he went without him. He opened the door of the next room, where he thought his mother was ironing; but when he went in, he saw that she was out; and he thought she had gone to fetch some more clothes to iron. The clothes, he knew, were hanging on the bushes in the garden; so he thought his mother was gone there; and he ran after her, to tell her what had happened.

Now, whilst Frank was gone, Robert was left in the room by himself; and all the while he was alone he was thinking of some excuses to make to his mother; and he was sorry that Frank was gone to tell her the truth. He said to himself, "If Frank and I both were to say that we did not throw down the basin, she would believe us, and we should have milk for supper. I am very sorry Frank would go to tell her about it." Just as he said this to himself, he heard his mother coming down stairs. "Oh, oh!" said he to himself, then my mother has not been out in the garden, and so Frank has not met her, and cannot have told her; so now I may say what I please."

Then this naughty, cowardly boy determined to tell his mother a lie. She came into the room; but when she saw the broken basin, and the milk spilled, she stopped short, and said, "So, so. What a piece of work is here! Who did this, Robert?"

"I don't know, mamma," said Robert, in a very low voice.

"You don't know, Robert! Tell me the truth, and I shall not be angry with you, child. You will only lose

the milk at supper ; and as for the basin, I would rather have you break all the basins I have than tell me one lie. So don't tell me a lie. I ask you, Robert, did you break the basin ?”

“No, *mamma*, I did not,” said Robert ; and he coloured as red as fire.

“Then where is Frank ? Did he do it ?”

“No, mother, he did not,” said Robert ; for he was in hopes that when Frank came in he should persuade him to say that he did not do it.

“How do you know,” said his mother, “that Frank did not do it ?”

“Because—because—because,” said Robert, hesitating, as liars do, for an excuse, “because I was in the room all the time, and I did not see him do it.”

“Then how was the basin thrown down ? If you have been in the room all the time, you can tell.”

Then Robert, going on from one lie to another, answered, “I suppose the dog must have done it.”

“Did you see him do it ?” says his mother.

“Yes,” said this wicked boy.

“Trusty, Trusty,” said his mother, turning round ; and Trusty, who was lying before the fire drying his legs, which were wet with the milk, jumped up and came to her. Then she said, “Fie ! fie ! Trusty !” pointing to the milk, — “Get me a switch out of the garden, Robert ; Trusty must be beat for this.”

Robert ran for the switch, and in the garden he met his brother. He stopped him, and told him in a great hurry, all that he had said to his mother ; and he begged of him not to tell the truth, but to say the same as he had done.

“No, I will not tell a lie,” said Frank. “What ! and is Trusty to be beat ! He did not throw down the milk, and he shall not be beat for it. Let me go to my mother.”

They both ran toward the house. Robert got home first, and he locked the house door, that Frank might not come in. He gave the switch to his mother.

Poor Trusty ! he looked up as the switch was lifted

over his head; but *he* could not speak to tell the truth. Just as the blow was falling upon him, Frank's voice was heard at the window.

"Stop, stop! dear mother, stop!" cried he, as loud as ever he could call; "Trusty did not do it. Let me in; I and Robert did it; but do not beat Robert."

"Let us in, let us in," cried another voice, which Robert knew to be his father's; "I am just come from work, and here's the door locked."

Robert turned as pale as ashes when he heard his father's voice; for his father always whipped him when he told a lie. His mother went to the door and unlocked it.

"What's all this?" cried his father, as he came in; so his mother told him all that had happened.

"Where is the switch with which you were going to beat Trusty?" said the father.

Then Robert, who saw by his father's looks that he was going to beat him, fell upon his knees and cried for mercy, saying, "Forgive me this time, and I will never tell a lie again."

But his father caught hold of him by the arm. "I will whip you now," said he, "and then, I hope, you will not." So Robert was whipped, till he cried so loud with the pain, that the whole neighbourhood could hear him.

"There," said his father, when he had done, "now go without supper; you are to have no milk to-night, and you have been whipped. See how liars are served!" Then turning to Frank, "Come here, and shake hands with me, Frank; you will have no milk for supper, but that does not signify; you have told the truth, and have not been whipped, and everybody is pleased with you. And now I'll tell you what I will do for you. I will give you the little dog Trusty, to be your own dog. You shall feed him and take care of him, and he shall be your dog; you have saved him a beating; and, I'll answer for it, you will be a good master to him. Trusty, Trusty, come here."

Trusty came; then Frank's father took off Trusty's

collar. "To-morrow I'll go to the brazier's," added he, "and get a new collar made for your dog. From this day forward he shall always be called after you, *Frank!* And, wife, whenever any of the neighbours' children ask you why the dog *Trusty* is to be called *Frank*, tell them this story of our two boys: let them know the difference between a liar and a boy of truth."



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THE ORANGE-MAN;

Or, the Honest Boy and the Thief.

CHARLES was the name of the honest boy; and Ned was the name of the thief. Charles never touched what was not his own. *This* is being an honest boy. Ned often took what was not his own. *This* is being a thief.

Charles's father and mother, when he was a very little boy, had taught him to be honest, by always punishing him when he meddled with what was not his own. But when Ned took what was not his own, his father and mother did not punish him; so he grew up to be a thief.

Early one summer's morning, as Charles was going along the road to school, he met a man leading a horse, which was laden with panniers. The man stopped at the door of a public-house which was by the road-side, and he said to the landlord, who came to the door, "I won't have my horse unloaded; I shall only stop with you whilst I eat my breakfast. Give my horse to some one to hold here on the road, and let the horse have a little hay to eat."

The landlord called; but there was no one in the way, so he beckoned to Charles, who was going by, and begged him to hold the horse.

"Oh," said the man, "but can you engage him to be an honest boy? for there are oranges in my baskets; and it is not every little boy one can leave with oranges."

"Yes," said the landlord, "I have known Charles from the cradle upwards, and I never caught him in a lie or a theft; all the parish knows him to be an honest boy. I'll engage your oranges will be as safe with him as if you were by yourself."

"Can you so?" said the orange-man; "then I'll

engage, my lad, to give you the finest orange in my basket, when I come from breakfast, if you'll watch the rest whilst I am away."

"Yes," said Charles, "I *will* take care of your oranges."

So the man put the bridle into his hand, and he went into the house to eat his breakfast.

Charles had watched the horse and the oranges about five minutes, when he saw one of his school-fellows coming towards him. As he came nearer, Charles saw that it was Ned.

Ned stopped as he passed, and said, "Good-morrow to you, Charles; what are you doing there? whose horse is that? and what have you got in the baskets?"

"There are oranges in the baskets," said Charles; "and a man, who has just gone into the inn here to eat his breakfast, bid me take care of them, and so I did; because he said he would give me an orange when he came back again."

"An orange," cried Ned; "are you to have a whole orange? I wish I was to have one! However, let me look how large they are." Saying this, Ned went towards the pannier, and lifted up the cloth that covered it. "Ha! what fine oranges!" he exclaimed the moment he saw them; "let me touch them, to feel if they are ripe."

"No," said Charles, "you had better not; what signifies it to you whether they are ripe, you know, since you are not to eat them. You should not meddle with them; they are not yours. You must not touch them."

"Not touch them!—surely," said Ned, "there's no harm in *touching* them. You don't think I mean to steal them, I suppose." So Ned put his hand into the orange-man's basket, and he took up an orange, and he felt it; and when he had felt it, he smelt it. "It smells very sweet," said he, "and it feels very ripe; I long to taste it; I will only just suck one drop of juice at the top." Saying these words, he put the orange to his mouth.

Little boys who wish to be honest, beware of temptation.

People are led on by little and little to do wrong. The sight of the oranges tempted Ned to *touch* them. The touch tempted him to *smell* them, and the smell tempted him to *taste* them.

"What are you about, Ned?" cried Charles, taking hold of his arm. "You said you only wanted to smell the orange; do put it down, for shame!"

"Don't say *for shame* to me," cried Ned, in a surly tone; "the oranges are not yours, Charles!"

"No, they are not mine; but I promised to take care of them, and so I will; so put down that orange!"

"Oh, if it comes to that, I won't," said Ned; "and let us see who can make me, if I don't choose to do so. I am stronger than you."

"I am not afraid of you for all that," replied Charles, "for I am in the right." Then he snatched the orange out of Ned's hand, and he pushed him with all his force from the basket.

Ned, immediately returning, hit him a violent blow, which almost stunned him. Still, however, this good boy, without minding the pain, persevered in defending what was left in his care. He held the bridle with one hand, and covered the basket with his other arm, as well as he could. Ned struggled in vain to get his hand into the pannier again. He could not; and, finding that he could not win by strength, he had recourse to cunning. So he pretended to be out of breath, and to desist; but he meant, as soon as Charles looked away, to creep softly round to the basket on the other side. Cunning people, though they think themselves very wise, are almost always very silly.

Ned, intent upon one thing,—the getting round to steal the oranges,—forgot that if he went too close to the horse's heels, he should startle him. The horse, indeed, disturbed by the bustle near him, had already left off eating his hay, and began to put down his ears; but when he found something touch his hind legs, he gave a sudden kick, and Ned fell back just as he had seized the orange. Ned screamed with the pain, and at the scream all the people came out of the public-house to

see what was the matter; and amongst them came the orange-man.

Ned was now so much ashamed, that he almost forgot the pain, and wished to run away; but he was so much hurt that he was obliged to sit down again.

The truth of the matter was soon told by Charles, and as soon believed by all the people present who knew him; for he had the character of being an honest boy, and Ned was known to be a thief and a liar. So nobody pitied Ned for the pain he felt. "He deserves it," says one. "Why did he meddle with what was not his own?" "Pugh; he is not much hurt, I'll answer for it," said another. "And if he were, it's a lucky kick for him, if it keeps him from the gallows," says a third. Charles was the only person who said nothing; he helped Ned away to a bank; for boys that are brave are always good-natured.

"Oh, come here," said the orange-man, calling him; "come here, my honest lad! What! you got that black eye in keeping my oranges, did you? That's a stout little fellow," said he, taking him by the hand, and leading him into the midst of the people.

Men, women, and children had gathered around, and all the children fixed their eyes upon Charles, and wished to be in his place. In the mean time the orange-man took Charles's hat off his head, and filled it with fine China oranges. "There, my little friend," said he, "take them, and God bless you with them! If I could but afford it, you should have all that is in my baskets."

Then the people, and especially the children, shouted for joy; but as soon as there was silence, Charles said to the orange-man, "Thank you, master, with all my heart; but I can't take your oranges, only that one I earned. Take the rest back again: as for a black eye, that's nothing! But I won't be paid for it, no more than for doing what's honest. So I can't take your oranges, master; but I thank you as much as if I had them." Saying these words, Charles offered to put the oranges back into the basket; but the man would not let him.

"Then," said Charles, "if they are honestly mine, I

may give them away." So he emptied the hat amongst the children, his companions. "Divide them amongst you," said he; and without waiting for their thanks, he pressed through the crowd, and ran towards home. The children all followed him, clapping their hands, and thanking him.

The little thief came limping after. Nobody praised him, nobody thanked him; he had no oranges to eat, nor had he any to give away. *People must be honest before they can be generous.* Ned sighed as he went towards home. "And all this," said he to himself, "was for one orange; it was not worth the sacrifice."

No; it is never worth while to do wrong. Little boys who read this story, consider which would you rather have been—the honest boy or the thief?



THE CHERRY-ORCHARD.

MARIANNE was a little girl of about eight years of age. She was remarkably good-tempered; she could bear to be disappointed, or to be contradicted, or to be blamed, without looking or feeling peevish, or sullen, or angry. Her parents, and her school-mistress, and companions all loved her, because she was obedient and obliging. Marianne had a cousin, a year younger than herself, named Owen, who was an ill-tempered boy. Almost every day he was crying, or pouting, or putting himself into a passion about some trifle or other; he was neither obedient nor obliging. His playfellows could not love him, for he was continually quarrelling with them; he would never, either when he was at play or at work, do what they wished; but he always tried to force them to yield to his will and his humour.

One fine summer's evening, Marianne and Owen were setting out, with several of their little companions, to school. It was a walk of about a mile from the town, in which their fathers and mothers lived, to the school-house, if they went by the high-road; but there was another way, through a lane, which was a quarter of a mile shorter. Marianne and most of the children liked to go by the lane, because they could gather the pretty flowers which grew on the banks, and in the hedges; but Owen preferred going by the high-road, because he liked to see the carts and carriages, and horsemen, which usually were seen upon this road. Just when they were setting out, Owen called to Marianne, who was turning into the lane.

"Marianne," said he, "you *must* not go by the lane to-day; you must go by the road."

"Why must not I go by the lane to-day?" said Marianne; "you know, yesterday, and the day before,

and the day before that, we all went by the high-road, only to please you; and now let us go by the lane, because we want to gather some honeysuckles and dog-roses, to fill our dame's flower-pots."

"I don't care for that; I don't want to fill our dame's flower-pots. I don't want to gather honeysuckles and dog-roses. I want to see the coaches and chaises on the road; and you *must* go my way, Marianne."

"*Must!* Oh, you should not say *must*," replied Marianne, in a gentle tone.

"No, indeed!" cried one of her companions, "you should not; nor should you look so cross; that is not the way to make us do what you wish."

"And, besides," said another, "what right has he always to make us do as he pleases? He never will do anything that we like."

Owen grew quite angry when he heard this; and he was just going to make some sharp answer, when Marianne, who was good-natured, and always endeavoured to prevent quarrels, said, "Let us do what he asks, this once; and I dare say he will do what we please the next time. We will go by the high-road to school, and we can come back by the lane, in the cool of the evening."

To please Marianne, whom they all loved, the little party agreed to this proposal. They went by the high-road; but Owen was not satisfied, because he saw that his companions did not comply for his sake; and as he walked on, he began to kick up the dust with his feet, saying, "I'm sure it is much pleasanter here than in the lane. I wish we were to come back this way. I'm sure it is much pleasanter here than in the lane; is it not, Marianne?"

Marianne could not say that she thought so. Owen kicked up the dust more and more.

"Do not make such a dust, dear Owen," said she; "look how you have covered my shoes and my clean stockings with dust."

"Then say it is pleasanter here than in the lane. I shall go on making this dust till you say that."

"I cannot say that, because I do not think so, Owen."

"I'll make you think so, and say so too."

"You are not taking the right way to make me think so; you know that I cannot think this dust agreeable."

Owen persisted, and he continually raised a fresh cloud of dust, in spite of all that Marianne or his companions could say to him. They left him, and went to the opposite side of the road; but wherever they went, he pursued. At length they came to a turnpike-gate, on one side of which there was a turn-stile. Marianne and the rest of the children passed, one by one, through the turn-stile, whilst Owen was emptying his shoes of the dust. When this was done, he looked up, and saw all his companions on the other side of the gate, holding the turn-stile to prevent him from coming through.

"Let me through, let me through!" cried he; "I must and will come through."

"No, no, Owen," they said, "*must* will not do now; we have you safe. Here are ten of us; and we will not let you come through till you have promised that you will not make any more dust."

Owen, without returning any answer, began to kick, and push, and pull, and struggle with all his might; but in vain he struggled, pulled, pushed, and kicked; he found that ten people are stronger than one. When he felt that he could not conquer them by force, he began to cry; and he roared as loud as he possibly could. No one but the turnpike-man was within hearing, and he stood laughing at Owen. Owen tried to climb the gate; but he could not get over it, because there were iron spikes at the top.

"Only promise that you will not kick up the dust, and they will let you through," said Marianne.

Owen made no answer, but continued to struggle till his whole face was scarlet, and both his wrists ached: he could not move the turn-stile an inch.

"Well," said he, stopping short, "now you are all of you joined together, you are stronger than I am; but I am as cunning as you are."

He left the stile, and began to walk homewards.

"Where are you going? You will be too late at school if you turn back and go by the lane," said Marianne.

"I know that very well; but that will be your fault, and not mine. I shall tell our dame that you all held the turn-stile against me, and would not let me through."

"And we shall tell our dame why we held the turn-stile against you," replied one of the children; "and then it will be plain that it was your fault."

Perhaps Owen did not hear this; for he was now at some distance from the gate. Presently he heard some one running after him. It was Marianne.

"Oh, I am so much out of breath with running after you! I can hardly speak! But I am come back," said this good-natured girl, "to tell you that you will be sorry if you do not come with us; for there is something that you like very much just at the turn of the road, a little beyond the turnpike-gate."

"Something that I like very much! What can that be?"

"Come with *me*, and you shall *see*," said Marianne: "that is both rhyme and reason. Come with *me*, and you shall *see*."

She looked so good-humoured, as she smiled and nodded at him, that he could not be sullen any longer.

"I don't know how it is, cousin Marianne," said he; "but when I am cross, you are never cross; and you can always bring me back to good humour again, you are so good-humoured yourself. I wish I was like you. But we need not talk any more of that now. What is it that I shall see on the other side of the turnpike-gate? What is it that I like very much?"

"Don't you like ripe cherries very much?"

"Yes; but they do not grow in these hedges."

"No; but there is an old woman sitting by the roadside, with a board before her, which is covered with red ripe cherries."

"Red ripe cherries! Let us make haste then," cried Owen. He ran on, as fast as he could; but as soon as the children saw him running, they also began to run

back to the turn-stile; and they reached it before he did; and they held it fast as before, saying, "Promise you will not kick up the dust, or we will not let you through."

"The cherries are very ripe," said Marianne.

"Well, well, I will not kick up the dust. Let me through," said Owen.

They did so, and he kept his word; for though he was ill-humoured, he was a boy of truth; and he always kept his promises. He found the cherries looked red and ripe, as Marianne had described them. The old woman took up a long stick which lay on the board before her. Bunches of cherries were tied with white thread to this stick; and as she shook it in the air, over the heads of the children, they all looked up with longing eyes.

"A halfpenny a bunch! Who will buy? Who will buy? Who will buy? Nice ripe cherries!" cried the old woman.

The children held out their halfpence; and "Give me a bunch!" and "Give me a bunch!" were heard on all sides.

"Here are eleven of you," said the old woman, "and there are just eleven bunches on this stick." She put the stick into Marianne's hand as she spoke.

Marianne began to untie the bunches; and her companions pressed closer and closer to her, each eager to have the particular bunch which they thought the largest and the ripest. Several fixed upon the uppermost, which looked indeed extremely ripe.

"You cannot all have this bunch," said Marianne; "to which of you must I give it? You all wish for it."

"Give it to me, give it to me," was the first cry of each; but the second was, "Keep it yourself, Marianne; keep it yourself."

"Now, Owen, see what it is to be good-natured and good-humoured, like Marianne," said William, the eldest of the boys, who stood near him. "We all are ready to give up the ripest cherries to Marianne; but we should never think of doing so for you, because you are so cross and disagreeable."

"I am not cross *now*; I am not disagreeable *now*," replied Owen; "and I do not intend to be cross and disagreeable any more."

This was a good resolution; but Owen did not keep it many minutes. In the bunch of cherries which Marianne gave to him for his share, there was one which, though red on one side, was white and hard on the other.

"This cherry is not ripe; and here's another that has been half eaten away by the birds. Oh, Marianne, you gave me this bad bunch on purpose. I will not have this bunch."

"Somebody must have it," said William; "and I do not see that it is worse than the others; we shall all have some cherries that are not so good as the rest; but we shall not grumble and look so cross about it as you do."

"Give me your bad cherries, and I will give you two out of my fine bunch, instead of them," said the good-natured Marianne.

"No, no, no!" cried the children; "Marianne, keep your own cherries."

"Are you not ashamed, Owen?" said William. "How can you be so greedy?"

"Greedy! I am not greedy," cried Owen, angrily; "but I will not have the worst cherries; I will have another bunch."

He tried to snatch another bunch from the stick. William held it above his head. Owen leaped up, reached it, and when his companions closed round him, exclaiming against his violence, he grew still more angry. He threw the stick down upon the ground, and trampled upon every bunch of the cherries in his fury, scarcely knowing what he did or what he said.

When his companions saw the ground stained with the red juice of their cherries, which he had trampled under his feet, they were both sorry and angry. The children had not any more halfpence; they could not buy any more cherries; and the old woman said that she could not *give* them any.

As they went away sorrowfully, they said, "Owen is

so ill-tempered that we will not play with him, or speak to him, or have anything to do with him."

Owen thought that he could make himself happy without his companions; and he told them so. But he soon found that he was mistaken. When they arrived at the schoolhouse, their dame was sitting in the thatched porch before her own door, reading a paper that was printed in large letters. "My dears," said she to her little scholars, "here is something that you will be glad to see; but say your lessons first. One thing at a time; duty first, and pleasure afterwards. Whichever of you says your lesson best, shall know first what is in this paper, and shall have the pleasure of telling the good news."

Owen always learnt his lessons very well, and quickly: he now said his lesson better than any of his companions said theirs; and he looked round him with joy and triumph; but no eye met his with pleasure. Nobody smiled upon him, no one was glad that he had succeeded. On the contrary, he heard those near him whisper, "I should have been very glad if it had been Marianne who had said her lesson, because she is so good-natured."

The printed paper, which Owen read aloud, was as follows:—"On Thursday evening next the gate of the cherry-orchard will be opened; and all who have tickets will be let in, from six o'clock till eight. Price of tickets, sixpence."

The children wished extremely to go to this cherry-orchard, where they knew that they might gather as many cherries as they liked, and where they thought that they should be very happy, sitting down under the trees, and eating fruit. But none of these children had any money; for they had spent their last halfpence in paying for those cherries which they never tasted; those cherries which Owen, in the fury of his passion, trampled in the dust. The children asked their dame what they could do to earn sixpence apiece; and she told them that they might perhaps be able to earn this money by plaiting straw for hats, which they had all been taught to do by their good dame.

Immediately the children desired to set to work. Owen, who was very eager to go to the cherry-orchard, was the most anxious to get forward with the business. He found, however, that nobody liked to work along with him; his companions said, "We are afraid lest you should quarrel with us. We are afraid that you will fly into a passion about the straws, as you did about the cherries; therefore we will not work with you."

"Will you not? then I will work by myself," said Owen; "and I dare say that I shall have done my work long before any of you have finished yours, for I can plait quicker and better than any of you."

It was true that Owen could plait quicker and better than any of his companions; but he was soon surprised to find that his work did not go on so fast as theirs.

After they had been employed all the remainder of this evening, and all the next day, Owen went to his companions, and compared his work with theirs.

"How is this?" said he, "that you have all done so much, and I have not done nearly so much, though I work quicker than any one of you, and I have worked as hard as I possibly could? What is the reason that you have done so much more than I have?"

"Because we have all been helping one another, and you have had no one to help you. You have been obliged to do everything for yourself."

"But still, I do not understand how your helping one another can make such a difference," said Owen: "I plait faster than any of you."

His companions were so busy at their work, that they did not listen to what he was saying. He stood behind Marianne, in a melancholy posture, looking at them and trying to find out why they went on so much faster than he could. He observed that one picked the outside off the straws; another cut them to the proper length; another sorted them, and laid them in bundles; another flattened them; another (the youngest of the little girls, who was not able to do anything else) held the straws ready for those who were plaiting; another cut off the rough ends of the straws when the plaits were finished;

another ironed the plaits with a hot smoothing-iron; others sewed the plaits together. Each did what he could do best, and quickest; and none of them lost any time in going from one work to another, or in looking for what they wanted.

On the contrary, Owen had lost a great deal of time in looking for all the things that he wanted. He had nobody to hold the straws ready for him as he plaited; therefore he was forced to go for them himself every time he wanted them. His straws were not sorted in nice bundles for him; the wind blew them about, and he wasted half an hour, at least, in running after them. Besides this, he had no friend to cut off the rough ends for him; nor had he any one to sew the plaits together; and though he could plait quickly, he could not sew quickly, for he was not used to this kind of work. He wished extremely for Marianne to do it for him. He was once a full quarter of an hour in threading his needle, of which the eye was too small. Then he spent another quarter of an hour in looking for one with a larger eye; and he could not find it at last, and nobody would lend him another. When he had done sewing, he found that *his hand was out for plaiting*: that is, he could not plait so quickly after his fingers had just been used to another kind of work. When he had been smoothing the straws with a heavy iron, his hand trembled afterwards for some minutes, during which time he was forced to be idle. Thus it was that he lost time by doing everything for himself; and though he lost but a few minutes or seconds in each particular, yet, when all these minutes and seconds were added together, they made a great difference.

"How fast—how very fast they go on! and how merrily!" said Owen, as he looked at his former companions. "I am sure I shall never earn sixpence for myself before Thursday; and I shall not be able to go to the cherry-orchard. I am very sorry that I trampled upon your cherries; I am very sorry that I was so ill-humoured. I will never be cross any more."

"He is very sorry that he was so ill-humoured; he is

very sorry that he trampled upon our cherries," cried Marianne. "Do you hear what he says? he will never be cross any more."

"Yes, we hear what he says," answered William; "but how are we to be sure that he will do as he promises?"

"Oh," cried another of his companions, "he has found out at last that he must do as he would be done by."

"Ay," said another; "and he finds that we who are good-humoured and good-natured to one another do better even than he who is so quick and so clever."

"But if, besides being so quick and so clever, he were good-humoured and good-natured," said Marianne, "he would be of great use to us. He plaits much faster than Mary does, and Mary plaits faster than any of us. Come, let us try him; let him come in amongst us."

"No, no, no," cried many voices; "he will quarrel with us, and we have no time for quarrelling. We are all so quiet and so happy without him! Let him work by himself, as he said he would."

Owen went on working by himself; he made all the haste that he possibly could; but Thursday came, and his work was not nearly finished. His companions passed by him with their finished work in their hands. Each, as they passed, said, "What, have you not done yet, Owen?" and then they walked on to the table where their dame was sitting ready to pay them their sixpences. She measured their work, and examined it; and when she saw that it was well done, she gave to each of her little workmen and workwomen the sixpence which they had earned, and she said, "I hope, my dears, that you will be happy this evening."

They all looked joyful; and as they held their sixpences in their hands, they said, "If we had not helped one another we should not have earned this money; and we should not be able to go to the cherry-orchard."

"Poor Owen!" whispered Marianne to her companions, "look how melancholy he is, sitting there alone at his work! See, his hands tremble, so that he can scarcely hold the straws; he will not have finished his work in time; he cannot go with us."

"He should not have trampled upon our cherries; and then perhaps we might have helped him," said William.

"Let us help him, though he did trample upon our cherries," said the good-natured Marianne. "He is sorry for what he did, and he will never be so ill-humoured or ill-natured again. Come, let us go and help him. If we all help, we shall have his work finished in time, and then we shall all be happy together."

As Marianne spoke, she drew William near to the corner where Owen was sitting, and all her companions followed.

"Before we offer to help him, let us try whether he is really inclined to be good-humoured and good-natured."

"Yes, yes; let us try that first," said his companions.

"Owen, you will not have done in time to go with us," said William.

"No, indeed," said Owen, "I shall not; therefore I may as well give up all thoughts of it. It is my own fault, I know."

"Well, but as you cannot go yourself, you will not want your pretty little basket; will you lend it to us to hold our cherries?"

"Yes, I will, with pleasure," cried Owen, jumping up to fetch it.

"Now he is good-natured, I am sure," said Marianne.

"This plaiting of yours is not nearly so well done as ours," said William; "look how uneven it is."

"Yes, it is rather uneven, indeed," replied Owen.

William began to untwist some of Owen's work; and Owen bore this trial of his patience with good temper.

"Oh, you are pulling it all to pieces, William," said Marianne; "this is not fair."

"Yes, it is fair," said William, "for I have undone only an inch; and I will do as many inches for Owen as he pleases, now that I see he is good-humoured."

Marianne immediately sat down to work for Owen; and William and all his companions followed her example. It wanted but two hours of the time when the cherry-orchard was to be opened; and during these two hours

they worked so expeditiously, that they completed the task.

Owen went with them to the cherry-orchard, where they spent the evening all together very happily. As he was sitting under a tree with his companions, eating the ripe cherries, he said to them, "Thank you all for helping me; I should not have been here now, eating these ripe cherries, if you had not been so good-natured to me. I hope I shall never be cross to any of you again. Whenever I feel inclined to be cross, I will think of your good-nature to me, and of THE CHERRY-ORCHARD."



FRANK.

PART I.

THERE was a little boy whose name was Frank. He had a father and a mother, who were very kind to him; and he loved them. He liked to talk to them, and he liked to walk with them, and he liked to be with them. He liked to do what they asked him to do; and he took care not to do what they desired him not to do. When his father or mother said to him, "Frank, shut the door," he ran directly and shut the door. When they said to him, "Frank, do not touch that knife," he took his hands away from the knife and did not touch it. He was an obedient little boy.

One evening, when his father and mother were drinking tea, he was sitting under the tea-table; and he took hold of one of the legs of the table, and he tried to pull it towards himself; but he could not move it. He took hold of another leg of the table, and he found that he could not move it; but at last he took hold of one, which he found that he could move very easily; for this leg turned upon a hinge, and was not fixed like the other legs. As he was drawing this leg of the table towards him, his mother said to him, "Frank, what are you doing?"

And he answered, "Mamma, I am playing with the leg of the table."

And his mother said, "What do you mean by saying that you are playing with the leg of the table?"

And Frank said, "I mean that I am pulling it towards me, mamma."

And his mother said, "Let it alone, my dear."

And Frank took his hands away from the leg of the table, and he let it alone; and he came from under the

table, and got up, and stood beside his mother. And he said, "Mamma, I have come away from the leg of the table, that I may not think of touching it any more."—And his father and mother smiled.

And Frank said, "But, mother, will you tell me why you bade me let it alone?"

"Yes, I will, my dear," said his mother. And she then moved some of the teacups and saucers to another table, and Frank's father put the tea-urn upon another table; and then Frank's mother said to him, "Now, my dear Frank, go and push the leg of the table as you did before."

And Frank pushed the leg of the table; and when he had pushed it a little way, he stopped and looked up at his mother, and said, "I see part of the top of the table moving down towards my head, mamma; and if I push this leg any farther back, I am afraid that part of the table will fall down upon my head, and hurt me."

"I will hold up this part of the table which is called the *leaf*," said his mother; "and I will not let it fall down upon your head. Pull the leg of the table back as far as you can." And Frank did as his mother desired him; and when he had pulled it back as far as he could, his mother ordered him to come from under the table; and he did so. She said, "Stand beside me and look what happens when I let go this leaf of the table, which I am now holding."

And Frank said, "I know what will happen, I believe, mamma. It will fall; for now, that I have pulled back the leg, there is nothing to hold it up but your hand."

Then his mother took away her hand, and the leaf of the table fell; and Frank put his hand upon his head, and said, "Oh, mamma, that would have hurt me very much, if it had fallen upon my head. I am glad I was not under the table when the leaf fell. And now I believe I know the reason, mamma, why you asked me not to meddle with that leg of the table; because the leaf (is not that the name you told me?) the leaf would have fallen upon my head, and would have hurt me. Was not that the reason, mamma?"

"That was one reason; but I had some other reasons.

Try if you can find out what they were, Frank," said his mother.

And Frank looked at the table for a little while, and then answered, "I don't know any other reasons, mamma;" but as he was saying these words, he saw his mother turn her head towards the table upon which she had put the cups and saucers.

"Oh, now, mamma," said Frank, "I know what you mean. If those cups and saucers had been upon this leaf of the table, they would have slid down when it fell, and they would have been broken. And the urn, too, mamma, would have come tumbling down; and, perhaps, the top of the urn would have come off; and then all the hot water would have run out, and wet the room, and would have scalded me, if I had been under it. I am very glad, mamma, that I did as you told me."

ONE day, Frank's mother took him out to walk with her in the fields: and he saw flowers of different colours, blue, red, yellow, and purple. He asked his mother whether he might gather some of these flowers.

She answered, "Yes, my dear; you may gather as many of these flowers as you please."

Then Frank ran, and gathered several flowers; and in one corner of this field, upon a bank, he saw some blue-bells; as he liked blue-bells, he ran and gathered them. In the next field he saw a great number of purple flowers, which he thought looked very pretty; and he got over the stile, and went into the field, and went close up to the purple flowers. They had yellow in the middle of them; and they grew upon a plant which had a great number of green leaves.

As Frank was pulling some of the purple flowers, he shook the green leaves; and he saw amongst them several little green balls which looked like very small apples. Frank wished to taste them; and he was just going to pull one from the stalk, when he recollected that his mother had not given him leave to have them; and he ran back to his mother, and said, "Mamma, may I have

some of those nice little apples?" and he pointed to the plants on which the purple flowers grew.

His mother answered, "I do not see any apples, my dear."

"You will see them, mamma, if you will come a little closer to them," said Frank; and he took his mother by the hand and led her to the plants, and showed her the little green balls which he thought were apples.

"My dear little boy," said his mother, "these are not apples; these things are not good to be eaten; they are poisonous. They would have made you sick, if you had eaten them."

"I am glad," said Frank, "that I did not taste them. But may I have one of them for a ball?"

"No, my dear," said his mother, "do not meddle with any of them."

Frank walked on, in the path, beside his mother; and he did not meddle with any of the little green balls. And he saw, at a little distance from him, a boy, who was digging. When he came near to this boy, Frank saw that he was digging up some of the plants that bore the pretty purple flowers; and Frank said, "Mamma, why does this boy dig up these things? Is he going to throw them away?"

And Frank's mother said, "Look and you will see what part of them he keeps, and what part of them he throws away."

And Frank looked; and he saw that the boy pulled off some of the brown and white round roots of the plant; and put these roots into a basket. The green part of the plant, and the purple flowers, and the green balls, which Frank mistook for apples, he saw that the boy threw away.

And Frank said to his mother, "What are those roots in the basket?"

His mother said, "Look at them; and try if you can find out. You have eaten roots like them. You often see roots like these at dinner."

"I do not remember," said Frank, "ever having seen such dirty things as these at dinner."

"They are washed and boiled before you see them at dinner; and then they look white," said his mother.

Frank looked again at the roots which were in the basket; and he said, "Mamma, I think that they are potatoes."

"Yes, my dear, they are potatoes," said his mother; and then Frank and his mother went on a little farther, until they came to a large shady tree. Frank's mother sat down upon a bank under the shade of this tree to cool and rest herself; for she was hot and tired.

Frank was not tired, therefore he did not sit down; but he amused himself with trying to reach some of the branches of the tree which hung over his head.

He jumped up as high as he could to catch them; but he found that several which he thought he could reach, he could not touch, even when he stretched out his hand and arm, and stood on tiptoe.

At last he saw a bough which hung lower than the other boughs, and he jumped up, and caught hold of it; and he held it down, that he might look at the leaves of the tree.

"Mamma," said he, "these leaves are not like the leaves of the tree which is near the hall-door at home. You told me the name of that tree; that tree is called a beech. What is the name of this tree?"

"This tree is called a horse-chesnut tree."

"Mamma," said Frank, "here are little green balls upon this tree. They are something like those I saw upon the potatoes. I won't meddle with them; they have prickles upon them."

And Frank's mother said, "You may gather some of these little balls, my dear; these are not of the same sort as those you saw on the potato-plants. These are not poisonous. These are called horse-chesnuts. The prickles are not very sharp; you may break them off."

"How many of these horse-chesnuts may I gather, mamma?" said Frank.

"You may gather four of them, my dear," said his mother; and Frank gathered four of the horse-chesnuts. Then he let go the bough, and he sat down upon the

bank, beside his mother, to examine his horse-chesnuds. His mother broke one of them open for him. The inside of the green husk was white and soft; and in the middle of this white soft substance, there lay a smooth shining kernel, of the colour of mahogany.

"Is it good to eat, mamma?" said Frank. "May I taste it?"

"You may taste it if you please, my dear," said his mother; "but I do not think that you will like it; for that brown skin has a bitter taste, and I do not think the inside of it is agreeable. You may taste it if you like it."

Frank tasted it, and he did not like the bitter of the outside; and he said, "Mamma, I will always take care to ask you, before I meddle with things, or taste them, because you know more than I do; and you can tell me whether they are good for me or not."

Frank's mother, having now rested herself, got up from her seat, and walked home; and Frank carried his three horse-chesnuds home with him. He did not put them into his mouth, because he had learned that they tasted bitter; but he used them as balls; and he rolled them along the floor when he got into the house; and he was very happy playing with them.

ANOTHER day, Frank went out to walk with his mother, and he came to a gate that was painted green; and he stopped at the gate, and looked between the rails of it, and he saw a pretty garden, with several beds of flowers in it. There were nice clean gravel-walks between these flower-beds, and all round the garden. Against the walls of the garden there were plum-trees and cherry-trees, and the cherries and plums looked as if they were quite ripe.

And Frank called to his mother who was a little way off, and said, "Mamma, come and look at this pretty garden. I wish I might open this gate, and go in and walk in it."

"My dear," said his mother, "you must not open the

gate. This garden does not belong to me; and I cannot give you leave to walk in it."

There was a man nailing up a net over a cherry-tree in this garden, and he came to the gate and opened it, and said, "Will you walk in, madam? This garden belongs to me; and you shall be very welcome to walk in it." And Frank's mother thanked the man; and she then turned to Frank and said, "If I take you with me, Frank, to walk in this garden, you must be careful not to meddle with anything in it." And Frank said that he would not meddle with anything in the garden; and his mother took him into it.

As he walked along the gravel-walks, he looked at everything; but he did not touch anything.

A very sweet smell came from two beds of pinks and carnations, and he stood at a little distance from them, looking at them; and the man to whom the garden belonged said to him, "Walk down this narrow path, master, between the beds, and you'll see my carnations better."

And Frank answered, "I should like to come down that narrow path; but I am afraid of coming, because the skirts of my coat, I am afraid, will brush against the flowers. I saw your coat just now, sir, hit against the top of a flower, and it broke it."

Frank's mother smiled, and said, "I am glad, my dear little boy, that you are so careful not to do mischief."

Frank did not tread upon any of the borders; and the person to whom the garden belonged, who was a gardener, said to his mother, "I hope, whenever you come this way again, ma'am, you'll walk in this garden of mine, and bring this little gentleman with you; for I am sure, by what I see of him now, that he will not do me any mischief."

The gardener told Frank the names of several flowers; and he showed him the seeds of some of these flowers; and he showed Frank how these seeds should be sown in the ground.

And whilst the gardener was showing Frank how to sow the seeds of mignonette, he heard a noise at the

gate ; and he looked, and saw a boy who was shaking the gate, and trying to get in. But the gate was locked, and the boy could not open it ; and the boy called to the gardener, and said, "Let me in—let me in. Won't you let me in?"

But the gardener answered, "No, I will not let you come in, sir, I assure you ; for when I did let you in yesterday, you meddled with my flowers, and you ate some of my cherries. I do not choose to let you in here again. I do not choose to let a dishonest boy into my garden, who meddles with what does not belong to him."

This boy looked very much ashamed, and very sorry that he might not come into the pretty garden ; and he stood at the gate for some time ; but when he found that the gardener would not let him in, he went slowly away.

A little while afterwards, Frank asked his mother why she did not gather some of the pinks in this garden ? and his mother answered, "Because they are not mine ; and I must not meddle with what does not belong to me."

"I did not know till now, mamma," said Frank, "that you must not meddle with what does not belong to you. I thought that people only said to little boys, *You must not meddle with what does not belong to you.*"

"My dear," said Frank's mother, "neither men, women, nor children should meddle with what does not belong to them. Little children do not know this till it is told to them."

"And, mamma," said Frank, "what is the reason that men, women, and children should not meddle with what does not belong to them?"

Frank's mother answered, "I cannot explain all the reasons to you yet, my dear. But should you like anybody to take flowers out of the little garden you have at home?"

"No, mamma, I should not."

"And did you not see that the boy who just now came to this green gate was prevented by the gardener from coming into this garden, because he yesterday took flowers and fruit which did not belong to him. You, Frank, have not meddled with any of these flowers or this fruit ; and

you know the gardener said, that he would let you come in here again whenever I like to bring you with me."

"I am very glad of that, mamma," said Frank; "for I like to walk in this pretty garden; and I will take care not to meddle with anything that does not belong to me."

Then Frank's mother said, "It is time that we should go home." And Frank thanked the gardener for letting him walk in his garden, and for showing him how to sow seeds in the ground; and Frank went home with his mother.

A FEW days after Frank had been with his mother to walk in the garden that had the green gate, his mother said to him, "Frank, put on your hat, and come with me: I am going to the garden in which we walked two or three days ago."

Frank was very glad to hear this; so he put on his hat in an instant, and followed his mother, jumping and singing as he went along.

When they were in the fields which led to the garden with the green gate, Frank ran on before his mother. He came to a stile. A boy of about Frank's size was sitting upon the uppermost step of the stile. He had a hat upon his knees, in which there were some nuts; and the boy was picking the white kernel of a nut out of its shell.

When the boy saw Frank, he said to him, "Do you want to get over this stile?"

And Frank answered, "Yes, I do."

The boy then got up from the step of the stile on which he was sitting; and jumped down, and walked on, that he might make room for Frank to get over the stile.

Frank and his mother got over the stile, and, in the path in the next field, at a little distance from the stile, Frank saw a fine bunch of nuts.

"Mamma," said Frank, "I think these nuts belong to that little boy who was sitting upon the stile, with nuts

in his hat. Perhaps he dropped them, and did not know it. May I pick them up, and run after the little boy, and give them to him?"

His mother said, "Yes, my dear; and I will go back with you to the boy." So Frank picked up the nuts, and he and his mother went back; and he called to the little boy, who stopped when he heard him call.

And as soon as Frank came near him, and had breath to speak, he said to the boy, "Here are some nuts, which I believe are yours. I found them in the path, near that stile."

"Thank you," said the boy; "they are mine. I dropped them there; and I am much obliged to you for bringing them back to me."

Frank saw that the boy was glad to have his nuts again; and Frank was glad that he had found them, and that he had returned them to the person to whom they belonged.

Frank then went on with his mother; and they came to the garden with the green gate. The gardener was tying the pinks and carnations to white sticks, which he stuck into the ground near them. He did this to prevent the flowers from hanging down in the dirt, and from being broken by the wind.

Frank told his mother, that he thought he could tie up some of these flowers, and that he should like to try to do it.

She asked the gardener if he would let Frank try to help him.

The gardener said he would; and he gave Frank a bundle of sticks, and some strings made of bass mat. Frank stuck the sticks in the ground, and tied the pinks and carnations to them; and he said, "Mamma, I am of some use." And he was happy whilst he was employed in this manner.

After the flowers were all tied up, the gardener went to the cherry-tree, which was nailed up against the wall; and he took down the net which was spread over it.

Frank asked his mother why this net had been spread over it.

She told him, that it was to prevent the birds from pecking at and eating the cherries.

The cherries looked very ripe, and the gardener began to gather them.

Frank asked whether he might help him to gather some of the cherries.

His mother said, "Yes; I think the gardener will trust you to gather his cherries, because he has seen that you have not meddled with any of his things, without his leave."

The gardener said that he would trust him. Frank was glad; and he gathered all the cherries within his reach that were ripe.

The gardener desired that he would not gather any that were not ripe; and his mother showed Frank a ripe and an unripe cherry, that he might know the difference between them; and she asked the gardener if he would let Frank taste these two cherries, that he might know the difference in the taste.

"If you please, ma'am," said the gardener. Frank tasted the cherries; and he found that the ripe cherry was sweet, and the unripe cherry was sour.

The gardener told him that the cherries which were now unripe would grow ripe in a few days, if they were left to hang upon the tree, and if the sun shone.

And Frank said, "Mamma, if you let me come with you here again in a few days, I will look at these cherries, that I may see whether they do grow ripe."

Frank took care to gather only the cherries that were ripe; and when he had filled the basket into which he had been asked to put them, the gardener picked out five or six bunches of the ripest cherries, and offered them to Frank.

"May I have them, mamma?" said Frank.

His mother said, "Yes, you may, my dear."

Then he took them; and he thanked the gardener for giving them to him. After this, he and his mother left the garden, and returned towards home.

He asked his mother to eat some of the cherries; and she took one bunch, and said that she liked them.

"And I will keep another bunch for papa," said Frank, "because I know he likes cherries."

And Frank ate the rest of the cherries, except the bunch which he kept for his father; and he said, "I wish, mother, you would give me a little garden, and some mignonette-seeds to sow in it."

She answered, "This is not the time of year in which mignonette-seed should be sown: the seeds will not grow if you sow them now. We must wait till the spring."

Frank was going to say, "How many months will it be between this time and spring?" but he forgot what he was going to say, because he saw a boy in the field in which they were walking, who had something made of white paper in his hand, which was fluttering in the wind.

"What is that, mamma?" said Frank.

"It is a paper kite, my dear," said his mother; "you shall see the boy flying this kite, if you please."

"I do not know what you mean by flying the kite, mamma," said Frank.

"Look at what the boy is doing, and you will see."

Frank looked, and he saw the paper kite blown by the wind; and it mounted up higher than the trees, and went higher and higher till it seemed to touch the clouds, and appeared no larger than a little black spot. At last, Frank lost sight of it entirely.

The boy who had been flying the kite now ran up to the place where Frank was standing; and Frank saw that he was the same boy to whom he had returned the nuts.

The boy held one end of a string in his hand; and the other end of the string, Frank's mother told him, was fastened to the kite.

The boy pulled the string towards him, and wound it up on a bit of wood; and Frank saw the paper kite again, coming downwards; and it fell lower and lower, and lower; and, at last, it fell to the ground.

The boy to whom it belonged went to fetch it; and Frank's mother said, "Now we must make haste and go home."

Frank followed his mother, asking her several questions about the kite; and he did not perceive that he had not his bunch of cherries in his hand till he was near home—when his mother said, “There is your father coming to meet us.” Frank cried, “Oh, mamma! my cherries! the nice bunch of cherries that I kept to give him; I have dropped them—I have lost them—I am very sorry for it; may I run back to look for them? I think I dropped them whilst I was looking at the kite; may I go back to that field, and look for them?”

“No, my dear,” said his mother; “it is just dinner-time.”

Frank was sorry for this; and he looked back towards the field where he lost his cherries, and he saw the boy with the kite in his hand running very fast across the field nearest to him.

“I think he seems to be running towards us, mamma,” said Frank, “will you wait one minute?”

His mother stopped; and the boy ran up to them, quite out of breath. He held his kite in one hand, and in his other hand he held Frank’s bunch of cherries.

“Oh, my cherries! thank you for bringing them to me,” said Frank.

“You seem to be as glad as I was when you brought me my nuts,” said the boy. “You dropped the cherries in the field where I was flying my kite; I knew they were yours, because I saw them in your hand when you were looking at my kite.”

Frank thanked the boy again for returning them to him; and his mother also said to the boy, “Thank you, my little honest boy.”

“I was honest, mamma, when I returned his nuts to him; and he was honest when he returned my cherries. I liked him for being honest; and he liked me for being honest. I will always be honest about everything, as well as about nuts.” Then Frank ran to meet his father, with the ripe bunch of cherries, and gave them to him; and his father liked them very much.

THE evening after Frank had seen the boy flying a kite, he asked his father if he would be so good as to give him a kite.

"My dear," said his father, "I am busy now; I am writing a letter, and I cannot think about kites. Do not talk to me about kites when I am busy."

When his father had finished writing his letter, he folded it up, and took up some sealing-wax to seal it; and Frank watched the sealing-wax, as it was melted by the heat of the candle: he saw that his father let some of the melted sealing-wax drop upon the paper, and he pressed the seal down upon the wax which had dropped upon the paper, and which was then soft.

When the seal was taken up, Frank saw that there was the figure of the head of a man upon the wax; and he looked at the bottom of the seal, and he said, "This is the same head that there is upon the wax, only this on the seal goes inwards, and that on the wax comes outwards."

He touched the wax upon which the seal had been pressed, and he felt that it was now cold and hard; and he said, "Papa, are you busy now?"

And his father said that he was not busy.

And Frank asked him if he would drop some more wax on a bit of paper, and press the seal down upon it.

"Yes," said his father, "you were not troublesome to me when I said that I was busy. Now I have leisure to attend to you, my dear."

His father then took out of a drawer three different seals; and he sealed three different letters with these, and let Frank see him drop the wax upon the paper, and let Frank press down the seals upon the soft wax.

"Papa, will you give me leave to try if I can do it myself?" said Frank.

"My dear," said his mother, "I do not like that you should meddle with candles or with fire, lest you should set your clothes on fire and burn yourself, as many children of your age have done when no one has been present to help them."

"But, papa," said Frank, "I never meddle with candles or fire when you or mamma are not in the room."

"Then now we are present, you may try what you wish to do; but I advise you to take care," said his mother, "not to let any of the melted wax drop upon your hands, for it will burn you, if you do."

Frank was in a great hurry to melt the wax. His mother called to him, and said, "Gently, Frank, or you will let the wax drop upon your hand, and burn yourself."

But he said, "Oh, no, mamma; it will not burn me."

And, just after he had said this, a drop of the melted sealing-wax fell upon the forefinger of his hand, and burned him; and he squeezed his finger as hard as he could, to try to stop the feeling of pain. "It hurts me very much, mamma. I wish I had minded what you said to me. But I will not cry; I will bear it well."

"You do bear it well," said his father. "Shake hands with me, with the hand that is not burnt."

A few minutes afterwards, Frank said that he did not feel the pain any longer; and he asked his father if he would give him leave to have the sealing-wax again, and to try whether he could not make such a seal as he had seen upon his father's letter, without burning himself.

"You did not burn yourself, papa," said Frank; "and if I take care and do it as you did, I shall not burn myself. May I try again?"

"Yes, my dear," said his father; "and I am glad to see that you wish to *try again*, though you have had a little pain."

His father showed him, once more, how to hold the wax to the candle, and how to drop it, when melting, upon the paper, without burning himself.

And Frank succeeded very well this time, and made a good impression from the seal; and he showed it to his mother.

"Is it not a *good seal*, mamma?" said he, "I took care not to hold the wax this time, as I did the last, when I burned myself."

"Yes," said his mother, "I dare say you remember how you held it when you burned yourself."

"Oh yes, *that* I do, mamma; the pain makes me remember it, I believe."

"And I dare say you remember how you held the wax when you made this pretty seal."

"Oh yes, mamma, *that* I do; and I shall remember to do it the same way the next time."

"You have been rewarded for your patience, by having succeeded in making this seal; and you were punished for your carelessness by having burned your forefinger."

FRANK remembered that his father desired him not to talk to him about kites when he was busy; and, though Frank was very eager to have a kite, he waited till he saw that his father was neither reading nor writing, nor talking to anybody. Then he said, "Papa, I believe you are not busy now. Will you give me a kite?"

"I have not a kite, ready made, in my house," replied his father, "but I will show you how to make one; and I will give you some paper, and some paste, and some wood, to make it of." Then his father gave him three large sheets of paper; and his mother rang the bell, and desired the servant to order the cook to make some paste.

And Frank asked his mother how the cook made paste, and what she would make it of.

His mother took him by the hand, and said, "You shall see; and she took Frank downstairs with her, into the kitchen, where he had never been before; and she stayed with him whilst he observed the manner in which the cook made the paste.

"What is that white powder, mamma, which the cook is taking up in her hands?" said Frank.

"It is called flour, my dear. You may take some of it in your hand; and you may taste it."

"Where does it come from, mamma?"

"From corn, my dear. You have seen corn growing

in the fields; and when we walk out again into a field where there is corn, if you will put me in mind, I will show you the part of the plant from which flour is made."

"Made, mamma! how is it made?"

"It is ground in a mill. But I cannot explain to you now what I mean by that. When you see a mill, you will know."

"I should like to see a mill," said Frank, "now, this minute."

"But I cannot show it to you, Frank, now, this minute," said his mother; "besides, you came here to see how paste was made, and you had better attend to that first."

Frank attended; and he saw how paste was made. And when the paste was made, it was left upon a plate to cool.

Frank, as soon as it was cool enough to be used, took it to his father, and asked him if he might now begin to make his kite? but his father said, "My dear, I cannot find two slips of wood for you; and you cannot make your kite well without them. I am going to the carpenter's, and I can get such bits as I want from him. If you wish to come, you may come with me."

Frank said that he should like to go to the carpenter's; so his father took him along with him.

The carpenter lived in a village, which was about a mile from Frank's home; and the way to it was by the turnpike-road.

As he walked along with his father, he saw some men who were lifting up a tree, which they had just cut down. It had been growing in a hedge by the road-side. The men put the tree upon a sort of carriage, and then they dragged the carriage along the road.

"What are they going to do with this tree, papa?" said Frank. "Will you ask them?"

The men said that they were carrying the tree to the saw-pit, to have it cut into boards.

They went on a little further, and then the men turned up a lane, and dragged the carriage, with the tree

upon it, after them; and Frank told his father that he should very much like to see the saw-pit.

It was not far off, and his father went down the lane and showed it to him.

At the saw-pit, Frank observed how the sawyer sawed wood. He looked at some boards which had just been sawn asunder. When the sawyer rested himself, Frank looked at the large sharp teeth of his saw; and when the sawyer went on with his work, Frank's father asked him to saw slowly, and Frank observed that the teeth of the saw cut and broke off very small parts of the wood, as the saw was pushed and drawn backwards and forwards. He saw a great deal of yellow dust in the sawpit, which his father told him was called sawdust; and fresh sawdust fell from the teeth of the saw as it moved.

The men who had brought the tree to be sawed into boards were all this time busy in cutting off, with a hatchet, the small branches; and Frank turned to look at what they were doing; but his father said, "Frank, I cannot wait any longer, now; I have business to do at the carpenter's." So Frank followed his father directly, and they went on to the carpenter's.

When they came to the door of his workshop, they heard the noise of hammering; and Frank clapped his hands and said, "I am glad to hear hammering. I shall like to hammer myself."

"But," said his father, stopping him, just as he pulled up the latch of the door, "remember that the hammer in this house is not yours; and you must not meddle with it, nor with any of the carpenter's tools, without his leave."

"Yes, papa," said Frank, "I know that I must not meddle with things that are not mine. I did not meddle with any of the flowers, or cherries, in the gardener's nice garden; and I will not meddle with any of the carpenter's tools." So his father took him into the workshop; and he saw the bench upon which the carpenter worked, which was called a work-bench: upon it he saw several tools—a plane, and chisel, and a saw, and a gimlet, and a hammer. He did not meddle with

any of them ; and, after his father had been some time in the workshop, and when he saw that Frank did not touch any of these things, he asked the carpenter to let him touch them, and to show him their use.

The carpenter, who had observed that Frank had not meddled with any of his tools, readily lent them to him to look at, and when he had looked at them, showed him their use. He planed a little slip of wood with a plane ; and he bored a hole through it with a gimlet ; and he sloped off the end of it with his chisel ; and then he nailed it to another piece of wood with nails, which he struck into the wood with his hammer.

And Frank asked if he might take the hammer, and a nail, and hammer it into a bit of wood himself.

"You may try, if the carpenter will give you leave," said his father.

So Frank took the hammer, and tried to hammer a nail into a bit of wood. He hit his fingers, instead of the nail, two or three times ; but at last he drove it into the wood ; and said, "I thought it was much easier to do this, when I saw the carpenter hammering."

Frank afterwards tried to use the plane, and the saw, which he thought he could manage very easily ; but he found that he could not ; and he asked his father what was the reason that he could not do all this as well as the carpenter.

The carpenter smiled, and said, "I have been learning to do all this, master, a long while. When I first took a plane in my hand, I could not use it better than you do now."

"Then, perhaps, papa, I may learn too, in time. But, papa," said Frank, recollecting his kite, "will you be so good as to ask for the slips of wood for my kite?"

His father did so ; and the carpenter found two slips that were just suited for his purpose, and gave them to him ; and his father then desired him not to talk any more ; "For," said he, "we have business to do ; and you must not interrupt us."

WHILST his father was speaking to the carpenter about his own business, Frank went to the window to look at it; for it was a different sort of window from those which he had been used to see in his father's house. It opened like a door; and the panes of glass were very small, and had flat slips of lead all round them.

Whilst Frank was examining this window, he heard the sound of a horse trotting; and he looked out, and saw a horse upon the road before the window.

The horse had a saddle and bridle on; but nobody was riding upon it. It stopped, and ate some grass by the roadside, and then went down a lane.

Soon after Frank had seen the horse go by, his father, who had finished his business with the carpenter, called to Frank, and told him that he was going home.

Frank thanked the carpenter for letting him look at the plane, and the saw, and the chisel, and for giving him a slip of wood for his kite; and he took the bit of wood with him, and followed his father. When his father and he had walked a few yards from the carpenter's door, a man passed by them, who seemed very hot and very much tired. He looked back at Frank's father, and said, "Pray, sir, did you see a horse go by this way, a little while ago?"

"No, sir, I did not," said Frank's father.

"But I did, papa," said Frank. "I saw a horse going by, upon this road, whilst I was standing, just now, at the carpenter's window."

"Pray, master, what colour was the horse you saw?" said the man.

"Black, sir," said Frank.

"Had he a saddle and bridle on?" said the man.

"Yes, sir, he had," answered Frank.

"And pray, master," said the man, "will you be so good as to tell me whether he went on, upon this road straight before us, or whether he turned down this lane to the right, or this other lane to the left hand?"

As the man spoke, he pointed to the lanes, and Frank answered, "The horse that I saw, sir, galloped down this lane to my right-hand side."

"Thank you, master," said the man. "I will go after him. I hope the people at the house yonder will stop him. He is as quiet and good a horse as can be, only that whenever I leave him by the roadside, without tying him fast by the bridle, he is apt to stray away; and that is what he has done now."

The man, after saying this, went down the lane to his right-hand side, and Frank walked on with his father.

The road towards home was up a steep hill, and Frank began to be tired before he had got half way up the hill.

"It did not tire me so much, papa, as we came down the hill; but it is very difficult to get up it again."

"I do not hear all that you are saying," said his father, "you are so far behind me. Cannot you keep up with me?"

"No, papa," cried Frank, as loud as he could, "because I am tired. My knees are very much tired coming up this great hill."

His father stopped and looked back, and saw that Frank was trying to come up the hill as fast as he could.

At this time, Frank heard the noise of a horse behind him, and he looked, and saw the man whom he had spoken to a little while before, riding upon the black horse which he had seen going down the lane.

The man said to him, "Thank you, master, for telling me which way my horse went. You see, I have caught him again. You seem sadly tired. I will carry you up this hill upon my horse, if you have a mind."

"I will ask my father if he will allow me," said Frank.

His father gave him permission to ride, and the man took Frank up, and set him before him upon the horse, and put his arm round Frank's body, to hold him fast upon the horse. Then the horse proceeded gently up the hill, and Frank's father walked at the side; and when they came to the top of the steep hill, his father took Frank down from the horse, and Frank thanked the man for carrying him; and he felt himself refreshed, and able to walk on merrily with his father.

And as they went on, he said to his father, "I am glad that I saw the horse, and observed which way it ran, and

that I told the man which road it went. You know, papa, there were three roads; and the man did not know which way the horse went till I told him. If I had not observed, and if I had not told him the right road, he would have gone on—on—on—a great way, and he would have tired himself, and he would not have found his horse."

"Very true," said his father. "Now you have found one of the uses of observing what you see, and of relating facts exactly."

"One of the uses, papa! Are there more uses, papa?"

"Yes, a great many."

"Will you tell them all to me?"

"I would rather that you should find them out for yourself," said his father. "You will find them all out some time or other."

Then Frank began to talk about his kite; and as soon as he got home, his father showed him how to make it, and helped him to do it. And when it was made, he left it to dry, for the paste which pasted the paper together was wet, and his father told him that it must dry before the paste would hold the paper together, and before the kite was fit to be used.

And when it was quite dry, his father told him that he might go out upon the grass, in a field near the house, and fly it.

Frank did so, and it went up very high in the air; and it stayed up, now higher, now lower, for some time; and the sun shone upon it, so that it was plainly seen; and the wind swelled out the sides of it, as Frank pulled it by the middle with the string.

His mother came to the window to look at the kite; and Frank was very glad that she saw it too. And when it came down, it fell upon the smooth grass, and it was not torn.

Frank carried it into the house, and put it by carefully, that it might not be spoiled, and that he might have the pleasure of flying it another day; and he said, "I wish I could find out why the kite goes up in the air!"

PART. II.

It was a rainy day; and Frank could not go out to fly his kite. He amused himself with playing with his horse-chesnuts. He was playing in a room by himself; and, by accident, he threw one of his horse-chesnuts against the window, and it broke a pane of glass. Immediately he ran downstairs into the room where he knew that his mother was, and he went up to her. She was speaking to somebody, and did not see him—and he laid his hand upon her arm, to make her attend to him; and the moment she turned her face to him, he said, "Mamma, I have broken the window in your bed-chamber, by throwing a horse-chesnut against it."

His mother said, "I am sorry you have broken my window; but I am glad, my dear Frank, that you came directly to tell me of it." And his mother kissed him.

"But how shall I prevent you," said she, "from breaking my window again, with your horse-chesnut?"

"I will take care not to break it again, mamma," said Frank.

"But you said that you would take care, before you broke it to-day; and yet you see that you have broken it. After you burnt your finger by letting the hot sealing-wax drop upon it, you took a great deal of care not to do the same thing again, did you not?"

"Oh yes, mamma," said Frank, squeezing the finger which he burnt, just as he did at the time he burnt it. "Oh yes, mamma, I took a great deal of care not to do the same thing again, for fear of burning myself again."

"And if you had felt some pain when you broke the window, just now, do you not think that you should take care not to do so again?"

"Yes, mamma."

"Where is the horse-chesnut with which you broke the window?"

"It is upon the floor in your room."

"Go and fetch it."

Frank went for it, and brought it to his mother: and she took it in her hand, and said, "You would be sorry to see this horse-chesnut thrown away, would you not?"

"Yes, mamma," said Frank; "for I like to roll it about, and to play with it; and it is the only one of my horse-chesnuds that I have left."

"But," said his mother, "I am afraid that you will break another of my windows with it; and if you would throw it away, you could not break them with it; and the pain you would feel at your horse-chesnut's being thrown away would make you remember, I think, not to throw hard things against glass windows again."

Frank stood for a little while, looking at his horse-chesnut; and then he said, "Well, mamma, I will throw it away," and he threw it out of the window.

Some days afterwards, his mother called Frank to the table where she was at work; and she took out of her work-basket two leather balls, and gave them to Frank. One of them was very hard, and the other was very soft. His mother desired that he would play with the soft ball when he was in the house, and with the hard ball when he was out of doors. She said that she had made the soft ball on purpose for him, that he might have one to play with when it was rainy weather, and when he could not go out.

This soft ball was stuffed with horse-hair; it was not stuffed tight, and Frank could squeeze it together with his fingers.

Frank thanked his mother. He liked the two balls very much; and his mother said to him, "You have not broken any more windows, Frank, since you *punished* yourself by throwing away your horse-chesnut; and now I am glad to *reward* you for your truth and good sense."

ABOUT a week after Frank's mother had given him the two balls, she came into the room where he had been playing at ball. Nobody had been in the room with him till his mother came in. She had a large nosegay of pinks and carnations in her hand: "Look here, Frank,"

she said, "the gardener who lives at the garden with the green gate has brought these pinks and carnations, and has given them to me. He says they are some of those which you helped him to tie up."

"Oh, they are very pretty! they are very sweet!" said Frank, smelling them, as his mother held them towards him. "May I help you, mamma, to put them into the flower-pot?"

"Yes, my dear. Bring the flower-pot to me, which stands on that little table, and we will put these flowers into it."

She sat down, and Frank ran to the little table for the flower-pot.

"There is no water in it, mamma," said Frank.

"But we can put some in," said his mother. "Well! why do not you bring it to me?"

"Mamma, said Frank, "I am afraid to take it up, for here is a large crack all down the flower-pot; and when I touched it, just now, it shook. It seems quite loose; and I think it will fall to pieces if I take it in my hands."

His mother then came to the little table, by which Frank was standing; and she looked at the flower-pot, and saw that it was cracked through from top to bottom; and the moment she took it in her hands, it fell to pieces.

"This flower-pot was not broken yesterday evening," said his mother; "I remember seeing it without any crack in it, yesterday evening, when I took the dead mignonette out of it."

"So do I, mamma; I was by at that time."

"I do not ask you, my dear Frank," said his mother, "whether you broke this flower-pot; I think, if you had broken it, you would come and tell me, as you did when you broke the pane of glass in this window."

"But, mamma," said Frank, eagerly looking up in his mother's face, "I did *not* break this flower-pot. I have not meddled with it. I have been playing with my soft ball, as you desired. Look, here is my soft ball," said he; "this is what I have been playing with all this morning."

"My dear Frank," said his mother, "I believe you. You told me the truth before, about the window that you broke."

Frank's father came into the room at this moment, and Frank asked him if he had broken or cracked the flower-pot.

He said, "No, I have not, I know nothing about it."

Frank's mother rang the bell, and when the maid-servant came up, she asked her whether she had cracked the flower-pot.

The maid answered, "No, madam, I did not." And after she had given this answer, the maid left the room.

"Now, my dear Frank," said his father, "you see what an advantage it is to speak the truth; because I know that you told the truth about the window which you broke, and about the horse which you said you had seen going down the lane, I cannot help believing that you speak the truth now. I believe that you did not break this flower-pot, because you say that you did not."

"But, papa," said Frank, "I wish that the person who *did* crack it would tell you or mamma that they cracked it, because then you would be quite, *quite* sure that I did not do it. Do you think the maid did it?"

"No, I do not, because she says she did not; and I have always found that she tells truth."

Frank's mother, whilst he was speaking, was looking at the broken pieces of the flower-pot; and she observed that, near the place where it was cracked, one side of the flower-pot was blackened; and she rubbed the black, and it came off easily; and she said, "This looks as if it had been smoked."

"But smoke comes from the fire," said Frank: "and there has been no fire in this room, mamma."

"And did you never see smoke come from anything but from the fire in the fireplace?"

"Not that I remember, mamma," said Frank. "Oh yes, I have seen smoke, a great deal of smoke, come from the spout of the tea-kettle, and from the top of the urn."

"That is not smoke," said his father: "but I will tell

you more about that another time. Cannot you recollect seeing smoke come from——”

“From what, papa?”

“Last night, you saw smoke coming from——”

“Oh, now I recollect—from the candle, papa,” said Frank.

“And now I recollect,” said Frank’s father, “that, late last night, I was sealing a letter at this little table; and I remember that I left the green wax-candle burning very near this flower-pot, whilst I went out of the room to give the letter which I had been sealing to a man who was waiting for it. When I came back again, I put the candle out. I did not observe that the flower-pot was smoked or cracked; but I now think it is very probable that the heat of that candle cracked it.”

“Let us look whether there is any melted green wax,” said Frank, “upon the pieces of the flower-pot, because wax, when it was melting, might drop upon the flower-pot, as it did upon my fingers once.”

Frank examined all the pieces of the flower-pot; and on one part, near the place where it was blackened with smoke, he found a round spot of green wax.

“Then,” said his father, “I am now pretty sure that it was I who was the cause of cracking the flower-pot, by putting the lighted candle too near it.”

“I am very glad we have found out the truth,” said Frank; “and now, papa,” added he, “will you be so good as to tell me about the smoke. No, not the smoke, but the thing that looks so like smoke, which comes out of the top of the urn, and out of the spout of the tea-kettle.”

“I have not time to explain it to you now, Frank,” said his father; “but if I am not busy at teatime this evening, you may put me mind of it again.” And at teatime his father showed him the difference between smoke and steam.*

“The bread, mamma, is very good this morning,” said Frank, one morning, at breakfast.

* See “Harry and Lucy.”

"It is new bread."

"New bread, mamma!—What is meant by *new* bread?"

"Bread that has been newly made."

"Bread is made of flour, I remember you told me, mamma; and flour comes from—Oh, mamma, do you not recollect telling me that, some time or other, you would show me corn growing in the fields? When we walk out this morning, I will put you in mind of it again."

And when he walked out with his mother in the fields, Frank put her in mind of it again; and she said, "I see some men at work, yonder, in a corn-field; let us go and see what they are doing." So they went to the field; and Frank's mother showed him some wheat growing; and she showed him some that had been cut down; she showed him some that was ripe, and some that was not ripe. And then they walked farther on, to the part of the field where the men were at work.

Frank saw that they had a kind of sharp, bright hooks in their hands, with which they were cutting down the wheat. His mother told him that these hooks are called reaping-hooks.

He saw that, after the wheat was cut down, the men tied up bundles of it, which they set upright in the field, at regular distances from each other. His mother told him, that each of these bundles was called a sheaf of wheat; and she pulled out a single stalk, and put it into his hand, and said, "This is called an ear of wheat. That which grows upon a single stalk is called an ear of wheat."

Whilst Frank was looking at the men tying up the sheaves, a person came to him, and said, "You are welcome here, master. You are he that was so good as to tell me which road my horse strayed, some time ago."

Frank looked in the face of the person who was speaking to him; and he recollected that this was the man who carried him up the steep hill upon his horse.

This man was a farmer; and he was now overlooking some labourers, who were reaping his wheat. He pointed

to a small house amongst some trees at a little distance, and he told Frank's mother that he lived in that house, and that, if she liked to walk there, he could show Frank how the men were thrashing in his barn.

Frank's mother thanked the farmer, and they walked to his house. It was a thatched, whitewashed house, and it looked very neat.

There were some scarlet flowers in the kitchen-garden, which looked very pretty. As they passed through the garden, Frank asked the name of these flowers; and his mother told him that these were called scarlet runners; and she said to him, "On this kind of plant grow kidney-beans, of which you are so fond, Frank."

Frank saw cabbages, and cauliflowers, and lettuce, in this garden; but his mother said, "Come, Frank, you must not keep us waiting;" and he followed his mother through a yard, where there were a great number of ducks, and fowls, and geese, and turkeys; and they made a great noise. Several of them clapped their white wings; and the geese and turkeys stretched out their long necks.

"You need not squeeze my hand so tight, Frank," said his mother. "You need not squeeze yourself up so close to me. These geese and turkeys will not do you any harm, though they make so much noise."

So Frank walked on boldly; and he found that the geese and turkeys did not hurt him. And when he had crossed this yard, the farmer led them through a gate, into a large yard where there were ricks of hay; and there were several cows in this yard, and as he passed by them, Frank observed that their breath smelt very sweet.

"Come this way, into the barn," said the farmer; "here are the men who are thrashing."

The barn, on the inside, looked like a large room, with rough walls, and no ceiling; but it had a floor. Four men were at work in this barn; they were beating some wheat that lay upon the floor, with long sticks; they made a great noise, as they struck the floor with their sticks, so that Frank could neither make his mother hear what he said, nor could he hear her voice.

The sticks seemed to be half broken in two in the middle; and they seemed to swing with great violence, as the men struck with them; and Frank was afraid lest the sticks should reach the spot where he stood, and hit him; but, after he had been in the barn for a little while, he became less afraid—for he observed that the sticks did not swing within reach of him.

The farmer asked the men to stop working, and they stopped; and the farmer took one of the things with which they had been working out of their hands, and showed it to Frank.

His mother told him that it was called a flail. It was made of two sticks, tied together with a piece of leather.

The farmer showed Frank the wheat which lay upon the floor; and his mother showed him that the loose, outside cover of the wheat was beaten off by the strokes of the flail.

The farmer said, "You may take some of the wheat, master, in your hand, and some of the chaff, and then you will see the difference." The chaff was the outside covering.

"And how is this wheat made into bread?" said Frank.

"Oh, master," said the farmer, "a great deal must be done to it before it can be made into bread. It must go to the mill, to be ground."

"I should like to see the mill, mamma," said Frank; "but I do not know what he means by *to be ground*."

"That you will see, when you go to the mill."

"Shall we go to the mill now, mamma?" said Frank.

"No, my dear," said his mother, "I would rather that you should wait till some day when your father can have time to go with you to the mill, because he can explain it to you much better than I could."

Then Frank and his mother thanked the farmer for what he had shown them, and they had a pleasant walk home.

Ah! spare yon emmet, rich in hoarded grain;
He lives with pleasure, and he dies with pain.*

FRANK was always careful not to hurt insects, nor any sort of animals. He liked to observe spiders in their webs, and ants carrying their white loads; but he never teased them. Even those animals which he did not think pretty he took care not to hurt.

One evening, when he was walking with his father and mother, upon a gravel walk near the house, he saw several black snails. He did not think them pretty animals; but whenever he came near one, he took care not to tread upon it. He stooped down to look at one of these black snails, which was in the act of drawing in its black horns.

"I believe, mamma," said Frank, "that it draws in those horns because it is afraid I am going to hurt it."

"Very likely."

"But that is foolish of the snail, mamma, because you know I am not going to hurt it."

"I know that, Frank; but how should the snail know it?"

"He lies quite still. He will not put out his black horns again. I will go away and leave him, that I may not frighten him any more. I should not like to be frightened myself, if I were a snail," said Frank. So he ran on before his father and mother, and left the snail; and he saw some pretty brown and green moss upon a bank; and he asked his mother if he might gather some of it.

"She said 'Yes;'" and he climbed up the bank, and gathered some of the moss; and in the moss, at the foot of a tree, he found a pretty shell. It was striped with purple and green, and straw-colour and white, and it was smooth and very shining. He got down from the bank as fast as he could, and he ran and asked his mother if he might keep this pretty shell, and carry it into the house, when he came home from walking.

His mother looked at the shell, as Frank held it upon

* Sir William Jones.

the palm of his hand; and she told him that he might have it, and that he might carry it into the house with him when he went home; and she told him that it was a snail-shell.

"A snail-shell, mamma!" said Frank. I never saw such a pretty snail-shell before. I am glad I found it, and I will take care not to break it."

Frank held it carefully in his hand during the rest of his walk, and he often looked at it, to see that it was safe; and, just as he came near the hall-door, he opened his hand, and began to count the number of coloured rings upon his snail-shell. "One, two, three, four, five rings, mamma," said Frank; "and the rings seem to wind round and round the shell; they are larger at the bottom, and they grow less and less, and less, as they wind up to the top."

"That is called a spiral line," said his father, pointing to the line which, as Frank said, seemed to wind round and round the shell.

As Frank was looking with attention at the shell, he felt something cold, clammy, and disagreeable touching his hand, at the bottom of the shell; and with his other hand he was going to lift up the shell, to see what this was; but when he touched it he found that it stuck to his hand; and, a few instants afterwards, the snail-shell seemed to rise up, and he perceived the horns and head of a snail peeping out from beneath the shell. "Oh, mamma! there is a living snail in this shell. Look at it," said Frank. "Look! it has crawled out a great deal farther now, and it carries its shell upon its back. It is very curious; but I wish it was crawling anywhere but upon my hand—for I do not like the cold, sticky feeling of it."

Frank was then going to shake the snail from his hand; but he recollected that, if he let it fall suddenly upon the stone steps, he might hurt the animal, or break the pretty shell; therefore he did not shake it off—but he put his hand down gently to the stone step, and the snail crawled off his hand upon the stone.

"Mamma," said Frank, "I think the snail might do

without that pretty shell. You gave the shell to me, mamma. May I pull it off the snail's back?"

"My dear," said his mother, "I did not know that there was a snail in that shell when I said that you might have it. I would not have given it to you if I had known that there was a snail inside of it. You cannot pull the shell from the snail's back without hurting the animal, or breaking the shell."

"I do not wish to hurt the animal," said Frank, "and I am sure I do not wish to break the pretty shell; so I will not pull it. But, mamma, I think I had better take the snail and snail-shell, both together, into the house, and keep them in my little red box. What do you think?"

"I think, my dear, that the snail would not be so happy in your little red box as in the open air, upon the grass, or upon the leaves which it usually eats."

"But, mamma, I would give it leaves to eat, in the little red box."

"But, Frank, you do not know what leaves it likes best to eat; and if you do not shut it up in your red box, it will find the leaves for itself which it loves best."

"Then if you do not think it would be happy in my red box, mamma, I will not shut it up in it. I will leave it to go where it pleases, with its own pretty shell upon its back. That is what I should like, if I was a snail, I believe."

He then took the snail, and put it upon the grass, and left it; and went into the house with his mother. She called him into her room, and she took out of her bureau something which she held to Frank's ear: and he heard a noise like the sound of water boiling. Then she put into Frank's hand what she had held to his ear, and he saw that it was a large shell, speckled red, and brown, and white; it was so large, that his little fingers could hardly grasp it.

"Do you like it as well as you did the snail-shell?"

"Oh, yes; a great deal better, mamma."

"Then I give it to you, my dear," said his mother.

"Keep it," said his father; "and, even if you keep it

till you are as old as I am, you will feel pleasure when you look at it; for you will recollect that your mother was pleased with you when she gave it to you, because you had been good-natured to a poor little snail."

"WHAT was it, mamma," said Frank, "that papa was saying to you, just after you were looking at the snail?"

"I do not recollect, my dear."

"I wish you would be so good as to try to recollect, mamma, because it sounded very pretty; and I should like to hear it again. It seemed like something out of a book. It was something about horned snails, and varnished shells, and sliding."

"Do you mean,

"Slide here, ye horned snails, with varnished shells?"

"Oh yes, mamma!" cried Frank, "that is what I mean; but papa said a great deal more of it. Will you say it for me?"

"I will repeat the lines that you may hear the agreeable sound; but I do not think that you can understand the sense of them yet," said his mother; and she repeated to him the following lines:—

"Stay thy soft-murmuring waters, gentle rill;
Hush, whispering winds; ye rustling leaves, be still;
Rest, silver butterflies, your quivering wings,
Alight, ye beetles, from your airy rings;
Ye painted moths, your gold-eyed plumage furl;
Bow your wide horns, your spiral trunks uncurl;
Glitter, ye glow-worms, on your mossy beds;
Descend, ye spiders, on your lengthened threads;
Slide here, ye horned snails, with varnish'd shells;
Ye bee-nymphs, listen in your waxen cells."*

"I do not understand the last line, mamma, at all but I understand about the spiders coming down on their long threads. I have often looked at spiders doing that. But, mamma, I never saw any moths that had trunks. I do not think that a moth could carry a trunk."

* Darwin.

"What do you think is meant by a trunk, my dear?"

"A sort of box."

"That is one meaning of the word trunk. Do you know any other meaning?"

"Yes; trunk of a tree."

"And did you never see the picture of the trunk of an elephant?"

"Yes, yes, mamma, I remember seeing that; and I remember you read to me an account of the elephant, and you told me that he could curl up that trunk of his. But, mamma, such moths as I have seen are little flying animals, about as large as a butterfly. They could not have such trunks as elephants have."

"No, they have not; they have not such large trunks."

"Will you tell me what sort of trunks they have?"

"I will show you, the first time we see a moth."

"Thank you, mamma; and I wish you could show me a glow-worm. I have seen a beetle. But, mamma, will you say that part about the beetle again?"

"Alight, ye beetles, from your airy rings."

"What does that mean, mamma?"

"Beetles sometimes fly round and round in the air, so as to make the shape of circles or rings in the air; and *alight* here means come down from, alight upon the ground, or settle upon the ground."

"And *silver butterflies*, mamma, does not mean made of silver, but that they look shining, like silver, does it not?"

"Yes, my dear."

"But I wish, very much, mamma, to see the glow-worms that lie on the mossy beds."

"I will try if I can find a glow-worm, and show it to you this evening," said his mother.

In the evening, when it was dusk, Frank's mother called him, and bade him follow her; and she went down a lane that was near her house, and Frank followed her. She looked from side to side, on the banks, and under the hedges, as she walked along.

"Are you looking for a glow-worm, mamma?" said

Frank; "it is so dark now, that I am afraid we shall not see it, unless it is a great deal larger than a common worm, or unless we had a lantern. May I go back for the little lantern that is in the hall; there is a candle ready lighted in it, mamma? May I go back for it, mamma?"

"No, my dear; we shall not want a lantern, nor a candle. We shall be more likely to find a glow-worm in the dark than if we had a candle."

Frank was surprised at hearing his mother say this. "I can always find things better in the light than in the dark," said he. But just as he finished speaking, he saw a light upon the bank, near the place where his mother was standing; and she called to him, and said, "Here is a glow-worm, Frank; come nearer to me, and you will see it better."

Frank knelt down upon the bank beside his mother; and he saw that the light seemed to come from the tail of a little brown caterpillar.

The caterpillar crawled on upon the bank, and the light moved on whenever the caterpillar moved, and stood still whenever it stood still.

Frank's mother, whilst the glow-worm was standing still, put her hand down upon the bank, close beside it; and by-and-by, the glow-worm began to move again, and it crawled upon her hand.

"Oh, mamma, take care," cried Frank. "It will burn you."

"No, my dear, it will not burn me, it will not hurt me," said his mother; and she held her hand towards Frank, and he saw the glow-worm upon it.

"Shall I put it in your hand?" said his mother.

Frank drew back, as if he was still a little afraid that it would burn him.

"My dear," said his mother, "it will not hurt you. You know that I would not tell you that it would not hurt you if it would. You know that I told you the hot melting sealing-wax would scald you if you let it drop upon your fingers, and it did. But I tell you that the light which you see about this animal will not burn you, as the flame of a candle, or as the fire would."

"Then, here is my hand, mamma. Put the glow-worm upon it, and I will not shrink back again," said Frank.

He found that the light from the glow-worm did not hurt him in the least; and he asked his mother how it came that this, which looked so much like the flame of a candle, should not burn him.

But she answered, "I cannot explain that to you, my dear."

And when Frank had looked at the glow-worm as long as he liked to do so, his mother desired him to put it again upon the bank, which he did. Before they got home, Frank saw several other glow-worms upon the banks; and his mother said to him, "Now you know the meaning of

"Glitter, ye glow-worms, on your mossy beds."

"Yes," said Frank, "*glitter* means look bright, shine. Thank you, mamma, for showing me these glow-worms; and, some time or other, I hope we shall see the trunk of a moth."

THE candles were lighted; and all the window-shutters in the room were shut, except the shutters of one window, which were left open to let in air, for it was a warm evening.

Frank's mother was sitting upon a sofa, reading; and Frank was kneeling upon a chair at the table upon which the candle stood. He was looking at some prints in a book which his mother had lent him.

Through the window which was open there flew into the room a large moth. It flew towards the candle.

"Oh, mamma! here is a moth," cried Frank.

As he spoke, the moth, which had flown very quickly round and round the candle, two or three times, went so close to the flame, that Frank thought it would burn itself to death; and he cried, "Oh, it will burn itself!" He put his hand before his eyes that he might not see the moth burn itself. But his mother did not put her hand before her eyes; she got up as quickly as possible, and

put her hand gently over the moth, and caught it; and so prevented it from burning itself in the candle.

"I am glad you have caught it, mamma," said Frank, "and the next time I will try to catch it as you did; and I will not put my hands before my eyes, because that did the moth no good."

His mother then covered the moth with a glass tumbler, and she put it upon the table, and Frank looked through the glass, and he saw it plainly.

When the moth was quiet, Frank's mother took a honeysuckle out of her nosegay; and she lifted up one side of the tumbler a little way from the table; and she squeezed the honeysuckle under the tumbler; and as soon as the moth perceived the flower was near him, he walked upon it; and Frank saw him uncurl what is called his trunk or proboscis; and he saw the moth dip it into part of the flower of the honeysuckle. And he saw also what were called the horns of the moth; and he saw the animal bow them forwards; and he said, "Now, mamma, will you repeat those two lines about the moth again for me?"

"Ye painted moths, your gold-eyed plumage furl;
Bow your wide horns, your spiral trunks uncurl."

"*Painted!*" said Frank,—“it does not mean that the moth is painted, I suppose, but that it looks as if it was painted. *Gold-eyed plumage*, mamma! What does that mean?"

"*Plumage* means feathers, such as you see on birds. Look through this glass," said his mother, putting a magnifying-glass into his hand.

"I have looked through this glass before at a caterpillar, mamma. It makes things look larger."

His mother lifted up the tumbler gently; and, as the moth was settled upon the honeysuckle, Frank looked through the magnifying-glass at it.

"Mamma, it looks very large; and upon its wings," said Frank, "I see what look like very, very small feathers."

"That is what is meant by *plumage*."

"But *gold-eyed*, mamma! I see no gold eyes."

"Do you see some spots upon the wings?"

"Dark brown spots, mamma?"

"Yes."

"They are of the shape of eyes; and, though they are not eyes, they are called so, from their shape. In some moths, these spots are yellow, gold-coloured; and then they may be called *gold-eyed*."

"One thing more, mamma," said Frank: "What does it mean by ——. Would you be so good as say the line again; for I do not recollect the word that I did not understand."

His mother repeated the line again,—

"Ye painted moths, your gold-eyed plumage furl."

"*Furl*, mamma. *Furl* is the word which I do not understand."

His mother showed him a fan, and showed him what is meant by *to furl* and *unfurl* a fan; and when the moth closed and afterwards spread its wings, she said, "Now he is furling, and now he is unfurling his pretty wings: *furl* and *unfurl* are seamen's phrases, and are used *metaphorically* in speaking of a fan, or of a moth's tail."

"Metaphorically! mamma," said Frank, "I think that is a harder word than *furl*."

"It is my dear," said his mother; "but I will explain it to you. When a word that properly belongs to one kind of thing is made use of in speaking of another kind of thing, then it is used *metaphorically*,—as the word *furl*, which is properly used in speaking of the sails of a ship, and metaphorically in speaking of a moth's wings. But now I think we have kept the poor moth long enough under this glass. We will now let him fly about where he pleases." So she took the moth and let him fly out of the window.

"Do you know, mamma," said Frank, "that I can repeat those two lines about the moths. I wish you would say the other lines again for me that I might learn them all, and then say them to my father. I think he

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Frank and his mamma at the old woman's cottage.

would like to hear me say them after dinner to-morrow, mamma?"

"I think your father will like to hear you repeat them if you understand them all, but not otherwise."

"I think I do understand them all now; every one, mamma, except something in the last line, about bees in their wazen cells."

"You never saw a honeycomb, did you, Frank?"

"No, mamma, never."

"When you see a honeycomb, you will know what is meant by the wazen cells in which which bees live."

The next morning, at breakfast, there was part of a honeycomb upon a plate on the breakfast-table; and Frank's mother showed it to him, and she gave him some honey. He liked the sweet taste of the honey, and he thought the honeycomb was very pretty. His mother gave him a little bit of the honeycomb, which she told him was made of wax.

"It is quite a different sort of wax from sealing-wax, mamma," said Frank. "Where does this wax come from, and this pretty honeycomb, and this sweet honey?"

His mother told him that she would show him where they all came from, when she had finished eating her breakfast. And, after breakfast was over, she took Frank with her to a cottage, belonging to an old woman in the neighbourhood.

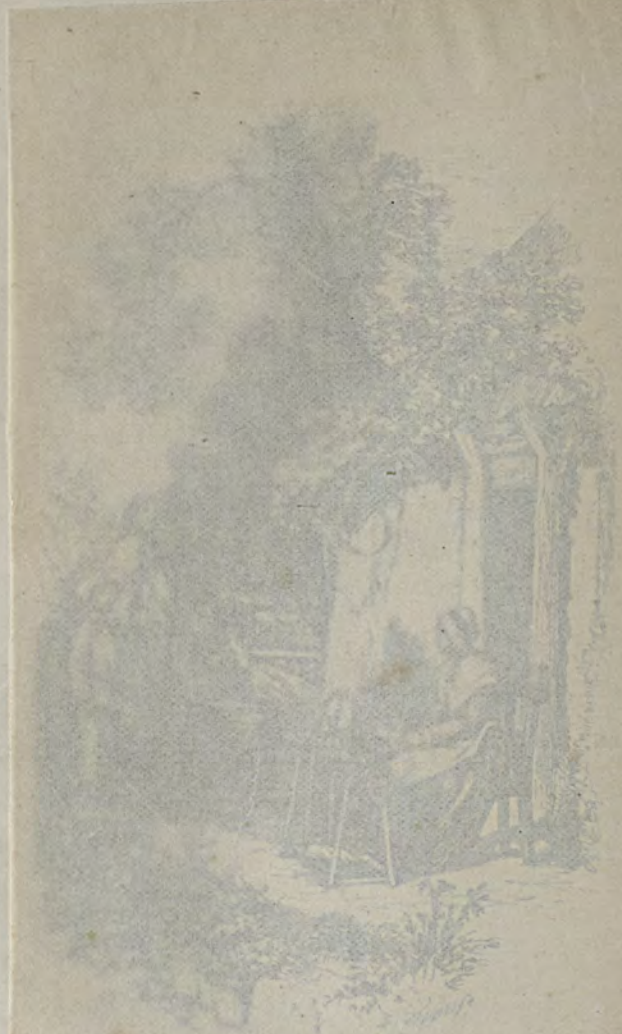
The old woman was sitting at her door, turning a small wheel very quickly round, which Frank's mother told him was called a spinning-wheel.

The old woman pushed her spinning-wheel on one side, and got up, as soon as they came to her door.

"Thank you for the good honey you sent us, Mrs. Wheeler," said Frank's mother.

"You are heartily welcome, ma'am, I'm sure," said the old woman; "but it was not I that sent it; it was my grandson sent it to you. George! George! are you there?"

A little boy came running to the door; and he smiled:



THE OLD WOMAN'S REFUGE.

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"I think your father will like to hear you repeat them if you understand them all, but not otherwise."

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A little boy came running to the door; and he smiled

when he saw Frank, and Frank smiled when he saw him—for he recollected that this was the same boy to whom he had returned the nuts which he had found dropped near the stile—the same boy who had brought him back his ripe bunch of cherries.

"Thank you for the honey you sent us," said Frank's mother to this boy; "will you be so good as to let us look at your bee-hive? I hear that you have a glass bee-hive."

"Yes, ma'am, I have," said the boy; "and if you will be pleased to come with me into the garden, I will show it to you. I have a glass bee-hive, and I have a straw bee-hive."

Frank and his mother followed the boy, who ran across a narrow passage, which went straight through the house, and he opened a low gate, and took them into a small garden. The paths were narrow; and he said to Frank, "Take care that you do not prick yourself against the gooseberry-bushes, as I do when I am in a hurry to get by."

Frank took care not to prick himself; and the boy pointed to his bee-hives, and said, "There are my bee-hives, and there are my bees."

"Did bees make that straw basket?" said Frank.

The boy laughed so much at this question, that he could make no answer; but Frank's mother answered, "No, my dear, the bees did not make that straw basket; that was made by men; but go and look in, through the little pane of glass in that wooden box, and you will see what bees make."

"Do you not know," said the little boy, "what bees make? I thought everybody knew that bees make honey and wax."

"How can they make honey? What do they make it of?" said Frank.

"They collect it; they get it from flowers," answered his mother; and she said to the boy, "May I gather this honeysuckle?" touching a honeysuckle which grew in an arbour close beside the place where she stood.

"Yes, and welcome, ma'am," said the boy; "that honeysuckle is mine; grandmother gave it to me."

When Frank's mother had gathered the honeysuckle, she pulled off a part of the flower; and she held that end of the flower which grew next the stalk to Frank's mouth, and she bid him suck it.

He sucked it.

"It has a sweet taste, like honey," said Frank. "Is that the reason the flower is called honeysuckle, mamma?"

"Yes, my dear, I believe it is."

"And have all flowers honey in them, mamma?"

"I do not know, my dear; but I know that some flowers have more honey in them than others."

"And how do bees get honey from flowers?"

"Look, and you may see a bee now settling upon that honeysuckle in the arbour. You will see all that I have seen, if you use your own little eyes."

Frank used his own little eyes; and he saw that the bee stretched out its proboscis, or trunk, and put it down into the flower, then drew it back again, and flew to another part of the flower, settled again, and again put down its proboscis, drew it back, and put it to its mouth.

"I fancy, mamma, the bee sucks the honey which it gets in the flower from its proboscis every time it puts it to its mouth. But I am not sure, because I do not see the honey."

"You are right not to say that you are sure of it, as you do not see it; but I believe that the bee does, as you say, draw the honey from flowers with that proboscis; and then he puts the honey into his mouth, and swallows the honey. With a good magnifying-glass, you might see that the proboscis of the bee is rough, and you might see the little drops of honey sticking to it. The bee gets but one or two very small drops of honey from one flower."

"What a great deal of work it must be, then, for the bees to collect as much honey as I ate this morning at breakfast! But, mamma, does this bee swallow all the honey it gets from this flower?"

"Yes, the bee swallows it; it keeps the honey in a

little bag; and the bee has the power of forcing it up again from this bag, whenever it pleases. Usually the bee carries the honey home to the hive, and puts it in the little waxen cells, such as those you saw in the honeycomb to-day at breakfast."

"And where do the bees get the wax, mamma, of which they make the cells in the honeycomb?"

"I am not sure, my dear, what that wax is. I believe that it is made partly of farina, which the bees collect from the flowers, and partly of some sticky substance in the stomachs of bees. Some time or other you will read the accounts which have been written of bees, and then you will judge for yourself."*

Frank looked through the glass pane, into the beehive; but he said that the bees crowded so close to one another, that he could not see what they were doing.

His mother told him, that some other day she would bring him again to see the bees at work, and that by degrees, perhaps, he would distinguish them, and see what they were doing.

When Frank went home, he said, "Now, mamma, that I know what is meant by the bees in their waxen cells, may I learn those lines, and will you repeat them to me?"

"It is troublesome to me, my dear," said his mother, "to repeat them so often; but here is a book in which you can read them yourself; and you may now learn them by heart, if you like."

FRANK read the lines over and over, and tried to learn them by heart; and at last he could repeat them, as he thought, perfectly. One day, after dinner, he went to his father, and told him that he could repeat some pretty lines to him, if he would give him leave.

* See "Bees; their Habits, Management, and Treatment." By the Rev. J. G. Wood, author of "Natural History." May be had of the publishers. Price 1s.

"I shall be glad to hear them, Frank," said his father. "Begin and repeat them."

So Frank repeated them, without making any mistake; and when he had repeated them, his father asked him several questions about them, to try whether he understood them; and his father was pleased to find that he really did understand. Frank told him that his mother had been so good as to show him a glow-worm, and a moth, and a bee-hive, and that she had explained to him all the words in the lines which he did not at first understand.

"I am glad, my dear," said his father, "that you have had so much amusement, and that you have had the perseverance to learn anything well that you began to learn. But, pray tell me why you have been continually buttoning and unbuttoning the left sleeve of your coat whilst you have been talking to me, and whilst you were repeating those verses?"

"I do not know, papa," said Frank, laughing; "only I remember that when I was getting the verses by heart, and saying them by myself, I first began buttoning and unbuttoning this sleeve, and then I could not say the verses so well without doing that."

"And do you not remember, Frank," said his mother, "that I spoke to you several times, and told you that I was afraid you would get a trick, a habit of buttoning and unbuttoning that sleeve of yours, if you did not take care?"

"Yes, mamma," said Frank; "and I stopped whenever you spoke to me, and whenever I remembered it; but then I found myself doing it again, without thinking of it. Now, whenever I am trying to recollect anything, I cannot recollect it half so well without buttoning and unbuttoning my sleeve."

"Give me your right hand," said his father.

Frank gave his hand to his father.

"Now," said his father, "repeat those lines to me once more."

Frank began—

"Stay thy soft-murmuring waters, gentle rill;
Hush, whispering winds——"

But here he twitched his hand which his father held fast;

"Hush, whispering winds——"

"Father, I cannot say it whilst you hold my hand."

His father let go his hand.

Frank immediately buttoned and unbuttoned his sleeve, and then repeated, very fluently,

"Hush, whispering winds; ye rustling leaves be still;
Rest, silver butterflies——"

But here his father caught hold of his right hand, and he could get no further.

"My dear," said his father, "it would be very inconvenient to you if your memory was to depend upon your button; for you see that I can make you forget all you have to say in an instant, by only catching hold of your hand."

"But then, papa, if you would be so good as not to catch hold of my hand," said Frank, "you would hear how well I could repeat the lines."

"It is of little consequence," said his father, "whether you repeat these lines to-day or to-morrow; but it is of great consequence that you should not learn foolish, awkward tricks. Therefore I beg you will not say them to me again till you can hold yourself perfectly still whilst you are repeating them."

PART III.

FRANK'S father and mother went out to walk, and Frank went with them. "Oh, I am glad you are going this way," said Frank, "because now I shall see the swing."

His father had had a swing put up between two trees. Frank had seen it from the window of the room in which he slept; but he had never yet been close to it; and he wished very much to see it, and to swing in it.

When he came up to it, he found that there was

a soft cushion fastened to the middle of the rope of which the swing was made.

One end of the rope was tied round the trunk of a large ash-tree, and the other end of the rope was tied round the trunk of an oak that was opposite to the ash.

The rope was tied towards the top of the trees; and some of the branches of the trees were cut away, so that the rope could swing backwards and forwards without catching in anything.

The cushion, which made the seat of the swing, hung so near the ground that Frank could reach it; and he asked his father whether he might sit upon it.

His father told him that he might; and he said, "Take hold of the cord on each side of you, and hold it fast, and your mother and I will swing you."

Frank jumped up on the cushion directly, and seated himself, and took hold of the cord on each side of him with his hands.

"You must take care not to let go the cord whilst we are swinging you," said his father, "or perhaps you will tumble out of the swing, and be hurt. Hold up your feet, that they may not touch the ground."

"I will not let go, papa; I will hold fast," said Frank: and his father and mother began to swing him backwards and forwards. He liked it very much; but it was a sharp evening in autumn, and his father and mother did not like to stand still long to swing him.

"When you have had twenty more swings backwards and forwards, we will stop, Frank," said his father. So Frank began to count the swings; and whilst he was counting, a leaf fell from the tree, and put him out. He tried to recollect whether the last number of swings he had counted to himself was six or seven; and the moment he began to try to recollect this, he let go the cord with his right hand, for he was going to button and unbutton his sleeve, as he had the habit of doing when he was trying to recollect anything.

The moment he let go the cord, he twisted a little in the seat, and could not catch the cord again; and he fell out of the swing.

He fell on the grass and hurt his ankle, but not much.

"It is well you were not more hurt," said his father. "If we had been swinging you higher, and if you had fallen upon the gravel walk, instead of on the grass, you might have been very much hurt. My dear, why did you let go the cord?"

"Papa," said Frank, "because I was trying to recollect whether it was six swings or seven that I had had."

"Well, and could you not recollect that without letting go the cord?"

"No, papa. The thing was—that I was, I believe, going to button my sleeve. I wish I had not that trick."

"You may cure yourself of it, if you take pains to do so," said his father.

"I wish I could," said Frank; "my ankle is not very much hurt, however. Papa, will you put me into the swing again; and I think I shall take more care not to let go the cord now. You know I have not had all my twenty swings, papa."

"No, you have had but eight," said his father; "I am afraid that if I were to put you into the swing again, and if you were to begin counting again, if you should not be able to recollect the number, you would let go the cord to button your sleeve, and you would slip out of the swing again."

"No, papa," said Frank. "I think this is the very thing that would cure me of that trick, because I do not like to tumble down and hurt myself; and I think I should take care, and count and recollect without buttoning or unbuttoning this sleeve. May I try, papa?"

His father shook hands with him, and said, "I am glad to see that you can bear a little pain, and that you wish to cure yourself of this foolish trick. Jump, my boy," said his father; and Frank sprang up, and his father seated him in the swing again.

He counted, and held fast by the rope, this time; and just when he was come to the eighteenth swing, his father said to him, "Can you recollect the last number you

counted, without letting go the rope to button your sleeve?"

"Yes, papa," said Frank, "I can. It was seventeen."

"And you have had two swings since I spoke last; how many does that make?"

Frank was just going to let go the cord to button his sleeve; but he recollected his former tumble. He held fast; and after thinking for an instant, answered, "Seventeen swings and two swings make nineteen swings."

His father gave him one good swing more, and then lifted him out, and his mother kissed him.

The next day his father was going from home; and when he took leave of Frank, Frank asked him if there was anything he could do for him whilst he was away. "May I dust the books in your study, papa? I can do that," said Frank.

"I would rather, my dear," said his father, "that you should, whilst I am away, learn to repeat the lines which you got by heart, without——"

"I know what you mean, papa; I will try if I can."

His father went away; and Frank, after he was gone, asked his mother if she would take him to the swing and swing him, and let him try whether he could recollect some of the verses whilst he was swinging; "for then, you know, mamma, I cannot move my hands without tumbling out, and I shall take care."

But his mother said that she did not choose to swing him whilst his father was away; and Frank, soon afterwards, said, "Will you be so good, then, mamma, as to cut off this button, and to sew up this button-hole for me; and then I cannot button and unbutton it."

His mother cut off the button, and sewed up the button-hole; and several times, when he was trying to repeat the lines, he felt for the button and button-hole; but when he found that the button was gone, and that he could not put his finger into the button-hole, he, by degrees, left off feeling for them.

His father stayed away a week; and in this time, Frank quite cured himself of the foolish trick which he

had had, and he repeated the lines to himself whilst he held his hands quite still.

He asked his mother to sew the button on again, and to open the button-hole, the day his father came home; and she did so.

And when his father came home, and after he had said, "How do you do, father?" Frank cried, "May I say the lines now, father?"

"Yes, my dear."

He stood opposite to his father, held his hands perfectly still, and repeated the lines without making a single mistake.

His father was pleased; and he desired the servant, who was bringing some things of his out of the chaise in which he came, to give him a book that was in the front pocket of the chaise.

The book was "Bewick's History of Quadrupeds." It had very pretty prints in it. Frank's father wrote, in a blank page at the beginning of it—

"This book was given to Frank, October the 27th, 1798, by his father, as a mark of his father's approbation for his having, at six years old, cured himself of a foolish habit."

"Read that, if you can, Frank," said his father.

Frank could not read all the words, for he was not used to read writing; but his mother read it to him.

And Frank liked the prints in this book very much; and he said, "Shall I read all that is in the book, papa?"

"Read only what you can understand, and what entertains you in it, my dear," said his father.

FRANK was kneeling upon a chair at the side of the table upon which his mother was writing. He was looking at the prints in his "Bewick;" and every minute he exclaimed, "Oh, mamma, look at this! Mamma, here is a very pretty print! Only look at this one, mamma; the old, old man going over a narrow bridge, and his dog leading

him. He is a blind man, I suppose; and the wind has blown his hat off; and it is raining very hard. Pray look, mamma!"

His mother put down her pen, and she looked at the print, which she said was very pretty.

"But now, Frank," added she, "do not interrupt me any more."

Frank was silent after this; but whenever he turned over a new leaf, he put down both his elbows upon the table, to look at the new print; and he shook the table, so that his mother could not write; wherefore she at last desired him to take his book to another table.

He did so; but he said that he could not see nearly so well as when he was nearer to the light.

"If you had not disturbed me," said his mother, "I should not have sent you away from this table. You should consider what is agreeable to others, or they will not consider what is agreeable to you."

"Mamma," said Frank, "if you will let me come back to the table where you are sitting, I will take care not to shake the table."

His mother told Frank that he might come; and he took care not to shake the table.

A little while after this he was trying to draw the old man going over the bridge. Pompey, a little dog that was in the room, jumped up suddenly behind Frank's chair, and shook the table.

"Fie! Pompey! fie! down! down!" cried Frank. "I don't like you, Pompey, at all."

"Why don't you like Pompey?" said Frank's mother; "you generally are very fond of him."

"Yes, mamma, so I am fond of him, generally; but I don't like him now, because he shook me, and hindered me from drawing. Oh, Pompey! Pompey! again you gave my elbow a shake. Look, mamma, just as I was drawing the old man's nose, he shook me."

"Who? the old man?"

"No, mamma, but Pompey. Just as I was drawing the old man's nose, Pompey shook me, and made me make the old man's nose as large as his whole head. Oh,

Pompey! you have spoiled my old man entirely. But I'll rub out his nose, and draw it over again."

Just as Frank had finished drawing the old man's nose over again, the dog shook him again; and Frank was angry. "Don't shake, Pompey; I bade you several times not to shake, and still you go on shaking. Naughty Pompey! why don't you do as you are bid?"

"Perhaps the dog does not understand you," said Frank's mother.

"Well, but it is very disagreeable that he should shake the table. I don't like him at all to-night."

Here Frank began struggling with Pompey. Pompey had his fore paws upon the table, and Frank was trying to drag him back by the hind legs; but all this struggling shook the table very much.

"Frank, I don't like either you or Pompey, now," said Frank's mother, "because you both of you shake the table, so that I cannot write. Look, here is an O that is as crooked as your old man's nose."

"I am very sorry, mamma," said Frank; "but will you be so kind as to put Pompey out of the room, and then we shall all be quiet and happy. You know you sent me to another table when I was troublesome; and now, if you put Pompey out of the room, he cannot be troublesome to us any more."

"Very true," said his mother, and she put Pompey out of the room.

"I am glad he is gone," cried Frank: "now I can draw nicely."

"And now I can write nicely," said his mother.

"Mamma, are you glad when I go out of the room, after I have been troublesome, as we are now that we have got rid of Pompey?"

"Yes."

"But when I am not troublesome, you are not glad when I go out of the room?"

"No; I am glad to have you with me when you are not troublesome."

"And you are more glad to have me with you when I am useful to you, as I was yesterday, when I helped you

to cut open the leaves of those new books which you wanted to read. You liked me very much then, when you said I was *useful* to you."

"Yes; people like those who are useful to them."

"And I like to be liked, mamma, by you more than by anybody; so I will try always to be as useful to you as I can. I can be useful to you now, mamma, if you will give me leave."

"I will give you leave, and welcome, Frank," said his mother, smiling. So Frank went for a little bit of wood which his father had given him; and he cut it with his knife into the shape of a wedge; and he put this wedge under one of the legs of the table which was shorter than the other legs; and the table was now much steadier than it was before.

"Now, mamma," said Frank, "try to shake the table, and you will feel how steady it is. I can put my elbows upon it now without shaking it; and, I dare say, even Pompey would not shake it if he was to leap up as he did just now. Is not my wedge useful, mamma?"

"Yes; thank you for it, my dear."

"And now, mamma, may I open the door, and let poor Pompey in again; for he cannot easily shake us now?"

Frank's mother told him that he might let Pompey in again; and when Frank opened the door, he saw Pompey, sitting upon his hind legs, holding something up in his fore paws.

"Oh, mamma, it is my glove," cried Frank, "the glove that I lost yesterday. Useful Pompey! I like you for finding my glove. Useful Pompey! Come in, useful Pompey!"

ONE evening, at tea-time, there was a small plum-cake upon a plate on the tea-table; and there was a knife beside the plate. Frank's father and mother, and two of his brothers, were sitting round the table. His mother was beginning to pour out the tea; and she called to Frank, and said to him, "My dear, cut this plum-cake into five pieces for us; and take care that you make all

the pieces of the same size, for your father, and your two brothers, and yourself, and me; and give us each our just share."

Frank began to cut the cake; but, by mistake, he divided it into six parts, instead of into five.

"Mamma," said he, "what shall I do with this bit? I have five without it; one for you, and one for my father, and one for my brother Edward, and one for my brother Harry, and one for myself. What shall I do with this bit that is left?"

"What is it most just to do with it?"

"I think I had better keep it myself, mamma, because it belongs to nobody, and I should have it for the trouble of cutting the cake for everybody."

"No," said his brother Henry, "I do not think *that* would be just, because then you would be rewarded for making a mistake. If you had cut the cake right, there would not be this bit to spare."

"Well," said Frank, "I do not think it would be just that I should have it; but to whom, then, shall I give it? I will give it to you, mamma, because I like to give it to you best. No, I will give it to papa, because he likes plum-cake better than you do. Stay, I will give it to you, good Henry, because you mended my kite for me. No, indeed, I must give it to poor Edward, because he had no cherry-pie to-day at dinner."

"But," said his mother, "what right have you, Frank, to give this bit of cake to poor Edward, because he had no cherry-pie to-day at dinner; or to good Henry, because he mended your kite; or to your father, because he loves plum-cake better than I do; or to me, because you like to give it to me? What right have you to give it away to any of us?"

"Mamma, you said that I was to give each of you your just share; and I thought I was to be judge."

"Remember, that I desired you to divide the cake into five pieces, all of the same size. You were to judge about the size of the pieces; and you were to take care that we have each our just share; but you are going to give one of us twice as much as any of the others."

"I cannot make the pieces the right size, now, mamma."

"But you can give us each equal quantities of cake; can you not?"

"How, mamma?"

"Think. When you are trusted to divide anything, you must take the trouble, Mr. Judge, to consider how it is to be done fairly."

Frank took the trouble to think; and he then cut the spare bit of cake into five equal parts; and he put these parts by the side of the five large pieces of cake; and he gave one of the large pieces and one of the little pieces to each person; and he then said, "I believe I have divided the cake fairly now." Everybody present said, "*Yes*;" and everybody looked carefully at each of the shares, and there appeared exactly the same quantity in each share. So each person took their portion, and all were satisfied: justice satisfies everybody.

"My dear Frank," said his mother, "as you have divided the cake so fairly, let us see how you will divide the sugar that was upon the top of the cake, and which is now broken and crumbled to pieces in the plate. We all like that sugar; divide it equally amongst us."

"But this will be very difficult to do, mamma," said Frank; "because the pieces of sugar are all of such different sizes and shapes; and here are so many crumbs of cake mixed with the crumbs of sugar, I do not know how I shall ever divide it exactly. Will it do if I do not divide it quite exactly, mamma?"

"No," said his mother; "I beg you will divide it quite exactly. You can do it if you take the right way."

Frank first took out all the largest bits of sugar, and laid them one upon the other, and broke off the corners and edges till he thought he made five of them of the same size exactly; and then he divided the crumbs and little broken bits into five heaps, which he thought seemed to be of the same size.

But when he had done, his brother Henry said, "This heap next me is a great deal larger than any of the others."

And Edward said, "My heap is taller than yours, but

it is not so closely squeezed together; and that makes a great difference."

And his father said, "Frank, my large bit of sugar is twice as big as your largest bit."

"Oh no, indeed, papa; I measured them, and they are exactly the same size: put yours upon mine, and you shall see. Look, papa; not the least corner or crumb difference."

"They are of the same length and breadth, I acknowledge," said his father; "but they are not of the same thickness."

"Oh, thickness! I never thought of thickness."

"But you should think of it," said his father; "because if I were to cut my piece of sugar, which is twice as thick as yours, into two slices, each of those slices would be as long, and as broad, and as thick as your piece is now; and I should have two pieces of the same size as yours—twice as much as you."

"Ah! so you would. Thickness does make a great difference. Then, how shall I manage? for if I begin to cut the sugar in your way in slices—look, papa, it all crumbles. Indeed, the crumbs are the most easily divided. I will crumble it all, and then divide the crumbs amongst you; and then I shall have no difficulty about the thickness." So Frank pounded the sugar with a spoon till it was all a fine powder; and then he divided it into heaps; but still people did not agree that his heaps were all of the same size.

"We can measure them," said Frank; and he put one of the heaps into a teaspoon. It did not quite fill the spoon. Another of the heaps filled the spoon higher than the brim. Another was exactly a spoonful. Frank added to one heap and took from another.

"You squeeze the sugar in the spoon, and that will make more go in," said Henry.

"Indeed! indeed!" said Frank, "it cannot be divided more exactly. It is impossible to divide the sugar more exactly than I have done it now; is it not, mamma?"

"I cannot say that it is impossible to divide it more exactly," said his mother, smiling; "but as far as I can

guess, by looking at your heaps, they seem to be of the same size. I cannot, however, be sure, merely by looking at them, that they contain exactly equal quantities."

"How, then, could you be sure? I do not feel any difference, mamma. Perhaps, I could find out by weighing them in a pair of scales. Papa, will you be so good as to lend me the scales in which you were weighing—money, I believe, yesterday?"

"No, my dear," said his father; "the saucers of those scales are made of brass—and you must not put anything that you are going to eat near brass, because the rust of brass is poisonous. I will lend you another pair of scales which are made of ivory; and in these you may weigh your sugar. Go for these scales; they are upon the table that is on the right-hand side of the window in my study. As you are used to find your way about the house in the dark, you will readily find what you want."

Frank found the scales, and weighed his heaps of sugar very carefully. He was surprised to find that there was so much difference in the weight of the heaps which he thought were exactly of the same size. By patiently adding and taking away he at last, however, made them each of the same weight; and everybody was then satisfied with the accuracy of his division.

"Now, Frank, eat your own share of cake, and drink this cup of tea, which has grown quite cold whilst you have been dividing and weighing," said his mother. And whilst Frank and his brothers were eating their shares of plum-cake, Frank's father said that if they pleased he would read a short story to them.

The boys said that they should like to hear a story, and the story that he read was out of "Sandford and Merton."* It was Cyrus's judgment about the two coats.

ONE day Frank went with his mother to a shop in a town. It was a shop where gloves and ribands, and caps and hats, were sold. His mother, after she had

* An illustrated edition of this work may be had at the publisher's.

bought some gloves which she wanted, went into a little room behind the shop, to see a poor girl who was ill.

"Frank," said his mother, "stay in this shop till I come back again."

Frank waited in the shop; and whilst he was there, a carriage stopped at the door; and a lady got out of the carriage, and came into the shop where Frank was. She asked to look at some ribands; and whilst the shopman was looking in some little drawers for ribands, the lady turned to look at Frank, and said, "Does this little boy belong to you?" meaning the shopkeeper.

"Oh no, ma'am; he belongs to a lady who is just gone into the next room;" and the shopkeeper mentioned the name of Frank's mother.

The moment the lady heard this she smiled at Frank, called him to her, kissed him, and told him he was a charming little creature. She then asked him several questions; and Frank was pleased by her smiling at him, and praising him; and he began to talk to her; and then she said he was the finest boy she had ever seen in her life; and he liked her still better.

She was rolling up some riband in a paper, upon which some words were printed, and she asked him whether he could read any of those words. "Oh yes," said Frank; and he read, "Sarcenets, modes, &c., the most fashionable assortment."

The lady stopped his mouth by kissing him; and she told him he was a very clever little fellow indeed.

Frank thought he should appear still cleverer if he repeated the pretty verses which he had learned by heart. "Oh, what a memory he has! I never heard any verses so well repeated!" exclaimed the lady.

Frank went on to tell her the history of his having cured himself of the trick of buttoning and unbuttoning his coat; and he told her that his father had given him a book; and he repeated, word for word, what his father had written at the beginning of this book.

To all this the lady listened with a smiling countenance; and Frank was going on talking about himself, when his mother came out of the room at the back of the

shop; and she called Frank, and took him home with her.

The next day, his mother, who usually let Frank read to her a little every day, told him that he might bring his book to her and read. He began to read; but he made several mistakes, and his mother said, "Frank, you are not minding what you are about this morning."

Frank read on more carefully; and when he had read about half a page, without making any mistake, he stopped short and said to his mother, "But, mamma, you do not praise me, as the lady in the shop did."

"I do not flatter you, my dear," said his mother.

"What is flattering me, mamma?"

"Flattering you, my dear, is praising you more than you deserve to be praised."

"Did the lady in the shop flatter me, mamma?"

"I do not know, for I was not there; I did not hear what she said."

"She said—I feel, mamma, I do not know why, ashamed to tell you all she said to me. She said I was a charming little creature, and that I was the finest boy she had ever seen in her life; and she said I was a very clever boy, indeed, when I read something about sarcelles and modes, that was printed on a paper in which she was rolling up some riband; and when I repeated the verses to her, mamma, she said she never heard anything so well repeated in her life."

"And did you believe all this, Frank?"

"Not quite, mamma. I made some mistakes when I was repeating the verses; and she did not take notice of them."

"And did you understand what you read about sarcelles and modes?"

"Oh, mamma, I was sure you would ask that question! How came it that the lady never asked me that? And there was something about *fashionable assortment*. She kissed me for reading that, and all the time I did not understand those words. When you kiss me, and praise me, mamma, I feel quite sure that I have done something well or good. I know what you are pleased with me for,

but I did not exactly know why that lady was so much pleased with me. Do you know, mamma?"

"No, my dear; and I am not sure that she was much pleased with you."

"Oh, yes, mamma, I think she really was very much pleased with me, though she was a foolish woman, and did not know why."

"Did not know why she was a foolish woman, do you mean?"

"No, mamma; but did not know why she was pleased with me."

"In that respect," said his mother, laughing, "it seems that you were as foolish as she was."

"But, mamma," said Frank, "why are you not quite sure that she liked me?"

"Because, my dear, I have often heard people tell children that they were sweet creatures, and charming dears, and clever fellows: and I have observed that these people forget the charming dears as soon as they are out of sight."

"You and my father never do so, do you?"

"Never."

"I had rather that you and papa should praise me, and like me, than the lady I saw in the shop. I think I was very foolish to tell her what my father wrote in my book, because I suppose she did not care about it."

"You will be wiser another time," said his mother. "Now, put on your hat, and let us go to look at the bees at work in the glass bee-hive."

They went to the old woman's cottage; and the little boy opened the garden-gate; and Frank went to the bee-hive, to observe the bees, whilst his mother sat down in the arbour, and took a book out of her pocket, in which she read for some time. It entertained Frank more to-day to look at the bees than it did the first morning he came to look at them, because he saw more distinctly what they were doing. And when he had attended to the bees as long as he liked, he went to the arbour where his mother was sitting; and he asked her whether he might go and talk to the little boy, who was now weeding in the garden.

His mother said that she would rather that he should not talk to this little boy; but she went to him herself, and thanked him for letting Frank look at his bee-hive; and she told him that if he would come to her house, she would give him a pair of strong shoes.

Then she took Frank by the hand and went to the cottage.

Somebody was talking to the old woman very eagerly about washing a gown.

The person who was talking was a maid-servant; and she had a muslin gown in her hand which she said her mistress had desired her to take to be washed.

This old woman was a washerwoman.

"Look here!" said the maid, showing the bottom of the muslin gown, on which there were the marks of shoes, which had trodden upon it, and on which there was also the mark of a large hole that had been mended. "Look here! what a piece of work I have had this morning. Yesterday, my mistress came home with her gown torn and dirtied in this manner; and she told me it was all done by a little mischievous, troublesome, conceited brat of a boy that she met with in the milliner's shop where she was yesterday."

Whilst the maid was saying this, she did not see Frank or his mother; for her back was turned towards the door through which they entered.

"Oh, mamma!" cried Frank, "I remember that was the gown the lady had on who called me a charming little fellow, and who *praised*, I mean the other word, *flattered*, me so much; but now she calls me a little mischievous, troublesome, conceited brat, only because I trod upon her gown by accident and tore it. I did not know I had torn it: I remember I caught my foot in it when you called me to come away with you, mamma. If I had torn or dirtied your gown, I do not think that you would have been so angry with me. The next time anybody begins to flatter me, and to tell me I am a *charming little dear*, I shall recollect all this; and I shall not repeat my verses, nor tell them what papa wrote in my book."

FRANK, who had seen the little boy to whom the beehive belonged weeding the beds in the garden, said to his mother, one morning, "Mamma, I should like to try to weed some of the borders in your garden as that little boy weeds the beds in his grandmother's garden."

Frank's mother said that he might weed one of the borders in her garden; and she lent him a little hoe; and he went to work, and weeded a piece of the border very carefully; and his mother looked at it when he had done, and said that it was very well done.

The same day, at dinner, Frank's father gave him a piece of cheese; and his mother was surprised to see Frank take this cheese off his plate and put it betwixt his forefinger and his middle finger. He then took a piece of bread and stuck it betwixt his middle finger and his fourth finger, and then he took a large mouthful of the cheese, and a larger mouthful of the bread, so that his mouth was filled in a very disagreeable manner.

"Pray, Frank," said his mother, "what are you about?"

Frank's mouth was not empty for nearly a minute; and he could make no answer.

"Where did you learn this new method of eating bread and cheese?"

"Mamma," said Frank, "I saw the little boy in the cottage eating his bread and cheese after he had done weeding: and he ate it just in this way."

"And why should you eat in that way because you saw him do so?"

"Mamma, I thought you liked that little boy; I thought he was a very good boy. Do you not remember his bringing me back the bunch of ripe cherries that I dropped? You called him an honest little fellow; and do you not remember that he has been very good-natured, in telling us all he knew about bees, and in letting me look at his glass bee-hive? And you know, mamma, this morning you said, when you saw him at work, that he was very industrious; did you not?"

"Yes, I did; I think he is very industrious, and that

he was good-natured in letting you look at his glass beehive, and honest in returning to you the bunch of ripe cherries which you dropped. But what has all this to do with his method of eating bread and cheese?"

"I do not know, mamma," said Frank, after thinking a little while. "Nothing to do with it! But I thought you would be pleased to see me do everything like him, because you were pleased this morning when you saw me weeding like him."

"You may weed like him," said Frank's mother, "without eating like him; he weeds well, but he eats disagreeably. I shall be glad to see you as honest, and as good-natured, and as industrious as he is; but I should be sorry to see you imitate his manner of eating, because that is disagreeable. Sensible people do not imitate everything which they see others do; they imitate only what is useful or agreeable."

Frank took the bread and cheese from betwixt his fore finger and his middle finger, and from between his middle finger and his fourth finger, and he put the cheese upon his plate, and did not any longer imitate the manner in which he had seen the little boy in the cottage cram his mouth.

"Did you ever hear," said Frank's father, "of the manner in which apes are sometimes caught?"

"No, papa."

"Apes are apt to imitate everything which they see done; and they cannot, as you can, Frank, distinguish what is useful and agreeable from what is useless or disagreeable. They imitate everything without reflecting. Men, who want to catch these apes, go under the trees in which the apes live; and the men take with them basins, with water in them, in which they wash their own hands. They rub their hands, and wash, and wash, for some time, till they perceive that the apes are looking at them; then the men go away, and carry with them the basins of water; and they leave under the trees large, heavy wooden basins filled with pitch. You have seen pitch, Frank; and you know that it is a very sticky substance. The apes, as soon as the men are out of sight, come down from the

trees, and go to the basins to wash their hands, in imitation of the men. The apes dip their hands into the pitch, and the pitch sticks to their hairy hands; and the apes cannot draw their hands out of the pitch. Now, these animals usually run upon all-fours."

"All-fours, papa!" interrupted Frank; "how is that?"

"As you run, upon your hands and feet, upon the carpet, sometimes. The apes cannot run well for want of their hands, and because the wooden bowls, which stick to their hands, are so heavy. The men who left these bowls come back, and find the apes caught in this manner."

"I think these apes are very foolish animals," said Frank.

"So do I," said his father. "No animals are wise who imitate what they see done, without considering the reason why it is done."

PART IV.

FRANK asked his mother if she would take him again to the cottage-garden, to see the bees at work in the glass bee-hive; but his mother answered, "I am afraid to take you there again till I am sure that you will not imitate the little boy in everything which you see him do. For instance——"

"Oh, mamma," said Frank, "I know what you are going to say. But to-day, at dinner, you shall see that I will not eat in that disagreeable way."

His mother attended to him several days; and when she observed that he did not imitate this boy any more in his manner of eating, she took him again to the cottage.

The old woman was spinning, and Frank stopped to look at her spinning-wheel; and he asked his mother what was the use of what the old woman was doing.

She told him that the woman was twisting a kind of coarse thread, and that her spinning-wheel was a machine which helped her to do this quickly.

His mother then asked Frank whether he knew where the thread was found, or how it was made.

"No, mamma," said Frank.

"It is made of a plant called flax, my dear," said his mother. "I think you went with me last summer through a field in which you saw flax. You took notice of its pretty blue flowers."

Frank said that he did remember this; but that he could not imagine how the thread which he saw upon the spinning-wheel could be made from that green plant with the blue flowers.

His mother told him that she would show him whenever she had an opportunity.

The old woman who was spinning told Frank's mother that a neighbour of hers was this very day hackling some flax, and that if she liked to let Frank see how it was done, she would show her the way to the house where her neighbour lived.

"I should like to see what is meant by hackling flax," said Frank.

"Then come with us and you shall see," said his mother.

Frank followed his mother to another cottage, where he saw a woman beating, with the edge of a thin bit of wood, something which he thought looked a little like very yellow dry hay; but his mother told him that this was flax.

As the woman beat it, a great deal of dust and dirt fell out of it upon the ground; and by degrees the flax which she held in her hand looked cleaner and cleaner, and finer and finer, till at last it looked like yellow hair.

"But, mamma," said Frank, "the flax which I saw last summer growing in a field near this house had long green stalks and blue flowers. I saw no yellow threads like these. Is this a different kind of flax?"

"No, my dear; this is the same flax. The blue flowers have withered and died. When the blue flowers began to wither, the woman pulled up all the green stalks, and bound them together in bundles, and put these bundles under water, where she left them for about a fortnight.

During this time the green outside of the stalk decayed, and the stringy part remained. She then untied the bundles, and spread them out near a fire to dry. In a few days they were dried, and then she brought the flax home. And this," said she, showing Frank a bit of the flax which the woman had not yet beaten and cleaned—"this is the flax as it looks after it has been soaked in water and dried."

"And what is going to be done with it now, mamma?" said Frank, who observed that the woman was placing two small boards before her, on which were stuck, with their points upright, several rows of steel pins; with points as sharp as those of needles.

"I am going to hackle the flax, master," said the woman; and she began to comb the flax with these steel combs. She drew the flax through the steel pins several times. The board into which the pins were stuck was fastened upon the table; and, as the woman drew the flax through the pins, it was disentangled, and combed smooth.

"Mamma," said Frank, "it is just like combing hair out, only the woman does not move the comb, but she draws the hair, or the flax, I mean, through it."

The pins in one of the boards were much smaller, and placed closer together, than those in the other board.

"This is the large comb, and this is the small-toothed comb, mamma," said Frank.

And when the flax had been drawn through these fine pins, there was not a tangle left in it; and it looked smooth, bright, and shining, and of a light-yellow colour.

Frank's mother showed him that this looked the same as what he had seen on the old woman's spinning-wheel.

They went back to the spinning-wheel; and the old woman sat down, and spun a little; and Frank saw that the threads of the flax were twisted together. He did not exactly know how; and his mother told him that he must not expect to find out how it was done by looking at it for a few minutes.

Frank said, "Mamma, I feel tired; my eyes are tired

of looking; and I am tired with thinking about this spinning-wheel."

"Then do not think any more about it now; go, and run in the garden." And Frank ran into the garden; and he jumped, and sang, then he listened to the birds, which were singing; and he smelt the flowers, particularly rosemary and balm, which he had never smelt before; and he heard the humming of bees near him, as he was smelling to the rosemary, and he recollected that he had not looked at the bees this day; so he ran to the glass bee-hive, and watched them working.

And afterwards he ran back to his mother, and said, "I am quite rested now, mamma. I mean, I do not feel tired of thinking about the spinning-wheel. May I look at the woman spinning again?"

"Yes, my dear."

Frank went into the cottage, and looked at the old woman, who was spinning.

"Would you like to try to spin a bit, dear?" said the old woman.

"Yes, I should," said Frank; "it looks as if it was very easy to do it; but perhaps it is not; for I remember I could not plane with the carpenter's plane, though it seemed very easy when he was doing it."

Frank tried to spin; but he broke the thread almost at the first trial; however, the old woman clapped her hands and said, "That's a pretty dear! He spins as well as I do, I declare!"

"Oh, no, no, no," said Frank; "I know I cannot spin at all;" and he looked ashamed, and left the spinning-wheel, and turned away from the old woman, and went back to his mother.

She walked home with him; and, as they were walking home, his mother said to him, "Do you know why you came back just now, Frank?"

"Yes, mamma, because the woman called me a pretty dear, and told me that I could spin as well as she could; and you know I could not; so that was flattering me; and I do not like people that flatter me. I remember the lady in the shop, who flattered me, and afterwards called

me a mischievous brat. But I do not much like to think of that. Mamma, of what use is that brown thread which the old woman made of the flax?"

"Of that brown thread linen is made, my dear."

"But linen is white, mamma; how is the brown thread made white?"

"It is left in a place where the sun shines upon it; and there are other ways of making linen white, which I cannot now explain to you. Making linen white is called bleaching it."

"Can you explain to me, mamma, how the thread is made into linen?"

"No, my dear, I cannot; but perhaps your father, when you are able to understand it, may show you how people weave linen in a loom."

ONE night, when Frank's brother Henry was with him, they were talking of Henry's garden.

Henry said, "Next spring, I intend to sow some scarlet runners, or French beans, in my garden."

"Whereabouts in your garden?" said Frank.

Henry tried to describe to him whereabouts; but Frank could not understand him; so Henry took his pencil out of his pocket and said, "Now, Frank, I will draw for you a map of my garden; and then you will understand it."

He drew the shape of his garden upon paper, and he marked where all the little walks went, and where the rose-bush stood, and where the sally-fence was; and he drew all the borders, and printed upon each of the borders the name of what was planted there when Frank last saw it.

Frank, after he had looked at this drawing for a little while, understood it, and saw the exact spot in which Henry intended to sow his scarlet runners.

"So this is what you called a map," said Frank; "but it is not like the maps in papa's study."

"They are maps of countries, not of little gardens," said Henry.

"I suppose they are of the same use to other people that this little map of your garden was to me, to show them whereabouts places are. But, Henry, what are those odd-shaped, crooked bits of wood, which hook into one another, and which I thought you called a map?"

"That is a map, pasted upon wood; and the shapes of the different places are cut out, through the paper, and through the wood; and then they can be joined together again, exactly in the same shape that they were in at first."

"I do not understand how you mean," said Frank.

Henry cut out the different beds and walks in the little map which he had drawn of his garden; and when he had separated the parts, he threw them down upon the table before Frank, and asked him to try if he could put them together again, as they were before.

After some trials, Frank did join them all together; and he told Henry that he should very much like to try to put his wooden map together, and that he would be very much obliged to him if he would lend it to him.

"I am afraid," said Henry, "to lend you that map, lest you should lose any of the parts of it."

"I will not lose them, I assure you."

"I tried every day, for a week," said Henry, "before I was able to put it all together; and after I had done with it every day, I put it into the box belonging to it; and I regularly counted all the bits, to see that I had them right."

"I will count them every day before I put them by, if you will lend them to me," said Frank.

"If you will promise me to do so," said Henry, "I will lend you my map for a week."

Frank was eagerly going to say, "*Yes, I will promise you,*" when he felt a hand before his lips. It was his mother's. "My dear Frank," she said, in a serious tone of voice, "consider before you ever make any promise. No persons are believed, or trusted, who break their promises. You are very young, Frank, and you scarcely know what a promise means."

"I think I know, mamma, what this promise means," said Frank.

"And do you think you shall be able to keep your promise?"

"Yes, mamma," said Frank, "I hope that I shall."

"I hope so too, my dear," said his mother, "for I would rather that you should never put that map together, than that you should make a promise, and break it."

Frank promised Henry, that whenever he took the map out of the box, he would count the pieces, to see whether he had the right number, before he put them again into the box.

"Remember, said Frank, "I do not promise that I will not lose any of the pieces of the map; I promise only to count them; but I hope I shall not lose any of them."

Henry told him that he understood very well what he said; and he put the box into his hands.

Frank immediately counted the pieces of the map. It was a map of England and Wales, and there were fifty-two pieces, one to represent each county.

"Fifty-two; fifty-two; fifty-two," repeated Frank, several times; "I am afraid I shall forget how many there are."

"Then," said Henry, "you had better write it down. Here is a pencil for you, and you may write it upon the lid of the box."

Frank wrote a two, and a five after it.

"That is not right," said Henry; "that is twenty-five; and you know that there are fifty-two."

"Then," said Frank, "I must put the five to my left hand, and the two to my right hand, to make fifty-two. Mamma, I did not understand what papa told me once, about the places of units, and tens, and hundreds."

"Then you had better ask him to explain it to you again, when he is at leisure: for want of knowing this, when you had to write fifty-two, you wrote twenty-five."

"That was a great mistake: but papa is busy now,

and cannot explain about units and tens to me; therefore I will put the map together, if I can."

Frank could not put the map together the first night that he tried, nor the second, nor the third: but he regularly remembered to count the pieces according to his promise, every day, before he put them into the box.

One day, he was in a great hurry to go out to fly his kite; but all the pieces of the map were scattered upon the carpet: and he stayed to count them, and put them into the box, before he went out.

It was not easy to get them into the box, which was but just large enough to hold them when they were well packed.

The lid of the box would not slide into its place when the pieces of the map were not put in so as to lie quite flat.

One day, it was Friday, Frank saw his father open a large book, in which there were very pretty prints of houses; and he was eager to go to look at these prints; but his map was upon the table; and he thought he had better count the pieces, and put them into the box, before he went to look at the prints, lest he should forget to do it afterwards. Therefore he counted them as fast as he could. They were not all right. Fifty-two was the number that had been lent to him; and he could find but fifty-one.

He searched all over the room, under the tables, under the chairs, upon the sofa, under the cushions of the sofa, under the carpet, everywhere he could think of. The lost piece of the map was nowhere to be found; and whilst he was searching, his father turned over all the leaves in the book of prints, found the print that he wanted, then shut the book, and put it into its place in the bookcase.

Frank was at this instant crawling from beneath the sofa, where he had been feeling for his lost county. He looked up, and sighed, when he saw the book of pretty prints shut, and put up into the bookcase.

"Oh, papa! there is the very thing I have been looking for all this time," cried Frank, who now espied the

piece of the map which he had missed. It was lying upon the table; and the book of prints had been put upon it, so that Frank could not see it till the book was lifted up.

"I am glad I have found you, little crooked county of Middlesex," said Frank. "Now I have them all right, fifty-two."

The next morning being Saturday, the last day of the week during which the map was lent to Frank, he spent an hour and a half* in trying to put it together; at last he succeeded, and hooked every county, even crooked little Middlesex, into its right place.

He was much pleased to see the whole map fitted together. "Look at it, dear mamma," said he: "you cannot see the joinings, it fits so nicely."

His mother was just come to look at his map, when they heard the noise of several sheep very near the windows. Frank ran to the window, and he saw a large flock of sheep passing near the window. A man and two women were driving them.

"How fat they look, mamma!" said Frank; "they seem as if they could hardly walk, they are so fat."

"They have a great deal of wool upon their backs."

"Mamma, what can be the use of those large, very large, scissors, which that woman carries in her hand?"

"Those large scissors are called shears; and with them the wool will be cut from the backs of these sheep."

"Will it hurt the sheep, mamma, to cut their wool off?"

"Not at all, I believe."

"I should like, then, to see it done, and I should like to touch the wool. What use is made of wool, mamma?"

"Your coat is made of wool, my dear."

Frank looked surprised; and he was going to ask how wool could be made into a coat; but his father came into the room, and asked him if he should like to go with him to see some sheep sheared.

* A boy of four years old spent, voluntarily, above an hour and a half in attempts to put together a joining-map.

"Yes, very much, papa; thank you," said Frank, jumping down from the chair on which he stood.

"I shall be ready to go in five minutes," said his father.

"I am ready this minute," said Frank; "I have nothing to do but to get my hat, and put on my shoes." But, just as he got to the door, he recollected that he had left Henry's map upon the floor; and he turned back, and was going hastily to put it into the box. Then he recollected his promise to count the pieces every day, before he put them into the box. He was much afraid lest his father should be ready before he had finished counting them, and that he should be left behind, and should not see the sheep sheared; but he kept his promise exactly. He counted the fifty-two pieces, put them into the box, and was ready the instant his father called him.

He saw the wool cut off the backs of the sheep. It did not entertain him quite so much as he had expected, to see this done; but when he returned home, he was very glad to meet his brother Henry in the evening, and he returned the box of maps to him.

"Thank you, Henry," said he; "here is your map, safe. Count the pieces, and you will find that there are fifty-two. And I have kept my promise; I counted them every day before I put them into the box. My mother saw me count them every day."

"I am glad, Frank, that you have kept your promise," said Henry, and his mother, and his father, all at once; and they all looked pleased with him.

His father took down the book of pretty prints, and put it into Frank's hands.

"I will lend you this book for a week," said his father; "you may look at all the prints in it; I can trust you with it; for I saw that you took care of Henry's map, which was lent to you."

Frank opened the book; and he saw, upon the first page, the print of the front of a house.

"The reason I wished to look at this book so much," said Frank, "was, because I thought I saw prints of houses in it. I am going to build a house in my garden."

"You have kept your promise so well," said Henry, "about the map, that I will lend you what I would not lend to anybody that I could not trust—I will lend you my box full of little bricks, if you will not take them out of doors, or wet them."

Frank said that he would neither take them out of doors, nor wet them.

And Henry believed that Frank would do what he said that he would do, because he had kept his promise exactly with respect to the map.

Frank received the box full of little bricks, with a joyful countenance; and his mother gave him leave to build with them in the room in which he slept.

Henry showed him how to *break the joints* in building; how to build walls and arches. And Frank was happy in building different sorts of buildings, and staircases, and pillars, and towers, and arches, with the little bricks which had been lent to him. And he kept his promise not to wet them, and not to take them out of doors.

"It is a good thing to keep one's promises," said his mother; "people are trusted who keep their promises—trusted even with little bricks."*

It was autumn. The leaves withered, and fell from the trees; and the paths in the grove were strewn with the red leaves of the beech-trees.

Little Frank swept away the leaves in his mother's favourite walk in the grove; it was his morning's work to make this walk quite clean; and as soon as dinner was over, he slid down from his chair; and went to his mother,

* These little bricks were made of plaster of Paris. They were *exactly* twice as long as they were broad, and twice as broad as they were thick. Two inches and a quarter long is a convenient length, being one quarter of the length of a common brick. Common bricks are not exactly in the proportion above mentioned, as there is generally allowance made for mortar. A few lintels of wood, the depth and breadth of a brick, and twelve inches and three-quarters long, will be found very convenient. These should be painted exactly to match the colour of the bricks.

and asked her if she would walk out this evening in the grove.

"I think," said his mother, "it is now too late in the year to walk after dinner; the evenings are cold; and——"

"Oh, mamma," interrupted Frank, "pray walk out this one evening. Look, the sun has not set yet. Look at the pretty red sunshine upon the tops of the trees. Several of the trees in the grove have leaves upon them still, mamma, and I have swept away all the withered leaves that were strewed upon *your path*. Will you come and look at it, mamma?"

"Since you have swept my path, and have taken pains to oblige me," said his mother, "I will walk with you, Frank. People should not always do just what they like best themselves; they should be sometimes ready to comply with the wishes of their friends; so, Frank, I will comply with your wish, and walk to the grove."

His mother found it a more pleasant evening than she had expected; and the walk in the grove was sheltered, and she thanked Frank for having swept it.

The wind had blown a few leaves from one of the heaps which he had made; and he ran on before his mother, to clear them away. But as he stooped to brush away one of the leaves, he saw a caterpillar, which was so nearly the colour of the faded green leaf upon which it lay, that he at first sight mistook it for a part of the leaf. It stuck to the leaf, and did not move in the least, even when Frank touched it. He carried it to his mother, and asked her if she thought that it was dead, or if she knew what was the matter with it.

"I believe, my dear," said his mother, "that this caterpillar will soon turn into a chrysalis."

"Chry——what, mamma?"

"Chrysalis."

"What is a chrysalis?"

"I cannot describe it to you; but if you keep this caterpillar a few days, you will see what I mean by a chrysalis."

"I will. But how do you know, mamma, that a caterpillar will turn into a chrysalis?"

"I have seen caterpillars that have turned into chrysalises; and I have heard that they do so, from many other people, who have seen it; and I have read in books accounts of caterpillars that have turned into chrysalises; and this is the time of the year in which, as it has been observed, this change usually happens."

"But, my dear mother," said Frank, "may I keep this caterpillar in my red box? And what shall I give it to eat?"

"You need not give it anything to eat, for it will not eat whilst it is in this state. You may keep this caterpillar in your box; it will soon become a chrysalis; and, in the spring a moth, or butterfly, will come out of the chrysalis."

Frank looked much surprised at hearing this; and he said that he would take great care of the caterpillar, and that he would watch it, that he might see all these curious changes.

"Who was the first person, mamma, that ever observed that a caterpillar turned into a chrysalis, and a chrysalis into a butterfly?"

"I don't know, my dear."

"Mamma, perhaps if I observe, I may find out things as well as other people."

"Yes, very likely you may."

"Mamma, how did the person who wrote about animals, in my book that my father gave me, find out all that he knew?"

"Partly from reading other books, and partly from observing animals himself."

"But, mamma," said Frank, "how did the people who wrote the other books know all the things that are told in them?"

"By observing," said his mother. "Different people, in different places, observed different animals, and wrote the histories of these animals."

"I am very glad that they did this. Did they ever make mistakes, mamma?"

"Yes, I believe that they did make a great many mistakes."

"Then everything that is in books is not true, is it?"

"No."

"I am sorry for that. But how shall I know what is true, and what is not true, in books, mamma?"

"You cannot always find out what is true, and what is not true, in books, till you have more knowledge, my dear."

"And how shall I get more knowledge, mamma?"

"By observing whatever you see, and hear, and feel, by reading, and by trying experiments."

"Experiments, mamma! Papa, and grown-up wise people try experiments; but I did not know that such a little boy as I am could try experiments."

Frank and his mother had walked on, whilst they were talking, till they came to a path, which led to the river-side.

A little girl was by the river-side, dipping a yellow earthen jug into the water.

The girl did not perceive Frank and his mother, who were coming behind her, till she heard Frank's voice, which startled her; and she let the pitcher fall from her hand, and it broke.

The girl looked very sorry because she had broken the jug; but a woman, who, was standing beside her, said, "It is no great misfortune, Mary, for we can take it home, and tie it together, and boil it in milk, and it will be as good as ever."

"My dear mother," cried Frank, "then we can mend the broken flower-pot. Shall we do it as soon as we get home?"

"We can *try* to do it as soon as we go home."

"*Try*, mamma! But are you not sure it will do? That woman said the jug would be as good as ever, if it was tied together and boiled in milk."

"Yes; but she may be mistaken. We had better try the experiment ourselves."

"Is that called trying an experiment?"

"Yes, this is an experiment we can try."

When they got home, Frank's mother rang the bell, and asked to have a clean saucepan, and some milk up-

stairs. When the saucepan was brought to her, she tied the pieces of the broken flower-pot together with packthread, in the same shape that it was before it was broken. She put the flower-pot into the saucepan, and she poured over it as much milk as entirely covered it; and after she had put the saucepan on the fire, she waited till the milk boiled. Then she took the saucepan off the fire, and she waited till the milk grew so cool that she could dip her fingers into it without burning herself. She took out the flower-pot, and carefully untied the wet packthread, and unwound it; but when she had unwound it, the parts of the flower-pot did not stick together: they separated, and Frank was disappointed.

"But, mamma," said he, "I wish you would be so good as to send to the woman, and ask her how it was that she could mend broken things by boiling them in milk. Perhaps she knows something about it, that we do not know yet."

"Stay," said Henry: "before you send to the woman, try another experiment. Here's a saucer, which I broke just before you came in from walking. I was rubbing some Indian ink upon it, and I let it slip off the table. Let us tie this together, and try whether you can mend it by boiling it in the milk."

The saucer was tied together, the milk that was in the saucepan was poured out, and some cold milk was put into it. Into this milk the saucer was put, and the milk was then boiled; and the moment the saucepan was taken off the fire, Frank was impatient to see the saucer. Before it was nearly cool, he untied the string; the parts of the saucer did not stick together; and Frank was more disappointed now than he had been before.

His mother smiled, and said, "Frank, people who wish to try experiments, you see, must be patient."

The woman whom he had heard speaking to the little girl by the river-side lived very near them, and Frank's mother sent to beg to speak to her. She came; and when she was told what had been done about the flower-pot and the saucer, she asked whether it was a long time since the flower-pot had been broken.

"Yes, about two months."

"Then, ma'am," said she, "that could not be mended this way. I can only mend things this way that have been fresh-broken."

"Mamma," said Frank, "how comes it that the saucer which Henry did but just break before we came in from walking did not stick together after all we did to it?"

"Perhaps, master," said the woman, "you did not let it stand to cool before you untied it."

"No, I did not," said Frank.

"But, master, you must have patience, and wait till it is quite cool, or it will never do."

"I will be more patient this time, mamma, if you will let me try once more."

His mother let him try once more; and Frank was going to boil the milk again; but the old woman said that the milk which had been boiled would not *do*, and that he must use new milk.

And Frank said, "This will waste a great deal of milk."

But the old woman said, "I never waste the milk, for I give it to the children afterwards, or to the chickens, and I do not throw it away."

Frank now began to tie the broken saucer together, and the old woman said to him, "Fit it very close and even, and tie it very tight, or it will not do."

"I have tied it as tight as I can," said Frank.

"But, master, it is not nearly tight enough," said the woman. "I will show you how to tighten it better, if you will give me a small wooden skewer or a bit of wood that I can cut into a skewer about the size of your pencil."

"Here is such a bit of wood as you want," said Frank's mother.

"Now, master," said the old woman, "take another piece of packthread, and wind it three times round the saucer, and tie the ends together. Leave it quite loose so that you may put your finger between the saucer and the packthread. Very well. Now, master, put this stick between the packthread and the saucer, and twist the packthread tight with the stick."

"The packthread looks like a screw as I twist it," said Frank.

"Yes," said his mother, "and you see that you really screw the parts of the saucer together."

"Yes," said Frank, "and this is as tight and strong as the stick and string in my skip-jack, and it is something like it. Is it not, mamma?"

"Yes, my dear."

"I will run for my skip-jack, and see whether it is quite the same," said Frank.

"You had better finish what you are about first," said his mother. "You can look at the skip-jack afterwards. Do one thing at a time, my dear."

Frank boiled the new milk, and put the well-tied saucer into it, and this time he waited till the saucer was cool, and then he untied the string, and he found that the parts of the saucer stuck fast together; and he could scarcely see the place where they were joined.

He was pleased with this success; and he said, "People who try experiments must be patient, and people must be patient who are to observe things; so I will have patience till next spring, and then I shall see the chrysalis change to a moth or a butterfly. But, mother, first I shall see the caterpillar change into a chrysalis."

Frank put his green caterpillar into his red box; and then he went again to look at the saucer which had been mended, and at the flower-pot which the old woman said could not be mended; and he asked his mother if she could tell the reason why things which had been broken a long time before could not be mended by being boiled in this manner in milk.

"I think I can guess the reason," said his mother; "but I will not tell it to you; I would rather that you should think, and find it out for yourself. If I were to tell you the reason of everything, my dear, you would never take the trouble of thinking for yourself; and you know I shall not always be with you, to *think* for you."

"MAMMA," said Frank, "there is a reason that I have thought of; but I am not sure that it is the right reason. It may, however, be one of the reasons."

"Well, let us hear it, without any more *reasons*," said his mother, laughing.

"I thought, mamma," said Frank, "that perhaps the old woman could never mend things."

"Things! what sort of things; chairs and tables, or coats and waistcoats?"

"Oh, mamma, you know very well what I mean."

"Yes, I guess what you mean; but other people will not be at the trouble of guessing at the meaning of what you say; therefore, if you wish to be understood, you must learn to explain yourself distinctly."

"I thought, mamma," said Frank, "that the reason why the old woman could never mend cups and saucers, or jugs or plates, that had been broken a great while, was because, perhaps, the edges of these might have been rubbed or broken off, so that they could not be fitted close together again. If you recollect, the old woman said to me when I was tying the broken saucer together, 'Tie it tight and fit it close, or it will not do.' Do you think that I have found out the right reason, mamma? Is it the reason which you thought of?"

"It is the reason," answered his mother, "which I thought of; but my having thought of it is no proof that it is right. The best way to find out whether this is the case, is to try. Can you find out yourself, Frank, how you may prove whether this is the reason or not?"

"I would rub the edges of a plate or saucer after it was broken; and when I had rubbed off little bits of the edges, I would tie the pieces together, and boil them in milk. I would, at the same time, break another bit of the same plate or saucer, and I would tie the broken pieces together, without rubbing off any of the edges. I would put it into the same milk, and let it be upon the fire as long, and let it be as long before I untied it, as before I untied the other broken pieces; and then we

should see whether the rubbing off the edges would prevent the pieces from joining or not."

Frank's mother told him that he might try his experiment. He tried it, and he found that the broken pieces of the plate, the edges of which he had broken off, could not be joined by being boiled in milk; and two other broken pieces of the same plate, which he joined without rubbing off their edges, stuck together very well, after they had been boiled in milk.

Then Frank said, "Mamma, there is another thing which I should like to try. I should like to tie the broken flower-pot very tight together, and to fit the pieces closely; for the last time I tied it I did not tie it very tight. I did not know that I should have done that till the old woman told me that I should. I think, perhaps, the flower-pot may be mended, because, though it has been broken a great while, its edges have never been rubbed, I believe. It has been lying in the press, in your room; and nobody has ever meddled with it."

"Nobody has ever meddled with it, I believe," said his mother; "for I lock that press every day, and no one goes to it but myself; and I have never rubbed anything against the edges of the broken flower-pot."

She went and brought the pieces of the broken flower-pot, and Frank tied them together very tight, after he had fitted their edges closely and evenly together. He boiled this flower-pot again in milk, waited afterwards till it became cool, and then untied it, and he found that the parts stuck together; and he poured water into it, and the water did not run out. Frank was glad that he had mended the flower-pot at last.

"Do you think, mother," he said, "that it was made to stick together again by being tied so tight, or by the milk, or by both together?"

"I do not know," answered his mother; "but you may try whether tying broken pieces of earthenware together will fasten them, without boiling them in milk."

Frank tried this; and he let the pieces that were tied together remain still, as long as those which he had before boiled in milk; and when he untied the string, the pieces

separated. They did not stick together in the least. He afterwards tied these pieces together again, and boiled them in water; and he found, when he untied them, that they did not stick together.

THERE was one part of a winter's evening which Frank liked particularly. It was the half-hour after dinner, when the window-shutters were shut, and the curtains let down, and the fire stirred, so as to make a cheerful blaze which lighted the whole room.

His father and mother did not ring the bell for candles, because they liked to sit a little while after dinner by the light of the fire.

Frank's father often used at this time to play with him, or to talk to him.

One evening, after his father had been playing with Frank, and had made him jump, and run, and wrestle, and laugh, till Frank was quite hot and out of breath, he knelt down upon the carpet at his father's feet, rested his arms upon his father's knees, and, looking up in his face, he said, "Now, papa, whilst I am resting myself so happily here, will you tell me something entertaining?"

But just as Frank said the word *entertaining*, the door opened, and the servant came into the room with lighted candles.

"Oh, candles! I am sorry you are come!" cried Frank.

"Oh, candles! I am glad you are come," said his father; "for now I can see to read an entertaining book, which I want to finish."

"But, papa," said Frank, "cannot you sit still a *little*, *little* while longer, and tell me some short thing?"

"Well, what shall I tell you?"

"There are so many things that I want to know, papa, I do not know which to ask for first. I want to know whether you have ever seen a camel; and I want to know where silkworms are found, and how they make silk; and I want to know how people weave linen in a loom, and how the wool of sheep is made into such coats as we have

on. And, father, I wish very much to know how the fat of animals is made into candles? You promised to tell me, or to show me, how that was done. And, more than all the rest, I wish to know how plates, and jugs, and cups and saucers, and flower-pots, are made of clay; and whether they are made of clay such as I have in my garden? And I want very much to know where tea comes from; and——”

“Stop, stop! my dear Frank,” said his father; “it would take up a great deal more of my time than I can bestow upon you to answer all these questions. I cannot answer any of them to-night; for I have a great many other things to do. The first thing you asked me, I think, was whether I had ever seen a camel. I have; and the print I am going to show you is very like the animal that I saw; and you may read his history; and then you will know all that I know of camels; and when you have satisfied your curiosity about camels, I can lend you another book in which you may read the history of silkworms.”

“Thank you, papa,” said Frank: “I shall like to read these things very much; only I cannot read quickly yet, papa; and there are words sometimes which I cannot well make out.”

“If you persevere,” said his father, “you will soon be able to read without any difficulty. But nothing can be done well without perseverance. You have shown me that you have a great deal of perseverance, and——”

“Have I, papa?” interrupted Frank; “when did I show you that?”

“The morning when you tried for an hour and a half to put the joining-map together.”

“And at last I did put it together.”

“Yes; you succeeded because you persevered.”

“Then,” said Frank, “I will persevere, and learn to read easily, that I may read all the entertaining things that are in books; and then I shall be as glad when the candles come as you were just now, papa.”

PART V.

FRANK was very fond of playing at battledore and shuttlecock; but he could not always play when he liked, nor as long as he liked, because he had no battledore or shuttlecock of his own. He determined to try to make a shuttlecock for himself; but he had no cork for the bottom of it, and he had only five feathers, which had once belonged to an old worn-out shuttlecock, and these were ruffled and bent. His mother was very busy, so that he did not like to interrupt her to ask for more feathers; and his father was out riding, so that Frank could not ask him for a cork. His brother Edward advised him to put off trying to make his shuttlecock till his mother was not busy, and till his father should return from riding; but Frank was so impatient, that he did not take this prudent advice. He set to work immediately to make the bottom of his shuttlecock of one end of the handle of his pricker, which he sawed off, because he thought that it resembled the bottom of a shuttlecock in shape more than any other piece of wood which he possessed. When he tried to make holes in it for the feathers, he found that the wood was extremely hard; he tried and tried in vain; and, at last, snap went the end of the pricker. It broke in two; and Frank was so sorry, that he began to cry; but recollecting that his tears would not mend his pricker, he dried his eyes, and resolved to bear the loss of it like a man. He examined the stump of the pricker which he held in his hand, and he found that there was enough of the steel left to be sharpened again. He began to file it as well as he could; and, after having taken some pains, he sharpened it; but he did not attempt to make any more holes in the hard wood, lest he should break the pricker again. He said to himself—"Edward gave me good advice, and I will now take it; I will wait till my father comes home, and till my mother is not busy, and then I will ask them for what I want."

The next day his father gave him a cork, and his mother gave him some feathers; and, after several trials, he at last made a shuttlecock, which flew tolerably well. He was eager to try it, and he ran to his brother Edward, and showed it to him; and Edward liked the shuttlecock, but could not then play, because he was learning his Latin lesson.

"Well! I will have patience till to-morrow, if I can," said Frank.

It happened, during the same evening, that Frank was present when his brother Edward and three of his cousins were dressing to act a pantomime. They were in a great hurry. They had lost the burnt cork with which they were to blacken their eyebrows. They looked everywhere that they could think of for it, but all in vain; and a messenger came to tell them that everybody was seated, and that they must begin to act the pantomime directly. They looked with still more eagerness for this cork, but it could not be found; and they did not know where to get another.

"I have one! I have one! I have a cork! You shall have it in a minute!" cried the good-natured little Frank. He ran up stairs directly, pulled all the feathers out of his dear shuttlecock, burnt the end of the cork in the candle, and gave it to his friends. They did not know, at this moment, that it was the cork of Frank's shuttlecock; but when they afterwards found out that this was the case, they were very much obliged to him; and when his father heard this instance of his good nature, he was much pleased. He set Frank upon the table before him after dinner, when all his friends were present, and said to him:—

"My dear little son, I am glad to find that you are of such a generous disposition. Believe me, such a disposition is of more value than all the battledores and shuttlecocks in the world! You are welcome to as many corks and feathers as you please! You, who are so willing to help your friends in their amusements, shall find that we are all ready and eager to assist you in yours."

Close to the garden which Frank's mother had given

to him, there was a hut, in which garden-tools and watering-pots were once kept; but it had been found to be too small for this purpose, and a larger one had been built in another part of the kitchen-garden. Nothing was now kept in that which was near Frank's garden but some old flower-pots and pans. Frank used to like to go into this hut, to play with the flower-pots. They were piled up higher than his head; and one day, when he was pulling out from the undermost part of the pile a large pan, the whole pile of flower-pots shook from bottom to top, and one of the uppermost flower-pots fell down. If Frank had not run out of the way in an instant, it would have fallen upon his head. As soon as he had recovered a little from his fright, he saw that the flower-pot had been broken by the fall, and he took up the broken pieces, and went into the house to his mother, to tell her what had happened. He found his father and mother sitting at the table writing letters: they both looked up when he came in, and said,—

"What is the matter, Frank? You look very pale."

"Because, mamma, I have broken this flower-pot."

"Well, my dear, you do rightly to come and tell us that you broke it. It is an accident. There is no occasion to be frightened about it."

"No, mamma; it was not that which frightened me so much. But it is well that I did not break my own head, and all the flower-pots in the garden-house."

Then he told his mother how he had attempted to pull out the undermost pan, and how "the great pile shook from top to bottom."

"It is well you did not hurt yourself, indeed, Frank!" said his mother.

His father asked if there was a key to the door of the hut.

"Papa, there is an old rusty lock, but no key."

"The gardener has the key; I will go for it directly," said his father, rising from his seat; "and I will lock that door, lest the boy should do the same thing again."

"No, papa," said Frank; "I am not so silly as to do again what I know might hurt me."

"But, my dear, without doing it on purpose, you might by accident, when you are playing in that house, shake those pots and pull them down upon yourself. Whenever there is any real danger, you know, I always tell you of it. And it is much better to prevent any evil than to be sorry for it afterwards. I will go this minute and look for the key, and lock the door," continued his father.

"Papa," said Frank, stopping him, "you need not go for the key, nor lock the door; for if you desire me not to play in the old garden-house, I will not play there; I will not go in, I promise you; I will never even open the door."

"Very well, Frank; I can trust to your promise. Therefore, I want no lock and key: your word is enough."

"But only take care you do not forget, and run in by accident, Frank," said his mother: "as you have such a habit of going in there, you might forget."

"Mamma, I will not forget my promise," said Frank.

A FEW days after this time, Frank's father and mother were walking in the garden, and they came to the old garden-house, and they stopped and looked at the door, which was a little open. This door could not be blown open by the wind, because it stuck against the ground at one corner, and could not be easily moved.

"I assure you, mamma, I did not forget—I did not open it—I did not go in, indeed, papa," said Frank.

His father answered, "We did not suspect you of having opened the door, Frank."

And his father and mother looked at one another and smiled.

His father called the gardener, and desired that he would not open the door of the old garden-house; and he ordered that none of the servants should go in there.

A week passed, and another week passed, and a third week passed, and again Frank's father and mother were walking in the garden; and his mother said—

"Let us go and look at the old garden-house."

His father and mother went together, and Frank ran after them, rejoicing that he had kept his promise. He had never gone into that house, though he had often been tempted to do so, because he had left a little boat there of which he was very fond. When his father and mother had looked at the door of the garden-house, they again looked at each other and smiled, and said—

"We are glad to see, Frank, that you have kept your word, and that you have not opened this door."

"I have not opened the door, papa," answered Frank; "but how do you know that by only looking at it?"

"You may find out how we know it; and we had rather that you should find it out than that we should tell you," said his father.

Frank guessed, first, that they recollected exactly how far open the door had been left, and that they saw it was now open exactly at the same place. But his father answered, that this was not the way; for that they could not be certain by this means that the door had not been opened wider, and then shut again to the same place.

"Papa, you might have seen the mark in the dust which the door would have made in opening. Was that the way, papa?"

"No; that is a tolerably good way; but the trace of the opening of the door might have been *effaced*—that is, rubbed out, and the ground might have been smoothed again. There is another circumstance, Frank, which, if you observe carefully, you may discover."

Frank took hold of the door, and was going to move it; but his father stopped his hand.

"You must not move the door. Look at it without stirring it."

Frank looked carefully, and then exclaimed—

"I've found it out, papa! I've found it out! I see a spider's web, with all its fine thin rings and spokes, like a wheel, just at the top of the door, and it stretches from the top of the door to this post, against which the door shuts. Now, if the door had been shut or opened wider, this spider's web would have been crushed or broken; the

door could not have been shut or opened without breaking it. May I try, papa?"

"Yes, my dear."

He tried to open the door, and the spider's web broke; and that part of it which had been fastened to the door fell down, and hung against the post.

"You have found it out now, Frank, you see," said his father.

His mother was going to ask him if he knew how a spider makes his web, but she stopped, and did not then ask him this question, because she saw that he was thinking of his little boat.

"Yes, my dear Frank! you may go into the house now," said his mother, "and take your little boat."

Frank ran in, and seizing it, hugged it in his arms.

"My dear little boat, how glad I am to have you again!" he cried; "I wish I might go to the river-side this evening and swim it; there is a fine wind, and it would sail fast."

Frank was never allowed to go to the river-side to swim this boat without his father or mother, or eldest brother, could go with him.

"Mamma, will you?" said he; "can you be so good as to go with me this evening to the river-side, that I may sail my boat?"

His mother told him that she had intended to walk another way; but that she would willingly do what he asked her, as he had done what she desired. His father said the same, and they went to the river-side. His father walked on the banks, looking till he saw a place where he thought it would be safe for Frank to launch his boat. He found a place where the river ran in between two narrow banks of land; such a place, Frank's father told him, in large rivers, is called a *creek*.

The water in this creek was very shallow—so shallow, that you could see the sand and many coloured pebbles at the bottom; yet it was deep enough for Frank's little boat to float upon it. Frank put his boat into the water; he launched it, and set the sail to the wind; that is, turned it so that the wind blew against it, and drove the boat on.



Frank sailing his boat.

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"Yes, my dear Frank! you may go into the house now," said his mother, "and take your little boat."

Frank ran in, and seeing it, hugged it in his arms.

"My dear little boy, how glad I am to have you again!" he cried. "Frank! I might go to the river-side this evening and catch it; there is a fine wind, and it would sail fast."

Frank was never allowed to go to the river-side to swim; this boat, without his father or mother, or eldest brother, could go with him.

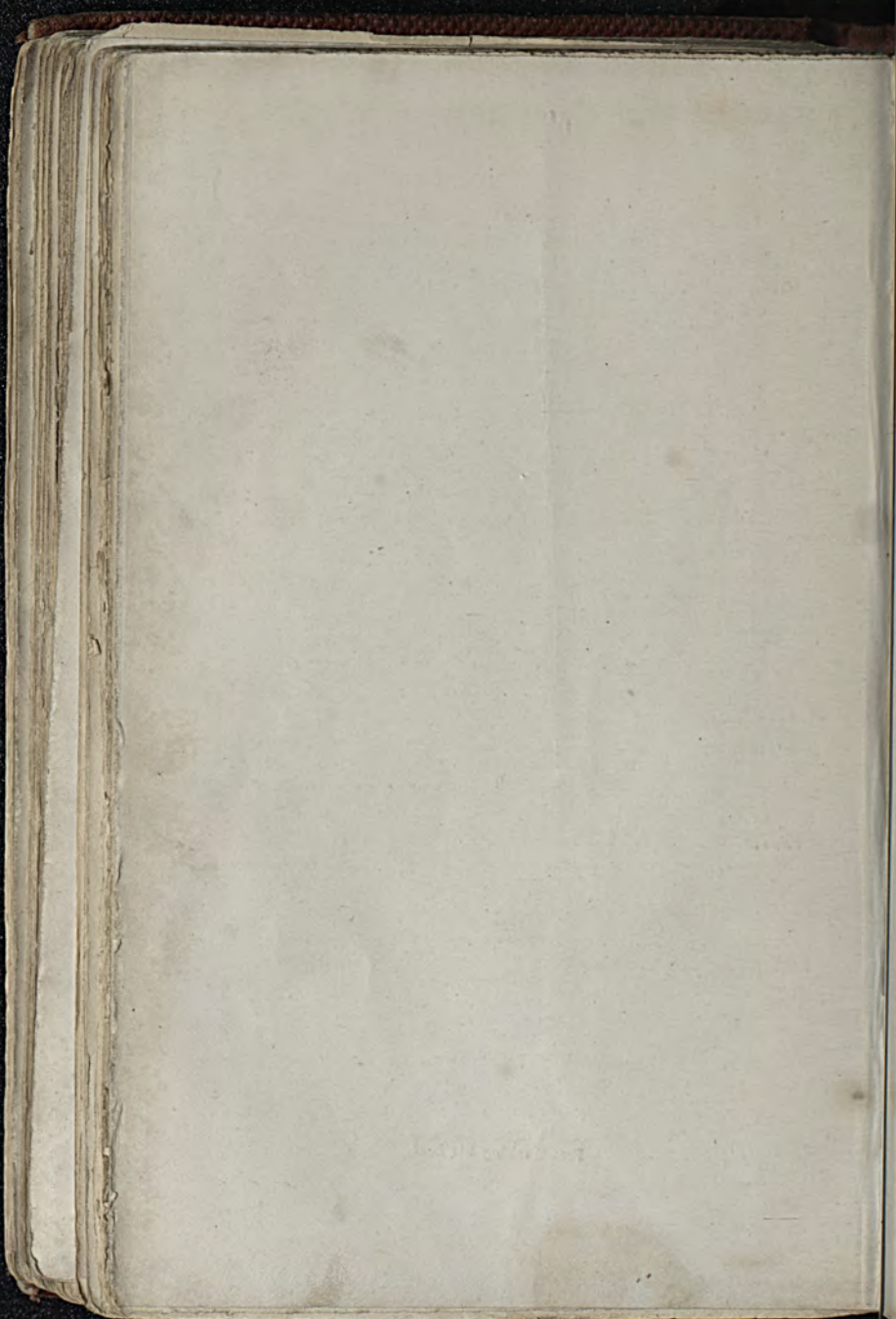
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It sailed swiftly over the smooth water, and Frank was happy looking at it and directing it in various ways, by setting or turning the sail in different directions, and then watching which way it would go.

"Mamma," said he, after his mother had remained a good while, "you are very good-natured to stay with me so long; but I am afraid you will not have time to come again to-morrow; and if you cannot, I shall not have the pleasure of swimming my boat. Papa, the water is so very shallow here, and all the way along this creek, that if I was to fall in I could not drown myself; and the banks are so close that I could walk to them, and get on dry land directly. I wish, papa, you would let me come here whenever I please, without anybody with me; then I should not be obliged to wait till mamma had time, or till my brother Edward had done his lesson; then I could swim my boat so happily, papa, whenever I pleased."

"But how can I be sure that you will never go to any other part of the river, Frank?"

"You know, papa, I did not open the door, or go into that garden-house, after you had desired me not to do so, and after I had promised that I would not. If I promise that I will not go to any other part of the river, you know you can believe me."

"Very true, Frank; and therefore I grant your request. I can trust to your doing what I desire you to do; and I can rely upon your promise. You may come here whenever you please, and sail your boat in this creek, from the stump of this willow-tree, as far in this way toward the land as you please."

Frank clapped his hands joyfully, and cried, "Thank you, papa! thank you! Mamma, do you hear that? Papa has given me leave to come to this place whenever I please, to swim my boat; for he trusts to my promise, mamma."

"Yes, that is a just reward for you, Frank," said his mother. "The being believed another time, and the being more and more trusted, is the just reward for having done as you said that you would do, and for having kept your promise."

"Oh! thank you, mamma; thank you, papa, for trusting to my promise!" said Frank.

"You need not thank me, my dear, for believing you," said his father; "for I cannot help believing you, because you speak the truth. Being believed is not only the reward, but the necessary consequence, of speaking truth."

NEXT morning, at breakfast, Frank's father told him, that if all the flower-pots were carried out of the old garden-house, and if they were removed without being broken, he would give the empty hut to Frank for his own.

"For my own!" cried Frank, leaping from his chair with delight. "For my own, papa! And do you mean that I may new roof it and thatch it?"

"If you can," said his father, smiling. "You may do what you please with it, as soon as the flower-pots are removed; but not till then. They must all be carried to the house at the other end of the garden, before I give you the hut. How will you get this done, Frank? for you are not tall enough to reach to the uppermost part of the pile yourself; if you begin at the bottom, you will pull them all down and hurt yourself, and you would break them, and I should not give you the house."

"Papa, perhaps the gardener——"

"No, the gardener is busy."

Frank looked round the breakfast-table at his brother Edward, and at his three cousins, William, Charles, and Frederick. They all smiled, and immediately said, that they would undertake to carry the flower-pots for him.

The moment they had eaten their breakfast, which they made haste to finish, they all ran out to the old garden-house. Edward took a wooden stool, mounted upon it, and handed down, carefully, the uppermost of the garden-pots to his cousins, who stood below, and they carried them to the new garden-house.

As all these boys helped one another, and worked with good will, and in good order, the great pile was soon

carried away; so soon, that Frank was quite surprised to see it was gone. Not one flower-pot was broken. Frank ran to tell his father this; and his father went out, and saw that the garden-pots had been safely removed; and then he gave the house to Frank, and put the key of it into his hand.

Frank turned to his brother Edward and his cousins, and said, "Edward, how good you and my cousins were to help me!"

"You deserved that we should do this for you," said Edward. "We do not forget how good-natured you were to us about the cork of your shuttlecock. When we were in distress, you helped us; so it was fair that we should help you when you wanted our assistance."

"Yes," said his father, "those who are ready to help others, generally find others ready to help them. This is the natural and just reward of good nature."

"*Reward!* papa," said Frank: "that word you used several times yesterday, and again to-day; and it always puts me in mind of the time when you gave me my '*Bewick on Quadrupeds*.' You gave it to me—do you remember?—as a *reward* for having, as you wrote in the book, cured myself of a foolish habit. I recollect, that was the first time I ever exactly understood the meaning of the word *reward*."

"And what do you understand, Frank, by the word *reward*?" said his father.

"Oh, papa! I know very well; for mamma then told me, 'a reward is something we like, something we wish to have, something——' papa, I thought I could explain it better; I cannot explain it in words, but I know what it is. Will you explain it to me again, papa?"

"Do you try first, if you can understand what it means; and if you will stand still, and have a little patience, you will perhaps be able to find words to express your thoughts. Try, and do not look back at the dear hut; the hut is there, and will not run away. You will have time enough all the morning and all the evening to play in it, and to do what you please with the roof of it. So, now stand still, and show me that

you can command your attention for a few minutes. What is a reward?"

Frank, after he had considered for a few moments, answered:—

"A reward is something that is given to us for having done right; no, it is not always a thing, for though the first reward that was given to me was a *thing*—a book—yet I have had rewards that were of a different sort. That was a reward to me yesterday about the boat; and when you, papa, or when mamma praises me, that is a sort of reward."

"It is," said his father.

"Papa, I believe," continued Frank, "that a reward is any sort of pleasure which is given to us for doing right. Is it, papa?"

"It is, my dear. Now, answer me one or two more questions, and then I will reward your patience by letting you go to your hut."

"I am not thinking of that now, papa; I will stay and answer as many questions as you please."

"Then, what do you think," said his father, "is the use of rewards?"

"To make me—to make all people do right, I believe."

"True; and how do rewards make you or make other people do right?"

"Why——" Frank paused, and considered a little while.

"Papa, you know I like, and all other people like, to have rewards, because they are always pleasures: and when I know I am to have a reward, or when I hope even that I shall be rewarded for doing any right thing, I wish and try to do it; and if I have been rewarded once, I think I shall be rewarded again for doing the same sort of thing; and therefore I wish to do it. And even if I have not had the reward myself, if I have seen another person rewarded for doing something well, I think and hope that perhaps I may have the same, if I do the same, and that makes me wish to do it. When you gave John, the gardener's boy, a little watering-pot, because he had made a net for the cherry-trees, I

remember I wished to make a net too, because I hoped that you would give me a watering-pot; and when mamma praised my brother Edward, and gave him a table, with a drawer in it, as a reward for keeping his room in order, I began to try to keep my room in better order. You know, Edward, that I have kept it in order—in better order—ever since. Papa, that is all I can think of about the use of rewards. I cannot explain it better."

"You have explained it as well as I expected that you would, Frank. Now run off to your hut, or your house, whichever you please to call it."

FRANK found that there were holes in the thatch of his house, and that when it rained, the water came through these holes, and wetted him, and spoiled the things which he kept in his house; therefore he wished to mend the thatch. He went to his father, and asked him if he would be so good as to give him some straw.

His father said that he would, if Frank would do something for him which he wanted to have done.

"I will do anything I can for you, papa," said Frank.

"What is it?"

"Look at those laburnums, Frank," said his father.

"Do you see a number of blackish dry pods hanging from the branches?"

"Yes, papa, a great number."

"Do you know what those pods contain?"

"Yes; little black shining seeds: the seeds of the laburnum-tree."

"I want to have all those seeds, that I may sow them in the ground, and that I may have more laburnum-trees. Now, Frank, if, before the sun sets this evening, you bring me all these seeds, I will give you straw enough to mend the thatch of your house."

"Thank you, papa. I will work very hard, and gather them as fast as I can."

Frank ran for his basket, and began to pluck the pods from the lower branches of one of the laburnums.

He had soon filled his basket with the pods, and then those which he tried to cram in at the top of the basket sprang up again, and fell over the sides; so he began to make a heap on the ground, of the pods which he afterwards pulled from the tree. When he had finished gathering all that he could reach from the lower branches of one tree, he went to the lower branches of the next, and made a heap under that tree; and so on. There were nine laburnum-trees; and when he had got to the ninth tree, and was pulling the seeds from that, he heard a rustling noise behind him, and, turning round, he saw Pompey, the little dog, dragging the laburnum-seeds about in his mouth.

"Oh, Pompey! Pompey! let those alone!" cried Frank.

But as fast as he drove him from one heap, Pompey ran to another, and scratched and scattered about the heaps with his feet, and snatched up the pods in his mouth, and scampered with them over the garden, while Frank ran after him, till at last he caught the dog; and, in spite of Pompey's struggling, carried him out of the garden, and shut the door. When he had put Pompey out, he collected all his pods together again; and just when he had done so, the gardener opened the garden-door, and Pompey tried to squeeze in between the gardener's legs; but Frank called loud, to beg that the gardener would keep him out. Every time anybody opened the garden-door, Frank was obliged to watch, and call to them, making the same request. This was so troublesome, and interrupted him so often, that Frank thought it would be better to carry his heaps of pods into his garden-house, and to lock the door, so that Pompey could not get in to pull them about. Frank carried the heaps, dropping many pods by the way, and going backwards and forwards so often, that this took up a great deal of time. He heard the clock strike three.

"Three o'clock, already!" said Frank to himself, looking at the number of pods which hung on the upper branches of the laburnums. "How much I have to do, and how little I have done! Oh, Pompey! Pompey!

you don't know the mischief you have done me," said he, as the dog squeezed his way in, when the gardener again opened the garden-door.

"Indeed, master," said the gardener, "I cannot keep him out."

"Well, Pompey, come in; you cannot do me any more harm. Now, you may run snuffing about the garden as much as you please, for my seeds are safely locked up."

But though the pods were safe, yet it wasted Frank's time sadly to lock and unlock the door every time he had a fresh basketful to throw into the house; and he was obliged to keep the basket hanging always upon his arm, lest Pompey should get at it. Frank lost time also in jumping up and down every five minutes from the stool, on which he was obliged to stand to reach the pods from the higher branches; and moving this stool from place to place took up time. Presently, he had gathered all that he could reach when standing upon the stool, even when he stood on tiptoe, and stretched as far as he could possibly reach. Then there was time lost in fixing a step-ladder, which his father lent to him upon condition that he would never get upon it till he had fixed it quite steadily, and had put in a certain prop, all which required some minutes to settle properly. The running up and down this ladder, with his basket, continually, as it was filled, tired Frank, and delayed him so much that he got on with his business very slowly, though he worked as hard as he could.

The morning passed, and the evening came; and, after dinner, Frank jumped from his chair as soon as the tablecloth was taken away, and said, he must go to his work, for he was afraid that he should not be able to finish it before sunset. His brother Edward, and his three cousins, said that they would help him, if his father had no objection. His father said that he had no objection; that he should be glad that they should help Frank, because he had worked so hard, and had been so good-humoured when the little dog had hindered him.

Frank ran to the laburnum-trees, followed by his brother and cousins, rejoicing. As he went, he said:

'Now we shall get on so quick! as quickly as we did when you all helped to move the flower-pots.'

"Yes," said Edward, "and for the same reason."

"Yes; because there are so many of us," said Frank.

"And for another reason," said Edward.

"What other reason?"

"Look, and you will see," said Edward.

Then Edward settled that there should be a regular division of labour, so that they might help one another, and do what they wanted as quickly as they could. Edward was to stand upon the ladder, because he was the tallest, and he could reach most easily to the uppermost branches of the tree. He was not obliged to run up and down the ladder, to carry the seeds, because Frank was appointed to collect and carry the pods off as fast as Edward gathered and threw them to the ground. Frederick and William sat on the grass, at the door of the hut, where the great heap had been collected; and it was Charles's business to supply them with pods, from which they shelled the seeds. As soon as Edward had finished pulling all the pods from the trees, he joined Frederick and William, and helped to *shell the seeds*—that is, to pick them out of the pods; and as soon as Frank had brought from underneath the trees all the pods that had been thrown there, he was set to open the pods, ready for the pickers; and Charles, who had by this time brought out all that were in the hut, was now constantly employed in collecting and throwing into a heap the empty husks; because it was found that time had been lost in searching the empty husks, which had been often mistaken, at first sight, for full pods.

"Ay," said Frank, "now I see the other reason that you meant, Edward. I see why we go on so quickly and well; because each person does one thing, and the thing he can do best—so no time is lost."

No time was lost. And they finished their work, had the laburnum-seeds shelled and collected in a brown paper bag, and all the rubbish and husks cleared away, just as the sun was setting.

"Here are mamma and papa coming to see how we are

getting on," cried Frank; "and we have done. Come, papa; come as quickly as you please; here are the seeds, all ready! But do you know, papa," continued Frank, as he put the bag of seeds into his father's hands, "it was as much as ever we could do, for I lost so much time this morning. It was all we could do to make up for it this evening. And though there were so many of us, and though we all went to work as fast as we could, I am sure we should never have finished it in time if we had not managed as we have done."

His father asked him in what manner they had managed.

Frank explained, and showed how they had divided the work among them, so as to save time. His father told him, that manufacturers and workmen, who are obliged to do a great deal of work in a short time, always, if they are wise, help one another, and save time in the same manner that he and his brother and cousins had done. "And this," added he, turning to Edward, "this is what is called *the division of labour*."

"In making this pin," continued he, taking a pin from Frank's mother—"In making a pin, eighteen different workmen are employed. In a manufactory for making pins, each workman does that part which he can do best. One man draws out the wire of which the pins are made; another straightens it; a third cuts it; a fourth grinds it at the top, ready to receive the head. To make the heads requires the different work of two or three men. Another man's business is to put on the heads; another's to sharpen the points; and sticking the pins in the papers is a business by itself. Now, if one workman tried to make a pin without any assistance from others, he could not, probably, make a single pin, certainly he would not be able to make twenty, in a day. But with even nine men to assist him, dividing the labour amongst them, as I have described to you, they could, altogether, make forty-eight thousand pins in a day; so that each of the ten men might be reckoned to make four thousand eight hundred pins."

"Ten men make forty-eight thousand pins in a day!"

cried Frank, "and one man four thousand eight hundred pins! Oh, papa! is this true?"

"Yes, I believe it is true," said his father. "When we go in, your brother Edward shall read to us an account of this, if he likes it, from the book in which I read it.* But, Frank, look what comes here!" added his father, pointing to a labourer, who now came into the garden with a great bundle of straw. "Where would you like to have it put?"

Frank chose to have it in his garden-house; and his father ordered that it should be put there. Then Frank thanked his brother and cousins for helping him so kindly; and he said, that he thought he should never forget the advantage of *the division of labour*.

SOME time ago, Frank had told his father that he would *persevere* in trying to learn to read, that he might be able to employ and to entertain himself. He did as he said that he would do. He *persevered*, till he had learnt to read quite easily. Then he read in books, which his mother lent him, accounts of the camel, of which, ever since he had seen the print of it, he had wished to know

* "I have seen a small manufactory of this kind, [viz., of pin-making,] where ten men only were employed, and where some of them, consequently, performed two or three distinct operations. But, though they were very poor, and, therefore, but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make, among them, about twelve pounds of pins in a day. There are, in a pound, upwards of four thousand pins, of a middle size. Those ten persons, therefore, could make upwards of forty-eight thousand pins in a day. Each person, therefore, making a tenth part of forty-eight thousand pins, might be considered as making four thousand eight hundred pins in a day. But, if they had all wrought separately and independently, and without any of them having been educated to this peculiar business, they certainly could not each of them have made twenty, perhaps not one, pin in a day—that is, certainly not the two hundred and fortieth part of what they are at present capable of performing, in consequence of a proper division and combination of their different operations."—(SMITH'S *Wealth of Nations*, vol. i. p. 6, quarto edition.) Pins are now made much more rapidly, owing to recent improvements.

the history. He read, also, entertaining accounts of the elephant, and of many other animals. In the books which were lent to him, he read only what he could understand ; when he came to anything that he did not understand, he asked his father or mother to explain it to him. If they had not time to attend to him, or to answer his questions, he went on to some other part of the book, which he could understand ; or he left off reading, and went to do something else. Whenever he felt tired of reading, or whenever he wanted to hear or see something else that was going on in the room, and found that he could not attend to what he was reading, he shut the book, and put it away. He never kept a book before him when he was tired or sleepy, or when he was thinking of something else.

So Frank became very fond of reading. He could now employ himself happily on rainy days, when he could not run about out of doors, or when he had no one to talk to or to play with in the house. At night, when the candles came, and when all the rest of the family began to read, Frank also could read, and he said :

"Papa, now I am as happy as you are when the candles come ! Thank you, mamma, for teaching me to read."

His mother gave him a book, called "The Book of Trades." When she gave it to him, she said to him :

"Frank, there are many parts of this book which you cannot yet understand ; but you will, I think, be entertained by looking over the prints of the men and women at work at their different trades, and you will understand some of the descriptions of what they are doing."

Frank thanked his mother, and he looked over all the prints in the four volumes of this book. He looked at each print carefully, and examined everything in it before he turned over the leaf to look for another. He was pleased with the print of the chandler making candles ; and of the shoemaker making shoes ; and of the turner turning at his lathe ; and of the ropemaker making ropes ; and of the weaver working at his loom. After he had looked at these prints, he read some of the explanations

and descriptions, in hopes that he should be better able to understand the prints. He began with the chandler, who, as his mother told him, is a person that makes candles; and Frank was curious to know how candles are made. But there were several words in this account of candle-making of which he did not know the meaning; and there was one whole sentence, about *bales of cotton performing quarantine*, which puzzled him sadly. His mother explained to him several of the words which he did not understand; but she told him that she could not then explain to him what was meant by *performing quarantine*; and that he could understand how candles were made without having this sentence explained to him.

"Mamma," said Frank, "I now know pretty well how they are made; but I think I should understand it all a great deal better if I were to see it done. Mamma, I wish I could see somebody making candles."

A few days afterwards, Frank's mother called him to her, and told him that the cook was going to make some candles. "Should you like to see them made, Frank?"

"Yes, very much indeed!" said Frank; "thank you mamma, for calling me."

Then his mother took him to the room where the cook was preparing to make mould candles. The first thing he saw was a large saucepan which the cook had taken off the fire to cool. Frank asked what was in the saucepan. He was told that it was full of melted mutton suet. Some suet, which had not been melted was shown to him; he said that it looked like cold fat; and he was told that this suet was the fat of mutton.

The next thing which Frank saw was a wooden frame or stand, about the height of a common table. In this stand were a number of round holes, through each of which hung a tube, or hollow pipe, of pewter, the size of a candle. These hollow pipes were taper—that is, narrower at one end than at the other, and growing narrower and narrower by degrees. The largest ends were uppermost, as the pipes hung in the frame, so that they

looked like the shapes of candles, with the part that is usually lighted hanging downwards. At the narrow end, these pewter tubes were made in the shape of the top of a tallow candle before it is lighted.

"Mamma, I know what this is!" cried Frank; "and I know what it is for. It is the same sort of thing which I saw in the print of the tallow-chandler, in the 'Book of Trades.' These pipes are the moulds in which the candles are to be made; the melted stuff—the melted suet—is to be poured into this open mouth, and it runs all the way down. Then it is left to cool, and then it is pulled out, and the candle is made. This broadest end is the bottom of the candle, which is to go into the candlestick, and this narrow end is the top. It is hanging upside down now. You see, I understand it all, mamma!"

"Stay, Frank; do not be in such a hurry; do not be too quick. You do not understand it all yet. You have not observed or discovered some things in these moulds which are necessary to be known; and you have forgotten the most material part of a candle."

"What can that be, mamma? Tell me, pray."

"I would rather that you should think, and find it out for yourself, Frank."

Frank considered a little, and then answered—

"Mamma, I have thought of everything, and I can think of nothing else. Here are the moulds, and the melted grease, which is to be poured into the moulds, to make the candle. What can be wanting?"

"How would you light the candle?" said his mother.

"By the wick, to be sure! Oh! the wick!—I forgot the wick! Where is the wick? What is the wick made of?"

"It is made of cotton. Look here, master!" said the cook, showing him a ball of coarse cotton.

"And how do you get this cotton into the middle of the candle?"

"I will show you, sir," said the cook.

She then took one of the candle-moulds out of the wooden frame in which it hung; and Frank looked at the narrow end, which had hung downwards, and he saw at the bottom a little hole; and he said—

"Here is a little hole; this must be stopped, or else all the melted tallow will run through it. Shall I stop it up with this piece of paper, mamma? I will roll it up, and make a stopper—shall I?"

"No, thank you, master!" said the cook. "You shall see how I will stop it up."

Then she doubled the cotton which she held in her hand; and she cut off as much as would reach from one end of the candle-mould to the other, and a little more. Then she put the cotton, just where she had doubled it, in at the broadest end of the mould, and she let it fall all down the pipe to the small hole at the narrow end, and by means of a wire, she drew the cotton through the hole, leaving a loop of cotton as long as that which is commonly seen at the wick of a tallow candle which has not been lighted. Then she stuck a peg of wood into the little hole; this peg, together with the cotton which had been put through the hole, stopped it up completely, so that none of the melted tallow could run through it. She next tied the other ends of the cotton together, and put a small bit of wood like a skewer through the loop, which she had made by tying the cotton together. This skewer lay across the broad end of the mould, and fitted into two notches, in the outer rim of the mould, at opposite sides. The cotton was now tight in the mould, from top to bottom. Frank looked into the mould, and saw that it was so.

"Cook, why are you so careful to make the cotton tight, and put it just in the middle of the mould?" said Frank.

"That the wick of *my* candle may be in the middle," said the cook. "In good candles, the wick must always be in the middle."

When the cook had put cotton in the same manner into all the moulds, she was ready to pour the melted tallow into them. Frank was afraid that the tallow had grown cold, because the saucepan in which it stood had been taken off the fire some time. But the cook said it was quite warm enough; that it would not make good candles if it was very hot. As Frank now went close to

the large saucepan, he saw that there was a smaller saucepan inside of it. The smaller saucepan contained the melted tallow; and between the large and the smaller saucepan, the space was filled with water: both at the sides and at the bottom, between the small and large saucepan, there was water. Frank asked the reason of this.

The cook answered: "Master, it is to hinder *my* tallow from burning, or being made too hot; which would spoil it, as I told you."

"But how does the water hinder the tallow from being made too hot—for the water is hot itself, is it not?"

"It is, master; but still it keeps the tallow from being *too* hot—I can't say how; but I know it is so, and I always do it so."

"But I ask the reason: I want to know the reason, mamma," said Frank.

"I will endeavour to explain the reason to you some other time, my dear," said his mother; "but, first, let us look at what the cook is doing, that you may not miss seeing how candles are made."

Frank looked, and he saw the cook replace all the pewter moulds in the wooden frame, with the narrow ends downwards, and the broad end uppermost; and into the open mouth of the broad end, which was uppermost, she poured, carefully and slowly, the melted tallow, from the spout of the saucepan, into each of the candle-moulds. She poured it over the cotton, not at the top, but on each side of it, so as to leave the cotton, and the skewer that was put through it, standing above the grease, when the mould was filled nearly to the top. When this was done, the cook said that they must leave the tallow to cool; and that it would be some time before it could be cool.

Frank went away with his mother, and he asked her if she could now answer the question about the hot water. But just then his father called her, and she had not time to answer Frank.

She was busy all the rest of the morning, and Frank went to his garden, and worked in it; when he was tired

of working, he trundled his hoop upon the walk, and kept it up till he was tired of running after it. It began to rain, and then he went into the house, and learnt by heart some of the multiplication-table, which his mother had desired him to learn.

Some company dined this day with his father and mother; and his mother could not talk to him again till after the company had gone away in the evening. Frank was glad when the company left, and when his mother had time to attend to him.

THE next day Frank asked his mother to take him to look at the candles; he said that he hoped the cook had not taken them out of the moulds, for he wished to see that done. The cook had not taken them out; for his mother had desired that she should not do this till Frank should be present. The first thing the cook did was to pull out the pegs which she had stuck between the cotton of the wick into the little holes at the small end of the moulds. She then took hold of the cotton loop, through which the bit of stick had been put, at the larger end of the mould, and she drew it up gently—and with the cotton came the tallow, out of the mould, in the shape of a candle; and as it came out, Frank exclaimed,

"It is a real candle, indeed! Shall we light it, mamma?"

"Not yet, my dear. It is not hard enough. It must be hung up for two or three days, before it will be fit to be used."

The cook drew all the candles out of the moulds, and she hung them up to harden.

"Well, now, mamma, I have observed carefully all that has been done, and I have not been too quick, have I? I have learnt something *accurately*, as you say. Now I know how to make candles!"

"You have seen how candles are made; that is, you have seen how mould candles are made. These are called *mould candles*, because they are made in a mould; but there are other ways of making candles."

"Yes, I remember the man in the 'Book of Trades' says that there are dipped candles, as well as mould candles."

"Yes, master," said the cook; "the dipped candles are made by dipping the wick into the tallow, then letting it dry, and then dipping it again in the tallow; and every time more and more sticks to the candle; and it is left to dry between every dipping; till at last it is the size the candle should be. Then, besides dipped candles and mould candles, there are rushlights, such as the poor people use here, in their cottages, you know."

"I do not know," said Frank. "Tell me, what are rushlights? Are they made of rushes?"

"Yes, sir."

"Oh! tell me how they are made!"

"If I can, I will take you this evening to the cottage of that good-natured old woman who showed you her spinning-wheel," said Frank's mother; "and I will ask her to show you how rushlights are made."

"Thank you, mamma. Are there any other sorts of candles?"

"There is another sort, which you have seen, and that is not made of tallow."

"I recollect; wax candles, mamma."

"They may be made nearly in the same manner that dipped candles are made, only that melted wax is poured over the wick, instead of the wick being dipped into the wax. The wax candle is rolled upon a smooth table, to make it smooth and round. There are other ways of making wax candles; but I will not tell you any more at present, least you should not be able to remember all that you have seen and heard."

"But, mamma, tell me one thing more," said Frank, as he followed his mother upstairs. "Wax, I know, is made by bees, and wax candles are made of wax; but there is another kind of wax candle, or of candle that looks like wax. It has a long, hard name, which I cannot remember."

"Do you mean spermaceti?"

"Yes; spermaceti. What is that?"

"Spermaceti is a fatty substance prepared from the brain of a species of whale. You have seen the print of a whale, and have read an account of a whale?"

"Yes; the great fish—the largest of fishes; I remember. I never should have guessed that candles were made from any part of a fish. Mamma, what a number of things we must know before we can know well how any one thing is made or done."

"Very true, my dear little boy; and I am glad to see that you wish to acquire or gain knowledge."

His mother could not talk to him any more during the morning, but, in the evening, she called him, and said: "Now, Frank, you may walk with your father and me to Mrs. Wheeler's cottage."

"To the good-natured old woman's? Oh! I am glad of that, mamma," said Frank.

He ran for his hat, and was ready in an instant, for he was happy to go with his father and mother. It was a fine evening, and the walk was pleasant, through pretty paths, in green fields; and there were several stiles, which Frank liked to get over. He showed his father how quickly he could get over them.

"Look, papa, how well I can jump! how I can vault over this stile! You know you said that men ought to be active. Now, papa, am I not active?"

Frank ran on, without waiting for an answer, till he came to a rivulet, or little river, or brook, which crossed the path. He then stopped, and stood still, for there was only a narrow plank or board across the stream, and the hand-rail, by which Frank used to hold when he walked over, had been broken since he had last been at this place. The rail had fallen into the water, and there was nothing by which Frank could hold. His father and mother came up to him.

"Frank," said his father, "what is the matter? You look very melancholy."

"Yes, papa, because I am afraid we must turn back. We cannot go on."

"Why not, my dear?"

"Look at this broken bridge, papa!"

"Broken handrail of a bridge, you mean, Frank. The bridge is not broken. This plank is as broad and as strong as it was before; and you know you have walked over it safely. You see it will bear my weight, and I am much heavier than you are," said his father, standing on the plank.

"Yes, papa, so I see."

"And you see," said his father, walking over the bridge, "you see that I can walk over it, though there is no handrail."

"Yes, papa, so I see," said Frank; but he stood still, without attempting to follow his father.

"Come on, my boy," said his father, "unless you mean to stand there all night."

"No, papa. Yes, papa. Mamma, will you go first?"

His mother went over the bridge; still Frank felt afraid to follow; but when his father said, "Men ought to be brave: boys should conquer their fears," Frank tried to conquer his fear; and he put his foot upon the bridge, and his father held out his hand to him, and he walked on, slowly at first and quicker afterwards, till he got quite across. Then he said,

"Papa, I will go back again, and do it better."

He went back again, and walked quite stoutly over the plank, his father holding his hand. And then he said,

"Papa, I will do it without holding your hand."

So he did. And he went backwards and forwards two or three times, till he had quite conquered his fear. Then he felt glad and pleased with himself, especially when his mother smiled upon him, and said,

"That is right, Frank, my dear. This puts me in mind of a little boy who conquered his fear, as you have done."

"Who was that, mamma?"

"A little boy, who was younger than you are."

"Was it a real boy, mamma? And is it a true story?"

"It is a true story of a real boy. He was about five years old."

"Much younger than I am!" cried Frank. "Well, mamma?"

"When this little boy was taken to the seashore, to be bathed for the first time in the sea, he was afraid, when he saw the wave of the sea coming, and when he felt it going over him."

"So should I have been, I dare say, mamma."

"But he was ashamed of having been afraid, and he was determined to conquer his fear; and he turned to the sea and said, 'Wave, do that again! Wave, come over me again!' And the next time he showed no fear."

"What was the name of the boy, mamma, and who were his father and mother?"

"I will not tell you their names, my dear; but I can tell you that the boy is son to the greatest general, the greatest hero in England."

"The greatest hero. Oh! then I know who he is, mamma."

WHEN they came to Mrs. Wheeler's cottage, Frank's father went into a field near the house, with the old woman's son, to look at a fine crop of oats; and Frank's mother took him into the house, where they found Mrs. Wheeler getting her grandson's supper ready. She stopped when she saw Frank and his mother. She seemed glad to see them, and said: "You are welcome, madam; you are welcome, master; be pleased to sit down." Then she set a chair for *madam*, and a little stool for *master*, and she swept the hearth quite clean; and she called to a little girl, of about six years of age, who was in the room, and bade her run to the garden, and gather some strawberries, and bring them in for Frank. Frank thanked this good-natured old woman, and said:

"I did not come to beg strawberries; and, though I love strawberries very much, I do not wish to have any of yours, because I believe you have but very few for yourself. What I want you to do for me is to show me how you make rush candles."

"I will do that with pleasure," said Mrs. Wheeler.

"But, Mrs. Wheeler, first finish what you were about when we came in," said Frank's mother. "I believe you were getting your supper ready."

"It is George's, my grandson's supper, madam."

"Then it is not fair that your grandson George should lose his supper, because my son Frank wants to see rush-lights made," said Frank's mother, smiling.

"That is true," said Frank. "And I dare say that her George will be very hungry, mamma, when he comes in; for I saw him working hard in the fields; and I am always very hungry when I have been working hard. Pray, Mrs. Wheeler, finish getting George's supper ready. I can wait as long as you please; and I wish I could do something for you, as you are going to do something for me. Let me carry those sticks to the fire. I can do that, and you may go on with your cooking."

"God bless you, master!" said the old woman; "but this is too great a load for your little arms."

"Let me try," said Frank.

"Yes, let him try," said his mother; "he loves to be useful."

"And I am useful, too!" cried Frank, carrying the great bundle of sticks to the fire.

His mother began to show him how to put them on the fire.

"But," said she, "some of these are wet, and they will not burn readily."

"Ay," said the old woman, "I am afraid that is a wet bundle. I took it from the wrong place;—yonder, in that corner, are all the dry fagots."

Frank had never heard the word *fagots* before, and he did not hear it quite plainly now; but he saw what the old woman meant, because she pointed to the place where the fagots lay. So he ran directly for another bundle of sticks, and he carried it toward the fire; and throwing it down beside his mother, said,

"There, mamma, there's another *maggot*, and a dry *maggot*, for you."

"Fagot, not *maggot*," said his mother.

"Maggot!" cried the old woman, laughing, with her arms akimbo. "Lord bless him! don't he know the difference betwixt a maggot and a fagot?"

"What is the difference?" said Frank.

"Why, a maggot!—Lord help us!"—the old woman began, as well as she could speak, while she was laughing.

"Mamma," said Frank, turning to his mother—"mamma, I would rather you would tell me; because you will tell me without laughing at me."

The old woman, who saw that Frank did not like to be laughed at, but who could not stop herself, turned her back, that he might not see her. He saw her sides shaking all the time his mother was explaining to him the difference between maggot and fagot.

"A maggot is a small worm, and a fagot is a bundle of sticks."

"Yes, mamma," said Frank.

"Well, Frank, now I have told you, can you tell me what is a maggot, and what is a fagot?"

"A maggot, mamma, is——Mamma, I did not hear—I could not attend to what you said, because——"

The old woman walked out of the room, and stood laughing in the passage.

"Mamma," whispered Frank, "I shall not call Mrs. Wheeler my good-natured old woman any more, because she is laughing at me."

"Then, Frank, I am afraid I cannot call you my good-humoured little boy any more. What harm does her laughing do you, Frank? Let us see, has it broken any of your bones?"

"No," said Frank, smiling; "but I don't like to be laughed at, especially for not knowing anything."

"Then, to avoid being laughed at again for the same thing, had you not better learn that which you did not know?"

"I had. Now, mamma," said Frank, turning his back to the door, so that he could no longer see Mrs. Wheeler—"now, if you will be so good to tell me again, I will attend, if I possibly can; but I was so much ashamed, mamma——"

"My dear," said his mother, "there is nothing shameful in not knowing the meaning of words which you never heard before. When you have not done anything wrong or foolish, never mind being laughed at. A man should never mind being laughed at for a trifling mistake."

"Mamma, I will not mind. Tell me now, and I will show you that I do not mind."

His mother repeated to him the explanation of the two words; and as soon as he knew this, he ran to the door, and called out very loud:

"A maggot is a small worm, and a fagot is a bundle of sticks! You need not laugh any more, Mrs. Wheeler."

"Oh, master! I ask your pardon; I will not laugh any more. I was very rude; I ask your pardon. But I'm foolish, and could not help it. I hope you are not angry, master! I hope," said Mrs. Wheeler, coming back into the kitchen, and curtseying, "you are not angry, madam."

"Mamma is not angry at all," said Frank; "and I was only a little angry, and it is over now. Come in, come in," said he, pulling her by the hand, "and look how well the fire is burning that I and mamma—that mamma and I made."

"Bless your little soul! that forgives and forgets in a minute," said the old woman. "I wonder Hannah has not come in with the strawberries."

"I don't want the strawberries yet," said Frank; "you have not put the pot on the fire to boil the supper for George. Won't you put it on now?"

Mrs. WHEELER put the pot on, and, while the supper was boiling for George, she showed Frank how to make rushlights. First, she took down from a hook, on which they hung, a bundle of rushes. Frank had seen rushes growing in a field near his father's house; and he had gathered some of them, and had peeled them; and he knew that, in the inside of the rush, there is a white soft substance, called pith. But when he had attempted to peel rushes, he had always been a great while about it, and he had seldom been able to peel more than about the

length of his finger of the rush without breaking the white pith. Mrs. Wheeler in an instant stripped the rush of its thick green outside, all except one narrow stripe or rib of green, which she left to support the soft pith; and she peeled, without breaking it, the whole length of the pith contained in the rush, which was almost as long as Frank's arm.

"Can you guess, Frank, what part of a candle this rush is to be?" said his mother.

Frank thought for a little while, and then answered that he supposed the rush would be made into the wick of the candle, and that it would serve instead of the cotton, which he had seen used by the cook in making mould candles.

"Yes, master, you have guessed right," said Mrs. Wheeler.

Then she brought from a corner near the fire a small pan which contained melted grease. Frank gave the rush to her to dip into it; but she said that it would not make a good rush candle, because it had not been left to dry for some days. She took another peeled rush from a bundle, which hung up in a press by the fireside. This, which had hung there, as she said, for two or three days, was drier and less white than that which had been freshly peeled. She drew the rush through the melted grease, and said:—

"It will be cool, and fit to burn, in about five minutes."

In about five minutes it was cool, and the old woman lighted it, and it burned; but there was so much daylight in the room, as the setting sun was shining full upon the window, that the light of the small rush candle could scarcely be seen. Therefore Mrs. Wheeler took it into another room, at the opposite side of the house, where the sun did not shine at this time. When she had shut the shutters, the flame of the rushlight was plainly seen. Frank observed that this rush candle did not give nearly so much light as a thick tallow candle did. Mrs. Wheeler said that she could not afford to buy tallow candles often, and that these rushlights gave light enough

for her. Frank perceived, that after he had been a little while in this room he could see the things in it better than he did when the shutters were first closed, and when his eyes had been dazzled by the sunshine. He was surprised to find that he could make out the words at the bottom of a print, to which the old woman held the light.

"Mamma, I could scarcely see it before, and now I can see it quite plainly, and I will read it to you."

He read aloud—

"For want of a nail, the shoe was lost ;
For want of a shoe, the horse was lost."

Just as Frank got to "*the horse was lost*," the rush-light burnt out.

"Oh! is the candle gone so soon?" cried Frank. "Mamma," continued Frank, turning to his mother, whilst Mrs. Wheeler opened the shutters—"mamma, you know such a candle as that would last, at home, the whole night; a rush candle lasts several hours at home, mamma."

"Do you think that the candles being *at home* makes any difference as to their burning?" said Frank's mother, smiling.

"No, no, mamma," said Frank, laughing; "I know that the rush candles which we have at home would burn as long here as they do at our house. But I mean that ours burn longer, because there is more grease or tallow about them. Mamma, if there was no tallow about this rush, would it burn at all? or would it burn away a great deal sooner than it does now?"

"Try, and you will see, my dear," said his mother.

Mrs. Wheeler gave Frank a peeled rush, and he lighted it at the fire, and it burned; but the flame was not bright, and it soon went out. Frank dipped it into the grease, and it burned better. Mrs. Wheeler went to see if George's supper was ready; and Frank continued talking to his mother.

"Mamma, I believe it is the melted grease that burns, and makes the bright flame of the candle: but I do not

know how. Mamma, what becomes of the grease or the tallow when the candle burns?"

"Do you not see the smoke that rises from the top of the flame?" said his mother.

"Yes, mamma, I see the smoke; but what has that to do with what I asked you?"

"Do you not know what that smoke is? Do you not remember your father's showing you, one evening after tea, the difference between smoke and steam?"

"I remember, mamma, steam comes from water when it is made hot. I remember papa showed me the steam, the vapour, rising from the hot water in the tea-urn; and I recollect papa held a cold plate over it, and showed me that the cold turned the vapour back again into water; I saw the drops of water *condensed*,—I remember the word. And I recollect he afterwards held a plate over the candle, and said that what rose from the candle was smoke, not steam. I do not remember about the smoke. I recollect only that the plate which was held over the candle was blackened, and that the plate was not wet; but I do not know exactly how it was."

"Did you never hear anything more about smoke?" said his mother.

"O yes! I recollect papa told me that smoke when cold became soot, and fell down to the ground, or stuck to anything cold that was near it."

"Just so: the smoke of the candle is the vapour of melted tallow, which boils by the heat of the candle; and when this vapour is *condensed* by cold, it becomes soot, such as you see sticking to the ceilings where many candles are used; soot is frequently collected on purpose upon plates held over lamps, and it is then called lamp-black."

"Mamma, I once saw, in the little barrel at the time the painter was going to paint the black board, at the bottom of your room, some light black powder. Was that lamp-black?"

"Yes, my dear, that was lamp-black; and it is used for paint, and for making blacking for shoes and boots."

"Very well, mamma, I understand that; but I want to

go back to the candle; the melted tallow, the vapour of boiling tallow, makes the candle burn, and keeps the candle burning. Mamma, I do not know how, and why the candle burns. And what is the flame?"

"Frank, till you have more knowledge, I will not attempt to explain that to you," said his mother. "But, whenever you can understand it, you shall read all that is known about the burning of a candle. You will find it in that book which your brother Edward was reading yesterday, 'Conversations on Chemistry.'"

"Ay, that book which he likes so much! But, mamma, I do not like it. Edward said to me, 'Don't interrupt me, Frank; I am busy; I am very happy reading this.' Mamma, I got up behind his chair, and began trying to read over his shoulder; but I did not like the book much."

"No, because you did not understand it at all."

"And I am afraid I shall never understand it," said Frank.

"Do you not understand parts of books, now, Frank, which you did not understand when you began to learn to read?"

"Yes, parts of 'Evenings at Home,' and parts of 'Sandford and Merton,' which I did not understand, and did not like last year; and now I like them very much."

"Then you may hope that the time will come, if you try to improve yourself, when you will understand and like 'Conversations on Chemistry,' as your brother does now. Even what you have seen and learnt this evening will help you a little."

Just then Frank looked out of the window, and he saw the little girl who had been sent for strawberries coming along the path which led to the house. She brought a basket of fine strawberries. The old woman set a little deal table in the porch, where the honeysuckles, which hung over the roof of the porch, smelt very sweet. The sun was setting, and it was cheerful and pleasant.

"Look, Master Frank! I have strawberries for you and for myself, too!" said Mrs. Wheeler. "My George takes care of my garden, and I have plenty of fruit and

flowers. These honeysuckles, that smell so sweet, are all of his planting."

Frank's father returned from the oat-field, where he had been; and Frank, and his father and mother, sat in the porch covered with honeysuckles, and partook of strawberries and cream.

AFTER Frank had eaten as many strawberries as he liked, he and his father and mother thanked the good-natured old woman, and his mother put some money into the little girl's hand. The girl curtsied and smiled, and looked happy.

Then Frank followed his father and mother out of the cottage, and his father said that they would walk home by a new way, through the oat-field, and afterwards through a neat farm-yard, and round by a pretty lane, which would take them to the bridge. Frank did not hear what his father said; and his father, turning his head back, saw Frank walking slowly behind him, and looking as if he was thinking intently of something.

"What are you thinking of, Frank?" said his father.

"I am thinking, papa, about money."

"What about money, Frank?"

"I am thinking how happy that little girl looked when mamma gave her some money, and how glad people always look when money is given to them. The reason, I know, is because they can buy things with money—bread and meat, or clothes, or balls and tops, and playthings, or houses, chaises, or anything they wish for. But, papa, I wonder that the people who have bread and meat, and clothes, and tops, and balls, and all sorts of pretty or useful things, are so foolish as to give them for little bits of gold, or silver, or copper, which are of no use."

"No use! My dear, recollect that you have just said that they are of use to buy anything people want or wish for. Suppose you had two tops, and that you wanted to have a ball instead of one of your tops, you might sell one of your tops, and with the money that would be paid to you for your top, you might buy a ball."

"But, papa, why could I not change one of my tops for a ball, without buying or selling, or having anything to do with money?"

"Your top is worth more than a ball; however, you might, if you liked, exchange your top for a ball; but it is not so easy to exchange heavy and large things, as it is light and small things. You cannot carry large or heavy things, for instance, coals or cows, about with you, to exchange; and yet one man may have more coals, and another more cows, than he wants; and if they wish to exchange these, then it is convenient to give money, which can readily be carried in the pocket."

Frank did not quite understand what his father meant; his father said that it was too difficult for him to comprehend, and that he should only puzzle him if he talked to him any more about it yet.

"Papa," said Frank, looking a little mortified, "I am sorry that there are so many things that I cannot understand yet. What shall I do?"

"Attend to those things which you can understand, my dear boy; and then you will learn more and more, every day and every hour. Here are men reaping oats. Look at the sickle with which they are cutting down the oats. Did you ever see a sickle before?"

Frank remembered having seen sickles last autumn, when his mother took him to see some men reaping corn; and he said he recollected that the bundles of the corn, which the men bound together and set upright on their stalks, were called sheaves, and that the top of each separate stalk of corn is called the ear.

His father told him to run and gather an ear of barley, which was growing in the next field on the left hand, and also an ear of wheat, which was growing in a field on the right hand. When Frank had gathered these, his father showed him the difference between oats, barley, and wheat. Frank knew that wheat is made into bread, and that barley and oats are sometimes made into bread, and that oats are eaten by horses. But there is another use of barley, which he did not know.

"Did you ever taste beer, Frank?"

"Yes, papa."

"Do you know of what beer is made?"

"I think my brother Edward told me that it is made of malt and hops; and he once, when the brewer was brewing, showed me some hops; he said that hops give the bitter taste to beer. But, papa, I do not know what malt is."

"Malt is corn that has been made to begin to grow again, and that is not suffered to grow a long time. Corn, you know, is a name for many kinds of grain; as wheat, barley, bere, oats, and rye."

"How do they make it *grow* a little?" said Frank.

"By wetting the grain and heaping it up, which makes it hot; then it swells, and the grain becomes soft; and if it is opened, it is found to contain a kind of flour. I think I once gave you some malt to taste. Do you remember the taste of it, Frank?"

"Yes, papa, it has a sort of sweet taste."

"Well, when the malt has swollen and is ready to burst, they stop its growth by taking it out of the heap and spreading it upon the ground, and at last by putting it into a place that dries the corn, and prevents it from growing any more."

"Papa, you showed me such a place at Mr. Crawford's, the maltster's, and he called it a kiln. And what do they do next to the malt?"

"They then brew it, and make beer of it."

"I know that; but how do they brew it, papa?"

"I cannot explain that to you now, my dear; but the next time the brewer comes, I will take you into the brewhouse, and you may then see part of what is done to make beer of malt."

WHILST Frank's father had been talking about malt and beer, they had walked through two or three fields, and they came to a neat farm-house. The man to whom the house belonged came out and said—

"How do you do, landlord? Madam, you are welcome. Will you walk into my yard, sir, and look at my new barn, which I am just now thatching?"

"Pray, papa, take me with you," said Frank; "for I want very much to know how to thatch the old garden-house better."

His father took him to the yard. When they came there, Frank saw lying on the ground, on one side of the yard, a great heap of straw; and on the other side he saw a bundle of hay, of which horses were eating. As he was passing between the heap of straw and the bundle of hay, Frank heard his mother tell his father that she once knew a young lady who had lived till she was fourteen years old, in the country, and yet who did not, at that age, know the difference between hay and straw.

Frank laughed and said, "What a very ignorant young lady that must have been, mamma! I know the difference between straw and hay, perfectly: this on my right hand is straw, and this on my left hand is hay. Cows and horses eat hay, but they do not eat straw. Beds are sometimes made of straw; and hats, and a great many things, are made of straw; and houses are thatched with straw, and not with hay. You see, mamma, I know a great deal more than that young lady, though she was fourteen. How very odd!"

"But all this time you have not told me, Frank, what hay is, and what straw is."

"Hay is grass dried, and straw is the stalks of wheat. You know, mamma, last autumn I saw the men threshing. I saw the corn that was threshed out of the ears; and what was left after the corn was beaten out, you told me was called chaff; and the stalks, mamma, you told me were to be called straw."

"Well remembered, Frank!" said his father. "Perhaps, if the poor ignorant young lady of fourteen had, at your age, been blessed with as kind a mother as you have, and had been told and shown all these things, she might have remembered them as you do. But, Frank, the stalks of wheat are not the only stalks that are called straw. The stalks of wheat are called wheat straw; but there are other kinds of straw. The stalks of oats, and of barley, and of rye, are all called straw."

"Which kind of straw is the best for thatching houses, papa?"

"Wheat straw, I believe," said his father.

By this time they had come to the barn which the man was thatching. Frank looked up attentively a little while, and then said,

"The man is so far above me, papa, that I cannot well see how he fastens on the straw. May I go up this ladder, papa?"

Frank pointed to a ladder, which stood beside that on which the thatcher was at work. Frank's father made him no answer, till he had examined if the ladder was firmly fixed; and then he told Frank that he might go up.

"I will follow you, Frank," he added, "to take care of you, when you get to the top."

"No, papa, thank you, you need not; for I am not at all afraid, because I know so well how to go up and down a ladder."

Frank ran to the ladder, and a maid-servant, who was milking a cow in the yard, cried out,

"Master! master! dear young master! What are you about? Don't go up the ladder, or you'll break your pretty little legs."

Frank laughed, and began to ascend the ladder directly. He had been accustomed to go up and down a step-ladder which his father had in his library. Formerly, when he was a very little boy, he had not been allowed to mount that ladder; and he never had gone up it till his father gave him leave. And now he was proud of being permitted to mount a ladder. So he went up; and when he was half-way up, he turned back his head to look at the maid, who had hid her face with her hands. Frank laughed more and more at her fright.

"Take care, Frank; mind what you are about. Hold fast by the sides of the ladder. You are in much more danger now than you were in crossing the plank over the brook; for, if you miss a step of the ladder, you will fall, and hurt yourself very much. There is no courage in being careless."

Frank knew that his father told him the truth about *danger*, as well as about everything else, and he always attended to what his father advised; therefore he left off laughing, and he took care to hold fast, and not to miss any step of the ladder. He found that this ladder was much higher than that which he had been used to go up. His father was behind him. He reached the topmost step safely, and his father put one of his arms round Frank, and held him, for his head grew a little giddy; he had not been used to look down from such a height. In a few minutes, when his attention was fixed on what the thatcher was doing, he forgot this disagreeable feeling; and he was entertained by seeing the manner in which the house was thatched.

"Papa, I see that he puts on the straw quite differently from what I did, when I was trying to thatch the house in my garden."

"Why, how did you put on the straw?"

"I put it in bundles upon the sticks that made the roof."

"What do you mean by bundles?"

"I took as much as I could grasp, or hold in my hand, and I put it on the wooden roof, not quite like steps, but one above another."

"And you found that the rain came in between every bundle, did you not?"

"I did indeed; and I was very sorry that, after all my pains, and after I had thatched my house, the water came in the first time there was a heavy shower of rain."

"Yes; because you put the bundles of straw the wrong way. You see the thatcher does not lay handfuls of straw in steps, one above the other, as you did; but he begins at the eaves of the roof, near the wall, just at one end of the house, and he lays several bundles one beside the other."

"I understand you," said Frank. "I put them one above the other, like the steps of the ladder; he puts them beside each other, like the sides of the ladder."

"He fastens them down with bent twigs, which he calls *scollops*," said Frank's father. "Or else, look, here

is another way: he fastens the straw down with a rope made of straw, with which he actually sews the thatch down to the roof, with this long iron rod, which you see he uses like a needle."

"But, papa, you said that he begins at the *eaves* of the house. What are the *eaves*?"

"The *eaves* are that part of a roof that is nearest the wall; they are the lowest part of the roof, and the thatch hangs over the wall, to carry off the rain without allowing it to touch the wall. Here is a *scollop*. You see, it is sharpened at both ends, that it may stick in the roof. Observe the thatcher; he is going to put on the second row of thatch above the first."

"Yes; I see that the lower part of the bundle, that he is now putting on, is put over the upper part of the bundles below it."

"Why does he do so?"

"I do not know."

"Think a little, Frank."

"I do think, papa; but I cannot find it out."

"The rain would fall between the bottom of the row which he is now putting on and the first row, if the bottom of the second did not lap over the top of the first; and the rain would run in at the holes made by the scollops, if they were not covered with the second row of thatch."

WHEN Frank had seen and heard all that his father showed and told him about thatching, he went down the ladder as carefully as he had gone up. As he passed through the farm-yard with his father and mother, he stopped to look at some pretty hens and chickens that were picking up oats. Whilst Frank was looking at them, a large turkey-cock came strutting up to him, making a great noise, spreading its black wings, stretching out its blue and red throat, and looking ready to fly at him. Frank started back, and had a great mind to run away; but his father, putting a stick into his hand, said,—

"Frank, stand steady, my boy; drive him away with this stick. That's right, drive him away."

The turkey-cock began to run away, turning back from time to time, and making a terrible noise; but Frank pursued him, threatening him with the stick; and as fast as Frank came up to him, the turkey-cock gobbled and ran away.

"Well done, Frank! you have fairly driven him away," said his father, shaking hands with him. "You see you can conquer him, and that he has not hurt you. The next time a turkey-cock attacks you, if you have a stick in your hand, you need not be afraid."

"My dear Frank," said his mother, "I am glad to see you are become so much braver than you were. When you were a very little boy, and not nearly so strong as you are now, I remember we had a turkey-cock in the yard, which one day frightened you; and your father ordered that it should be sent away, that it might not frighten you again; for you were not then able to defend yourself."

"But I am now older, and am able to defend myself," cried Frank; "and willing, too, mamma."

Frank marched on, in triumph, before his mother; and passed by the door of the chicken-yard, looking proudly at the turkey-cock, who dared not come out. Frank amused himself, during a great part of the way home, in imitating the strut and noise of this animal; and he frequently turned to his mother, asking her if *this* was not very like; and *this* still more like; and begging her to shut her eyes and listen, and tell whether she could know his *gobble* from that of the real turkey-cock.

Frank was tired, at last, of doing this; and his mother was tired of listening to him.

"Now, mamma, I have done being a turkey-cock."

"Very well, my dear, I am glad of it. Let this woman, who seems to be in a hurry, pass by you, Frank," said his mother.

Frank looked behind him, and he saw a woman, with a milk-pail on her head, and another under her arm. He made way for her, and when she had passed, he said,—

"Mamma, that is the very same woman who was milking the cow in the farm-yard, and who said to me, 'Master! master! don't go up the ladder, or you will break your pretty little legs.' Mamma, was not she foolish to be so much frightened? I wonder how anybody can be afraid to go up a ladder. What a coward she must be, poor woman!"

As Frank was saying this, they came to the narrow bridge; and, to Frank's surprise, he saw this woman run, without betraying any signs of fear, across the plank.

"With one pail on her head, and the other pail under her arm, too!" cried Frank, stopping short, and looking at her with astonishment. "Mamma, can that be the same woman? Then she cannot be a coward! Not a coward about going over narrow bridges, but she is a coward about going up a ladder, mamma."

"She is accustomed to go over this bridge, and she finds that she can do so without being hurt; and you, Frank, have been accustomed to go up a ladder without being hurt."

"Yes, the ladder in papa's study I go up and down nearly every day. The first time I went up it I was a little afraid; and I remember clinging fast, and going very slowly. I see, mamma, that people learn not to be afraid of what they are accustomed to; and I believe people can teach themselves not to be afraid."

As Frank finished speaking, he walked boldly over that bridge, on which, but a short time before, he had scarcely dared to put his foot—that bridge which he had thought it impossible to cross.

FRANK's father was always very careful to keep his promises. He remembered, that he had promised Frank that, whenever the brewer came, he would let him see how beer was brewed. The brewer was now going to brew, and Frank's father called Frank, and took him into the brewhouse.

"What a very large vessel that is, papa!" said Frank, pointing to a vessel which he saw in the brewhouse.

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Frank's sketch of the bridge

"Remember, that is the very same woman who was sitting under the tree in the farm-yard and who said to me, 'Blundering mastard! don't go up the ladder, or you will break your pretty little neck.' Mamma, was not she foolish to be so much frightened? I wonder how any body can be afraid to go up a ladder. What a coward she must be, poor mamma!"

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"Yes, the ladder in papa's study I go up and down nearly every day. The first time I went up it I was a little afraid; and I remember clinging fast, and going very slowly. I was mistaken; that people learn not to be afraid of what they are accustomed to; and I believe people can teach themselves not to be afraid."

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Frank crosses the bridge.

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"It is large, compared with that which you have seen the cook use for boiling meat; but it is small, compared with the brewing-pan, or boiler, used in a public brewery, where a great quantity of beer is brewed for numbers of people. We brew only the quantity that we want to drink ourselves."

"What is in the boiler, papa?"

"Water. Look at this large wooden vessel; this is called a vat. Into this the malt is put, and the water, that is boiled in the boiler, is poured into the vat, and mixed with the malt; and, after some other management, it becomes a liquor called *wort*. This is all you can see to-day."

The next day his father called Frank again, and took him into the brewhouse, and showed him the *wort*, and bid him taste it. He tasted it, and found it sweet; but it had not the taste of beer, though it had something of the colour of muddy beer. His father told him that hops must be mixed with the wort before it would taste like beer. He showed Frank hops, and Frank tasted the hops, and found that they had a bitter taste.

"And is this all that is done to make beer, papa?"

"Not all; the wort, after the hops have been boiled in it, must be set to *work*, or *ferment*; and after it has fermented for some time, it becomes beer."

"What is meant by to ferment?" said Frank.

"I cannot explain it to you," answered his father.

"But you shall see this wort when it is fermenting."

Then Frank's father desired the brewer would send, and let him know as soon as the beer began to ferment. The brewer did so some time afterwards; and Frank went to look at it. It was not now in the brewhouse.

"You see, Frank," said his father, "that the liquor in these vessels is not like what you saw in the brewhouse. It is, however, the same liquor; but it is now in a state of fermentation."

"It looks, indeed, quite different," said Frank; "that liquor was of a dull brown colour, and quite smooth on the surface; this is all frothy, and of a muddy yellow and white colour. It is full of bubbles; some rising from below the surface, and others bursting."

"That froth is called yeast, or barm; and it is by means of this yeast, or barm, that bread is made spongy and light. Bread made without barm is heavy, like unbaked paste."

"Papa, how is the beer made to work, or ferment, as it is called?"

"Some yeast, that was got from other beer that was fermenting, was put into this beer; and that *set it a working*, as it is called."

"How does it set it a working, papa?"

"I do not know," answered his father.

"How did they get yeast for the first beer that was made to ferment?"

"I do not know," answered his father.

"Why, papa, I thought you knew everything."

"Indeed, my dear, I know very little; and I never pretend to know more than I do. The older people grow, and the wiser they become, the more they feel that they are ignorant of a number of things. Then they become the more desirous to learn; and the more they learn, the more pleasure they feel in acquiring fresh knowledge."

AFTER he had seen and heard all that his father could show or tell him about the fermentation of beer, Frank went to read to his mother, as he usually did at this hour every morning.

"You have just been seeing how beer is made, Frank," she said; "now, should you like to know how cider is made?"

"Very much, mamma."

"Here is a book in which you can find an account of it."

She put into his hand the first volume of "Sandford and Merton," which was open at the place containing an account of Harry and Tommy's visit to the farm-house, where they saw a room full of apples, and where the farmer's wife described the manner in which she made cider of apple-juice.

Frank read all this to his mother, and it entertained him so much, that when he had finished it, he asked his mother to let him read some more of that book.

His mother said that she was afraid he was not yet able to understand all of it, and she advised him to *keep the pleasure* of reading it till he should be able quite to understand it.

"O, mamma, here is a story of two dogs, Jowler and Keeper. Mamma! just let me look at that, and a story of *the good-natured little boy* and *the ill-natured boy*. I am sure I can understand that, mamma; and the story of the gentleman and the basket-maker, and Androcles and the lion. I will begin at the beginning, mamma, if you please; and if I find that I do not understand it, I will put it up again in your bookcase, and *keep the pleasure*, as you say, till I am able quite to understand it."

Upon this condition, Frank's mother gave him leave to read "Sandford and Merton." He sat down immediately on the carpet, and he read eagerly for some time, till he came to a long dialogue, and then he yawned. His mother sent him out to work in his garden. She would not allow him to read much at a time, because she wished to prevent him from being tired of reading. He had the pleasure of reading a little of "Sandford and Merton" every day. He found that he understood a great deal of it; and his mother told him he might miss some parts. "You will read that book over again, I am sure, some time hence; and then you will be able to understand it all, and then you may read the parts which you now miss."

Frank was particularly delighted with the account of the house which Harry and Tommy built. And as soon as Frank got over the difficulty of the hard name *Spitzbergen*, he liked the account of the extraordinary adventures of the four Russian sailors who were cast away on the desert island of East Spitzbergen.

"Mamma, I like this, because it is true," said Frank. "Mamma, I like books that tell me true things, and that teach me something."

ONE morning, when Frank was going to put on his shoes, he found a hole in the side of one of them; so he

put on another pair, and he ran with the shoe that had the hole in it to his mother, and asked her to have it mended for him. She said that she would send it to the shoemaker's.

"Mamma," continued Frank, "I should like to go to the shoemaker's; I should like to see how he mends my shoe, and how he makes new shoes. I understand something about it, from having seen that print of the shoemaker in the 'Book of Trades,' and from having read the description; but I think I should understand it much better if I was to see a real shoemaker at work."

"I think you would, my dear; and when I have leisure, I will take you to see a shoemaker at work."

"Thank you, good mamma!—And I should like to see everything done that is shown in the prints of that book," continued Frank. He ran for the book, and, turning over the leaves, "I should like, mamma, to see the trunk-maker, the wheelwright, the turner, the ropemaker, the papermaker, the bookbinder, the brazier, the button-maker, the saddler, the glassblower, and—oh, mamma!—the printer, and——"

"Stop, stop, my dear Frank! I cannot show you all these; but if you are not troublesome, I will show you any which you can understand, whenever I have an opportunity, and when I have time. You know that I have a great many things to do, and cannot always attend to you, my little Frank."

"I know that, mamma. But you have time, have you not, to take me to the shoemaker's to-day?"

"Not to-day, my dear."

"But, mamma, will you tell me how paper is made?"

"Not now, my dear."

"Well, mamma, I will tell you how I intend to manage about my labour."

"Not at present, my dear. Do not talk to me any more now. I am going to write a letter."

Frank went away, and employed himself, that he might not be troublesome, and that he might make himself happy.

The next day his mother took him to the shoemaker's.

He saw him at work. He saw the awl, with which the shoemaker makes holes in the sole of the shoe and in the leather, through which holes he puts the waxed thread, with which he sews them together; he saw that, instead of using needles, the shoemaker used hogs' bristles, which he fastened to the waxed thread with which he worked; so that the bristles served him as needles. He put the two ends of the thread in at opposite sides of the holes, and then drew the thread tight, by pulling each end at one and the same time; and in doing this he pushed out his elbows, and made an odd jerking motion, which diverted Frank very much.

"Now I know the reason," said Frank, "why, in the song, which papa sings, about the cobbler, it says that he wanted elbow-room.

"There was a cobbler who lived in the Coomb,
And all that he wanted was *elbow-room*."

Frank saw, in this shoemaker's shop, large pieces of leather of different colours—black, white, red, blue, green, and purple. He asked leave to look at these; and one of the men in the shop, who was not busy, took out of a drawer some skins, as he called them, and spread them on the counter before Frank, who touched, and smelt, and looked at them, for some minutes, and then said,

"I know that leather is the skin of animals; of horses, and dogs, and calves, and some kinds of goats, and of—I forget the name—seals."

"Why, master!" said the shoemaker, looking up from his work, "many a little master, of your age, for whom I make shoes, does not know so much. You are a very clever little gentleman."

Frank coloured, and was ashamed; for he recollected the *flattering lady*, and he thought the shoemaker was flattering and laughing at him. He turned away, and said to the man who had showed him the skins:

"Tell me, will *you*, how the skins of horses, and dogs, and goats, are made to look like this *leather*, which I see before me? I know pretty well how the hair of the horses, and dogs, and calves, is got off, because I read an account

of that in my 'Book of Trades.' I know the currier, with a long knife with two handles, scrapes it off. But I don't know, and I wish you would tell me, how you turn the skin into leather, and how you give it such beautiful colours?"

"Master, I cannot tell you *that*. It is not our trade; that is the business of the tanner and the leather-dresser. I buy the leather from them just as you see it. Please to sit down, that I may measure you for a pair of shoes."

Frank, finding that the shoemaker's man could not tell him anything about tanning or dyeing, contented himself with observing the manner in which this man took measure of his foot. Frank looked at the stick, or ruler, which the shoemaker used. It was made to fold up and open, something like a carpenter's common ruler; but there was hinged, at one end of it, a bit of brass, about two inches long; and this was hinged so that it could be made to stand up, or shut down, as the workman pleased. This piece of brass the shoemaker turned up, and put behind Frank's heel, when he began to measure his foot, and he laid the ruler under the sole of Frank's foot. There was another piece of brass, hinged in the same manner, which could be moved backwards and forwards upon the ruler. The shoemaker pushed this up to the end of Frank's foot, and then looked at divisions which were marked upon the ruler; and he saw the distance between the brass at the heel and the brass at the toe; and he knew what *size* Frank's shoe ought to be as to length. The breadth he measured by *spanning* the foot—that is, by putting his fingers round it, in different places.

When the shoemaker had finished taking the measure, he shut up his measuring-stick. Frank asked leave to look at it once more, because he had not observed exactly how it was fastened when shut. The shoemaker put it again into his hands; and he saw how one part of the brass notched into the other, so as to fasten both the parts of the ruler together, when shut.

The shoemaker then showed Frank some other things, which he wished to see, in his shop. He showed him a

boot-jack, for drawing boots off; and a wooden leg, which is put into boots to stretch them; and he showed him the *lasts*, or moulds on which shoes are made.

Wherever Frank went, people were generally ready to answer his questions, and to show him what he wanted to see, because he took care not to be troublesome, and he did not ask foolish questions. He sometimes found, however, that people could not spare time to show him things; and he often found that he could not understand their manner of explaining.

SOME days after Frank had been at the shoemaker's, as he was walking out in the evening with his father and mother, he heard a dog barking at a distance.

"How far off, mamma, do you think that dog is?" said Frank.

"About a quarter of a mile, I should guess. I fancy it is White the tanner's dog.

"The tanner! Mamma, I wish he had not that barking dog."

"That barking dog is very useful to the tanner, and he will not do you any harm. That dog is always chained up in the daytime; he is let loose only at night, when he guards his master's property, and prevents any one from stealing the leather, which the tanner leaves in his tan-pits."

"Then, mamma, if the dog is chained up, and cannot do me any harm, I wish you would be so good as to take me to see the tanner and the tan-pits. You know the shoemaker told me the tanner tans leather. Mamma, will you go? Papa, will you go to the tanner's?"

"Yes, Frank, we will go with you," said his father; "I am glad to see that you are so desirous to acquire knowledge."

They walked across two or three fields towards the tanner's house; and when they came near it, the barking of the dog was heard very loud. But at the same time that Frank heard his loud barking, he also heard the rattling of the dog's chain; and he knew, therefore, that

he was chained up, and could not do him any mischief. His father told Frank to take care, as he passed by this fierce dog, not to go within his reach—not to go within the length of his chain. Frank took care, and walked at a prudent distance. The tanner came out, and silenced his dog, and then Frank could hear and attend to what was said.

But though he attended, he did not understand all that the tanner said; for the man spoke in a tone different from what Frank had been accustomed to hear.

"Here *bees* my tan-pits, master, if that *bees* what you're *axing* for. And all that *is*, as I knows about it, you see, master, is this, that I *puts* the skins into one of these here pits, first-and-foremost, to cleanse it of the hair, like; and then I stretches it upon a *horse*, you see, and I scrapes off the hair."

"And does the horse stand still," said Frank, "while you are doing that?"

"Oh, bless you! master, it's a wooden horse I be thinking of."

"Oh, I understand! But what is in this pit?"

"First-and-foremost, I *puts* it into this pit," said the tanner.

"First, he puts it into this pit," said Frank's father, observing that Frank did not know what the man meant by "first-and-foremost," which he pronounced very quickly, and like one word.

"Master, there is what we call lime-water; and then I *puts* it into stronger lime-water, to soak again; and then I *takes* it out, and *hangs* it to dry, and then again *soaks* it; and so on, till it is fit for the *tan-pit*, here," said the tanner, pointing to a pit.

"And what is in this pit?" said Frank.

"The bark, master. Nothing in life, master, but the bark and water."

"The bark!" said Frank; "what do you mean by the bark?"

"I *means* the bark that is ground and thrown into *this* here pit with water."

Frank looked to his father for an explanation; and his

father told him, that the bark of which the tanner spoke was the bark of oak-trees.

"This bark," continued his father, "contains something called *tannin*, which, after a length of time, gets into the pores or openings in the leather, and makes it hard. And after that, when the leather is dry, it does not let water easily pass through it; and then it is useful for making shoes, and boots, and harness, and for covering trunks, and for various other purposes."

"But what is that something called *tannin*, papa?" said Frank.

"I do not know," said his father. "But I know that it has a particular taste, which is called *astringent*, and that it makes leather hard and fit to keep out water. Dip your finger into that pit, where you see the bark and water, and taste the liquor, and then you will know what is meant by an astringent taste."

Frank dipped his finger into the tan-pit, and tasted the bark and water; and he understood what was meant by an astringent taste.

"Is this *all* that you can tell me, papa?"

"All that I can tell you at present, my dear. When you are able to understand it, you can read more on this subject in '*Conversations on Chemistry*.'"*

"But I do not see any of the red or green-coloured smooth, shining leathers here which I saw at the shoe-maker's."

"No, they are not made at a common tanner's: they are coloured, and made smooth and shining, as you saw them, at the leather-dresser's."

Frank's next wish was to go to a leather-dresser's, and to learn how the leather was made of these beautiful colours. The tanner said that he always sent his leather, as soon as it was tanned, to a leather-dresser, who lived in a town at twenty miles' distance from him, and from the place where Frank's father and mother lived.

They could not take him to the leather-dresser's conveniently. In a book, or sort of dictionary, which his

* Vol. ii. p. 186, third edition.

father lent to him, Frank afterwards looked for an account of the manner in which leather is dyed. He found that he could not understand it, so he turned his attention to something else which he could understand.

THE next day he passed by a nailer's forge, and he asked his father to take him in, and to let him see how nails were made. In the course of a few weeks afterwards, he saw several other things which entertained him.

The year before, when he had seen the sheep-shearing, and had been told that the wool cut from the back of the sheep could be made into cloth for a coat, such as that which he wore, he had been curious to know how this could be done. His mother showed him how the wool is spun into woollen yarn; and when he was able to understand it, his father showed him a loom, and explained to him the parts of the machine, and showed him how woollen yarn is woven into cloth by means of a loom.

This summer Frank saw several other things about which he had been curious. His father showed him how books are printed in a printing-press; and, some time afterwards, he took Frank to a glasshouse, and let him see men making several things; bottles, decanters, tumblers. He saw them pull the glass, when it is hot and soft, into various shapes, and blow air into it, and blow it out into any forms they pleased. This entertained him exceedingly.

But whenever Frank saw anything that entertained him much, he always wished that he had his brother Edward, or his cousin William, or his cousin Frederick or Charles, to tell it to. They were gone home, and his brother was at school; and Frank wished that he had some companion, of nearly his own age, to talk to and to play with.

FRANK had a little cousin Mary; and about this time little Mary, who was between five and six years old, was brought to his mother's house. Mary was dressed all in black when Frank first saw her, and she looked very melancholy. Frank went to his father, who was standing in another part of the room, and he whispered to his father, and asked why Mary was dressed in black, and why she looked so melancholy. His father answered:—

"Because her mother is dead."

"Poor girl!" said Frank. "If my mother was dead, how sorry I should be. Poor little Mary! what will she do without a mother!"

"Mary is to live with us," said his father; "your mother and I will take care of her, and teach her, as well as we can; and you will be kind to her, will you not, Frank?"

"That I will, papa," said Frank.

He ran directly for those of his playthings which he thought would please her the most, and he spread them before her. She looked at them, and smiled a little; but she soon put them down again, and did not seem to be amused by them. Frank took her to his garden, and gathered for her those of his flowers which he liked the best; but she did not seem to like them nearly as much as he did, or as much as he had expected that she would. She said:

"Thank you; but mamma had nicer flowers than these at home. I wish I was with mamma. I wish mamma could come back again to me."

Frank knew that her mamma could not come back again to her; but he did not say so then to Mary. He took her to look at the house which he was building; and he showed her the sticks which his papa had given him for the roof, and he explained to her how he intended to roof it, and how he intended, afterwards, to thatch it. He said that they two could work at it together, and he asked her if she should like it.

She said she believed that she should like it "by-and-by, but not then."

He asked her what she meant by "*by-and-by*."
She said, "To-morrow, or some other day, but not to-day."

To-morrow came, and little Mary, after she had slept all night, and after she had eaten some breakfast, and after she had become better acquainted with all the people in the house, who were strangers to her, began to look more cheerful; and, by degrees, she began to talk a little more; and, presently, she began to run about, and to play with Frank. He played with her at whatever she liked best. He was her horse, for that was what she asked him to be; and he put a bridle of packthread round his body, and let her drive him; and he lent her his best whip, with which he let her whip him on as much as she pleased.

After Mary had been at Frank's home for a few days, she began to call it her home; and she called his mother "mamma," and she seemed happy again. But Frank could not at all times play with her; he had several other things to do; and when he did play with her, he did not choose always to play at the play which she liked best. Sometimes, at night, she wanted him to make a cat's cradle, or a paper boat for her, when Frank wished to read an entertaining book; and sometimes he wanted to work in his garden, or to go on roofing his house, when she wished him to be her horse, or to roll her in the wheelbarrow. Upon these occasions Mary was sometimes a little cross, and Frank was sometimes a little impatient.

Frank had now finished roofing his house, and he was beginning to thatch it, in the manner he had learnt of the thatcher. He wanted Mary to help him. He told her she must wait upon him, as he had seen the labourer wait upon the thatcher who thatched the barn. He said she should be his *straw-man*, and he showed her how to carry the straw; and he charged her always to be ready when he cried out:

"More straw! More, man! more!"

For a little while Mary served him well, and had the straw ready when he called "More straw!" But she soon got tired, and Frank called,—

"More straw! more, man! more!" several times, before she was ready. Frank grew angry, and he said she was slow, and awkward, and lazy; and she said she was hot and tired, and that she would not be his *straw-man* any longer. Frank tried to convince her that she was wrong; and, to prove it to her, repeated what his father had told him about the division of labour.

"You see," he said, "if I am forced to come down the ladder every time I want straw, I lose my time, and I cannot get on nearly so quickly as if you carried it to me. When I go on doing one thing, and you doing another, you cannot think how well and quickly we get on; that is, dividing the labour; the division of labour; you understand?"

Mary did not understand. She said, "I do not know anything about that; but I don't like to be your *straw-man* any longer, and I will not."

Frank pushed her away, telling her she might go wherever she pleased. She stood still, and began to cry. Then Frank was sorry he had been so angry with her; and she dried up her tears when he told her so, and she said she would be his *straw-man* again, if he would not call "More straw! more, man!" so very fast; and if he would not call her stupid or lazy.

To this Frank agreed; and they went on again for some time, he thatching, and she carrying straw, and placing little bundles ready for him; and they were very happy, he working quickly, and she helping him nicely.

"How much happier it is not to quarrel!" said little Mary. "But now I am really quite tired; will you let me rest?"

"Yes, and welcome!" said Frank; "though I am not in the least tired."

He came down the ladder, and went and looked for some wood strawberries, and brought them to her, and they ate them together very happily.

"I cut, and you choose; that is fair, is it not, Mary?" said Frank.

Whenever any pie or pudding, fruit, cake, or anything which they both liked to eat, was given to them, Frank

was usually desired to divide it; and this he did with most accurate justice. When he had divided it as well as he could, he always desired Mary to choose whichever piece she liked for herself; so that, if there was any advantage, she might have it. This was being just; but, besides being just, Frank was generous. Everything that was given to him to share with his little cousin, he always gave her a part, and often a larger or a better part than that which he kept for himself. Nobody knew this but Mary and himself, for he did not want to be praised for it; the pleasure he felt in doing it, and the pleasure he saw that he gave her, was quite enough.

But though Frank was so good-natured to his little cousin, yet he had faults. He was passionate; and sometimes, when he was in a passion, he did what he was afterwards very sorry for. Till little Mary came to his mother's, he had not been used to live with any one who was younger and weaker than himself.

When he found that he was the stronger, he sometimes, in playing with little Mary, took advantage of his strength to make her do what he commanded her; and when he was impatient to get anything from her, he now and then snatched or forced it rudely from her hands. One day, she had a new ball, which she held between both her hands, and she would not let Frank look at it; she was half in play, and, at first, Frank was playing with her also; but when she persisted in refusing to let him see it, he grew angry, and he squeezed her hands, and twisted her wrist with violence, to make her open her hands. She, being in great pain, roared out so loudly, that Frank's father, who was in the room over that in which they were, came down to inquire what was the matter. Mary stopped crying the moment he appeared; Frank looked ashamed, but he went forward to his father directly, and said,—

"It was I who hurt her, papa. I squeezed her hands, to make her give me this ball."

"You have hurt her, indeed!" said his father, looking at little Mary's wrist, which was very red, and was beginning to swell. "Oh, Frank!" continued his father,

"I thought you would use your strength to help, and not to hurt, those who are weaker than yourself."

"So I always do, papa; except when she puts me in a passion."

"But the ball was my own ball," said Mary; "and you had no right to take it from me."

"I did not want to take it from you, Mary, I only wanted to look at it; and you first began to be cross. You were very cross."

"No, Frank, you were the *crossest*."

"You are both cross now, I think," said Frank's father; "and since you cannot agree when you are together, you must be separated."

Then he sent them into different rooms, and they were not allowed to play together during the remainder of that day.

The next morning, at breakfast, Frank's father asked the children whether they had been as happy yesterday as they usually had been; and they both answered, no. Then he asked,—

"Do you like better to be together, or to be separate?"

"We like a great deal better to be together," said Frank and Mary.

"Then, my dear children, take care and do not quarrel," said Frank's father; "for, whenever you quarrel, without asking any questions about who was cross, or crosser, or crossest, or who *began first*, I shall end your dispute at once by separating you. You, Frank, understand the nature and use of punishment; you know——"

"Yes, papa, I know," interrupted Frank, "that it is—it is pain—papa, will you explain it? for, though I know it, I cannot say it in good words."

"Try to explain it in any words."

"When you punish me, papa, you give me pain, or you take something from me which I like to have, or you hinder me from having something that I like, or from doing something that I like to do——"

"Well, go on; when, and for what reason, do I give you pain, or prevent you from having pleasure?"

"When I have done something wrong, and because I have done something wrong."

"And do I give you this pain or punishment because I like to give you pain, or for what purpose?"

"Not because you like to give me pain, I am sure, papa, but to cure me of my faults: to hinder me from doing wrong again."

"And how will punishment cure you of your faults, or prevent you from doing wrong again?"

"You know, papa, I should be afraid to have the same punishment again, if I were to do the same wrong thing; and the pain, and the shame of the punishment, make me remember. I remember them a great while, and the punishment comes into my head,—that is, I think of it again whenever I think of the wrong thing for which I was punished; and if I was tempted to do that same thing again, just at the very time I should recollect the punishment, and I should not do it. I believe——"

"Then, according to your description of it, just punishment is pain given to a person who has done what is wrong, to prevent that person from doing wrong again."

"Yes, papa, that is what I wanted to say."

"And is there no other use in punishments, do you think, Frank?"

"Oh yes, papa! to prevent other people from doing wrong; because they see the person who has done wrong is punished; and if they are sure that they shall have the same punishment, if they do the same thing, they take care not to do it. I heard John, the gardener's son, saying yesterday to his brother, that the boy who robbed his garden last week was taken, and had been whipped, and that this would be a fine example for all the children in the village, and would hinder them from doing the same thing again."

"Then just punishment is pain given to those who do wrong, to prevent them from doing that wrong again, and to prevent others from doing wrong?"

"Yes, papa," said Frank; "but, papa, why do you tell me all this? Why do you ask me these things?"

"Because, my dear son, now that you are becoming a

reasonable creature, and that you can understand me, I wish as much as possible to explain to you the reasons for all I do, in educating you. Brutes, who have no sense, are governed by blows; but human creatures, who can think and reason, can be governed, and can govern themselves, by considering what is right, and what makes them happy. I do not treat you as a brute, but as a reasonable creature; and on every occasion I endeavour to explain to you what is right and wrong, and what is just and unjust."

"Thank you, papa," said Frank; "I wish to be treated like a reasonable creature. Papa, may I say *one* thing?"

"As many things as you please, my dear."

"But, papa, this *one* thing is about you, and perhaps you will not like it. Papa, I do not think it is just to separate Mary and me whenever we quarrel, without examining or inquiring which is in the wrong."

"When people quarrel, they generally are both in the wrong."

"But not always, papa; and one is often more in the wrong than the other; and it is not just that the one who is least in the wrong should be punished as much as the person who did most wrong."

Here Frank paused, and the tears came into his eyes; and after a little struggle with himself, he added:

"Now it is all over, papa, I must tell you that I was most to blame. I was most in the wrong in that quarrel which little Mary and I had yesterday. It was I hurt her, by squeezing her hand violently, and she only cried out; and yet she was punished as much as I was."

"My dear, honest, just, generous boy!" said his father, putting his hand upon Frank's head, "act always, feel always, as you now do, and when you have been wrong, always have candour and courage enough to acknowledge it."

Little Mary, who had gone away to her playthings whilst they had been talking of what she did not understand, left her playthings, and came back and stood beside Frank, looking up in his face, and listening eagerly, when he said that he had been most to blame in

their quarrel. And when his father praised him, Mary smiled, and her eyes sparkled with pleasure. After his father had done speaking, she said :

"Frank is very good to tell you that he was the most wrong, but I was a little wrong; I cried more than I should have done, and a great deal louder, because I was angry."

"There is a good girl!" said Frank's father, stroking her head. "Now that is all over, let us think of the future. You say, Frank, that you do not think it just that you should be separated when you quarrel, because that separation is the same punishment for both, when perhaps only one is to blame, or one much more to blame than the other. Do I understand you? Do I state clearly what you mean?"

"Yes, papa; pretty well; not quite. I think the separating us is just enough, because, as you say, when we quarrel, we generally are both to blame, more or less; and besides, when we are angry, we cannot have any pleasure in being together. So I give that up. But I think, that before you separate us, you or mamma should always inquire, and find out which of us is most to blame, and exactly how much; and then the person who has been most wrong will have the most *shame*; and that will make the punishment just as it should be."

"Well argued, my boy! This would be strictly just, as far as you two are concerned; but you must consider, also, what is just for your mother and for me."

"What do you mean, papa? I do not want to punish mamma or you. You do not quarrel," said Frank, laughing. "I do not wish to separate you, or to punish mamma or you, papa; I do not understand you."

"Listen to me, and perhaps I shall make you understand me. You say you do not want to punish me or your mother; and yet you would punish us both whenever you quarrelled, if we were obliged to give up our time, and to leave whatever we were doing that was agreeable to us, in order to settle which of you two were most to blame in a dispute, perhaps, about a straw, or something

of as little value. Now suppose you two were to quarrel every hour."

"Oh, sir!" interrupted little Mary, "quarrel every hour! Oh! oh; that is quite impossible."

"But my father only says *suppose*. We can suppose anything, you know," said Frank. "Well, *suppose*, papa."

"And suppose, Frank, that every hour it would require a quarter of an hour of your mother's time or mine to listen to both, and settle which was most to blame."

"A quarter of an hour! that is a great deal too much time to allow."

"We have been talking now, Frank, above a quarter of an hour, I think."

"Indeed! I never should have guessed that."

"When people are much interested about anything, they talk on a great while, without considering how time passes."

"That is true. Well, allow a quarter of an hour for each quarrel, and one every hour," said Frank.

"And count twelve hours as a day. Then twelve quarters of an hour, Mary, how many whole hours will that make?"

Mary answered, after thinking a little while, "I don't know."

Frank answered, "Three hours."

"So three whole hours, Frank, your mother or I must, according to your plan, give up every day to settling your quarrels."

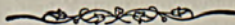
"That would be too much, really!" said Frank. "But this is only arguing upon your *suppose*, papa."

"Well, grant that you quarrel only once a day; tell me why your mother or I should be punished by taking up our time disagreeably in settling your little disputes, provided any other manner of settling them would succeed as well. Be just to us, Frank, as well as to yourself and to Mary."

"I will, papa. I will be just to you. I acknowledge we should not take up your time disagreeably in settling our disputes, *if* they could be settled as well any other

way; but all depends upon that *if*. You will acknowledge *that*, father?"

"I do acknowledge it, son. This question can be decided, then, only by experience; by trying whether the fact is so or not. Let us try my way, if you please, for one month; and afterwards, if mine does not succeed, I will try yours."



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HARRY AND LUCY.

PART I.

LITTLE children who know the sounds of all letters can read words, and can understand what is told in this book.

Harry and Lucy were brother and sister. Harry had just come home to his father's house. He had been left at his uncle's when an infant, and had always lived at this relative's house.

Lucy slept in a little bed in a closet near her mother's room, and Harry in a little bed in another closet.

EARLY in the morning, whilst Lucy was in bed, the sun shone through the window upon her face, and aroused her; when she was quite awake, she knew that it was morning, because it was daylight, and she called to her mother, and said, "Mamma, may I get up?" But her mother did not answer her, for she did not hear what she said, because she was asleep. When Lucy knew that her mother was asleep, she lay still, that she might not disturb her. At length she heard her mother stir; and then she asked her again if she might get up; and her mother said she might.

So Lucy got up, and put on her stockings and shoes, and finished dressing herself, and then went to her mother, and asked for some breakfast. But her mother told her to make her bed, before she should have any breakfast. Little Lucy began to make her bed, and her mother went into her other closet, to call Harry, and she said, "Harry! get up!" And Harry jumped out of bed in an instant, and put on his trousers, and his jacket, and his shoes; and then he combed his hair, and washed

his hands; and whilst he was wiping his hands, his mother went down stairs.

LITTLE Lucy hearing her brother Harry walking about in the closet, called him, and asked him if he had made his bed. Harry said he had not.

"Oh! then," says Lucy, "mamma will give you no breakfast."

"Yes," says Harry, "she will. I never made my bed at my uncle's, and I always had my breakfast."

As they were talking, he heard his father call him, and he ran down stairs to the parlour, where his father and mother were at breakfast. Lucy's mother called her down, too, and said to her, "Well, Lucy, have you made your bed neatly?"

Lucy. Yes, mamma; I made it as well as I could.

Mother. You shall have some breakfast, then.

Harry's father asked whether he had made his bed. Harry answered, that he did not know how to make it.

"I will show you," said his mother; and taking him by the hand, she led him up stairs, and showed him how to make his bed.

WHEN Harry came down to his father, he said that he did not know that boys or men ever made beds; for at his uncle's nobody ever made beds but the housemaid.

His father told him, that in some countries* the beds are made by men; and that in ships, which sail on the sea, and carry men from one country to another, the beds in which the sailors sleep are always made by men.

Lucy's mother observed that she had not eaten her breakfast, and asked her why she had not eaten it.

Lucy said that she waited for her brother. Her mother then gave Harry a basin of milk, and a large piece of bread; and she set a little table for him and his

* Here the child, if at a distance from the coast, should be told what is meant by different countries; what a ship is; and what is meant by a sailor, &c.

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his hands; and whilst he was wiping his hands, his mother went down stairs.

LITTLE LUCY looked at her brother Harry walking about in the clove, and asked him if he had made his bed. "How can he have not."

"Oh, then," says Lucy, "mamma will give you no breakfast."

"Yes," says Harry, "she will. I never made my bed at my mother's, and I always had my breakfast."

As they were talking, he heard his father call him, and as ran down stairs to the parlour, where his father and mother were at breakfast. Lucy's mother called her down, too, and said to her, "Well, Lucy, have you made your bed neatly?"

Lucy. Yes, mamma; I made it as well as I could.

Mother. You shall have some breakfast, then.

Harry's father asked whether he had made his bed. Harry answered, that he did not know how to make it.

"I will show you," said his mother; and taking him by the hand, she led him up stairs, and showed him how to make his bed.

When Harry came down to his father, he said that he did not know that boys or men ever made beds; for at his uncle's nobody ever made beds but the housemaid.

His father told him, that in some countries* the beds are made by men; and that in ships, which sail on the sea, and carry men from one country to another, the beds in which the sailors sleep are always made by men.

Lucy's mother observed that she had not eaten her breakfast, and asked her why she had not eaten it.

Lucy said that she waited for her brother. Her mother then gave Harry a basin of milk, and a large piece of bread; and she set a little table for him and his

* Have the child, if at a distance from the coast, should be told what a desert is; what a country is; what a ship is; and what a meal is by a ship, &c.



Harry and Lucy at breakfast.

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sister under a shady tree that was opposite to the open window of the room where she breakfasted.

LUCY was a good little girl, and always minded what was said to her, and was very attentive whenever her father or mother had taught her anything. So her mother taught her to read and to work, and when she was six years old she could employ herself, without being troublesome to anybody. She could work for herself, and for her brother, and sometimes, when Lucy behaved very well, her mother let her do a little work for her, or for her father. Her mother had given her a little thimble, to put upon her finger, and a little housewife, to keep her needles and thread in, and a little pair of scissors, to cut her thread with, and a little work-bag, to put her work in; and Lucy's father had given her a little book, to read in, whenever she pleased, and she could read in it by herself, and understand all she read, and learn everything that was in it.

As soon as Lucy had eaten the breakfast which her mother had given her, she sat down on her stool, and took her work out of her work-bag, and worked some time. Presently her mother told her that she had worked an hour, and that she did not choose that she should work any more. Lucy got up, and brought her work to her mother, and asked her if it was done as it ought to be done. And her mother said, "Lucy, it is done pretty well for a little girl that is but six years old, and I am pleased to see that you have tried to avoid the fault of which I told you yesterday." Then Lucy's mother kissed her, and said to her, "Put your work into your work-bag, and put your work-bag into its place, and then come back to me."

LUCY did as she was desired; and then her mother asked her if she would rather go out of doors and walk,

or stay with her. Lucy preferred staying with her mother, who very soon afterwards went to her dairy.

LUCY followed her, and took a great deal of care not to be troublesome, for she loved to be with her mother. She observed whatever she saw, and did not meddle with anything. She noticed that the dairy was very clean; the floor was a little damp, which made her think that it had been washed that morning, and there were not any cobwebs or dust upon the walls; and she perceived that the room smelt very sweet. She then looked about, to discover if there were any flowers from which that pleasant smell might proceed; but she could not see anything but a great many clean empty vessels of different shapes, and a great many round, wide, and shallow pans full of milk. She went near to them, and thought the smell came from them.

When she had looked at a good many of them, she thought they were not all alike; the milk in some of the pans was a little yellowish, and looked thick, like the cream that she saw every morning at her mother's breakfast; and the milk in the other pans of a blue shade, and looked thin, like the milk that was often given to her and her brother to drink. Whilst Lucy was thinking on this, she saw one of her mother's maids go to one of the pans, that had the yellowish milk in it. The maid had a wooden saucer in her hand, and she put the wooden saucer very gently into the pan; she did not put it down to the bottom of the pan, but took up that part of the milk which was at the top, and poured it into another vessel, and then Lucy saw that the milk that was left in the pan was not at all like that which the maid had taken out, but was very thin, and a little blue.

When Lucy's mother went out of the dairy, she took her little daughter out into the fields, to walk with her. Soon after they set out, Lucy said, "Mother, when I was in your dairy, just now, I saw the maid take some milk out of a milk-pan, and it looked like what I see you put into your tea—I believe it is called cream; but she

left some milk in the pan, and that was not at all like cream, but like very thin milk. Pray, mother, will you tell me why all that was in the pan was not cream?"

Then her mother said, "Yes, Lucy, I will answer any questions you like to ask me, when I have leisure, because, whenever I talk to you, you mind what I say, and remember whatever your father or I teach you."

"I BELIEVE you know that the kind of milk which I give you very often for your breakfast and supper is taken out of the udders of cows. Did you never see the maids, with milk-pails, going a-milking? They were then going to take the milk from my cows; they call that milking them, and it is done twice every day—once in the morning, and once in the evening. When they have got the milk in the pails, they carry it into the dairy, and put it into such milk-pans as you saw, and they let the milk-pans stand still, in the same place, for several hours, that the milk may not be shaken. During that time, the heaviest part of the milk falls as low as it can, towards the bottom of the pan, and the lightest part of the milk remains above it, at the top of the pan, and that thick light part is called cream, as you thought it was. When the milk has stood long enough, the cream is taken from the other part of the milk: and doing this is called skimming the milk; but it must be done very carefully, or else the cream and milk would be all mixed together again."

Lucy told her mother, that when she was in the dairy, she had walked all round it, and that she saw a great deal of cream; more, she thought, than came every day into the parlour; and she wished to know what other use was made of it, besides mixing it with tea, and fruit, or sweetmeats.

LUCY's mother was going to answer her, but she looked towards the other side of the field, and said, "Lucy, I think I see some pretty flowers there; will you run, and gather me a nosegay, before I talk any more to you?"

Lucy said, "Yes, mother;" and ran away to do what her mother requested. When she came to the place where the flowers were, she looked about for the prettiest, and gathered two or three of them, but when she had them in her hand, she perceived that they had not any smell; so she went to a great many more, and at last she found some that had a sweet smell. These, however, were not pretty, and she gathered some of them, intending to take them to her mother. As she passed near a hedge, she saw some honeysuckles, growing in it, and she remembered that she had smelt honeysuckles that were very sweet and very pretty too, so she was glad that she had found some, because she thought that her mother would like them. When she came close to the hedge, she saw that they were so high from the ground that she could not reach them. Lucy did not like to go away without taking some honeysuckles to her mother, so she walked slowly by the side of the hedge, till she came to a place where there was a large stone, upon which she climbed, and gathered as many honeysuckles as she liked.

WHILST she was getting down, she held the flowers fast, for fear she should drop them into the ditch, and she felt something prick her finger very sharply. She looked and saw a bee drop off one of the honeysuckles that she had squeezed in her hand; so she thought that she had hurt the bee, and that the bee had stung her to make her release him, and that it was the bee which she had felt pricking her. Lucy was afraid that she had hurt the bee very much, for she remembered that when she opened her hands the bee did not fly away, but dropped down; so she looked for it on the ground, and she soon found it struggling in some water, and trying with its little legs and wings to get out, but it was not strong enough. Lucy was very sorry for the bee, but she was afraid to touch it, lest she should hurt it again, or that it should hurt her. She thought for a little while what she could do, and then she got a large stalk of a flower and put it close to the bee. As soon as ever the bee felt it, he

clasped his legs round it, and Lucy gently raised the stalk with the bee upon it from the wet ground, and laid it upon a large flower that was near her. The bee was covered with dirt, but as soon as he felt that he was standing upon his legs again, he began to stretch his wings and to clean himself, and to buzz a little upon the flower. Lucy was glad to see that the bee did not seem to be very much hurt, and she took up her nosegay and ran as fast as she could towards her mother; but the finger that the bee had stung began to be very sore.

SHE met her mother coming to her, who wondered what had made her stay so long; and when Lucy told her what had happened, she said, "I thank you, my dear, for getting me so sweet a nosegay, and I am very sorry you have been pricked in doing it. I am sure you did not intend to hurt the poor little bee; and we will walk home now, and I will put some hartshorn to your finger, which will lessen the pain you feel."

Lucy said, "Indeed, mother, I did not mean to hurt the bee, for I did not know that it was in my hand; but when I am going to gather flowers another time, I will look to see if there are any bees upon them."

When Lucy's mother got home, she put some hartshorn to Lucy's finger, and soon after it grew easier; and Lucy's mother said to her, "Now I am going to be busy, and, if you like, you may go into the garden till dressing-time." Lucy thanked her, and said "she did like it, but she hoped that some time, when she was not busy, her mother would answer what she had asked her about cream."

AFTER breakfast, Harry's father took him out a walking; and they came to a field where several men were at work. Some were digging clay out of a pit in the ground; some were wetting that which had been dug out with water, and others were making the clay into a great number of pieces, of the same size and shape. Harry asked his father what the men were about? His parent

told him that they were making bricks for building houses. "Yes," says Harry, "but I can run my finger into these; they are quite soft and brown, and the bricks of your house are red and hard, and they don't stick together as the bricks of your house do." Saying this, he pushed down a whole stack of bricks. The man who was making them called out to desire he would pay for those he had spoiled. Little Harry had no money, and did not know what to do; but said to the man, "Indeed, sir, I did not intend to do any harm." The man answered, "Whether you intended it or not, you have spoiled the bricks, and must pay me for them; I am a poor man, and buy all the bread that I have with the money which I get for these bricks, and I shall have less bread if I have a smaller number of bricks to sell."

POOR Harry was very sorry for what he had done, and at last thought of asking his father to pay for them. But his father said, "I have not spoiled them, and therefore it is not necessary that I should pay for them." The man, seeing that Harry had not intended to do mischief, told him, "if he would promise to make amends at some future time for the mischief which he had done, he would be satisfied." Harry promised that he would. "Now you find, Harry," said his father, "that you must not meddle with what does not belong to you."

During their walk they came to a blacksmith's shop, and as it began to rain, Harry's father stood under the shed before the door. A farmer rode up to the shop, and asked the blacksmith to put a shoe upon his horse, which, he said, had lost one a little way off, and which would be lamed if he went over any stony road without a shoe. "Sir," says the blacksmith, "I cannot shoe your horse, as I have not iron enough. I have sent for a supply to the next town, and the person whom I sent cannot be back before evening."

"Perhaps," said the farmer, "you have an old shoe that may be made to fit my horse."

The smith had no iron, except a bit of small nail-rod,

which was only fit for making nails: but he said, that if the farmer looked on the road, perhaps he might find the shoe which had fallen from his horse. Little Harry, hearing what had passed, told his father that he thought he could find a shoe for the farmer's horse. His father asked him where he thought he could find a shoe?

HE said, that, as they walked along the road, he had observed something lying in the dirt, which he thought was like a horse-shoe. His father begged that the farmer would wait a little while; and then he walked back with Harry on the road by which they came to the blacksmith's. Harry looked very carefully, and after some time he found the horseshoe, and brought it back to the smith's shop; but it was not fit to be put upon the horse's foot again, as it had been bent by a waggon-wheel which had passed over it.

The farmer thanked Harry, and the blacksmith said that he wished every little boy was as attentive and as useful. He now began to blow his large bellows, which made a roaring noise, and the wind came out of the pipe of the bellows among the coals upon the hearth, and the coals grew red, and by degrees they became brighter and brighter, the fire became hotter, and the smith put the old iron horse-shoe into the fire, and after some time it became red and hot like the coals. When the smith thought that the iron was hot enough, he took it out of the fire with a pair of tongs, and put it upon the anvil, and struck it with a heavy hammer. Harry saw that the iron became soft by being made red hot; and he noticed that the smith could hammer it into whatever shape he pleased.

WHEN the smith had made the shoe of a proper size and shape, he took a piece of nail-rod, and heated it red-hot in the fire, by the help of the large bellows, which he blew with his right hand, whilst he held the tongs in his left.

Harry was going to examine the horseshoe that the

smith had just made, but he would not meddle with it without leave, as he recollected what had happened in the brick-field.

Whilst he was looking at the shoe, another little boy came into the shop, and after lounging about for some time, stooped down and took up the horseshoe in his hand. He suddenly let it drop,—roared out violently, and said that he was burnt. Whilst he was crying, and blowing his fingers, and squeezing and pinching them to lessen the pain, the smith turned him out of the shop, and told him, that if he had not meddled with what did not belong to him, he would not have been hurt. The little boy went away whimpering and muttering that he did not know that black iron would burn him.

THE smith now took the nail-rod out of the fire, and it was hotter than the other iron, and it was of a glowing white colour. When the smith struck it upon the anvil, a number of bright sparks flew off the iron, on every side about the shop, and they appeared very beautiful.

The smith then made some nails, and began to fasten the shoe on the horse's foot with these. Harry, who had never before seen a horse shod, was much surprised that the horse did not seem to be hurt by the nails which were driven into his foot; for the horse did not draw away his foot or show any signs of feeling pain.

Harry's father asked him whether his nails had ever been cut.

Harry said that they had.

Papa. Did cutting your nails hurt you?

Harry. No.

Papa. A horse's hoof is of horn, like your nails, and that part of it that has no flesh fastened to it is not sensible to pain. The outside of the hoof may be cut, and may have nails driven into it, without giving any pain to the horse.

The blacksmith, who was paring the horse's foot, gave Harry a piece of the horn that he had cut off. Harry perceived that it was neither so hard as bone nor so soft

as flesh; and the blacksmith told him, that the hoof of a horse grows in the same manner as the nails of a man, and requires, like them, to be sometimes pared.

AND when the blacksmith had finished shoeing the horse, he showed Harry the hoof of a dead horse that had been separated from the foot, and Harry saw how thick it was in that part where the nails were driven in.

Harry's father now told him that it was time to go home, as they had two miles to walk, and it wanted but an hour of dinner-time. Harry asked his father how much time it would take up to walk two miles if they walked as fast as they usually did? His father showed him his watch, and told him he might see, when they got home, how long they had been returning. Harry saw that it was four minutes after two o'clock, and when they got home it was forty-eight minutes after two; so Harry counted, and found how many minutes had passed from the time they left the blacksmith's shop until they got home.

WHEN Harry came into the garden, he ran to his sister Lucy to tell her all that had happened to him, and she left what she was about, and ran to meet him. She thought he had been away a great while, and was very glad to see him; but just then the bell rang, and they knew they must go in directly to make themselves ready for dinner.

When dinner was over, Harry and Lucy were allowed to go into the garden, and then Lucy begged her brother to tell her all that had happened whilst he was out in the morning. Harry then told her how he had spoiled the bricks, and what the brickmaker had said to him; and he told her that he had promised to make amends for the mischief which he had done.

He told her that, to make bricks, men dug clay and beat it with a spade, and mixed it with water to make it soft and sticky, and that then they made it into the shape of bricks, and left it to dry; and when it was hard enough to be carried without breaking, it was put into large heaps

and burnt so as to become of a reddish-yellow colour, and almost as hard as a stone.

"THEN, brother," says Lucy, "if you will make some bricks, we can build a house in the little garden mamma lent me." So they went to the little garden, and Harry dug some earth with a little spade which his father had given him, and endeavoured to make it stick together with some water, but he could not make it sticky like the clay that he saw the brickmakers use. He ran in, and asked his father why he could not make it sticky with water? And his father asked him whether it was the same kind of earth that he had seen at the brickfield. And Harry said, he did not know what his father meant by the same kind of earth: he saw a man dig earth, and he dug it in the same manner.

Papa. But is the earth in the garden the same colour as that in the brickfield?

Harry. No: that in the garden is almost black, and that in the field is yellow.

Papa. Then they are not the same kinds of earth.

Harry. I thought all earth was alike.

Papa. You find that it is not; for you see that all earth cannot be made to stick together with water.

HARRY went back into the garden; and after having looked into a great many places for yellow earth, at last he saw some in the bottom of a hole that had been dug some time before. He ran back and asked his father's leave to dig some of it; and after he had obtained leave, he dug some of the yellow clay, and found that when it was mixed with water it became very sticky and tough; and that the more it was mixed, and squeezed, and beaten with the spade, the tougher it became. He now endeavoured to make it into the shape of bricks, but he found that he could not do this, and Lucy asked him whether the brickmakers were as long making a brick as he was? "No," said he; "they have a little box made in the shape

of a brick without top or bottom, into which they put the clay upon a table, and with a straight stick like a ruler they scrape the clay even with the top of the box, and then lifting up the box, they find the clay in the shape of a brick upon the table."

"Harry," says Lucy, "there is a carpenter in the house at work for my mother; I will go and ask her to get a box made for you. Do you know by what name such a box is called, brother?"

"It is called a mould."

LUCY's mother ordered the carpenter to make a brick-maker's mould for Harry; but the man could not begin until he knew what size it should be; that is, how many inches long, how many inches broad, and how many inches thick. Harry did not know what the carpenter meant; but Lucy, having always lived with her mother, who had been very kind to her, and who had taught her a great many things, understood very well. As she wished to have bricks of the size of those with which her father's house was built, she went and measured some of the bricks in the wall, and finding that a great number of them were all of the same length, she said to her brother that she supposed that they were all alike. Harry told her, that as the brickmakers used but one mould whilst he saw them at work, he supposed that they made a great number of bricks of the same size, and that the wall would not look so regular as it did if the bricks were of different sizes.

LUCY therefore thought if she could measure one brick it would be sufficient. She easily found the length and the depth of a brick in the wall, but she did not at first know how to find the breadth, as the bricks were lying upon each other, and this prevented her from seeing their breadth. Harry showed her at the corner of the wall how the breadth of the bricks could be seen. She measured very carefully, and found the length to be nine inches, the breadth four inches, and the depth two inches

and a quarter. So the carpenter, when he knew the dimensions of the mould, made it; and Harry placed a flat stone upon two other large stones, to serve for a table, and he and Lucy made several bricks. They were a great while before they could make them tolerably smooth, as they stuck to the mould unless the mould was wetted. They were very happy making their bricks, but they did not know how they should burn them, so as to make them hard, although they determined to try.

It was eight o'clock in the evening before they had finished ten bricks, and they were called in, and their mother gave them some bread and milk for supper, and sent them to bed.

The next morning, Harry and Lucy got up as usual; and their father and mother gave them permission to go to look at the bricks they had made. Harry found that they were a little harder than they were the night before; and Lucy thought that burning them would make them softer; for she had seen butter, and wax, and pomatum, and sealing-wax, all made soft by heat, but she did not remember to have seen anything made hard by heat. But Harry put her in mind of the crust of pies, which is soft and tough, like clay, before it is baked, and which grows hard and brittle by the heat of the oven. He also told her, that the iron of which the blacksmith made the horse's shoe, when he blew the bellows, was hard and black before it was put into the fire, but that it became red when it was sufficiently heated, and so soft that the smith could hammer it into what shape he pleased.

Lucy believed what her brother said, but was resolved to ask her mother to take her to see red-hot iron, and a brick-kiln, which Harry told her was the name of the place in which bricks were burnt.

WHILST they were eating the breakfast which their mother gave them, Harry asked his sister what she had been doing the day before, when he was out with his father; and Lucy told him all she had seen in the dairy, and when she was out walking. When they had done

breakfast, his mother lent Harry one of Mrs. Barbauld's little books for children, and made him read the story of the poor Blind Fiddler, with which Harry was very much pleased; and then she told Lucy to read the following story.

"A MAN riding near the town of Reading, saw a little chimney-sweeper lying in the dirt. The poor lad seemed to be in great pain, so he asked him what was the matter; and the chimney-sweeper said that he had fallen down, and broken his arm, and hurt his leg, so that he was not able to walk. The man, who was very good-natured, got off his horse, and put the chimney-sweeper upon it, and walked beside the horse, and held the boy on till he came to Reading. When he came to Reading, he put the boy under the care of an old woman whom he knew there, and he paid a surgeon for setting his arm. He also gave the woman money for the trouble which she would have in taking care of the boy, and the expense which she would incur in feeding him, till he should be able to work again, to earn money for himself. Then the man continued his journey till he got to his own house, which was at a great distance. The boy soon recovered, and earned his bread by sweeping chimneys at Reading.

"SEVERAL years after that time, this same good-natured man was riding through Reading, and his horse took fright upon a bridge, and jumped, with the man upon his back, into the water. The man could not swim, and the people who were on the bridge, and saw him tumble in, were afraid to jump into the water to pull him out; but just as he was about to sink, a chimney-sweeper who was going by saw him, and without stopping a moment, threw himself into the river, and seizing hold of him, dragged him out of the water, and saved him from being drowned. When the man was safe upon the bank, and was going to thank the man who had pulled him out of the water, he recollected that it was the same chimney-sweeper whom he had taken care of several years before,

and who now hazarded his own life to save that of his benefactor."

When Lucy had done reading, her mother asked Harry which he liked best, the man who had taken care of the chimney-sweeper, whom he did not know, or the chimney-sweeper, who had saved the life of the man whom he knew, and who had taken care of him when his arm was broken.

Harry said, he liked the chimney-sweeper best, because he was grateful, and because he ventured his own life to save that of the man who had been kind to him; but Lucy said, she liked the other man the best, because he was humane, and took care of a poor little boy who had nobody to take care of him, and from whom he could never expect to receive any benefit.

THIS is the history of Harry and Lucy for two days. The next part will consist of the history of another day, when Harry and Lucy were a year older.

PART II.

AFTER the summer was over, and the autumn and winter had passed away, another spring came.

Harry and Lucy were now each of them a year older.

And during the year that had elapsed, they had grown taller and stronger, and had learned a great many things that they did not know before.

They had learned to read fluently; and they were therefore able to entertain themselves a little, during the winter's evenings, by reading short stories in books which their mamma gave them; and they had learned a little arithmetic, and could cast up sums in addition, and subtract.

And they had each of them a little garden. Harry dug the ground when it was necessary, and Lucy pulled up weeds, and helped to wheel them away in her little wheelbarrow, and assisted in sowing seeds of different sorts, and in planting the roots of flowers.

In the summer, she and Harry carried water, to water the plants and flowers which they had set and sown in

the spring. And they had not only planted flowers, and sown small salad, but Harry had also a crop of peas, and a crop of potatoes, in his garden; for his father had seen that he was industrious, and for that reason he gave him a piece of good ground, to be added to his garden. As it had been grass-ground for some time, it was so hard that Harry was not able to dig it. But his father had it dug roughly for him, and a cart-load of dung laid upon it. Harry had observed very attentively how his father's labourers set potatoes; and in the beginning of the month of February he dug his ground over again, and marked it out into ridges, with stakes and a line, and spread the dung upon the ridges, leaving sufficient space between the ridges for the furrows. He then cut some potatoes, which his father had given him, into small pieces, to plant in the ground for sets. He took care to cut them so that each piece had an eye in it; that is to say, that each piece should have one of those little black spots in it which contain the root of the potato. After the piece of potato has been some time in the ground, it rots away, and the root unfolds, and long fibres spread into the earth.

He scattered these pieces upon the dung, at eight or ten inches from each other; and then he dug earth out of the furrows that lay between the ridges, and covered the bits of potato and the dung with it, laying it over them both to the depth of three or four inches.

When he had made any mistake, or had not done the work well, his father assisted him, and showed him how to do it better.

The rain in the following spring, and the heat of the sun in the beginning of summer, had contributed to the growth of Harry's crop, and in the middle of June he had some fine young potatoes fit to eat.

About this time of the year the weather is generally very hot; and one day, as Harry and his sister were sitting under the shady tree which was mentioned in the former chapter, picking some cowslips for their mamma, Harry observed that the shadow of the tree reached almost round the stem. He had noticed in the morning, when he

was at breakfast, that the shadow of the tree fell only at one side of it. He asked his father, who was passing by, the reason of this, and his father took him to the door of the house, and desired him to look where the sun was; and he saw that it was opposite the door, and very high in the sky. "Take notice, Harry, where you see the sun now, and observe where you see it this evening, when the sun is setting."

Harry said he knew where the sun set; that he could not see it from the hall-door; but that he could see it from that end of the house, which was at the right hand of the hall-door as he went out.

Father. Did you ever observe where it rises?

Harry. Yes; it rose this morning at the other end of the house.

Father. It did so. Now, do you know where are the south, and the north, and the east, and the west?

Harry. No; but I believe that part of the sky in which the sun rises is called the east.

Father. It is; and the part in which it sets is called the west. Now you may always know the south and the north, wherever you are, if you know where the sun either rises or sets. If you know where it rises, stand with your left hand towards that part of the sky, and then the part of the sky before your face will be the south, and that part of the sky behind your back will be the north.

In the same manner, if you know where the sun sets, turn your right hand towards that place, and the part of the sky opposite to you will be the south. But, Harry, you must remember that there are only two days in the year when the sun sets exactly in the west and rises exactly in the east.

Harry. What days are those, papa?

Father. It would be of no use now to tell you the names of those days; but when one of them comes, I will let you know it. On that day the sun rises exactly at six o'clock in the morning, and sets exactly at six o'clock in the evening.

"Papa," said Harry, "I have observed several times

that my shadow in the morning and in the evening is very long; but in the middle of the day I can scarcely see it at all."

Father. You must think about it yourself, Harry; for if I tell you everything that you want to know, without your taking the trouble to think, you will not acquire the habit of thinking for yourself; and without being able to think for yourself, you will never have good sense.

THE bricks, which Harry and Lucy had made the year before, all *melted away* (as the workmen say) by the rain, or broke because they had not been burnt. In the month of November, before the usual frosts of the winter had begun, Harry dug some tough yellow clay, of a proper sort, and he mixed it well with his spade, and Lucy picked out the little pebbles with a small paddle, and the frost made the clay *ellow*, as the workmen call it. In the spring, Harry made nearly six hundred bricks, and built them into stacks, and covered them with turf, which his father had allowed him to pare off the surface of the ground. And Harry's father, who had been much pleased with his good behaviour and industry, came to the tree where he was at work, and asked him if he would like to go to the brick-field, to see how bricks were burnt. Lucy wished to go with them, and she ran and asked her mother to let her go. Her mother very cheerfully consented, and said she would accompany her.

WHILST Lucy and her mother were getting ready to go, Harry ran to his garden and dug some of his fine young potatoes, and put them into a basket which he had of his own, and returned to the house; and his father asked him what he intended to do with them.

"Father," said Harry, "last year when I had spoiled the poor man's bricks, I promised that I would make him amends, and I determined, when I set my potatoes, to let him have the first of them that were fit to be dug up, as I was told that *early* potatoes are more valuable than those that *come in later*."

Father. But you will not be able to carry such a heavy load so far.

"I will try," said Harry.

He was able to proceed but a little way with his load without resting.

What could he do?

His father was willing to assist him, as he had shown honesty and truth in keeping his promise, and good sense in the means which he had taken to make the brickmaker amends for the injury which he had done to him. He asked a farmer whom he knew, and who was passing at the time with a cart, to take the basket into his vehicle, and to leave it in the brickfield, which was at the roadside.

By the time they had reached the brickfield, by a pleasant walk through the fields, the farmer, who kept to the road, had arrived with his cart at the same place.

Harry thanked him, took up his basket, and marched boldly into the place where the brickmaker was at work.

The man knew him again, and was much pleased with Harry's punctuality. He took the potatoes out of the basket, and said that they were worth full as much as the bricks that had been spoiled.

Harry's father asked the man to show him how he burnt his bricks, in order to make them hard; and the man said he was just going to set fire to a kiln of bricks, and that he would show them how it was done.

THE kiln was made of the bricks that were to be burnt. These bricks were built up one upon another, and one beside the other, not quite close, but in such a manner as to leave a little room on every side of each brick; and in the middle of the kiln, near the bottom, there were large holes filled with furze-bushes.

The whole kiln was as large as a good-sized room. The man went to his house for a few lighted coals, and he put them under the furze, which soon took fire and blazed, and the smoke came through the openings that

were left between the bricks, and the heat of the fire came through them also, and heated the bricks. The man told Harry's father that he should supply the kiln with furze, and keep the fire strong, for six days and six nights, and that then the bricks would be sufficiently burnt.

Harry now said that he was afraid that he should not be able to build a kiln for his bricks. He had grown wise enough to know that it required time to learn how to do things which we have not been used to do. And he asked the brickmaker whether he thought he could build his bricks so as to be able to burn them. And the man told him that he believed he could not; but he said that on some holiday he would go to the place where Harry's bricks were, and would show him how to build a nice little kiln, if Harry's father would give him leave.

HARRY's father accepted this good-natured offer; and Harry plainly perceived that good conduct makes friends, and that a poor brickmaker may be of use even to persons who are not obliged to work for their bread.

Whilst they were talking, Lucy was looking about, and examining everything in the brickfield; and she observed that at the farthest part of the field some white linen was stretched upon the grass to dry, and she noticed several bits of black dirt lying upon the linen. They did not stick to the linen, but were blown about by the wind, as they were very light.

Lucy picked up some of these black things; and when she showed them to her mother, her mother told her that they were bits of soot, which had been carried by the wind from the brick-kiln.

"But, mamma," said Lucy, "I don't see any chimney belonging to the brick-kiln, and soot, I believe, is always found in chimneys."

Mother. No, my dear, soot is smoke cooled; and wherever there is smoke there is soot. A great quantity of thick smoke rises from a brick-kiln; or, to speak more properly, a great quantity of smoke is carried upwards

by the hot air that rises from a brick-kiln, and when this smoke cools, parts of it stick together and make what we call soot, which falls slowly to the ground. This is some of it that has fallen upon the white linen; and you see it, because it is black, and the linen upon which it has fallen is white.

Lucy. Why does it fall slowly?

Mother. Because it is light: if it were heavier, it would fall faster.

Lucy. What do you mean by light and heavy?

Mother. You cannot yet understand all that I mean by those words; but if you take two things which are nearly of the same size in your hands, and if one of them presses downwards the hand in which it is held more than the other does, that may be called heavy, and the other may be called light. You must observe, Lucy, that they can be called heavy or light only as compared together or weighed in your hands. For instance, if you take a large wafer in one hand, and a wooden button-mould of the same size in the other, you will readily perceive that the button-mould is the heavier. You might, therefore, say that the button-mould is heavy, and the wafer is light.

But if you were to take the button-mould again in one hand, and take a shilling in the other, you would call the shilling heavy, and the button-mould light. And if you were to lay down the button-mould, and were to take a guinea into your hand instead of it, you would find the shilling would appear light when compared with the guinea.

Lucy. But, mamma, what do you compare the soot with when you say it is light?

Mother. I compare it in my mind with other things of nearly the same size, as bits of saw-dust, or coal-dust, or bits of gravel; but I cannot yet make you entirely understand what I mean. When you have learnt the uses and properties of more things, and their names, I shall be better able to answer the questions you have asked me upon subjects which I cannot explain to you now.

As they returned home, they saw a poor little girl crying sadly, and she seemed to be very unhappy. Lucy's mother said to her: "Poor girl! what is the matter with you? What makes you cry so?"

"Oh, madam," said the little girl, "my mother sent me to market with a basket of eggs, and I tumbled down, and the eggs are all broken to pieces, and I am very sorry for it. My mother trusted them to me, as she thought I would take care of them; and, indeed, I minded what I was about, but a man with a sack upon his back was coming by, and he pushed me and made me tumble down."

Mother. Will your mother be angry with you when she knows it?

Little Girl. I shall tell my mother, and she will not be angry with me; but she will be very sorry, and she will cry, because she is very poor, and she will want the bread which I was to have bought with the money for which I ought to have sold the eggs; and my brothers and sisters will have no supper.

When the little girl had done speaking, she sat down again upon the bank, and cried very bitterly.

Little Lucy pulled her mother's gown, to make her listen to her, and then she said softly, "Mamma, may I speak to the poor little girl?"

Mother. Yes, Lucy.

Lucy. Little girl, I have some eggs at home, and I will give them to you, if my mamma will let me go for them.

"My dear," said Lucy's mother to her, our house is at a distance; and if you were to try to go back by yourself, you could not find the way. If the little girl will come to-morrow to my house, you may give her the eggs; she is used to go to market, and knows the road. In the mean time, my poor little girl, come with me to the baker's at the top of the hill, and I will give you a loaf to carry home to your mother: you are a good girl to tell the truth."

So Lucy's mother took the little girl to the baker's shop, and bought a loaf, and gave it to her; and the

little girl thanked her, and put the loaf under her arm, and walked homewards, very happy.

As he was going over a stile, Harry dropped his handkerchief out of his pocket, and it fell into some water, and was made quite wet. He was forced to carry it in his hand, until they came to a house, where his father told him he would ask leave to have it dried for him. And he asked the mistress of the house to let Harry go to the fire to dry his handkerchief. And while he held it at the fire, Lucy said she saw a great smoke go from the handkerchief into the fire; and her mother asked her how she knew it was smoke?

Lucy. Because it looks like smoke.

Mother. Hold this piece of paper in what you think like smoke, and try if you can catch any of those black things that were in the smoke you saw in the brick-field.

Lucy. No, mamma, it does not blacken the paper in the least; but it wets the paper.

Mother. Hold this cold plate in what you call smoke, that comes from the handkerchief.

Lucy. Mamma, I find the plate is wet.

Mother. What is it, then, that comes from the handkerchief?

Lucy. Water—the water with which it was wetted when it fell into the ditch.

Mother. What makes the water come out of it?

Lucy. The heat of the fire, I believe.

Mother. At tea-time to-night, remind me to show you how water is turned into steam, and how steam is turned into water.

When they reached home, Harry and Lucy went immediately, without losing any time, to cast up two sums in arithmetic, which they were accustomed to do every day.

Harry could cast up sums in common addition readily; and Lucy understood the rule called subtraction; and she knew very well what was meant by the words *borrowing* and *paying*, though it is not easy to understand them distinctly. But she had been taught carefully by her

mother, who was a woman of good sense, and who was more desirous that her daughter should understand what she did, than that she should merely be able to go on as she was told to do, without knowing the reason of what she was about.

And after they had shown the sums which they had cast up to their mother, they sat down to draw.

Lucy was learning to draw the outlines of flowers, and she took a great deal of pains, and looked attentively at the print she was copying. And she was not in a hurry to have done, or to begin another flower; but she minded what she was about, and attended to everything that her mother had desired her the day before to correct. After she had copied a print of periwinkle, she attempted to draw it from the flower itself, which she had placed in such a manner as to have the same appearance as the print had, that she might be able to compare her drawing from the print with her drawing from the flower.

SHE found it was not so easy to draw from the latter as from the former; but every time that she tried, it became easier. And she was wise enough to know that it was better to be able to draw from things themselves, or from nature, as it is called, than from other drawings; because everybody may everywhere have objects before them which they may imitate. By practice they may learn to draw or delineate objects so well as to be able to express upon paper, &c., to other people, whatever curious things they meet with.

The habit of drawing is particularly useful to those who study botany; and it was her love of botany that made Lucy fond of drawing flowers.

She had a number of dried plants, the names of which she knew; and she took great pleasure in the spring, and in the beginning of summer, in gathering such plants as were in flower, and in discovering, by the rules of botany, to what class, order, genus, and species they belonged.

Harry also knew something of botany; but he did not learn to draw flowers. He was endeavouring, with great

care, to trace a map of the fields about his father's house. He had made several attempts, and had failed several times; but he began again, and every time he improved.

He understood very well the use of a map. He knew that it was a sort of picture of ground, by which he could measure the size of every yard, or garden, or field, or orchard, after it had been drawn upon paper, as well as it could be measured upon the ground itself. He could also draw a little with a rule and compasses; he could describe a circle, and make an equilateral triangle, and a right angle, and he had begun to learn to write.

AFTER they had drawn and written for one hour, it was time for them to go and dress for dinner.

Harry's walk to the brickfield had made him very hungry, so that he ate heartily.

Whilst he was eating, his mother told him that she intended to send him into the garden, after dinner, for some strawberries that were just ripe; and she advised him not to eat so much pudding, if he wished to eat strawberries.

Now Harry had learnt from experience, that if he ate too much, it would make him sick; he therefore prudently determined not to have another spoonful of pudding.

A little while after dinner, Harry and Lucy went with their mother into the garden; and Lucy was desired to gather six strawberries, and Harry was desired to gather four strawberries. And when they were put together, Harry counted them, and found that they made ten. Lucy was not obliged to count them, for she knew by rote, or by heart, as it is sometimes called, that six and four make ten.

Each of them then brought five strawberries; and Harry knew, without counting, that when they were put together, they would make ten. And Lucy knew that the parcel of strawberries which they gathered first, which made ten, would, when added to the second parcel, which also consisted of ten, make twenty.

They now went and gathered ten more. One gathered

three, and the other gathered seven; and this ten, added to the former number, made thirty. And they went again, and brought ten more to their mother. This ten was made up of eight and two; and this ten, added to the thirty they had gathered before, made forty.

WHILST they were eating them, Harry asked his sister if she knew what was meant by *ty* in twenty and thirty. Lucy laughed at him for supposing that she did not know it, and said her father had told her. Harry said that he knew before that *teen*, in the words thirteen, fourteen, &c., meant ten; but he did not know that *ty*, in twenty and thirty, &c., meant ten. And he said he did not know why ten should have three names—*ten*, *teen*, and *ty*.

Lucy said she could not tell. They asked their father; and he told them that ten meant ten by itself, without any other number joined to it; but that *teen* meant ten with some other number joined to it; and he asked Harry what thirteen meant.

Harry. I believe that it is three and ten, for three joined or added to ten make thirteen. Fourteen is plainly four and ten; fifteen five and ten. But why, papa, is it not *threeteen* instead of being called thirteen?

Papa. Because it is easier to say thirteen than *threeteen*.

Lucy. But why is it called twelve? It should be *two-teen*.

Harry. And eleven, papa, should be *one-teen*.

Papa. I cannot now explain to you, my dear, the reason why we have not those names in English; but you perceive that it is easy to remember the names of fourteen, fifteen, sixteen, &c., because we remember that four, five, six, come after one another, and we perceive that all that is necessary is to add *teen* to them. You see that fourteen means four and ten,—four added to ten.

Harry. But does *ty* in forty mean four added to ten?

Lucy replied that it did not.

Papa. No; it means four times ten; not ten added to four, but ten added together four times; and fifty means

ten added together five times. So you see that it is useful to have three names for ten, which differ a little from each other, but which are also something like; for *teen* is like ten, and *ty* is like teen. *Teen* is always used when ten is added to any number as far as nineteen; and *ty* is always used when more tens than one are counted, as far as a hundred.

Harry. Then twenty should be *two-ty*; and thirty should be *three-ty*.

Papa. I told you before, my dear, that thirteen is used instead of *threeteen*, because the former word is more easily pronounced than the latter. Thirty is used instead of *three-ty*, for the same reason.

Harry. But why is not twenty *two-ty*?

Papa. Twenty is made up of *ty* and of twain, a word that was formerly used for two. The word twain, joined to *ty* makes *twainty*, which when spoken quickly, sounds like twenty.

Harry. But, papa, will you tell me another thing?

Papa. No, Harry, we have talked enough about numbers at present; you will be tired by thinking any longer with much attention, and I do not wish that you should be tired when you attend to what you are about. Thinking without tiring ourselves is very agreeable; but thinking becomes disagreeable if we tire ourselves: and as thinking with attention is useful and necessary, we should take care not to make it disagreeable to ourselves.

It was now tea-time. Harry and Lucy usually supped at the same time that their father and mother drank tea. They thus had an opportunity of hearing many useful and entertaining things that passed in conversation; and Lucy, recollecting that her mother had promised to tell her at tea-time something more about smoke and steam, put her in mind of what she had promised. Then her mother called for a lighted wax candle, and for a lighted tallow candle, and she desired Lucy to hold a cold plate over the wax candle, and Harry to hold another cold plate over the tallow candle, and in a short time a con-

siderable quantity of smoke, or soot, was collected upon each of the plates. Another cold plate was held over the tea-urn, in which water was boiling, and from which there issued a large quantity of steam, or vapour of water. This steam was stopped by the plate, which, by degrees, was covered with a number of very small drops, not so large as the head of a minikin pin. After the plate had been held over the steam a little longer, these drops became larger: they attracted one another; that is to say, one little drop was joined to another, and made a large drop; and so on, till at length the drops ran so much together as to lose their round shape, and to run over the plate. Harry and Lucy were much entertained with this experiment. Harry observed that the vapour of water was very different from the vapour of a candle.

Papa. I am very glad to find that you have so readily learnt something of the meaning of the word vapour, which I have purposely made use of in the place of the word steam; but you are mistaken, my dear, in saying vapour of a candle. Lampblack, soot, and smoke, are formed from the vapour of the oily parts of burning bodies. Formerly people made use of lamps instead of candles, and the soot of those lamps was called lampblack, though it should properly be called oil-black. Now, pray, Harry, do you know the meaning of the word evaporate?

Harry. I believe it means being turned into vapour.

Papa. Did you observe anything else in the experiments which I have just shown to you?

Harry. Yes, papa; I saw that the vapour of oil was solid when it was cold.

Papa. Condensed.

Harry. Yes, condensed.

Papa. And did you not observe, that the vapour of water, when condensed, was fluid? And what did you observe, Lucy?

Lucy. I thought, papa, that the soot, or lampblack, which you told me was the vapour of oil, did not seem to turn into oil again when it was condensed; but that it had an entirely different appearance from the tallow and

wax from which the oil came. Yet I noticed that the vapour of water, when it was condensed, became water again.

Papa. I do not think, my dear children, that my time has been thrown away in showing you this experiment. And as I wish to make you like to attend to what is taught you, I will endeavour to make it agreeable to you, by joining the feeling of pleasure to the feeling of attention in your mind; by giving you pleasure, or the hope of pleasure, when you attend.

Harry. I know what you mean, papa; for if we had not attended to what we were about, you would have endeavoured to give us pain.

Papa. No, Harry, you are a little mistaken. I don't wish to give you pain, unless when I want to prevent you from doing something that would be hurtful to yourself or to other people; and then I wish to associate, that is join, pain with such actions. But I do not expect that little boys and girls should be as wise as men and women; and if you do not attend, I only abstain from giving you pleasure.

Harry. But, papa, what pleasure were you going to give us?

Papa. I was not going to give you any immediate or present pleasure, but only the hope of some pleasure to-morrow. Your mamma and I intend, to-morrow, to walk to breakfast with her brother, your uncle, who has come to live at a very pretty place not quite three miles from this house. He was formerly a physician, and he has several curious instruments—a microscope, an electrifying-machine, an air-pump, and a collection of fossils, and a few shells and prints; and he knows very well how to explain things to other people. And the pleasure that your mamma and I meant to give you was to take you with us to-morrow morning.

Harry and Lucy were very happy, when they were going to bed, from the remembrance of the day that they had passed, and from the hope of being happy on the day which was to come.

At six o'clock in the morning Harry awoke, and as they were to set out for Flower Hill at seven, he got up and dressed himself with great alacrity, and Lucy did the same. But, alas! their hopes were disappointed; for a violent thunder-storm came on before seven o'clock, which prevented their walk to their uncle's.

Harry planted himself at the window, and examined every cloud as it passed by, and every quarter of the sky, in expectation of fair weather and sunshine. His sister, who was older, knew that standing at the window would not alter the weather; and she prudently sat down to study botany before breakfast, and to examine some flowers which she had gathered in her walk the day before.

When Harry had stood some time at the window, and could perceive no appearance of a change in the sky, he turned about, and looked wistfully round him, like a person who did not know what to do with himself. His mother, who at that instant came into the room, could not help smiling at the melancholy figure which she saw before her; and she asked Harry what was the matter. Harry owned that he felt sorry and sad, because he had been disappointed of the pleasure which his father had promised him.

Mother. But, Harry, my dear, your father did not promise you fine weather.

Harry. (Laughing.) No, mamma, I know he did not; but I expected that it would be a fine day, and I am sorry that it is not.

Mother. Well, Harry, that is all very natural, as it is called, or, to speak more properly, it is what happens commonly. But though you cannot alter the weather, you may alter your own feelings, by turning your attention to something else.

Harry. To what else, mamma?

Mother. You have several different occupations that you are fond of; and if you turn your thoughts to any of them, it will prevent you from feeling sad upon account of the disappointment that you have met with. Besides,

my dear Harry, the rain must, in some respects, be agreeable to you, and it is certainly useful.

Harry. Oh yes, mamma, I know what you mean,—my garden. It was indeed greatly in want of water, and it cost me a great deal of trouble to carry water to it twice every day. My peas will come on now, and I shall have plenty of radishes. Thank you, mamma, for putting me in mind of my garden; it has made me more contented.

Harry's father now came in, and seeing that he was cheerful, and that he bore his disappointment pretty well, he asked him if he had ever seen a cork garden.

Harry. No, papa; I remember having seen a cork model of a house, but I never saw the model of a garden made of cork.

Papa. But this is not the model of a garden, but a sort of small garden made upon cork. Here it is.

Harry. Why, this is nothing but the plate or saucer that commonly stands under a flower-pot, with a piece of cork, like the bung of a barrel, floating in water.

Papa. Notwithstanding its simplicity, it is capable, to a certain degree, of doing what a garden does. It can produce a salad. Here are the seeds of cresses and mustard; sprinkle them thinly upon this cork, and lay it in the closet near the window that opens towards the south.

Harry. When may I look at it again?

Papa. Whenever you please. But do not touch or shake it; for if you do, it will disturb the seeds from the places where they now rest, and that will prevent them from growing. In two or three days you will see that cresses and mustard-plants have grown from these seeds.

Harry. Pray, papa, will the seeds grow on the cork as they grow in the ground?

Papa. No, my dear; it is not the cork that nourishes the plant, but it is the water which makes it grow. If you cover the bottom of a soup-plate with a piece of flannel, and pour water into the plate, just high enough to touch the flannel, and scatter seeds on the surface of the flannel, they will grow upon it in the same manner that they grow upon cork.

Harry. But if it is by the water only that the seeds are made to grow, would they not thrive as well if they were put upon the bottom of the plate without any cork or flannel?

Papa. No, my little friend, they would not; because if there were only enough water in the plate to cover half of each of the seeds, it would be so shallow as to be evaporated (you know what that means, Harry) before the seeds could grow. Perhaps, also, the surface of the plate may be so smooth as to prevent the fibres of the roots from taking hold of it. And there are many more reasons which occur to me, why it is probable that they would not grow.

Harry. But we can try, papa.

Papa. Yes, my dear, that is the only certain method of knowing.

LUCY's mother recollected that she had last year promised to show her how butter was made; and as the rain in the morning had prevented Lucy from going to her uncle's, her mother thought it would be a good opportunity for taking her into the dairy, where the dairymaid was churning. Little Harry was permitted to go with his sister.

They remembered the wide, shallow pans which they had seen the year before. They recollected that their mother had told them that the cream, or oily part of the milk, which was the lightest, separated itself from the heaviest part; or, to speak more properly, that the heaviest part of the milk descended towards the bottom of the pans, and left the cream, or lightest part, uppermost; and that this cream was skimmed off twice every day, and laid by till a sufficient quantity, that is to say, five or six, or any larger number of quarts, were collected.

They now saw twelve quarts, or three gallons of cream, put into a common churn; and the dairymaid put the cream in motion by means of the churn-staff, which she moved up and down with a regular motion for seven or eight minutes. When she appeared tired, another of the

maids took the churn-staff from her, and worked in her stead; and so on alternately for about three-quarters of an hour, when the butter began to come, as it is called, or to be collected in little lumps in the cream. Harry and Lucy were much surprised when the lid or cover of the churn was taken off, to see small lumps of butter floating in the milk. They saw that the cream had changed its colour and consistency, and that several small pieces of butter were swimming on its surface. These pieces of butter were collected and joined together into one lump by the dairymaid, who poured some cold water into the churn to make the butter harder, and to make it separate more easily from the milk, which had become warm with the quick motion that had been used to make the butter come. Then she carefully took it all out of the churn and put it into a wooden dish, and pressed and squeezed it so as to force all the milk out of it. She then washed it very clean, in cold water, a great many times, and with a wooden thing called a slice, which is like a large flat saucer, she cut the lump of butter that she had made into pieces, in order to pull out of it all the cow's hairs that had fallen into the milk of which the cream had been made.

Many of these hairs stuck to the slice, and others were picked out, which appeared as the butter was cut in pieces. The butter was then well washed, and the water in which it had been washed, was squeezed out of it. The butter was now put into a pair of scales, and it weighed nearly three pounds. Some of it was rolled into cylinders, of about half a pound weight each, and some of it was made into little pats, and stamped with wooden stamps, which had different figures carved upon them; and the impression of these figures was marked upon the butter.

Lucy asked what became of the milk, or liquor, which was left in the churn? Her mother told her that it was called butter-milk, and that it was usually given to the pigs.

Lucy. Mamma, I have heard that in Ireland, and in Scotland, the poor drink butter-milk, and are very fond of it.

Mother. Yes, my dear ; but the butter-milk in Ireland is very different from the butter-milk here. We separate the thick part of the cream from the rest, for the purpose of making butter ; but in Ireland they lay by the thinner part, which is only milk, as well as the thick cream, for churning, and they add to it the richest part of the new milk, which is what comes last from the cow when she is milked ; and what is left after the butter is made, is, for this reason, not so sour, and is more nourishing than the butter-milk in this country.

Lucy. Do they not sometimes make whey of butter-milk and new milk ?

Mother. Yes, my dear, whey is made of butter-milk and skimmed milk ; but it is not thought so pleasant or useful in this kingdom, though it is much liked in Ireland ; probably because the butter-milk here is not so good as it is in Ireland. I am told that it is frequently preferred in that country to any other kind of whey, even by those who are rich enough to have wine whey. You see, my dear Lucy, that small circumstances make a great difference in things. I have heard it said that the Irish poor must be very wretched indeed, if they are forced to use butter-milk instead of milk ; but the fact is, their butter-milk is so much better than ours, that they frequently prefer it to new milk. To judge wisely, we must be careful to make ourselves acquainted with the facts about which we are to judge.

Harry. Pray, mamma, why does dashing about the milk with the churn-staff make butter ?

Mother. The process of making butter is not yet exactly understood. Cream consists of oil, whey, and curd, and an acid peculiar to milk. You know what is meant by an acid.

Lucy. Not very well. I know it means what is sour.

Mother. Yes, my dear, sourness is one of the properties of acids ; and when you have acquired a knowledge of a greater number of facts, that you can compare with one another, I shall be better able to explain to you what is meant by many terms that I cannot at present make you understand.

Harry. But, mamma, you have not yet told us why churning makes butter?

Mother. My dear, it does not make butter; it only separates the oily or buttery parts of the cream from the curd, or cheesy part, and from the whey. We do not know exactly how this is done by churning; but it is probable that, by striking the cream with the churn-staff, or by shaking it violently, the oily parts or particles are from time to time forced nearer together, which enables them to attract each other.

Harry. Yes, mamma, I know what that is; just as globules of quicksilver run together, when they are near enough.

Mother. Globules! Harry, where did you find that new word?

Harry. Papa told it to me the other day, when I was looking at some quicksilver that he had let fall. He told me the little drops of quicksilver, or mercury, which look like balls, were called globules, or little globes.

Lucy. And, mamma, the drops of dew and rain stand on several leaves separate from one another. On a nasturtium leaf I have seen drops of water almost as round as drops of quicksilver; and when I pushed two of the drops near one another, they ran together and formed one larger drop.

Mother. They were attracted together, as it is called.

Lucy. But the larger drop, which was made of the two drops, was not twice as large as either of the two small ones?

Mother. Are you sure of that, Lucy?

Lucy. No, mamma; but I thought so.

Mother. Two drops of mercury of the same size, or two drops of any other fluid, when they join, do not form a drop that is twice as large in breadth or diameter as one of the small drops, but such a drop contains exactly as much, and weighs as heavy, as the two small drops.

Harry. I do not understand you, mamma.

Mother. I will endeavour by degrees to make you understand me; but it cannot be done at once, and you have attended enough now. Lucy, it is time to read; let

us go on with the account of the insects, which you were reading yesterday.

Then Lucy, and Harry, and their mother, left the dairy, and returned to the drawing-room.

Mother. Here, Harry, sit down and listen to what your sister reads. You will soon be able to read to yourself without assistance; which, in time, will become an agreeable employment.

Lucy now read in the *Guardian*, No. 157, a very entertaining account of the industry and ingenuity of ants.*

Both Harry and she wished that they could find some ants' nests, that they might see how they carried on their works. Their mother said that she could show them an ants' nest in the garden, and as it had done raining, she took them into the garden, and showed them two little holes in the ground, where the ants had formed cells, which served them for houses to live in, and for store-houses to keep their eggs and food. They were busily employed in making a road, or causeway, from one of these holes to the other. Great numbers were employed in carrying earth, to repair breaches which had been made in their work by the rain.

Harry laid some dead flies, and some small crumbs of bread, upon the track where the ants were at work; but they were not diverted from their labour by this temptation. On the contrary, they pushed the dead flies and the crumbs out of their way, and went steadily on with their business. Harry's mother told him she had tried the same experiment before, and that, perhaps, another time the ants might choose to eat, instead of pushing away the food that was offered to them.

Harry and Lucy waited patiently watching the ants, till it was time to dress for dinner.

After dinner, Harry's father told him that the weather

* For many interesting particulars concerning animals, insects, &c., consult White's "Natural History of Selborne," edited by the Rev. J. G. Wood, and embellished with above 200 illustrations. Price 5s. cloth. Also, "A Tour Round my Garden," by Alphonse Karr. Revised and edited by the Rev. J. G. Wood. 117 illustrations. Price 5s. Ask for Routledge's editions.

was sufficiently fine for their jaunt to Flower Hill. Harry now saw that it was not such a great misfortune, as he had thought it in the morning, to have his walk deferred; and he and Lucy set out joyfully with their father and mother, on a visit to their uncle.

Their way was through some pretty fields, and over stiles, and through a wood, and along a shady lane. As they passed through the fields, Harry, when they came to a corn-field, was able to tell the name of the grain which was growing in it, and Lucy told him the names of several of the wild-flowers and weeds which were growing amongst the corn and under the hedges.

During the last year Harry had learnt to be very active in body as well as in mind; and when he came to a low stile, he put his hands upon the top rail, and vaulted nimbly over it. And Lucy ran almost as fast as her brother, and was very active in every exercise that was proper for a little girl.

They soon came to a windmill, which went round with great quickness. It was not necessary for his father to warn Harry not to go too near the arms or sails of the windmill, as he had read in a *Present for a Little Boy* how dangerous it is to go within the reach of a windmill's sails. He was not, however, foolishly afraid, but wisely careful. He kept out of the reach of the sails, but he was not afraid of going to the door, or to the wheel and lever, by which the top was turned round. He counted, with the assistance of his father, the number of turns which the sails made in a minute.

His father looked at his watch during one minute; and Harry counted the number of revolutions, or turns, that the sails made in that time. He found that they went round forty-five times in a minute.

Lucy observed that the middle of the sails moved round through a very small space, but that the ends or tips of them went very fast.

Papa. My dear, you see a black spot in that part of the cloth of the sails which is near the centre of the arms goes as often round as the tips of the sails. What, then, do you mean by saying that the tips move very fast?

Lucy. I mean that they go a great way in a little time.

Papa. What do you mean by a great way?

Lucy. I am afraid that I cannot explain myself clearly. I mean, that the tips of the windmill-sails go through a great way in the air; I believe I should say that they describe a very large circle, and the part of the sails that is near the centre describes a small circle.

Papa. Now I understand you distinctly: the circle which the tips describe is very large, *when compared* with that described by the part near the centre. I have tried several times how fast the tips of windmill-sails move; and when there was a brisk wind they moved a mile in a minute.

Harry. That is very fast, indeed! But how could you tell this, papa?

Papa. I cannot explain to you now; but at some future time I will.

They went through a wood, where they saw squirrels jumping from tree to tree with great agility; and rabbits sitting up on their hind legs, looking about them, and running from one hole to another, as if they were at play. Harry asked several questions about the squirrels and rabbits, and about woodpeckers, and other birds that he saw. By these means, he and Lucy got some knowledge in their walk, and were amused the whole of the way to their uncle's.

Harry. Papa, this walk puts me in mind of "Eyes and no Eyes," in "Evenings at Home." I feel very glad to find that things which I have read in that book are like real things, and that what I have read is of use to me.

NEITHER Lucy nor Harry had ever seen their uncle Brown; and they expected, as he was called Doctor, that he must be a very grave old man, who would not take the trouble to talk to little children. They were, however, much mistaken; for they found that he was cheerful, and that he talked to them a great deal. After tea, he took them into his study, in which, besides a great

many books, there were several instruments and machines of different sorts.

They had both seen a barometer and thermometer at home; but the barometer at Doctor Brown's was much larger than any Harry had seen before; and it was not fixed up against the wall, but was hung upon a stand with three legs, in such a manner that when it was touched it swung about; and the shining quicksilver withinside of it rose and fell so as to show that it did not stick to the tube which contained it. There were an air-pump, and a microscope, and a wooden orrery in the room, and a pair of very large globes.

Doctor Brown let Harry examine them. And he was so good as to answer all the questions that either Lucy or Harry asked him.

Harry asked him what that shining liquid was which he saw in the tube of the barometer?

Doctor Brown. It is a metal called quicksilver; and it is found in mines under-ground.

Harry. My papa showed me quicksilver the other day, and it was liquid, and was spilt on the table, and on the floor; and how can that be a metal! I thought metals were all solid.

Doctor Brown. So they all are when they are sufficiently cold.

Harry. Then is quicksilver hotter than iron?

Doctor Brown. I cannot explain to you at present what you want to know.

Harry. What is that globe made of?

Doctor Brown. Of pasteboard and plaster.

Harry. How is it made round? I thought pasteboard was made of flat sheets of paper pasted upon one another.

Doctor Brown. Flat pasteboard is; but the pasteboard upon this globe is made round by means of a round mould, upon which it is formed. You know, I suppose, what a mould is?

Harry. Yes I do, pretty well. But how can the pasteboard, after it is all pasted together, be taken off a round mould?

Doctor Brown. After it is dry, it is cut all round with

a knife; and then it will come off the mould in two caps, as the shell of a nut, when it is opened with a knife, comes off the kernel.

Harry. What is the use of this machine, which you call an air-pump?

Doctor Brown. To pump air out of that glass vessel which you see.

Harry. I do not quite understand you, uncle.

Doctor Brown. No, my dear, it is not probable that you can; but I will soon give you a little book, which will teach you the uses of several instruments of this sort.

Harry. My dear uncle, I cannot tell you how much I should be obliged to you.

Harry and Lucy were much delighted with what they saw at their uncle's; and as they had not been troublesome, he asked their father and mother to bring them to Flower Hill when they next came to see him.

They returned home that evening just before it was dark, and went to bed by moonlight.

Thus ends an account of three days passed by Harry and Lucy. One day when Harry was about five, and Lucy six years old; and two days, a year afterwards, when Lucy was seven, and Harry six years of age.*

PART III.

It was Lucy's business to call her father every morning. She watched the clock, and when it was the right time, she used to go softly into her father's room, and to open the curtain of his bed, and to call him.

"Papa! papa! it is time for you to get up."

Then she drew back the window-curtains, and opened the shutters, and she put everything ready for him to dress. She liked to do this for her father, and he liked that she should do it for him, because the attending upon him taught her to be neat and orderly. She and her

* The Rev. J. G. Wood's "Natural History" may be read with advantage to young children. It contains nearly 500 illustrations, and may be had of the publishers, bound in cloth, for six shillings.

brother Harry both liked to be in the room with their father when he was dressing, because then he had leisure to talk to them. Every morning he used to tell or teach them something that they did not know before.

One morning, in the beginning of winter, when the weather was cold, Lucy said, "It is much colder in this room to-day, papa, than it was when you got up yesterday."

"Oh, no! I think it is not nearly so cold to-day as it was yesterday, when my father was dressing," said Harry. "What do you think, papa?"

Their father went and looked at *something* that hung in his window, and then answered, "I think that it is neither hotter nor colder in this room to-day than it was yesterday, at the time when I was dressing."

"Are you sure, papa?" said Lucy.

"Quite sure, my dear."

"How can you be quite sure, papa?" said Lucy; "how do you know?"

"I can tell how papa knows," cried Harry: "he looked at the thermometer."

"But how does he know by looking at the thermometer?" said Lucy.

"Come here, and I will show you, for I know," cried Harry. "Stand up on this chair beside me, and I will show you. My uncle told me all about it last summer, when I was looking at the thermometer at his house."

"Look; do you see this glass tube?"

"Yes; I have seen that very often."

"I know *that*; but do you see this part of the tube, at the top, seems to be empty; and this part of it here, at the bottom, and half-way up the glass tube, is full of something white. Do you know what it is?"

"Yes; I remember very well my uncle told me that is quicksilver; but what then?"

"Stay, be patient, or I cannot explain it to you. Do you see these little marks, these divisions marked upon the edge here, upon the ivory, by the side of the glass tube?"

"Yes; well."

"And do you see these words printed?"

"Yes—*freezing, temperate, blood-heat, boiling-water heat*. I have read those words very often, but I don't know what they mean."

"When it is neither very hot nor very cold, people say it is *temperate*; and then the quicksilver would be just opposite to that division where *temperate* is written. When it freezes, the quicksilver would be down here, at the *freezing-point*; and if this thermometer were put into boiling water, the quicksilver would rise up, and it would be just at the place where *boiling water* is written. *Blood-heat*, I believe, means the heat that people's blood is generally, but I am not sure about that. Look, here are the numbers of the degrees of heat or cold. Boiling-water heat is 212 degrees; and when it is freezing, it is 32 degrees."

"And the heat of this room now is—look, what is it, Lucy?"

Lucy said it was above the long line marked 40.

"Count how many of the little divisions it is above 40," said Harry.

She counted, and said seven; and her father told her to add that number to 40, which made 47.

Then Lucy asked how her father knew that it was as cold, and no colder, in his room to-day than it was yesterday morning.

"Because, yesterday morning, the quicksilver rose just to the same place, namely, to 47 degrees, as it does to-day. It always rises or falls, with the same degree of heat or cold, to the same place,—to the same degree."

"But look, look, it is moving! The quicksilver is rising higher and higher in the glass!" cried Lucy.

"Look! now it is at fifty—fifty-two—fifty-five."

"Yes; do you know the reason of that?" said Harry.

"No, I do not know," said Lucy; "for it is not in the least degree warmer now in this room, I think, than it was when we first looked at the thermometer."

"That is true; but you have done something, Lucy, to the thermometer, that has made the quicksilver rise."

"I! What have I done? I have not even touched it!"

"But you have put your face close to it, and your warm breath has warmed the glass. Now, look when I put my hand, which I have just warmed at the fire, upon the bottom of the thermometer, upon this little round ball or bulb, where the greatest portion of the quicksilver is—look how it rises in the tube! And now I will carry the thermometer near the fire, and you will see how much more the quicksilver will rise."

Lucy looked at it, and she saw that the quicksilver rose in the thermometer when it was brought near the fire.

As Harry was putting it still closer to the fire, his father called to him, and begged that he would take care not to break the thermometer.

"Oh yes, papa, I will take care. If you will give me leave now, I will put it into this kettle of water which is on the fire, and see whether the water is boiling or not. If it is boiling, the quicksilver will rise to *boiling-water heat*, will it not? I will hold the thermometer by the string at the top, so I shall not burn my fingers."

His father stood by while Harry tried this experiment; and Lucy saw that, when the water boiled, the quicksilver rose to *boiling-water heat*; that is, to 212 degrees.

Then Harry carried the thermometer back again to the window, and left it to cool for some minutes; and they saw that the quicksilver fell to the place where it had been when they first looked at the thermometer this morning; that is to say, to 47 degrees.

"Now you see," said Harry, "the use of the thermometer. It shows exactly how hot or how cold it is."

"It measures the degrees of heat," said their father; "and the name *thermometer* means measurer of heat; from two Greek words; *thermo* means heat, *meter* means measure, as you may observe in the words *barometer*, *pyrometer*, *hygrometer*, and many others."

"But why, papa, does the quicksilver rise in this tube when it is hot, and fall when it is cold? I do not understand that," said Lucy.

"That is a sensible question," said her father; "and I am not sure that I can answer it so as to make you

understand me. It has been found from experience, my dear, that quicksilver *expands*; that is, *spreads out—takes up more room*—when it is heated than when it is cold, and it always expands equally when it is in the same heat; so that, by knowing how much more room it takes up,—for instance, when it is held near the fire than it did when it was hanging in the window,—we could know how much greater the heat is near the fire than at the window. Do you understand me, Lucy, my dear?"

"Yes, papa; I think I do. You say that when the quicksilver is heated, it—I forget the word."

"*Expands*," cried Harry.

"Yes, *expands*. When quicksilver is heated it *expands*, papa."

"But what do you mean by *expands*, my little girl?"

"It spreads out every way; its size increases; it takes up more room."

"Very well. And what then?"

"Why, then, as it expands when it is heated, people can tell, by seeing or measuring the size of the quicksilver, how hot it is."

"True; but how do you think they know exactly how much it increases in size or *bulk*, when it is heated to different degrees of heat? How do they measure and see at once the measure of this?"

"With a pair of compasses, papa?" said Lucy.

"Look at this little ball or globe of quicksilver," said her father, pointing to a little ball of quicksilver in the glass, at the bottom of the thermometer. "Would it not be difficult to measure this with a pair of compasses, every time you applied heat to it?"

"That would be difficult, to be sure," said Lucy.

"There must be some other way. Some way, too, by which it can be measured without taking the quicksilver out of the glass every time."

"I know the way!" cried Harry.

"Don't speak—don't tell her; let your sister think, and find out for herself. And now I must shave; and do not either of you talk to me till I have done."

Whilst her father was shaving, Lucy looked at the

thermometer, and considered about it; and she observed that the thin, tall line, or column of quicksilver, in the little glass tube, rose from the bulb or globe of quicksilver, at the bottom of the thermometer; and when she put her warm hand upon this bulb, the quicksilver rose in the tube.

"I know it now!" cried Lucy "But I must not tell it till papa has done shaving, lest I should make him cut himself."

As soon as papa had done shaving, Lucy, who had stood patiently at his elbow, stretched out her hand, and put the thermometer before his eyes.

"Here, papa! now I will show you."

"Not so near, my dear; do not put it so close to my eyes, for I cannot see it when it is held very near to me," said her father.

"There, papa; you can see it now," said Lucy, "cannot you? and you see the quicksilver in this little glass globe at the bottom of the thermometer?"

"Yes, I see it," said her father.

"When it is heated, and when it expands," continued Lucy, "it must have more room; and it cannot get out at the bottom or sides, or any way but up this little glass tube. There is an opening, you see, from the uppermost part of that little globe into this glass tube."

"Very well," said her father. "Go on, my dear."

"And when the quicksilver is made hotter and hotter, it rises higher and higher in this tube, because it wants more and more room; and the height it rises to shows how hot it is, because that is just the measure of how much the quicksilver has expanded—has grown larger. And by the words that are written here, and by these little lines—these degrees, I believe you call them, you can know, and tell people exactly, how much the quicksilver rises or falls; and *that* shows *how hot* it is."

"Pretty well explained, Lucy; I think you understand it."

"But one thing she does not know," said Harry—"that, in making a thermometer, the air must be first driven out of the little tube, and the glass must be kept

quite closed at both ends, so as to keep out the air. My uncle told me this. And now, papa," continued Harry, "will you tell me something about the barometer? I know that it is not the same as the thermometer; but I do not know the difference. Papa, will you explain it to me?"

"Not now: you have had quite enough for this morning, and so have I. I must make haste and finish dressing, and go to breakfast."

"Yes; for mamma is ready, I am sure," cried Lucy. "Here are your boots, papa!"

"And here is your coat," said Harry.

"Papa, to-morrow morning will you let us blow bubbles, when you have done shaving?" said Lucy.

"No, no; I want to hear about the barometer to-morrow," said Harry.

"We will settle this when to-morrow comes; and now let us go to breakfast," said their father.*

At breakfast, as their father was looking at the newspaper, he found an advertisement, which he read aloud. It was to the effect that a man had brought an elephant to a town in the neighbourhood, which he would show to any persons who would pay a shilling apiece for seeing it; and that the elephant was to be seen every day for a week, between the hours of twelve and three.

Harry and Lucy wished very much to see an elephant; they said that they would rather see it than any other animal, because they had heard and read many curious anecdotes of elephants. Their father said that he would take them during the morning to the neighbouring town to see this elephant. Harry immediately went for his "Sandford and Merton,"† and Lucy jumped from her chair and ran for her "Instinct Displayed." And they each found

* Many pleasing experiments and much useful information will be found in the beautifully-illustrated "Every Boy's Book," price 8s. 6d., to be had of Messrs. Routledge and Co. The work forms a complete Encyclopædia of Sports and Amusements.

† An illustrated edition of this work, price 3s. 6d., may be had of Messrs. Routledge and Co.

in these books anecdotes or stories of elephants, which they were eager to read to their father and mother. Lucy had not quite finished breakfast, so Harry began first; and he read the history of the tailor who pricked the elephant's trunk with his needle; and he read of the manner in which the elephant punished him. Then he read the account of the enraged elephant, who, when his driver's child was thrown in his path, stopped short, in the midst of his fury, and, instead of trampling upon the infant, or hurting him, looked at him seemingly with compassion, grew calm, and suffered himself to be led, without opposition, to his stable.

When Harry had finished reading, Lucy said that she liked these stories of the elephant; but that she had read that part of "Sandford and Merton" so often, that she had it almost by heart. "But now," said she, "I will read you something that will, I hope, be quite new, even to papa and mamma, unless they have read *my* Mrs. Wakefield's 'Instinct Displayed.'"

Then Lucy read an account of Rayoba's favourite elephants, which were almost starved by their keepers before it was discovered how their keepers cheated them of their food. When the prince saw that his elephants grew thin and weak, he appointed persons to see them fed every day; and these people saw the keepers give the elephants the food, of which they were most fond—rich balls, called *massaulla*, composed of spices, sugar, and butter, &c. The elephants took these balls up in their trunks and put them into their mouths, in the presence of the persons who were to see them fed; but still the elephants, though they seemed to eat so much every day, continued thin and weak.

"At length the cheat was discovered; and it shows the extraordinary influence the keepers had obtained over these docile animals. They had taught them, in the inspectors' presence, to receive the balls, and to put them into their mouths with their trunks, but to abstain from eating them; and these tractable creatures actually had that command over themselves, that they received this food, of which they are so remarkably fond, and

placed it in their mouths, but never chewed it; and the balls remained untouched, until the *inspectors*" (that is, the people who had been appointed to see them fed) "withdrew. The elephants then took them out carefully, with their trunks, and presented them to the keepers; accepting such a share only as they were pleased to allow them."*

Lucy rejoiced at finding that this curious anecdote was new to her brother, and even to her father and mother. After they had talked about it for some time, and admired the docility of these poor elephants, Lucy told what she had read of another elephant, who used to gather mangoes for his master, and to come every morning to his master's tent, when he was at breakfast, and wait for a bit of sugar-candy. Lucy's mother then desired her to bring from the library-table the book which she had been reading on a former evening—"Mrs. Graham's Account of her Residence in India." When Lucy had brought the book, her mother showed her an account of an elephant which had saved the life of an officer who fell under the wheel of a carriage; and a description of the manner in which elephants are tamed: she told Lucy that she and Harry, if they chose it, might read these passages. They liked to read, particularly at this time, accounts of this animal, that they might know as much as they could of his history, before their father took them to see the elephant. They were happy, reading together what their mother had given them leave to read of this book; and then they looked over the prints, and by the time they had done this, their mother called Lucy to her dressing-room, to write and to cast up sums, and Harry went to his father's study, to learn his Latin lesson. Harry and Lucy employed themselves regularly, for about an hour every morning, after breakfast; and, in general, they attended closely to what they were doing; therefore they made rapid progress in their studies. Lucy was learning to write, and she

* Many entertaining stories will be found in the Rev. J. G. Wood's "Sketches and Anecdotes of Animal Life," to be had of the publishers. The price of this work is 3s. 6d.

wrote about two lines carefully every day; always trying to correct, each day, faults of which her mother had told her the preceding day. She was also learning arithmetic; and she could, with the help of a dictionary, make out the meaning of half a page of French, without being much tired. She knew that nothing can be learnt without taking some trouble; but when she succeeded in doing better and better, this made her feel pleased with herself, and repaid her for the pains she took. She now read English so well, that it was a pleasure to her to read; and to her mother it was a pleasure to hear her. So the reading English was always kept for the last of her morning's employments. She was, at this time, reading such parts of "Evenings at Home"* as she could understand. This day she read the "Transmigrations of Indur;" and after she had read this, in "Evenings at Home," her mother let her read a little poem on the same subject, which was written by a young gentleman, a relation of hers. Lucy particularly liked the following description of the *metamorphosis*, or *change*, of the bee into an elephant?—

"Now the lithe trunk, that sipp'd the woodland rose,
With strange increase, a huge proboscis grows;
His downy legs, his feather-cinctured thighs,
Swell to the elephant's enormous size.
Before his tusks the bending forests yield;
Beneath his footsteps shakes th' astonish'd field;
With eastern majesty he moves along,
Joins in unwieldy sport the monster throng.
Roaming, regardless of the cultured soil,
The wanton herd destroy a nation's toil.
In swarms the peasants crowd, a clam'rous band,
Raise the fierce shout, and snatch the flaming brand;
Loud tramp the scared invaders o'er the plain,
And reach the covert of their woods again."

By the time Lucy had finished reading, and had worked a little, and copied the outline of a foot and of a hand, her mother told her to put by all her books, work, and

* This entertaining work, so warmly recommended by Miss Edgeworth, is published by Messrs. Routledge. Their edition is beautifully illustrated, and sells at 3s. 6d.

drawings, and to get ready to go out; for it was now the hour when her father had said that he would take Lucy and her brother to see the elephant.

HARRY and Lucy walked with their father to the neighbouring town, which was about a mile and a half distant from their home: they went, by pleasant paths, across the fields. It was frosty weather, so the paths were hard; and the children had fine running and jumping, and they warmed themselves thoroughly. When she was very warm, Lucy said, "Feel my hand, papa; I am sure, if I were to take the thermometer in my hand now, the quicksilver would rise finely. How high, papa? to how many degrees do you think it would rise?"

"I think," answered her father, "to about seventy degrees of Fahrenheit's thermometer."

"Fahrenheit's thermometer! Why do you call it Fahrenheit's thermometer? I thought it was your thermometer, papa?" said Lucy.

"So it is, my dear; that is, it belongs to me; but it is called Fahrenheit's, because a person of that name first divided the scale of the thermometer in the manner in which you saw mine divided. There are other thermometers, divided in a different manner; some of these are called Reaumur's thermometers, because they were first divided so by a person of the name of Reaumur."

"But, papa, will you tell me," said Harry, "something about the barometer?"

His father stopped him. "I cannot tell you anything about that now, my dear; run on, or we shall not have time to see the elephant; for the keeper of the elephant shows him only till three o'clock each day." Harry and Lucy ran on as fast as they could, and they were quite in time to see the elephant.

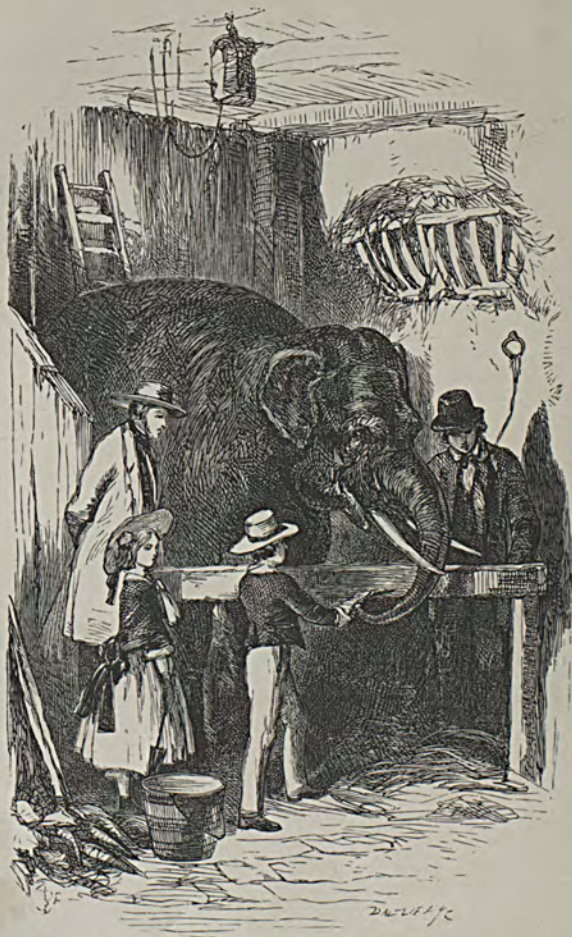
They were surprised at the first sight of this animal. Though they had read descriptions, and had seen prints of elephants, yet they had not formed an exact idea of the reality. Lucy said that the elephant appeared much larger; Harry said it was smaller than what he had

expected to see. Lucy said that, till she saw it, she had no idea of the colour, or of the wrinkled appearance of the elephant's skin. The keeper of this elephant ordered him to pick up a little bit of money, which he held upon the palm of his hand. Immediately the obedient animal picked it up with the end of his proboscis, and gave it to his keeper. Lucy said she had never had a clear notion how it moved its trunk, or proboscis, nor how it could pick up such small things with it, till she saw it done. Harry said that he had never had an idea of the size or shape of the elephant's feet till he saw them. Lucy said the prints had given her no idea of the size of its ears, or of the breadth of its back. Both she and her brother agreed that it is useful and agreeable to see real things and live animals, as well as to read or hear descriptions of them.

The keeper of this elephant was a little weak-looking man. Harry and Lucy admired the obedience and gentleness of this powerful animal, which did whatever his master desired, though sometimes it appeared to be inconvenient and painful to it to obey. For instance, when the elephant was ordered to lie down, he bent his fore knees and knelt on them; though it seemed to be difficult and disagreeable to it to put itself into this posture, and to rise again from its knees. Lucy asked what this elephant lived upon, and how much it ate every day. The man said that he fed the elephant upon rice and vegetables, and he showed a bucket which, he said, held several quarts. This bucketful the elephant had every day. There was, in one corner of the room, a heap of raw carrots, of which, the keeper said, the elephant was fond; he held a carrot to the animal, which took it gently, and ate it. When Lucy saw how gently the elephant took the carrot, she wished to give it one with her own hand; and the man told her that she might. But when Lucy saw the elephant's great trunk turning toward the carrot which she held out to him, she was frightened; she twitched back her hand, and pulled the carrot away from the elephant, just as he was going to take it. This disappointment made him very angry;

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Harry gives a carrot to the elephant.

and he showed his displeasure by blowing air through his proboscis with a sort of snorting noise, which frightened Lucy. Harry, who was more courageous, and who was proud to show his courage, took the carrot, marched up to the elephant, and gave it to him. The animal was pacified directly, and gently took the carrot with his proboscis, turned back the proboscis, and put the carrot into his mouth. Harry, turning to his father, with a look of great satisfaction, said that "the great Roman emperor, Trajan, was certainly a very brave man, for he never feared anything by the dreadful noise made by the elephant's trunk, especially as Kibricus had never been so afraid before." Lucy did not know what Harry meant to say, and he himself, because she had not yet read the Roman history. He said that he would show her the passage in the Roman history, as soon as they reached home. And now, having looked at the elephant as long as they wished, and having asked all the questions they wanted to ask, they went away. They were glad to get out into the fresh air again, for the stable in which the elephant lived had a very disagreeable smell. Lucy praised the animal for being cooped up, as she said, in such a small room, instead of being allowed to go about, and to enjoy his liberty. Harry then thought of horses, which live just as well as a great part of their lives, in stables. He asked his father whether he thought that horses which have been tamed, or broken in, as it is called, and which are kept in stables and taken care of by men, are happier or less happy, than wild horses. His father said he thought this must depend upon the manner in which the horses are fed and treated. He said that, if a horse which was tamed by man are cruelly treated, and are protected from the inclemencies of the weather, and are only worked with moderation, it is no wonder that they are happy; because, in these circumstances, they are usually in good health and fat, and their coats look sleek, smooth, and shining. From these signs we may guess that they are happy; but, as they cannot speak and tell us what they feel, we cannot be certain.



Harry gives a card to the elephant.

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and he showed his displeasure by blowing air through his proboscis, with a sort of snorting noise, which frightened Lucy. Harry, who was more courageous, and who was proud to show his courage, took the carrot, marched up to the elephant, and gave it to him. The animal was pacified directly, and gently took the carrot with his proboscis, turned back the proboscis, and put the carrot into his mouth. Harry, turning to his father, with a look of some self-satisfaction, said that "the great Roman general Fabricius was certainly a very brave man, not to have been terrified by the dreadful noise made by King Pyrrhus's elephant, especially as Fabricius had never seen an elephant before." Lucy did not know what Harry *alluded* to, or what he meant; because she had not yet read the Roman history. He said that he would show her the passage in the Roman history, as soon as they reached home. And now, having looked at the elephant as long as they wished, and having asked all the questions they wanted to ask, they went away. They were glad to get out into the fresh air again, for the stable in which the elephant lived had a very disagreeable smell. Lucy pitied this animal for being *cooped* up, as she said, in such a small room, instead of being allowed to go about, and to enjoy his liberty. Harry then thought of horses, which live shut up, for a great part of their lives, in stables. He asked his father whether he thought that horses which have been tamed, or *broken in*, as it is called, and which are kept in stables and taken care of by men, are happier, or less happy, than wild horses. His father said he thought this must depend upon the manner in which the horses are fed and treated: he observed, that if horses which are tamed by man are constantly well fed, and are protected from the inclemencies of the weather, and are only worked with moderation, it is probable that they are happy; because, in these circumstances, they are usually in good health and fat, and their skins look sleek, smooth, and shining. From these signs we may guess that they are happy; but, as they cannot speak and tell us what they feel, we cannot be certain.

During the walk home, Harry and Lucy took notice of many things. There was scarcely an hour in their lives in which they did not observe and learn something. One subject of observation and of conversation led to another; but it is impossible to give an account of *all* these things.

When they got home, Lucy reminded her brother of his promise about Fabricius and the elephant. He showed her the passage in the Roman History, which he had read; and that evening Lucy asked her mother if she might read the whole of her brother's Roman History. Her mother gave her a little "History of Rome,"* with sixty-four prints in it; and she told Lucy, that when she knew all the facts told in this history, it would be time enough to read another, which might tell her more particulars of the Roman history.

THE next day being Sunday, Harry and Lucy went, with their father and mother, to church. The morning lesson for this day was a chapter of the Bible containing a portion of the history of Joseph and his brethren. Harry and Lucy listened attentively, and when they came home from church they told their father that they wished very much to know the end of that history, of which they had heard the beginning read by the clergyman at church. Their father took down, from his bookcase, the large family Bible, and he read the whole of the history of Joseph and his brethren, with which the children were very much interested and touched.

In the evening they each read to their mother one of Mrs. Barbauld's "Hymns in Prose for Children." Harry and Lucy loved these hymns, and they showed their mother the passages that they liked particularly in those which they read this day.

"Mamma, this is the passage which I like the best," said Lucy.

"Look at the thorns, that are white with blossoms, and the flowers that cover the fields, and the plants that

* Probably Mrs. Trimmer's.

are trodden in the green path: the hand of man hath not planted them; the sower hath not scattered the seeds from his hand, nor the gardener digged a place for them with his spade.

“Some grow on steep rocks, where no man can climb; in shaking bogs, and deep forests, and desert islands; they spring up everywhere, and cover the bosom of the whole earth.

“Who causeth them to grow everywhere, and

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and giveth them colours and smells, and spreadeth out their thin, transparent leaves?

“How doth the rose draw its crimson from the dark brown earth, or the lily its shining white? How can a small seed contain a plant? * * *

“Lo! these are a part of His works, and a small portion of His wonders.

“There is little need that I should tell you of God, for everything speaks of Him.”

Harry was silent for a moment after he had heard these passages read again, and then he said, “I like that very much indeed, Lucy: but now let me read to you, mamma, what I like better still:—

“Negro woman, who sittest pining in captivity, and weepst over thy sick child, though no one seeth thee, God seeth thee; though no one pitieth thee, God pitieth thee. Raise thy voice, forlorn and abandoned one; call upon Him, from amidst thy bonds, for assuredly He will hear thee.

“Monarch, that rulest over a hundred states, whose frown is terrible as death, and whose armies cover the land, boast not thyself, as though there were none above thee. God is above thee; His powerful arm is always over thee, and, if thou doest ill, assuredly He will punish thee.”

THE next morning, when Harry and Lucy went into their father's room, Harry drew back the curtain of his father's bed, and said, “Father, you promised to tell

me something about the barometer, and it is time to get up."

His father answered, without opening his eyes, "Do you see two tobacco-pipes?"

Harry and Lucy laughed, for they thought that their father was dreaming of tobacco-pipes, and talking of them in his sleep. Lucy recollected that her mother said he had been writing letters late the night before, and she said to her brother, "We had better let him sleep a little longer."

"Yes, do, my dear," said her father, in a sleepy voice; "and take the two tobacco-pipes, and my soap, and my basin, and the hot water, Lucy, that you brought for my shaving, and you may blow soap-bubbles in the next room for half an hour, and, at the end of that time, come and arouse me again."

Harry looked about the room, and he found, on his father's table, the two tobacco-pipes which he had been so good as to put there the night before. Taking care to move softly, and not to make any noise that should disturb their father, they carried out of the room with them the hot water, basin, soap, and tobacco-pipes. During the next half-hour they were so happy blowing bubbles, watching them swell and mount into the air, and float, and burst, trying which could blow the largest bubbles, or the bubbles which would last the longest, that the half-hour was gone before they thought that a quarter of an hour had passed. But Lucy heard the clock strike, and immediately she knew that the half-hour was over, and that it was time to go and call her father again. So she went directly, for she was very punctual. Her father was now awake, and he got up; and, while he was getting up, she began to talk to him of the pretty soap-bubbles which they had been blowing; but Harry was impatient to ask his father something about the barometer.

"Now, Lucy, let us have done with the soap-bubbles," said Harry; "I want to learn something seriously. Papa, I want to understand the barometer perfectly before I go next week to my uncle's, that he may find I am not so ignorant as I was the last time he saw me; and,

besides, my cousin Frederick will be at home, and he is only a year or two older than I am; and my uncle says that Frederick understands the use of all the instruments in his room. I did not understand even the barometer. Father, will you explain it to me this morning?"

"Just let me first show papa this one large bubble," said Lucy, "and then you may go to the barometer."

Lucy blew a large bubble from the end of her tobacco-pipe, but it burst before it had risen far. Then Lucy put down the tobacco-pipe, and said, "Now I will not interrupt you any more with my bubbles."

"But perhaps, my dear Lucy," said her father, "the bubbles may lead us to the knowledge of some things necessary to be known, before I can explain a barometer. Do you know what a bubble is?"

"Oh yes, papa," said she; "I remember you told me, a great while ago,—a bubble is——"

She was forced to pause, to think, however, before she could describe it.

"I believe it is air blown into a round case, or globe, of *something*. A soap-bubble is air in a round case of soap and water. But, papa, I have often seen bubbles on the top of water; *they* are only air and water. But how can the case be made of water? I can conceive that a globe of soap and water might stick together, because I know that soap is sticky; but I wonder at water's sticking together, so as to make a hollow globe."

"When you look at water," said her father, "or at quicksilver, you perceive that they are very different, not only in colour, but in their other properties."

"*Properties*, papa," said Lucy; "that is a word of which you taught me the meaning. Properties are what belong to things."

"One of the properties of water is *fluidity*," said her father. "Sand, on the contrary, is not fluid. Sand may be poured out, like water or quicksilver; but the grains of which it is composed are separate, and have no visible attraction for each other. The parts of water *cohere*, or stick together, but slightly; a small force divides them, but still they have an obvious tenacity."

"Papa, what is *obvious tenacity*? Tenacity, I know, is stickiness; but what does *obvious* mean?"

"Easily seen—plain—easy to be perceived. By obvious tenacity I mean tenacity which you can easily perceive; though nothing viscid or sticky is added to the water, you see that water can be spread by air so as to form the outer case of a bubble."

"But, when soap is added to water," said Lucy, "larger bubbles can be made."

"Yes. Why?"

"Because the soap makes the parts of the water stick together more strongly; but, papa," continued Lucy, "what is the reason that a bubble bursts? for if the outside case is strong enough to hold it at first, why should not *that* hold it as well always? At last it bursts; what is the reason of this?"

Her father said that he believed there were several causes which might make a bubble burst; and that he was not sure either that he knew all of them, or that he could explain them all, so as to make Lucy understand them. He mentioned some of the causes; for instance, the wind blowing against the bubble might break it; or the heat might expand the air inside it, and burst it; or, at other times, some of the water, of which the outer skin of the bubble is made, may run down from the top to the bottom, till it makes the bottom so heavy, and the top so thin, that it bursts.

Here Harry was heard to utter a deep sigh. His father smiled, and said—

"Poor Harry thinks we shall never get to the barometer; but have patience, my boy, we have not gone so far out of the way as you think we have. Now, Harry, run to my workshop, and bring me a bladder, which you will find hanging up near the door. And Lucy, run for the little pair of bellows which is in your mother's dressing room."

Harry brought the bladder, and Lucy brought the bellows. They were curious to see what their father was going to show them; but, just then, the breakfast-bell rang. Their father could not show or tell them anything

more that morning, for he was forced to finish dressing himself as fast as he could, and the children helped him eagerly. One reason why they liked to come to their father every morning, and to be taught by him, was, that he never tired them by forcing them to attend for a long time together.

Ten minutes at a time he thought quite sufficient at their age; but then he required complete attention. Whenever he found that they were not thinking of what he was teaching them, he would not say any more to them, but send them away. For this they were always sorry; and this *punishment*, or rather this *privation*, was sufficient to make them attend better next day. It very seldom happened that they were sent out of their father's room. Though he never taught them *in play*, as it is called, yet he made what they learned as interesting to them as he could; and he made work and play come one after the other, so as to refresh them. He and their mother took care that Harry and Lucy should neither be made to dislike knowledge, by having tiresome, long tasks, nor rendered idle, and unable to command their attention, by having too much amusement. Spoiled children are never happy. Between breakfast and dinner they ask a hundred times "What o'clock is it?" and wish for the time when dinner will be ready, or when pudding or apple-pie will come. And when dinner is over, they long for tea-time, and so on; or they *must* have somebody to amuse them, or some new toys. From morning till night they never know what to do with themselves; but the whole long day they are lounging about, and troublesome to everybody, continually wishing, or asking, or crying for something that they have not. Poor, miserable creatures! Children who are not spoiled will smile when they read this, and will be glad that they are not like these, but that they are like Harry and Lucy. Harry and Lucy loved pudding and apple-pie as well as most people do, but eating was not their only or their greatest pleasure. Having acquired a love for reading and for knowledge of many sorts, they found continually a number of employments, and of objects which enter-

tained and interested them; so that they were never in want of new toys, or of somebody to amuse them. If any extraordinary amusement was given to them—such, for instance, as seeing an elephant—they enjoyed it as much as possible; but, in general, Harry and Lucy felt that they wanted nothing beyond their common, everyday occupations. Beside their own occupations and amusements, there was always something going on in the house which entertained them. They were now able to understand their father and mother's conversation: living constantly with them (*and not with servants*), they sympathized, that is, *felt along with* their parents, and made, to a certain degree, a part of their society. Frequently their mother read aloud in the evenings. On such occasions Harry and Lucy were never *desired* to listen; but sometimes they could understand what was read, and sometimes they found it entertaining.

It happened, one winter evening, that their mother began to read a French book, which they could not understand, yet it seemed to amuse their father so much, that they wished to know what it was about. All that they heard their father and mother saying to one another about it made them sure that it must be entertaining; they left their map of Europe, which they had been putting together, and Lucy went and looked over her mother's shoulder at the book, and Harry leant on his elbows opposite to his mother, listening eagerly, to try if he could make out any meaning; but he could understand only a word, or a short sentence, now and then.

Their mother observed their eagerness to know what she was reading, and she was so good as to translate for them, and to read to them, in English, the passages which she thought most entertaining. She told them, first, what it was about.

It was the account, given by a traveller, of a high mountain in Switzerland, and of the manner of living of the people by whom it is inhabited. Harry and Lucy turned to the map of Europe, which they had been putting together, and pointed to Switzerland, as their mother spoke. The name of the mountain of which she

was reading an account, was Mount *Pilate*. The name was taken, as their father told them, from the Latin word *pileus*, a hat; the top of this mountain being almost always covered with what looks like a hat, or cap of clouds. Different points, or heights, of this mountain, are called by different names. The most curious, difficult, and dangerous part of the ascent, lies between the point called the *Ass*, and another point called *the Shaking Stone*.

"Oh, mother! read about the shaking-stone," cried Harry.

"No, Harry, let mamma begin here, where there is something about *de très belles fraises*. I know the English of that,—*very fine strawberries*."

Her mother began to read just where Lucy's finger pointed.

"At the bottom of this road, up to the shaking stone, is a bank, which is covered with very fine strawberries from the middle of summer till the 21st of December, if the snow does not cover them before that time. And they may be found, even under the snow, if people will take the trouble to look for them."

"All the fir-trees near this spot are called *storm-shelterers*; because they seem to have been placed there on purpose to shelter people from the storms. Some of them afford a shelter of fifty feet in circumference. The rain cannot penetrate through the thick branches of these trees. The cattle are often seen gathered together under them, even in the finest weather; but it generally happens that a storm comes on within a quarter of an hour after the cattle have taken shelter in this manner."

"How do the cows or horses foresee the storm, mamma?" said Lucy.

"I do not know, my dear."

"Let my mother go on reading, and ask all your questions afterwards, Lucy," said Harry.

"If I can but remember them," said Lucy.

"From the foot of the mountain, to the point where there is the village called Brundlen, the road is tolerably safe. The people can even drive their cows up here, but

with this precaution: two men go with the cow, one at the head, and the other at the tail, and they hold in their hands a long pole, which they keep always between the cow and the precipice, so as to make a sort of banister or rail, to prevent her from falling.

"People are forced to walk very slowly on this road. Half-way up, you come to a curious fir-tree. From its trunk, which measures eight feet in circumference, spread nine branches, each about three feet in circumference, and six feet long. From the end of each of these branches, which are about fifteen feet from the ground, there rises, perpendicularly, a fir-tree. This tree looks, in shape, something like a great chandelier, with all its candles.

The village of Brundlen is the highest and last village on the mountain. It stands at the foot of a rock, from which enormous stones and fragments of rock frequently roll down; but the houses are so situated, *under the projecting part of the rock*, that all which falls from it bounds over without touching them. The inhabitants of this village possess about forty cows. The peasants mow only those parts of the mountain where the cattle cannot venture to go to feed. The mowers are let down, or drawn up, to these places by ropes, from the top of the rock; they put the grass, when they have mowed it, into nets, which are drawn up or let down by the same ropes wherever it is wanted. It is remarkable that the kinds of grass and herbs which are found in these mountainous places are quite different from those which grow in the low countries.'

"My dear children, is it possible that you are interested about these grasses?" said their mother.

"No, mamma," said Lucy, "not much about the grasses; but I like that part about the mowers let down by ropes; and I like to hear it, just as you read it to papa."

"Round some of the stones which have partly fallen, or mouldered away, grows a flower, which is a very dangerous poison. At four or five feet distance from this plant the cattle perceive its smell, and they leave the grass round it untouched. The flowers of the different

kinds of this plant are of a fine deep blue, yellow, or white. The white are the most uncommon; and the poison of these, it is said, is the most dangerous. Some years ago, a young man gathered some of these flowers, and held them in his hand while he descended the mountain, to go to a dance. When he was near the place where the dancing was going on, he felt that his hand was numbed, and he threw away the flowers. He danced, afterwards, for an hour or two, with a young woman, holding her hand all the time; he grew warm; and it is supposed that the poison from the poisonous flowers was communicated from his hand to hers; for they both died that night."

Harry and Lucy were shocked at this story.

"But, mother," said Harry, "do you think it is true?"

"That was the very thing I was considering," said his mother.

Then his father and mother began to talk about the probability of its being true or false.

They looked back for the description of the flower, and for the Latin name, which their mother, knowing that the children would not understand, had passed over. By comparing the name and description of this flower with those in botanical books, where the description and accounts of the properties of plants are given, they found that the plant of which they had been reading, was a species of *aconite*, called in England, *wolf's-bane*, or *monk's-hood*; and, as several instances were mentioned of its poisonous and fatal effects, they were inclined to believe that the story of the young man and woman's death might be true.

Lucy, seeing in some of the botanical books in which her mother had been looking, pretty coloured drawings, or prints of flowers, asked whether she might look at them. Her mother said that she might at some other time, but not this evening; because Lucy could not attend both to looking at these prints and to what she heard read aloud. So Lucy shut the books, and she and Harry put them into their places again, in the book-case,

resolving that they would look at them together *the next day*.

"Now, mamma," said Harry, as they drew their seats close to her, and settled themselves again to listen—"now for the skaking stone, mamma."

The kind mother began immediately, and read on, as follows:—

"This stone is at the summit of the mountain called the Ober Alp: it overhangs the rock a little, and appears as if it would fall; but this is really impossible, unless it were thrown down by a violent earthquake. The stone is as large as a moderate-sized house. When any one has the boldness to get upon it, to lie down, and let their head overhang the stone, they will feel the stone shake, so that it seems as if it were going to fall that moment. In 1744, the stone ceased to shake. About six years afterwards, somebody discovered that this arose from a little pebble, which had fallen through a crack, and remained under the stone. A man fastened a great hammer to a pole, and after frequently striking the pebble with the hammer, he succeeded in dislodging it. Immediately the stone began to shake again, and has continued ever since to vibrate."

"How glad the man who struck the pebble from under the stone must have been, when he saw it begin to shake again!" said Harry. "I should like to have been that man."

"Now I," said Lucy, "could not have managed the great pole and hammer, and I would rather have been the person who first discovered that the pebble had got under the stone, and that it was the cause which prevented the stone from shaking."

"Oh, but anybody who had eyes could have seen that," said Harry.

"And yet all those people who lived in that country had eyes, I suppose," said Lucy; "but they were six years before they saw it."

"They had *eyes and no eyes*," said her mother, smiling.

"That is true; I understand what you mean, mamma," said Lucy. "I have read 'Eyes and no Eyes,' in 'Evenings at Home,' and I like it very much. But will you go on, mamma, if there is anything more that is entertaining?"

"There is something more that, perhaps, would entertain you," said her mother; "but I will not read any more to you to-night, because it is time for you to go to bed."

"To-morrow night, mamma, will you read some more to us?"

"I will not promise, my dear. Perhaps I may have something else to do; or, perhaps, you may not deserve it so well to-morrow. When to-morrow night comes, it will be time enough to give you an answer."

THE next morning, when Harry and Lucy went into their father's room, they took care to have the bladder and the bellows ready by the time that he was up, as he had promised to show them some experiments.

"Now," said he, "we will fill this bladder with air, by blowing air into it with the bellows."

He put the end of the bellows into the neck of the bladder, and bade Harry hold the bladder, and Lucy blow the bellows.

"It is now quite full, papa," said Lucy: "I will tie the air in, with a waxed string round the neck of the bladder; I know how to do that. Look, how full, and round, and tight it is."

"So it is," said her father; "but now I want to let out some of the air that is in this bladder, without letting all of it out—how shall I do that?"

"I do not know," said Lucy; "for if I untie this string, I am afraid all the air that is in the bladder now would come out."

"That it certainly would," said her father.

"How shall we manage it?" repeated Harry and Lucy. After considering for some time, Harry observed, that beyond the place where the bladder was tied, there was enough of the neck of the bladder left to admit the nose of the bellows: he proposed, that they should put

in the end of the bellows, and tie the bladder round it, and then untie that string with which they had at first tied the neck of the bladder. His father said that this would do, but that he could show him what would do better. He gave him a little pipe of wood, about two inches long, that had a wooden stopper at one end, that could be easily put into the pipe, and easily taken out. He told Harry that this kind of pipe and stopper are called a *spigot* and *faucet*. He fastened the faucet into the neck of the bladder, so that he could stop the air from coming out of the bladder when it was full, and he could at any time let out the air by taking away the peg, or spigot. Then he let out a great part of the air that was in the bladder, till it was nearly empty, stopped the faucet again with the spigot, and then carried the bladder to the fire.

"Now you will see," said their father, "that the heat of the fire will swell the small quantity of air remaining in the bladder, till it will fill as great a space as that which was filled by all the air which we forced into it at first with the bellows. Here, Harry, take this to the fire while I shave myself."

The children held the bladder near the fire, but it did not swell out immediately; and after they had held it a few minutes, they began to think that it would *never do*, as Harry said. His father told him that he must not be so impatient if he intended to try experiments.

"If you are tired of holding the bladder," said he, "put it down on the hearth. Leave it there, and go and do or think of something else; and in about a quarter of an hour, perhaps, it will begin to swell out."

"A quarter of an hour! that is a great while, indeed!" said Harry.

However, the quarter of an hour passed while the children were putting some little drawers of their father's in order. When they returned to look at the bladder, they saw that it was beginning to swell, and they watched it while it gradually swelled. First one fold of the bag opened, then another; till, at last, it had again expanded into the shape of a globe.

"This is very extraordinary!" said Lucy, "that the little—the very little air which papa left in the bladder should have swelled out to this size, without anything being added to it."

"Without *anything* being added to it?" repeated her father: "think again, my dear."

"I have *thought again*, papa; but, I assure you, nothing was added to the air; for we never opened the bladder after you put in the—what do you call it, which fastens it?"

"The spigot," said Harry.

"The spigot," said Lucy. "Well, papa, I say nothing was added to the air."

"I say, daughter, you are mistaken."

"Why, papa, we did nothing in the world but hold the bladder to the fire, and leave it before the fire, and nobody touched it, or put anything to it, or near it!"

Still her father said, "Think again, Lucy."

She recollected herself, and exclaimed, "I know what you mean now, papa—heat. *Heat* was added to it."

"Yes," said her father, "heat mixed with the air in the bladder; and, by separating *the parts* of the air from each other, caused them to take up more room. Now take the bladder into a cold place; hang it up here near the window, and let us see what will happen."

"I know what will happen, papa," said Lucy. "When the air in the bladder grows cold, it will *take up less room*."

"It will contract," interrupted Harry.

"And then," continued Lucy, "the bladder will shrink, and become less and less; and it will fall in folds, in a kind of loose bag, just as it was before we carried it to the fire. I shall like to see whether this will happen just as I think it will."

Lucy hung up the bladder in a cold place, and watched it for a few minutes; but she did not perceive any immediate alteration.

"It will be as long in shrinking as it was in swelling out," she said; "and breakfast will be ready, I am afraid, before it shrinks."

"I know a way of making it shrink quickly," cried Harry.

"What is it?"

"I will not tell you; but I will show you," said Harry.
"You shall see what you shall see."

He ran out of the room, and soon returned, with his little watering-pot full of cold water.

"Now, Lucy," said he, "hold the basin for me under the bladder, that we may not wet the floor. Hold it steady."

He poured cold water from the rose of the watering-pot, so as to sprinkle the water all over the bladder, and immediately the bladder began to *collapse*, or shrink; and soon, to Lucy's delight, it had diminished to the size of which it had been before it was carried to the fire; and it hung like a loose, or *flaccid* bag.

"Papa, look!" she said—"look how much less room the bladder takes up now."

"Then," said her father, "something must have been taken away from what was inside of it."

"Yes," said Lucy.

"What was taken away?"

"Heat," replied Lucy.

"What took away the heat?"

"Cold water."

"How did that happen?"

Lucy answered she believed that the heat went into the water; that the water must have taken away the heat of the air that was within the bladder.

"*Attracted!*" cried Harry: "you should say that the water *attracted* the heat from the air."

"Well! *attracted*," said Lucy; "first, I suppose the bladder itself became warm, by touching the warm air inside it; then the water took,—or *attracted*, as you tell me I must say,—some of the heat from the bladder; then the bladder *attracted* some more heat from the inside air; and so on."

"Accurately stated, Lucy," said her father. "Now you have thought enough of all these things. Stay! before you go, tell me what you have learnt from the experiments you have tried this morning."

"*Experiments*, papa!" said Lucy, smiling, and looking

surprised; "I did not think that we had been trying experiments! I thought that only grown-up people and philosophers could try experiments."

"There you are mistaken, my dear," said her father; "an experiment is only a trial of anything, or something done to find out what will be the consequence. You carried the bladder to the fire, or poured cold water upon it, to find out what would happen to the air inside of it. Children can try some experiments as well as grown-up people can."

"Papa," cried Harry, "I have heard you talk of Dr. Franklin——"

"And of Newton," said Lucy, "I heard something."

"Very likely, my dear," interrupted her father; "but do not fly off to Dr. Franklin and Newton till you have answered the question I asked you just now. What have you learnt from the experiments you tried this morning?"

After Lucy had recollected what she had seen and heard, she answered,—"I have learnt that heat expanded or spread out the air in this bladder; and that cold——"

"That is, the want of heat," interrupted her father.

"That cold, or the want of heat made or let the air in the bladder *grow smaller*."

"*Contract*," said Harry.

"The same effects would be produced by taking away heat, not only from the air in that bladder, but from all air," said their father. "Now put the bladder in the place where you found it, and let us divert ourselves with something else. Can you cut capers, Harry?"

"Yes, papa; but first I want to say something. How very little we learn every morning! I looked at your watch when I came into your room, and it was just half after eight o'clock, and now it is nine. So we have been here half an hour. Half an hour!—I can scarcely believe that we have been here so long, papa!"

"Then you have not been tired, Harry?"

"No, not at all; but I am afraid, papa, that if we learn so very little every day, we shall never get on."

"You need not be afraid of that, my dear; learning a little—a very little—accurately every day, is better than learning a great deal inaccurately."

"A little and a little every day, regularly, make a great deal in many days," said Lucy. "I have found this to be true when I have been at work, and when I have done but very little each day."

"But when shall we get to the barometer?" said Harry.

"Oh! is that what you mean?" said his father. "Patience, my boy; patience till to-morrow!"

"Patience till to-morrow I must have, for I cannot help it," said Harry, sighing. "I wish to-day was over."

"No," said Lucy, "you need not wish to-day was over. Recollect, brother, that we have a great many pleasant things to do to-day. I am sure, Harry, you cannot wish that this evening was over; because, you know, though mamma did not promise it, if we deserve it, as I am sure we shall, she will read to us some more of that man's entertaining travels."

During this day Harry and Lucy were attentive to everything that they had to do. It snowed, so that after they had finished their lessons they could not go out, or take as much exercise as usual; but they warmed themselves by playing at hide-and-seek, and at battledore and shuttlecock, and at ball, at which they were allowed to play in an empty gallery, where they could do no mischief.

The evening came, and they were eager to know whether their mother would read to them. She smiled when Lucy brought the book to her, and said,—

"Yes, my dears, you have both been attentive to everything you had to do to-day; and I shall be glad to give you this pleasure; but first I must write a letter."

"While you are writing, mamma," said Lucy, "may we try if we can make out any of this French? Here is something that you missed, about *la statue et la caverne*—the statue and the cavern,—which looks as if it were entertaining; and I wish I could make it out. May I try, mamma?"

"Yes, my dear, provided you do not turn me into a

dictionary ; because I cannot write my letter and be your dictionary at the same time."

Without their mother's assistance, Harry and Lucy made out pretty well the sense of what they wanted to read ; and as soon as their mother had finished her letter, Lucy began to tell her all that they had translated.

"We have found out, mamma, that it is an account of a man of the name of Huber, who wanted to go into a cavern, in a rock of black or blackish stone (*noirâtre*), to see a statue called *Dominique*, made of white stone, and which seemed to be about thirty feet high, or above twice the height of this room, mamma ! But no one had ever been able to get to this statue, the way to it was so dangerous. They could, however, distinguish plainly that it was the figure of a man doing something on a table ;

'Accoudé sur une table.'

Mamma, you must, if you please, be so good as to tell us what *accoudé* is ; for we could not find it in the dictionary."

"It is just what Harry is doing at this moment—leaning his elbows on the table."

"Oh, now I understand it perfectly. The figure of a man leaning with his elbows on the table, his legs crossed, and seeming to guard the entrance of this cavern. Well, nobody had ever been able to get to this statue. I told you that."

"True, my dear ; therefore you need not tell it to me again."

"Very well, mamma ; but this man, of the name of Huber, who was a very courageous person, was determined to get to the statue. So, finding that he could not clamber up from the bottom of this rock, he had himself let down from the top by a long—a very long—rope, which he tied, I suppose, round his body ; but it does not say so. When he was let down, what do you think he found ? He found—how provoking !—that the rock overhung the cavern so much, that, as he hung down this way, *like a plumb-line*, as Harry says, he never could reach the entrance of the cavern, which was far in, far under the

rock ; so he was forced to call to the people to draw him up again. But he had seen enough to be almost sure that the statue was really a statue of a man, and not a white stone that looked like a man, as some people thought it was. Then there is something about the statue's not being '*l'ouvrage fortuit de la nature*;' that we could not understand, so we missed it. So the man Huber got a pole, to the end of which he fastened a hook, which he thought he could hook into the rock, and thus pull himself closer and closer to the entrance of the cavern, and so get in. So——"

"But, my dear, leave out *so*; do not *sew* your story together *so*."

"So—I mean he was let down a second time ; but oh !—now, the terrible thing !—the rope twisted and twisted continually ; his weight was more than the rope could bear ; it broke, and he fell and was dashed to pieces !"

"Poor man ! was he not very courageous, papa ?" said Harry. "I admire him very much."

"He was courageous, certainly," said Harry's father ; "but, before we admire him very much, we should consider what his motive was, or what good he could do by hazarding his life. If it was with the hope of being of any great service to himself, or to any one else ; if it was to accomplish any useful or generous purpose ; I should admire a man for risking his life ; but I cannot admire him for running the chance of breaking his neck merely to see a statue, or to find out whether it was the statue of a man or a white stone. I remember that when I was at Clifton, some years ago, a boy was dashed to pieces by falling from a high rock, to which he had climbed to look for a bird's nest. A few days after this accident happened I saw another boy climb to the same place, in search of the same nest. This was folly, not courage."

"It was, indeed," said Harry ; "but, mamma, will you be so kind to read on ?"

"Next comes," said their mother, "an account of the traveller's finding, in the wildest part of the mountain, a hut, inhabited by ten or twelve children, who lived there with a dog, which looked more savage than themselves.

They took care of a flock of goats, and lived chiefly on the milk of these animals. As soon as a stranger appeared on this part of the mountain, the children ran away, and shut themselves up in their hut, and sent their dog after him. A dog he might be called, because he barked; but he was a peculiar and hideous-looking creature."

"Is this all, mamma," said Lucy, as her mother stopped, "all that the man tells about the children? I wish he had told more. I want to know how these children lived together, and whether they quarrelled, like those in 'The Children's Friend,'* who asked their father to let them live by themselves, and govern themselves for one day—only for one day! What difficulties they got into!"

"Yes," said Harry; "but those children made themselves sick, by eating and drinking too much, and they quarrelled, because they had nothing to do but to play all day long. There was no danger that these poor children on the mountain would eat too much, for they had scarcely anything but goats' milk, and they must have had enough to do, as there was no one to do anything for them. But, papa," continued Harry, after thinking for a minute, "I want to know who was king among them, and I want to know what laws they made for themselves, and what punishments they had; for they could not have gone on long without some laws, I am sure."

"Pray what would have been your laws, Harry?" said his father. "I give you a week to consider of it; you and Lucy may consult together. Now let us go on with 'The Traveller's Wonders.'"

"I do not find anything else worth reading to you, my dears," said their mother, "except an account of the manner in which these mountaineers are taught to walk in dangerous places; and an account of the honesty of the people in preserving for the hunters the game which belongs to them."

"Ha! I shall like to hear that; we must remember *honesty* the first thing in our laws," said Harry.

* Les enfants qui veulent se gouverner.

"There are six hunters, who divide among themselves and among the inhabitants of the mountain all the game which they kill, and, in return, they are fed for nothing in the cottages. They undergo great labour, and go into dangerous places in pursuit of the goats and cocks of the wood. When these animals are shot, they often roll down from the highest rocks to the valleys beneath; and the peasants who live in these valleys, when they find these dead birds and beasts, take care of them, and faithfully return them to the hunters. If this was not done, the hunters would be obliged to walk many miles to pick up the game which they kill. You see that this honesty is useful to *all* the people who practise it; so is honesty in all cases. Therefore, Harry, I think you will do right to remember it first in your laws."

"So I will," said Harry. "But now, mamma, will you go on to the part which tells how the people learn to walk in dangerous places?"

"I am afraid it is too late to read any more to-night," answered his mother, looking at her watch. "Good night, my dear children. We must put off the account of the walking till another time."

"Now for the barometer!" said Harry, as he went into his father's room in the morning.

"Not yet, my dear boy," said his father; "you must know something more before you can understand the barometer."

Harry looked disappointed for a moment, but, recovering himself, he turned to observe what his father was doing. He was filling the bladder with water, to measure how much it would hold: it held five quarts, that is, ten pints.

"If you fill it ever so often, you cannot force more water into that bladder, can you?" said his father.

"No, certainly not; for if we try to put in any more water, it will run over," said Lucy.

"Then you find," said her father, "that we cannot force the parts of water nearer to each other, as you did those of air. Water differs from air in this respect."

"Yes," said Lucy, "for when you poured water upon the bladder, the air inside took up less room than before; therefore, the parts of the air must have come nearer together."

"But, perhaps, father," said Harry, "if this bladder were strong enough to bear our pressing water into it, we *could* force more in: if you were to take an iron vessel, and try to force water into it, would it not be possible to squeeze the parts of the water closer together, by pressing down the top of the vessel?"

"No, my dear," continued her father; "if a vessel had a top, made to screw into its mouth, to fit it exactly, and if water were poured into the vessel till it came to the very mouth of it, you could not squeeze the water down by screwing the top on. If you force the cover to screw on, the water will make its way through the screw, till the cover is screwed quite down, or it will burst the vessel."

"Burst the vessel!" cried Lucy; "an *iron* vessel, papa! Is that possible? I should like to see that experiment; but I believe it would be dangerous, because, when the iron vessel bursts, the pieces of it might be thrown against us, and hurt us. Papa, I remember your giving mamma an account of some vessel that burst from having too much hot water—too much steam, I mean—in it."

"Yes, because heat was added to the water," said Harry. "Water, in the tea-kettle, *boils over*, when it is made very hot; and I suppose that, if the top of the tea-kettle were screwed down so tight that no steam could get out, and if the spout were stopped in such a manner that the steam could not come out there, the tea-kettle would burst."

"Yes," answered his father.

"Then there is a way of swelling water by heat?" said Lucy.

"It is not the water which swells," said her father; "while it continues water it does not swell; but when heat mixes with it, or when it becomes what we call steam, or vapour, then it swells, and takes up a great deal more room than it did before."

"But there was something I was in a great hurry to

say," cried Lucy, "and now I have forgotten it. Talking of the *boiling over of the tea-kettle* put it out of my head."

"You mean the boiling over of the water in the tea-kettle," said her father.

"Yes, papa; but what was I thinking of?" said Lucy.

"Recollect," said her father, "what you were thinking of just before we spoke of the tea-kettle, and then, perhaps, you may recollect what you want to remember."

"We were talking of the swelling, or not swelling, of water by heat. Oh, I recollect what it was," said Lucy. "I know a way, papa, of swelling, or expanding, water without heat."

"What is that way?" said Harry.

"There is a way, I assure you, brother; and you know it, or, at least, you have seen it, as well as I. Don't you know that when water is frozen it swells."

"How do you know that, sister?"

"I know that bottles filled with water often burst when it freezes," said Lucy; "I assure you, I have seen the water-bottle in my room broken by the frost."

"That bottle had a very narrow neck," said Harry; "bottles or jugs that are as wide at the mouth, or wider than elsewhere, do not burst when the water inside of them is frozen. The jug in my room never bursts, though the water in it is often frozen."

"What is the reason of that, do you think?" said their father.

"Because there is room for the ice to expand," said Lucy.

"But does the ice expand, papa?" said Harry.

His father answered, "At the moment of freezing, the parts of ice are found to be farther from one another than the parts of the water were."

"Does cold get between the parts of the water?" said Lucy.

"No, no," said Harry; "cold is not a *thing*. Papa told us that it is only a word that expresses want of heat."

"Call it what you will," said Lucy "but still I do not

understand. What is it, papa, that gets between the parts of the ice, and makes it take up more room at the moment it freezes?"

"I do not know, my dear," answered her father.

"You don't know, papa! I thought you knew everything."

"No, my dear," said her father. "There are a great many things of which I know as little as you do. It is difficult to know anything well. Upon this very subject of which you were speaking there are different opinions; and I do not like to tell you anything of which I am not sure."

"But, papa," continued Lucy, "one thing you can tell me, or I can tell you, that ice is the same thing as water, and water is the same thing as ice; is it not so? except that one is fluid and the other solid."

"Not quite the same. Water is ice with heat added to it, and a little air."

"Then I should have thought," said Lucy, "that water ought to take up more room than ice."

"Why, my dear?"

"Because water is ice, and something more; something added to it. We saw, when we heated the bladder, that hot air took up more room than cold air, because it was air, and something added to it; for the same reason I should have thought that, if you add heat to ice, and so turn it into water again, that the water should take up more room than the ice, because, *I say*," cried Lucy, struggling to explain herself, "the water is ice, and something more; heat is added to it, you know."

"I understand you, my dear," said her father, "and what you say is very reasonable. I should have thought as you do, if I had not seen the experiment tried; but we find from experience that this is not the case. However, try the experiment for yourself."

"So I will, papa," cried Lucy. "So we will, and this very night, too, if it freezes; and I hope it will freeze; for, though I don't like the cold, I shall like very much to try this experiment; and I have a little bottle, and I will fill it with water, put it out of my

window, and, in the morning, I dare say we shall find it burst."

"So it will," said Harry, "if the neck is narrow."

"But," said his father, "I can give you a bottle with a very wide neck: if you fill this with water up to the neck, either the bottle will break, or the ice will not only fill the bottle, but will shoot up through the neck of the bottle, like a stopper."

"But what you wanted to try, I thought, was whether water takes up less room than ice," said Harry; "so, to make the proof quite exact, you should take the very ice that has been frozen in the bottle, and melt it—that is, put heat to it; and then, when it is water again, try whether it takes up more or less room, or the same, that it did before."

"Remember, you must melt it with a gentle heat, else the heat might evaporate some of the water," said their father.

"We will take care, papa, and we will try all this," said Lucy. "I love trying experiments, especially when we do it together, and when you, papa, are interested about them, as we go on."

"Yes, and I love to have something to do, and something to think of," said Harry.

"And something to feel eager to go to again the next day," said Lucy: "I like to feel curious to know how the thing will turn out."

"Well, now turn out of my way, my dear," said her father; "for you are so close to my elbow that I cannot whet my razor."

It happened this day, that Lucy found, in one of her drawers, a number of horse-chesnuts, which she had collected in the autumn, and which she had intended to plant; but, having forgotten them, they had lain in this drawer for nearly six weeks, and had become a little mouldy. Lucy, finding that they were spoiled, threw them into the fire. A few minutes after she had thrown them into the fire, she was startled by hearing a noise as

loud as that made by a pop-gun, and she saw pieces of coal, and fire, and chesnut thrown out on the carpet, to the distance of a yard from the hearth. While she was stooping to pick up these fragments, another *pop* was heard, another chesnut burst, and more pieces of coal, on fire, were thrown out; and one of them hit her arm, and burnt her a little. Nobody was with her. She ran into the next room directly, knowing that her father was there; and she called him, and told him what had happened, and asked him what she should do. He went immediately, and took all the chesnuts out of the fire. Harry and his mother came while he was doing this: they were glad that Lucy had not been much hurt, and that no mischief had been done. Her father then explained to her the cause of what had happened. He told her that the heat of the fire, acting upon the water in the wet, or mouldy, chesnuts, had turned the water into steam, which takes up more room than water; and that the steam, being confined by the outside skin of the chesnuts, having to make room for itself, burst through that skin, and had caused this sudden explosion.

After having explained this to Lucy, her father gave her an account of an accident which had happened to him when he was a child. He told her that he once thought that he could make a large lead pencil, such as he had seen used for ruling children's copybooks. Accordingly, he put some lead into a fire-shovel, and asked his sister to hold it over the fire to melt. In the mean time he fixed upright a slip of elder-tree, out of which part of the pith had been scooped. The wood was not quite dry. When the lead was melted, he took the shovel from his sister, and poured it into the hole in the piece of elder from which the pith had been scooped; but, to his great surprise and terror, the melted lead was driven out of the wood with such force as actually to strike against the ceiling. None of the lead struck his face; but had he been looking over it, probably his eyes would have been burnt out.

"So you see, my dear Lucy," her father concluded, "it is particularly necessary that children should be

careful in trying experiments, as they are not acquainted with the nature or properties of the things with which they meddle. When I filled the slip of wet elder-wood with hot lead, I did not know, or recollect, that the heat of the lead would turn the water into steam, and that the sudden expansion of this steam would cause an explosion."

This story brought to Harry's recollection an account which his mother had read to him of another accident. Lucy had not been present when this was read, and her brother now ran for the book, and showed her the passage. She began to read as follows:—

" 'At the cannon-foundry in Moorfields——' "

Lucy stopped at the first line, and said that she did not know what was meant by a cannon-foundry, and she did not know where Moorfields is.

Her father told her that Moorfields is the name of a part of London; and that a cannon-foundry is a place in which cannon are made. A foundry is a place where metals are melted and cast into different shapes. The word is taken from the French word *fondre*, to melt.

Lucy had seen a cannon; therefore she quite understood this first line of what she was going to read. Harry was rather impatient at her requiring so long an explanation; but her father said she was right not to go on without understanding completely what she heard. Lucy then read:—

" 'At the cannon-foundry in Moorfields, hot metal was poured into a mould that accidentally contained a small quantity of water, which was instantly converted into steam, and caused an explosion that blew the foundry to pieces. A similar accident happened at a foundry in Newcastle, which occurred from a little water having insinuated itself into a hollow brass ball that was thrown into the melting-pot.' "

Lucy was astonished to hear that water, when turned into steam, could have such force. From the facts which she had just heard and read, she perceived that it is necessary to be careful in trying experiments, and that it is useful to know the *properties* of bodies, that we may avoid hurting either ourselves or other people.

This evening it was a frost. Harry and Lucy saw that the quicksilver in the thermometer was at the *freezing-point*. They determined now to try the experiments which they wished about ice and water. Their father gave them a wide-necked bottle, and Harry filled it up to the bottom of the neck, leaving the neck empty; but he did not cork it. At the same time, Lucy took a common lavender-water bottle, that had wide shoulders and a very narrow neck; this she also filled up to the bottom of the neck, leaving the neck empty. Harry next filled a common phial bottle up to the mouth, stopped it closely with a cork, and tied the cork down strongly to the neck of the bottle. They hung all these bottles out of doors, on the same place, on the north side of the house.

Their father went to dine with a friend, at some distance from home; he was not to return till the next day, at dinner-time; so that in the morning, before breakfast, they missed their accustomed lesson from their father, for which they were sorry. Lucy observed that her father's room looked dismal without him; and as there was an unusual silence there, which the children did not like, they went off to the gallery, and consoled themselves by making as much noise as possible, galloping up and down the gallery, and playing at hare and hounds. It was snowing, so that they could not go out to look at their bottles; and it continued to snow for some hours, till long after the time when they had finished the day's lessons with their mother. At last the snow ceased; and, as the sun began to shine, the children were now afraid that the water in their bottles might, if it had been frozen, be soon thawed; therefore they put on their hats and great coats as fast as they could, and ran out to the wall on the north side of the house, and to the place where they had hung up their three bottles on the *preceding* day. They found that the lavender-water bottle, and the bottle that was tightly corked, were broken; but the bottle with the wide mouth was not broken. The ice had swelled out through the neck of the bottle, and some way above it, looking like a stopper. This bottle they brought into their mother's dressing-room, who put it

upon a saucer, in a warm place, and they left it there, that the ice might melt. In the mean time they went to help their mother to paste some prints into a large paper book. They were longer at this work than they had expected to be, and they had but just finished it when the dressing-bell rang. Then they suddenly recollected their *experiment*, and they said they must go and look whether the ice was melted; but their hands were now covered with paste, and their mother advised them first to wash their hands, and dress themselves, that they might be sure to be ready before their father came home to dinner.

Harry and Lucy ran away, saying, "Which will be dressed first?" And in a few minutes they came hurrying from their different rooms, eager to get to their mother's dressing-room.

"I'm ready! I was here before you!" cried Harry, bursting in.

"Gently, gently, my dear Harry," said his mother, "and shut the door after you."

"Lucy's coming in, mamma. Ha! Lucy, I was here first."

"But I had a great deal more to do, brother," said Lucy.

Her mother turned and looked at her, as she came into the room, and observed that Lucy's hair was not combed smoothly, and that one of her shoes was untied.

"And your hands, Lucy!" said her mother, "they are not clean. What is all this upon your hands?"

"Only the paste with which I was pasting those prints; but I did wash my hands, I assure you, mother."

"Yes; but you did not wash them well, I assure you, daughter; so go and wash them again, before you do anything else. You must not neglect to keep yourself clean and neat. This pocket-hole of your frock is torn almost from the top to the bottom."

"Yes, mamma; I tore it as I was coming down stairs; it caught upon a nail in the passage."

"Go and put on another frock, and mend this pocket-hole, before you do anything else, Lucy," said her mother.

"It is more necessary that a girl should be clean and neat than that she should try experiments."

Lucy blushed, and went to do what her mother desired.

"Mamma, I am sure it was partly my fault," said Harry, "because I hurried her too much; but to make amends, I know what I will do for her."

Then he ran for a pair of pincers, which his father had given to him; with some little difficulty he took out the nail on which Lucy's gown had been caught, and with some little difficulty, Lucy washed the paste off her hands, and mended her gown.

When they went to look at their experiment, they found that the ice which they had left in the bottle was quite melted, and that the water had sunk to the place where it had been before it was frozen. The top of the water just came to the bottom of the neck of the bottle. So they were convinced that water takes up less room than ice; or, in other words, that water, when it is frozen, takes up more room than it does when it is not frozen. When their father came home this day to dinner, Harry and Lucy told him the *result*, or end, of their experiments; and they said that the experiments had turned out just as he had foretold that they would. Their father said that he was glad that they had tried the experiments, and had thus satisfied themselves of the truth of what had been told them.

After dinner the children ran eagerly for the wide-necked bottle, that they might show their father that the water was *really* exactly at the place where it was before it had been frozen. They had left the bottle on the hearth in their mother's dressing-room; and as they knew exactly the spot where they had left it, they thought they could find it without a candle, especially as they expected that there would be a little glimmering light from the fire in the dressing-room. However, the fire being almost out, they could scarcely see their way: they felt about near the corner of the chimney, but no bottle was there: they felt water on the hearth.

"Oh! our bottle is broken!" exclaimed Lucy. "Who has done this?"

"Are you sure it is broken?" said Harry; "I will open the shutters, and then we shall see by the moonlight."

He drew up the curtain, unbarred and opened the shutters: then they saw, alas! that their bottle was broken. The dog was lying before the fire, and, in taking his customary place, had thrown down the bottle.

"Oh, our dear, dear wide-necked bottle, with which I intended to do so many things!" cried Lucy.

"Fie! fie! naughty dog! down! down, sir!" cried Harry, as the dog attempted to leap up and caress him. "Down, sirrah!"

"But don't call him *sirrah*! Don't be in a passion with him," said Lucy: "he did not know; he did not mean to do us any harm. It was our fault for leaving the bottle here, just in his way. Come here, poor fellow," added she, as the dog was slinking away ashamed, Harry, ashamed too of his anger, joined Lucy in patting him, and both he and his sister were now pleased with themselves for bearing their disappointment with good humour. The moon shone full on the window, and Harry, as he went to close the shutters again, called Lucy to look at "the beautiful blue sky, and the glorious bright stars in the heavens."

Lucy, as she looked and admired them, recollected something she had read in "Sandford and Merton" about the names and places of the stars; the *Polar Star*, and *Charles's Wain*, and the *Great Bear*, and the *Little Bear*. At the time when she read it, she did not understand it, because she had never observed the places of the stars in the sky; but this night she and Harry read over that part of "Sandford and Merton" again; and when they looked at the stars, and compared them with the description, they understood it perfectly. They went on to read the account of the use which little Sandford made of his knowledge of the stars, when he lost his way one night in crossing a great moor between his father's house and his uncle's.

Harry and Lucy were glad that they had found something entertaining to read to themselves; because their

father and mother were both engaged with their own employments, and could not attend to them. While they were reading, Lucy wanted her pencil to draw for Harry the figure of Charles's Wain, and to make the map of the sky, with dots for each star, which Tommy Merton had proposed to make. But Lucy had not her pencil in her pocket; she had left it in her mother's dressing-room, on the chimney-piece, as well as she recollected. When she went to look for the pencil, by the fire-light, she saw the pieces of her broken bottle. She had a great mind to put them into the fire, for she knew that glass would melt if it was put into the fire. She recollected the print of the glass-blower which she had seen in her "Book of Trades," and she wished to see glass melted. But recollecting also at this moment, that she had done mischief by throwing the chesnuts into the fire, she determined not to throw this glass into the fire without asking first whether it would do any harm. So she carried the broken glass carefully to the room where her father and mother were sitting, and she asked if she might put it into the fire. Her father, pleased by her prudence, was so good as to leave what he was doing, to show Lucy what she wished to see. He put the pieces of glass into the hottest part of the fire, and in a few minutes the glass became red-hot. Then he sent Harry to his workshop for a pair of pincers. Harry knew the names, and shape, and places of all his father's tools; so he easily found the pincers, and he brought them. Lucy blew the fire till it became of a *white heat*; then her father took the thick part of the bottom of the glass out of the fire. It was now melted into a lump; he held it by one end with the hot tongs, and desired Harry to take hold of the other end of the glass with the pincers, and to try to pull it out as far as he could. To Lucy's surprise, the glass was now so soft and yielding, that Harry pulled it out as easily as he could have pulled out warm sealing-wax; and he drew out the glass across the little table at which his mother was sitting. When drawn out, the glass looked like a thin shining thread; like what is called *spun sugar*; that is, sugar which has

been heated and melted, and drawn out in a *similar* (or like) manner.

Harry and Lucy were entertained by seeing this, and they asked several questions about the manner in which different glass things are made. They asked, for instance, how the panes of glass, which they saw in windows, are made; and how looking-glasses are made; and they wondered how the *cut-glass*, or that which they saw in chandeliers, is made. But their father told them that they could not possibly learn so many things at once. He added, that perhaps, at some future time, he should have an opportunity of taking them to see a glass-house, and of showing them how different kinds of glass are made.

"To-morrow, papa, will you take us," said Lucy; "or next week?"

"No, neither to-morrow, my dear, nor next week. You must not see, or attempt to learn, a variety of things at once, else you will learn nothing well, but will only have a jumble of things in your head. Now go to bed, my dear children."

Then Harry put the pincers into their places, and threw the pieces of glass into the fire; and Lucy put by their books, their pencil and paper, and their map of the stars. They were careful to put all these things into their places, because their mother had advised them not to make it troublesome or inconvenient to show them experiments, or to let them amuse themselves in the same room with her and with their father.

"Now we have put all our things into their places, mamma," said Lucy; "and after we have gone to bed you will not have the trouble of doing that for us. Good night. You will let us try experiments another time, I hope, mamma, because we have not been troublesome."

In the morning, Harry and Lucy went to their father's room; and Harry observed that they had lost a day by their father's not being at home. "So now," added he, "we must make up for it, and *get on* to the barometer."

Lucy was, at this instant, mixing up the lather for her father, who was going to shave. She took a tobacco-pipe, and blew a bubble into the air; and when it burst, she said, "Do, Harry, let me ask one more question about a bubble. Papa, when a bubble bursts, does the air which was inside of it stay where it was; or what becomes of it?"

"I believe that it does not stay exactly in the same place where it was," said her father: "it spreads, and mixes with the rest of the air in the room. It is supposed that when there is less air in one place than in another, the air which is collected in the place which contains the most of it rushes into that which contains the least of it."

"But what makes some places fuller of air than others?" said Lucy.

Her father said that he did not know; but he reminded Lucy that air can be squeezed into a smaller space than it usually occupies.

"Why, it occupies the whole world, does it not?" said Harry.

"No, brother, not the whole world, you know; for stones, and trees, and animals have places in the world; but the air is all round us, and is in every place where there is nothing else."

"That is true, or nearly true, Lucy," said her father. "Harry, do you know any other name by which people sometimes call the air that is all round us?"

Harry said that he did not recollect any other name for it; but Lucy said that she believed the air is sometimes called the *atmosphere*; and she said she had heard people speak of the *pressure of the atmosphere*, but that she did not clearly understand what they meant thereby.

"Take this hand-firescreen, my dear," said her father; "move it upwards and downwards, and backwards and forwards. What do you feel?"

"I feel that I cannot move it quickly," said Lucy.

"What prevents you? Let Harry answer that."

"I believe it is the wind," said Harry.

"There is no wind in the room," said Lucy.

"But when she moves the screen backwards and forwards, I feel a wind," said Harry.

"It is the moving the screen which puts the air in the room in motion. You will feel the air, or atmosphere, in any part of the room, if you move against it," said his father. "Take this little parasol, half-open it—do not fasten it up. Now run with it against the air, holding the outside of the parasol from you."

Harry did so, and found that as he ran, the parasol was closed by the air in the room, against which he pressed. Then his father told him to stand on a chair, and let the parasol fall when it was shut; and it fell quickly. He then opened it; and when it was open, Harry let it fall from the same height. It now fell very gently, and Harry perceived that it fell slowly because, when it was open, it was resisted by the air underneath it in falling: he also observed that the parasol, as it fell, *made a wind*, as he said.

His father then cut out of a card the shape of a wheel; and he cut the card in several places, from the outside, or *circumference*, towards the centre, and he turned these bits of cards sloping, so as to make a little windmill; he put a large pin through the centre of it, and stuck this pin into the uncut end of a pencil, so as to make a handle. Then he blew against it; and when he found that he could blow it round easily, he gave it to Lucy, and opening the window, desired her to hold it against the air at the open window, which rushing in suddenly, turned the little windmill. Then he shut the window, and told Lucy to run with the windmill as fast as she could from one end of the room to the other, holding it in such a manner that it might press against the air as she ran. She did so, and the windmill turned quickly; then she and Harry perceived that the forcing and pressing against the air made the windmill turn round in the same manner as it had done when the wind blew against it.

"Harry," said his father, "take these bellows, blow the fire with them. What comes out of the *nose*, or nozzle of the bellows, as it is called?"

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Harry and Lucy cutting up the firewood.



John and Sam sitting up the firewood.

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"Air, or wind," said Harry.

"What makes that wind?"

"My blowing the bellows," said Harry.

"What do you mean by blowing the bellows?"

"Making the bellows blow," said Harry.

"But how do you make the bellows blow?"

"By pulling up the top of the bellows, and shutting it down," said Harry.

"Very true," said his father; "that opens the bellows, and makes room for air to go into them."

"The air," said Harry, "goes in at the large hole in the bottom of the bellows."

"It does so," said his father, "and some goes in at the pipe, or nose; but what hinders the air from going out of the large hole in the bottom, where it went in?"

"Harry said there is a little flap, or door, that shuts down when I blow the bellows."

"That little door," said his father, "or *valve*, as it is called, falls down by its own weight when you blow the bellows, and it shuts that hole, and the air which is then in the bellows goes out at the pipe into the fire. If I were to paste a piece of paper over the hole in the bottom of the bellows, what would happen?"

"The air," said Harry, "would come into the bellows at the nose when I lift up the top, and would go out again at the nose when I shut the bellows."

"Then," asked his father, "what is the use of the hole at the bottom of the *valve*?"

"I believe," answered Harry, "it is to let the air in more quickly and more readily."

"It is so," said his father. "I will paste a piece of paper over the hole in the bottom of the bellows, and when it is dry, to-morrow, we will see what will happen. Now let me finish dressing myself."

The day was very cold, and the fire in the breakfast-room did not burn so well as usual. Harry's father, who was a man able to do things with his own hands, went for some dry wood, which he sawed into pieces of a certain length, convenient for putting on the fire. Harry could saw very well, and he assisted his father. Lucy stood by,

and she asked him to let her try to saw. At first Lucy could scarcely move the saw; it seemed to stick in the wood, and she said she wondered how Harry could do it so easily. Harry showed her how to move the saw, and guided her hand at first; and after a little practice, with some patience, she got on pretty well. After she had sawed the branch in two, her father split it down the middle with a *cleaver*, or a little hatchet. He did not allow the children *yet* to meddle with the hatchet, lest they should cut themselves, as it requires some skill, care, and practice, to be able to manage a hatchet well.

Harry and Lucy wished that they might saw wood every day for the fire. They said that it would be pleasant work, and that it would warm them so well, and that it would be so useful! They begged that their father would lend them a saw, and give them wood to saw, and a block, or a *horse*, to saw upon.

Their father answered, "My dears, do you think that I have nothing to do but to get you everything you want? I am afraid that, if I were to take the trouble to provide you with these things, you would soon grow tired, and perhaps, after sawing half a dozen pieces of wood to-day and to-morrow, you would throw aside the saw, and forget it, as I have sometimes seen you throw aside and forget or break toys, which delighted you the first hour or day you possessed them."

"Break! Oh, father! my dear father!" cried Lucy, "*that* was only the foolish toy *that* lady gave me, of which I could not make any use or any diversion in the least; after I had once looked at it, there was an end of it. I could not move the wooden woman's arms, or do anything with her, so I forgot her, and left her on the floor; and the footman, by accident, put his foot upon her when he was bringing in coals. But, indeed, papa, I never break or forget my playthings, if I can play with them. There's my cart! I have had it a year—a whole year. And there's my hoop, my battledores and shuttlecock, my jack-straws, my cup and ball, and my ivory alphabet."

"And there's my cart, and my pump, and my bricks, and my top, and our dissected maps," cried Harry. "I

am never tired of them, I know. And there is no danger, papa, that we should grow tired of a saw, if you will only be so good as to give us one, because it will always give us something to do; and, as Lucy says, we grow tired only of things that we cannot make any use of. Pray, papa, try us."

Their father was so kind as to grant their request. He lent them a saw, and a *horse* that held the wood which they wanted to saw; and he allowed them to work in a little room on one side of the hall, in which there was no furniture. It had been used as a sort of lumber-room. Here was kept a provision of wood for the winter, and there was plenty of branches which the children could saw. Their father told them to saw these into pieces of about a foot or eighteen inches in length; and he said that when they were sawn into these pieces, he would have them split.

"Papa!" cried Harry, "let us do it *all* ourselves. I can split them, I assure you; and we will take care not to cut ourselves, if you will lend us the little hatchet. Now, father, I will show you how well I can use the hatchet. Lucy may saw, and I will split."

Their father, however, would not lend them the hatchet yet. He told them that if they sawed only small branches, such as he would give them, these need not be split asunder afterwards. They sawed this morning wood enough for the evening's fire. This evening they enjoyed the first fire made with wood of their own sawing—the first fire acquired by the labour of their own hands.

"Did you ever see such a delightful blaze in your life, mamma?" said Lucy.

"Papa," said Harry, "this fire has warmed us twice. I mean, the sawing the wood warmed us while we were at work, and now it warms us again whilst it is burning. Mamma, would you be so good as to begin to read about the way of walking in dangerous places, now Lucy and I are sitting so comfortably at your feet, and the fire is blazing so finely?"

Their kind mother smiled, and she began to read as follows:—

“In the neighbourhood of Mount Pilate there are people who give lessons in the art of walking as regularly as lessons in dancing are given elsewhere. It is of the greatest importance, in certain dangerous places, to know which foot to make use of, or which hand to use, to preserve the balance of the body; and when you are to step on sharp-pointed rocks, you must be sure when you are to put down your heel or your toe first. For want of instruction, or for want of attending to these instructions, you might fall down a precipice, or be obliged to remain in a painful attitude, without daring to go forwards or backwards. The shoes usually worn on these mountains are merely soles of thin light wood, which are tied on the foot with leather straps. There are iron horse-shoe nails at the bottom of the soles, which stand out from the sole near half an inch. The *mountain-climber* depends chiefly on his stick or pole. This pole must be light and pliable, and yet strong enough to bear the weight of a man, if it should happen, as it sometimes does, that the pole is stretched from one point of a rock to another, over the man's head, while he clings with both hands to it as he passes beneath. The point of the pole is armed with iron at least two inches long.

“When a man wants to go down a steep descent, he does not set out with his face turned towards the bottom of the hill, because his whole body would be out of a perpendicular line——”

“Out of a perpendicular line!” interrupted Lucy. “Mamma, I am not clear about *perpendicular* and *horizontal*.”

“No!” cried Harry, starting up; “then, my dear Lucy, I will make you clear about them in an instant, and for ever. Look,” cried he, as he stood bolt upright, “now I am perpendicular; and now,” continued he, throwing himself flat upon the carpet, “now I am horizontal.”

“Thank you. Now, mamma, I shall understand it.”

“The man's whole body would be out of a perpendicular line, so that when he advanced three or four steps, as the hill becomes steeper, he would fall forward; therefore

the man turns his side toward the bottom of the hill. In this position he has one foot higher than the other ; if his left side is toward the bottom of the hill, his right foot must stand highest ; this must be observed, that you may understand the manner in which he then makes use of his stick. He holds it sloping with both his hands, one of its points resting against the ground ; and this point must be above the place where his highest foot stands. The right hand must be at the bottom of the stick, and the left is at the middle of it. In this attitude the man leans on the stick, with which he rakes or scrapes away the ground, as he descends the hill. You may imagine with what swiftness he goes, and without the least danger ; because his body thus leaning on the stick and approaching the ground, there is no danger of falling. If by chance the man's feet were to slip, the weight of his body leaning on the stick, it is necessary only to slide the left hand, which was in the middle, towards the bottom of the stick. Then it is impossible that the man should slip far ; because the stick becoming almost perpendicular, and being grasped near the bottom by both his hands, it catches against the least obstacle or hollow in the ground ; and this is sufficient to stop the man from sliding further downwards.

"In places where there are a great number of loose pebbles, as the most skilful walker might slide down along with the loose pebbles, two or three walkers join, and agree to go together. They provide themselves with a long pole, which they all hold with one hand : by these means, if one slips, the others hold him up. If all the party slip, which may chance to happen, he who first quits his hold of the pole is punished in whatever way the others think proper."

"My dear little Lucy," said her mother, putting down the book, and looking at Lucy, whose eyes were closed, and whose head was nodding—"my dear little girl, you are just asleep."

"Asleep! Oh no, mamma, I am not asleep at all," cried Lucy, rousing herself.

"My dear, there is nothing shameful in being sleepy,

especially at the hour when it is time for you to go to bed. Only do not let me read to you when you are sleepy, because you cannot possibly attend to what is read; and you would get the habit of hearing my voice without minding or understanding what I say."

"Oh, mamma! I beg your pardon; I assure you I heard the last words you read; it was something about *punished as they thought proper*; but I believe, mamma, I was sleeping a little, too, for those words joined somehow with my dream; and I was dreaming about a saw, and sawing wood; and I thought that as I was sawing, I slipped, and saw, and wood, and horse, and all slipped, and were sliding down a hill; and just then I heard the words, 'punished as they thought proper.'"

"I know the reason she is so *shockingly* sleepy," cried Harry; "it is because she worked so hard this morning, sawing; and she is not so strong, you know, as I am."

"There is nothing *shocking*," said his father, laughing—"there is nothing shocking in your sister's being sleepy. Good night, Lucy, my dear; go to bed. Good night, Harry."

"No, papa, not good night to me, pray: I am not at all sleepy. I was thinking how I should like to live on that mountain, and slide down, with my pole in my hand, and learn to walk in dangerous places. But here there are no precipices, papa; and I cannot learn to walk as they do on Mount Pilate."

"This is a lamentable case, indeed, Harry," said his father; "but if you are so exceedingly anxious to learn to walk among precipices, I can tell you how a celebrated traveller says that you may learn to do it, even in this flat country."

"Can you, papa? Oh, pray do tell me."

"Shut your eyes, and imagine yourself among precipices, and walk on; and M. de Saussure says you may thus accustom yourself so to the idea of danger, that you would be much less terrified afterwards, if you were among real precipices, than another person would who had never pursued this method."

"Is this true, papa?"

"I do not know, for I have never tried it. But I should think that you might practise walking over a narrow plank that was raised a foot from the ground, and, if you learn to balance your body and walk well upon that, if you were not afraid, you would be better able to walk steadily over any narrow bridge where there was a precipice or water beneath."

"So I could," said Harry; "and I will try this experiment to-morrow. There is a long ladder lying on the grass before the door, and I will walk on one side of the ladder, and Lucy on the other—for I suppose she will not be asleep to-morrow—and we shall see who slips first. Good night, mamma; good night, papa, and thank you."

LUCY was quite rested and refreshed when she awoke the next morning; and she went into her father's room, with her brother, at the usual hour.

The paper which had been pasted over the hole in the bellows was now dry; and Harry found that when he lifted up the top, the air came into the bellows at the nose; but it did not come in so readily as when the hole in the bottom was open.

Harry's father now put a peg into the nose of the bellows, and desired Harry to blow. Harry, with great difficulty, lifted up the top of the bellows slowly. He knew that this difficulty was occasioned by the shutting up the opening at the valve of the bellows and at the nose; and he asked his father how any air could now get in.

His father told him that bellows cannot be so well made as to hinder the air from forcing its way into them at the place where the nose is fastened to the leather; and that, besides this, the air gets in between the leather and the wood.

"I see, papa, the paper which you pasted over the hole in the bellows sinks inwards," said Harry, "when you lift the top, and swells outwards when you shut it down."

"It does so, my dear; and if the other parts of the

bellows were air-tight (as it is called), the paper would be broken inwards when I pull up the bellows."

"I suppose, papa, if it was not such strong paper it would break now, when you lift it up suddenly?"

"It would, my dear. I will wet the paper, which will make it softer, and more *fragile*."

"What is *fragile*, father?"

"That which can be easily broken, Harry."

"Now you see that lifting the top quickly has burst the paper."

"Yes, father, I see that the air, endeavouring to rush in, has broken the paper; the edges of it are all blown inwards."

"You perceive, then, Harry, that the air which is in the room, and everywhere else, is always forcing itself into any empty space; and that, if it cannot force its way immediately, it drives anything before it, which it can move, into that space."

"But I want to know, papa," said Harry, "what makes the parts of air fly from each other?"

His father answered that he did not know; "but I do know," said he, "that if heat be added to air, the parts of the air separate from each other to a greater distance, and with greater force, than when they are colder. Now, Harry," continued he, "I will close the valve, or door of the bellows; and if we were to put the end of the bellows into this bowl of water, and if we were to open the bellows, what would happen?"

"The water would go into the bellows," said Harry.

"Why should it go in?" said his father; "the parts of water, you know, do not fly from each other, in all directions, like those of air. If the bellows were lower than the bowl, the water might fall down into them; but you see that the bellows are higher than the water."

"I do not think," said Harry, "that the water would move itself into the bellows. It is the air on the outside of the water which would rush into the bellows, if the water were not in the way. The air drives the water before it into the empty part of the bellows."

Harry's father then took a tumbler in his hand, and filled it with water, and said, "If this tumbler, that is full of water, be emptied of the water, the air that is in the room will enter into the tumbler, whether it be held in any part of the room, upwards, or downwards, or sideways." He emptied the tumbler. "Now," continued he, "the air fills the space in the tumbler, which the water did fill; and, whichever way I hold the mouth of the glass, whether upwards or downwards, to this side or that, the air would go into it, and fill it."

"So it is full of air at this very moment, is it?" said Lucy. "But how can you be sure of that, papa? because we cannot see the air."

"No; but we can feel it," said Harry. "Wet your finger, and put it into the tumbler, and move it about quickly, and you will feel the air."

"I hope you are satisfied now," added he, laughing, as Lucy gravely put her finger into the tumbler, and said, seriously, "Yes, I am satisfied now."

"That is right, Lucy," said her father, "take nothing for granted. Now, observe what happens when I put this tumbler, with its mouth downwards, into the water in this basin. Does the water inside of the tumbler rise higher than the water on the outside of it, or does it not rise so high?"

"It does not rise quite so high," said Lucy.

"What do you think is in that space which you see above the water in the tumbler?"

Lucy at first hastily answered that there was *nothing*; but, recollecting herself, she said there was air; and she just said the word air at the same moment when Harry said it.

"And now, suppose that I could take away that air which is in the glass immediately over the water. What do you think would happen when that air was taken away?"

Lucy said that she did not think that anything would happen.

Harry said that he thought that the water would rise in the glass, and fill the place which the air had filled.

"Right, Harry," said his father; "it would."

"Oh! to be sure, so it would," said Lucy; "but I did not say *that*, because I was thinking you meant quite a different sort of thing, papa. When you said *what would* HAPPEN? I thought you meant to ask if any accident would happen; if the glass would be broken suddenly, or something of that sort. Oh! to be sure, I know the water would rise in the glass."

"And do you know, Lucy, why it would rise in the glass, or what would make it rise?"

Lucy could not tell; all she could say was, that the water would rise because there was room for it to rise; but her brother said he believed that the air in the room—the air that was all over the water in this basin, in which the tumbler is turned down—would press upon that water, and, by pressing it so, would force it up into the glass, if there was no air or anything else in the glass to prevent the water from rising.

His father, without telling Harry whether he was right or wrong, said that he would try this for him.

But just then their mother came in, and told their father that breakfast had been ready some time; and she was afraid that, if he did not come soon, the muffins would be quite cold. Immediately their father made a great deal of haste to get ready. Harry smiled, and said, "Ha! ha! see what haste papa makes, now he knows the muffins are come! He loves muffins, I see, as well as I do!"

"I dare say he loves muffins, and so do I," said Lucy; "but I know, Harry, it is not all for the sake of the muffins that he is making this wonderful haste; there's another reason."

"What other reason?" said Harry.

"Because," whispered Lucy, "he loves mamma, as well as muffins, and he does not like to keep her waiting for breakfast, *always*; particularly when she is so good, you know, and is never angry."

"I wonder whether you will be as good when you grow up," said Harry, laughing. "No, no; I dare say you will frown this way at your husband, and

say, 'I wonder, Mr. Slow, why you are never ready for breakfast!'"

"Now, papa, this morning," said Harry, "I hope we are to see the experiment which you were going to show us yesterday, just when mamma and the muffins came. You know, papa, that you asked us what would happen if you could take away all the air that is in this tumbler between the top of the water and the glass, and Lucy said *nothing* would happen; but she was wrong."

"Only at first, brother; I was only wrong at first, when I did not understand papa's question; afterwards, you know, I was right as you were, for I said the water would rise up higher in the glass, to be sure."

"Yes, but then you did not know the reason why it would rise, and I did; for when papa asked me, I said that the air in the room, the air that is all over the water in this basin, in which the tumbler is turned down, would press upon that water, and force it up into the glass, if there was no air left in the glass to hinder it."

"Well, I know that," said Lucy, "as well as you."

"Yes, when I tell it you," cried Harry; "but I said it first. I was right from the beginning."

"Come, come, my dear children; no boasting, Harry; no disputing, Lucy; and then you will both be right. What signifies which of you said it first, if you both know it at last. Now, Harry, turn your attention to this, and you also, Lucy. I am going to try an experiment that will prove to you whether the water will or will not rise in the glass, when some of the air above it is taken away."

"But I cannot imagine, papa," said Harry, "how you will contrive to get all that air out of the glass."

"I cannot easily get all the air out of the glass. I cannot easily produce what is called a perfect *vacuum*, that is, a place where there is nothing—neither air, nor anything else; but, though I cannot produce a vacuum in the top of this glass, by taking away *all* the air, I can easily take away some of it."

"How, papa?" said Harry and Lucy at once. Their father answered, "You shall see."

Then he went for a crooked, or bent tube of glass, which was nearly in the shape of a capital U. He told Harry that tubes of this sort are called siphons. He put one *leg* of this tube under the bottom of the tumbler, up through the water in the tumbler, into the place which appeared empty.

He now told Harry to suck at the other end of the siphon. Harry did so; and, as fast as he sucked, the water rose in the tumbler; but, when Harry took away his mouth, the water fell again.

"Why does this happen, Harry?"

"It happens, I believe, father, because, when I sucked, I took away the air that was above the water in the tumbler; and when I left off sucking, and took my mouth away, the air went again through the siphon into the tumbler above the water."

"Just so, Harry. Now the same thing would happen if I could take away the air in the tumbler, or lessen it by any means. If I could fill, or partly fill, the tumbler with anything that could be taken away from beneath the tumbler while it stands in the water that is in the basin, then we should see the water rise in the tumbler in the same manner as if the air were sucked out of it. What shall we put into it, that we can readily take out, without disturbing the tumbler?"

"I don't know," said Harry.

"Here," said his father, "is a little *spool*, or roller, upon which silk is usually wound. Now, I will put this into a little frame of tin, that will support it under the glass tumbler above the water. Upon this I have wound some very broad tape, so as to fill up a large space in the tumbler; I pull one end of the tape under the bottom of the tumbler, through the water that is in the saucer, so that I can unwind the whole of the tape without disturbing the tumbler. You see that the water rises in the tumbler as I unwind and draw out the tape; and, now that it is all drawn out, the water has filled as much of the tumbler as had before been filled by the tape."

"That is very pretty," said Harry; "I understand it. When the tape was taken away, the room that it filled would have been supplied with air if air could have got into the tumbler; but, as it could not get in, it forced the water in the basin to go up into the tumbler."

"Now I will show you, my dear children, another method of trying this experiment. I make a little stand of halfpence under the tumbler, upon which I can put a piece of paper without its being wet by the water in the basin. I set fire to the paper, and, whilst it is flaming, I put the tumbler quickly over the flame into the water. Now, you see the flame goes out, and the water rises."

"Yes, papa; I suppose the flame burns out some of the air."

"It does, Harry, consume a little of the air in the tumbler; but that is not the cause why so much water rises. You saw that the flame took up a considerable quantity of room in the tumbler while it was burning, but the moment that the glass covered the flame, it went out, and then the room which the flame took up was supplied by the water rising from the saucer."

"Yes, papa, the water was driven in by the air that wanted to get into the tumbler."

"Just so, Harry. Now, instead of putting a piece of lighted paper upon the little stand of halfpence, I put a piece of tow dipped in turpentine upon it; this, you see, makes a larger flame, and when this is extinguished, or put out, by placing the glass quickly over it, more water rises than in the former experiment. If I were to dip the tow into spirits of wine, and light it, it would answer the same purpose as tow dipped in turpentine."

Their father warned the children against the danger of having more than a very small quantity of turpentine or spirits of wine brought near to the candle or to the fire, as it might easily catch fire, and set fire to their clothes, or to the furniture in the room. "All experiments in which the use of fire is necessary," their father said, "children should never attempt to try when they are in a room by themselves. Some grown-up person should

always be present, to prevent accidents, or to assist, if any accident should happen."

The children both promised their father that they would take care never to meddle with fire when he or their mother was not present, or to try any dangerous experiments.

Harry then turned again to look at the tumbler, and repeated that it was really very pretty to see the water rise in the tumbler, pressed up by the air that was over the water in the basin. Harry still seemed doubtful whether Lucy understood it.

"You see, Lucy, the air presses this water first, and that presses it up into the tumbler."

"Yes, I understand it perfectly," said Lucy.

"But, Harry," said his father, "you say that the air presses the water in the basin up into the glass tumbler. What do you think would happen if there were no water in the basin?"

"I believe the water would run out of the tumbler," said Lucy.

"So it would," said her father, "unless the bottom of the tumbler was ground quite smooth, and the basin also ground quite smooth."

"And what would happen if the basin and tumbler were ground quite smooth?" said Harry.

"Then," replied his father, "if you lifted up the tumbler, the basin would come up with it from the table, and seem to stick to it."

"I should very much like to see that experiment," said Lucy; "but we have no glass vessel or basin ground smooth enough, I believe."

"No; but I can show you an experiment equally satisfactory without them," said their father.

"I fill this ale-glass with water, and I cover it with a card, having first wetted the side of the card which is next to the glass. I now put the palm of my hand on the card, and I turn the glass upside down on the card which lies on my hand. You now see that, though I have taken away my hand, the card sticks to the glass."

"That is very pretty!" cried Lucy.

"But why does not the water fall out?" said Harry.

"Because the card keeps it in?" said Lucy.

"Why does it keep it in?" said Harry.

"Because the card sticks to the glass?" said Lucy.

"And what makes it stick to the glass?" said Harry.

Lucy did not answer immediately; but her father asked Harry if he knew.

Harry said it did not stick to the glass, "but it is held close against the glass by the pressure of the air that is in the room."

"That is quite right," said his father; "by the pressure of the atmosphere. I am glad, Harry, that you know that the air presses upwards as well as downwards and sideways, and in all directions."

"Father," said Lucy, "will you be so good as to try that experiment again?"

"Here, you see the card remains close to the bottom of the glass," said their father.

"But, father, the glass is not full," said Lucy.

"Yes, it is full," said Harry; "though it is not quite full of water, it is full of water and air."

"I left it so on purpose," said his father. "Now I will hold it to the fire, and you shall see what will happen."

In less than half a minute they saw the card drop off, and the water fall on the hearth.

"What is the cause of that?" said his father.

"The heat of the fire swells, or expands the air that is in the glass over the water, and forces it and the card downwards," said Harry.

"There was also a little steam formed," said Lucy.

"There was," said her father. "Now let us take care, and not be late at breakfast this morning."

The children went to tell their mother of this last experiment, which pleased them particularly.

As soon as Harry and Lucy had finished their lessons this day, they went into what they now called "*their wood-room*," and sawed the provision of wood for the evening fire; and Harry's father lent him a little hatchet

for a few minutes, while he stood by, to see whether Harry could use it without hurting himself. Harry split half a dozen billets of wood, and begged that, as he had done no mischief to himself or to anybody or anything else, he might have the hatchet the next day, to split the wood in the same manner. But his father said,—

"It is not likely that I should have time to stand by to-morrow to see you split wood, though I happened to have leisure just now; and I cannot yet trust you with the hatchet when you are alone. But, Lucy, what makes you look so blue? you look as if you were very cold; I thought you had warmed yourself with sawing."

"No, papa; because I have not been sawing. Harry had the saw. You know two of us could not use the saw at the same time; and so I had nothing to do but to give him the wood when he wanted it, or to hold it for him when he was sawing; and that, you know, papa, was very cold work. That is what makes me look so blue, I suppose."

"Well, to-morrow you shall saw, and I will hold the wood," said Harry, "or we will take it by turns; that will be better. You shall begin, and saw one stick through, and I will hold the wood; then I will saw, and you shall hold the wood. That will be fair, will it not, papa? Quite just; I must be just, to be sure."

"Yes," said his father. "In your code of laws for the children on Mount Pilate do not forget that; nobody can govern well that is not just."

"That's true," said Harry, looking very thoughtful.

"Now, which must I put first, honesty or justice?"

"I think," said Lucy—and she paused.

"What do you think, my dear?" said her father.

"I was going to say, that I thought that honesty is only a sort of justice."

"You thought very rightly, my dear. It is so."

"And what are you thinking of, yourself, may I ask you, papa?" said Lucy; "for you looked at the saw as if you were thinking something more about our sawing."

"I was so," answered her father; "I was just think-

ing of a way by which you could both saw together with the same saw."

"How, papa?"

"Invent the way for yourself, my dear."

"*Invent*, papa! Can I *invent*?" said Lucy.

"Yes, my dear; I do not know of anything that should hinder you. To invent, you know, means—what does it mean, Lucy?"

"It means; to invent means to—think," said Lucy; "but that is not all it means; for I think, very often, without inventing anything. It means to contrive."

"And what does to contrive mean?"

"It means to make a contrivance for doing anything. Oh, papa, you are going to ask me what a contrivance means—stay, I will begin again. To invent, means to think of, and to find out a new way of doing something that you want to do."

"Well, now try, if you can, to invent some way of using this saw, so that you and your brother could work with it at the same time. Harry, think of it too; and whichever thinks of anything first, speak."

"Papa," said Harry, "I recollect that on the day we went to the farmer, who lives on the hill, Farmer *Snug*, as Lucy and I called him, we noticed two men sawing in a sort of pit."

"I remember it," cried Lucy; "and papa told me it was called a sawpit."

"And one of the men stood on a board that was placed across the top of the pit, and the other man stood at the bottom of the pit, and they had a kind of saw that was fixed upright, perpendicularly, this way, in a sort of frame. One of the men pulled it up, and the other pulled it down, through the wood they were sawing. Now, if Lucy and I had such a place to saw in, or if I stood upon something very high, and we had another handle to this saw——"

"But, brother," interrupted Lucy, "what would be the use, to us, of pulling the saw up and down, that way; if we had but a handle at each end of this saw, why could we not saw with it, pulling it backwards

and forwards, just as we stand now, without anything more?"

"Very true, Lucy," said her father; "now you have found out, or invented, a kind of saw which was invented long ago, by some one else, and which is at present in common use; it is called a *cross-cut saw*: I will get you a cross-cut saw. Now put on your hats; I am going to walk to see Farmer *Snug*, as you call him, about some business of my own; and you may both come to me."

Harry and Lucy got ready in a minute, and ran after their father, who never waited for them. When they came to the farmer's house, while their father was talking to the farmer about his business, they ran to the sawpit, in hopes of seeing the men sawing; but no men were at work there. As they returned, they heard the sound of men sawing in a shed near the house, and they looked into the shed as they passed, and they found two men sawing the trunk of a tree across, with something like the sort of saw which Lucy had described to her father. They went back to Farmer *Snug's* to tell this to their father; but he was busy talking, and they did not interrupt him. While he was engaged with the farmer, Harry and Lucy amused themselves with looking at everything in the parlour and kitchen of this cottage. There was one thing in the parlour which they had never seen before. Over the chimney-piece hung a glass phial bottle, in which there was a sort of wooden cross, or reel, on which thread was wound. This cross was much wider than the mouth or neck of the bottle; and Harry and Lucy wondered how it could ever have been got into the bottle. As they were examining and considering this, their father and the farmer, having finished their business, came up to them.

"Ah! you've got *that* there *cur'ous* thing, that reel in the bottle," said the farmer. "It has puzzled my wife, and many a wiser person. Now, master and miss, do you see, to find out how that reel, thread and all, was got, or, as I say, conjured into the bottle. And I don't doubt, but I might *ha'* puzzled myself over it a long time, as well as another, if I had not just happened to be told

how it was done, and, after, to see a man doing it, as I did for a shilling."

"Oh, how I wish I had been there!" cried Harry.

"And I too!" said Lucy. "Pray how was it done, sir?"

"Why, master. Why, miss, you see, just this way, *very ready*. The glass was, as it were—before it come to be a bottle *like* at all—was taken, and just blown over it, from a man's mouth, with fire and a long pipe. While they *was* shoeing my horse at the forge, the glass-house being next door, I stepped in, that I did."

Harry and Lucy stood looking up in the man's face, endeavouring to understand what he said; but, as Farmer Snug had not the art of explaining clearly, it was not easy to comprehend his descriptions.

"Then I will tell you what, master," said the farmer, growing impatient at finding that he could not explain himself; "it is an *impossibility* to make a body comprehend it rightly, except they were to see it done; and the man who did it is in our market-town here, hard by. He is a travelling kind of a strange man, who does not speak English right at all, not being an Englishman born, poor man! no fault of his! So, if you think well of it, sir, I will bid him, when I go by times to market, call at your house to-morrow. He goes about the country, to people's houses; he blows glass, and mends weather-glasses, and sells 'mometers and the like."

"Weather-glasses! barometers!" said Harry. "Oh, pray, papa, do let him come!"

"Thermometers! he sells thermometers, too!" cried Lucy. "Oh, pray, papa, let him come!"

Their father smiled, and said that he should be obliged to Farmer Snug if he would desire this man to call; and he begged that he would call in the morning, at half-past nine o'clock, if he could.

So much for the pleasures of this morning.

In the evening, Harry and Lucy's father and mother were reading to themselves; and the children entertained themselves with putting some more stars into their map of the sky; and they looked at the great celestial globe

which their mother had uncovered for them, and they learned the names of the signs of the Zodiac, and the months to which they belong. Lucy showed these to Harry, and said, "Mamma does not know them all herself; let us get them by heart, and surprise her."

Accordingly they learnt them, with some little difficulty.

After they had learnt these, Harry and Lucy refreshed themselves by playing a game at *Jackstraws*, or, as some call them, *spilikins*. Lucy had taken off almost all the straws without shaking one, and, consequently, according to the rules of the game, would have been victorious; but, unluckily, a sudden push backwards of her father's chair shook her elbow, shook her hand, shook *Jackstraw*, just as she was lifting him up, and he fell!

Harry, clapping his hands, exclaimed, "There! you shook! you shook! You have lost."

Lucy looked at her brother, and smiled.

"She has lost the game," said her mother; "but she has won a kiss from me, for her good humour."

Lucy, indeed, bore the loss of her game very good humouredly; and, when she went to wish her father and mother good night, they both kissed her, and smiled upon her.

"THE barometer-man is to come to-day, papa, at half-past nine, and it is half-past eight now. Will you get up?" said Harry.

"The man who can show us how the reel was put into the bottle," added Lucy. "Will you get up, papa?"

Their father rose and dressed himself; and, as he was dressed by nine o'clock, they had half an hour to spare before the time when this *much-expected* man was appointed to come.

"Why should we waste this half-hour, Harry?" said his father; "let us go on with what we were talking of yesterday morning. Do you recollect the experiments we tried yesterday?"

"Certainly, papa," said Harry; "you mean the experiments you showed us with the burning tow and the turpentine, to make an empty space—a *vacuum*, I remember, you called it—in the tumbler, that we might see whether the water would rise and fill the place which the air had filled. Yes, papa, I remember all this perfectly."

"And I remember the experiment you tried with the roll of tape, papa, which you put under the glass. When you unrolled the tape, and pulled it gently from under the tumbler, the water went up, and took the place of the tape that was unrolled."

"But, papa!" cried Harry, "I have thought of something! I want to ask you a question, papa."

"Ask it, then, my dear; but you need not begin by telling me that you want to ask a question."

"What I want to say, papa, is this——"

"Think, first, my boy, and when you clearly know what you mean to say, speak; and begin without that foolish preface of *What I want to say is this*."

"What I want," Harry began from habit, but stopped himself, and began again—"Would the water run up into a very high vessel, papa, as well as it ran into the tumbler, if you suppose that some of the air in the high vessel were taken out of it?"

"Yes," answered his father; "if the vessel were as high as the room in which we are, the water would remain in it, if it were quite emptied of air."

Harry asked if it would stay in the vessel, were it as high as the house.

"No, it would not," answered his father; "because the pressure of the *atmosphere* is not sufficient to hold up the weight of such a column of water as could be contained in a pipe forty feet high; though it is sufficient to *support*, or *sustain*, or hold up, the water that could be contained in a pipe thirty-four feet high."

Harry said he did not understand this.

"I am not surprised at that," said his father; "for you are not used to the words, *pressure of the atmosphere*

or *column of water*, and to other words which I make use of. But," continued his father, "if we had a pipe forty feet long, with cocks such as are in tea-urns fitted well into each end of it, and if the pipe were placed upright against a wall, with the bottom of it in a tub of water, and if the lower cock were shut, and if the upper cock were opened, the pipe might, by means of a tundish, or funnel, be filled with water. Now, Harry, if the lower cock were open, what would happen?"

"The water would run out at the bottom," answered Harry, "and would overflow the tub."

"True," said his father.

"But now suppose the pipe were filled again with water; and if the cock at the top were shut, and the cock at the bottom opened under water, would the water in the tube run out?"

"No, it would not," said Harry; "the pressure of the atmosphere at the bottom of the pipe would prevent its falling out."

"That would be the case," said his father, "if the pipe was only thirty-three or thirty-four feet high; but this pipe is forty feet high, so that the water in six feet of the top of the tube would run out; and if this were allowed to run out very gently, the water in the remaining thirty-three or thirty-four feet would continue supported by the *pressure of the atmosphere* on the water in the tub."

"Papa," said Lucy, "there is a tub of water in the area under the window in my room; and this would be a fine way of raising water up into my room, without the trouble of carrying it up stairs."

"My dear, that is an ingenious thought," said her father; "but you are mistaken. I will not attempt at present to tell you exactly how——"

"Here is the barometer-man, papa!" interrupted Lucy. "I saw an odd little man, with a box under his arm, go by the window. Hark! There he is, knocking at the door."

The man was shown into a room which was called the

workshop. He was a little, thin man, with a very dark complexion, large black eyes, and, as the children observed, had something ingenious and good-natured in his countenance, though he was ugly. Though he could not speak English well, he made them understand him, by the assistance of signs. He began to open his box, and to produce some of his things; but Harry's father asked him to rest himself after his walk, and ordered that he should have breakfast brought to him.

Harry and Lucy despatched their breakfast with great expedition; they thought that their father and mother were unusually slow in eating theirs, and that their father drank an uncommon number of cups of tea; but at last he said, "No more, thank you, my dear," and putting aside the newspaper, he rose, and said, "Now, children, now for *the barometer-man*, as you call him."

"Mamma! mamma! pray come with us!" said the children. They took her by the hand, and they all went together.

"Now, mamma, you shall see what Farmer Snug described to us yesterday," said Lucy.

"No, what he could not describe to us yesterday, you mean," said Harry: "how a reel, or a kind of wooden cross, mamma, is put into a bottle, or how the bottle is made or blown over the reel. I do not understand it *quite*, yet."

"So I perceive, my dear," said his mother, smiling.

"But this man will show it to us, mamma," said Lucy; "and I generally understand what I see, though I often do not understand what I hear."

Alas! to Harry and Lucy's great disappointment, this man, when they had with some difficulty made him understand what they wanted, told them that he could not blow a bottle such as they had seen at the farmer's, without being in a glass-house, or without having such a fire or furnace as there is in a glass-house.

This was a sad disappointment; and, what Harry thought still worse, the man had sold all his barometers. However, he had some little thermometers, and Lucy's

mother bought one for her, and gave it to her. Lucy coloured all over her face, and her eyes sparkled with pleasure, when her mother put it into her hand; and Harry was almost as glad as she was.

"Is it really for me, mamma? I will take care and not break it. Harry, we can hang it up in our wood-room, and see every day how cold or how hot the room is before and after we begin to work; and we can try such a number of nice experiments."

"Pray, sir," said Lucy to the man, "how do you make these thermometers?"

The man said he would show her; and he took out of his box some long tubes of glass, and a long brass pipe, and a lamp. It was a lamp with which he could melt glass. When he had lighted his lamp, it made a large flame, which he blew with a brass pipe that he held in his mouth. Her father told her that this pipe was called a blow-pipe. With it the man blew the flame of the lamp, and directed it to one of the glass tubes which he held in his other hand. In a little time the heat began to melt the glass, and it melted into a round ball; this he heated again in the flame of the lamp, and when the glass was soft and melting, he closed that end of the pipe, and it looked like a lump of melted glass; then he blew air with his mouth in through the other end of the glass pipe, till the air blown inside of the pipe reached the end which was melting; and the air being strongly blown against it, it swelled out into a bubble of melted glass, and thus made the bulb of a thermometer-tube. He left it to cool very slowly, and when it was cool it became hard, and was a perfect thermometer-tube.

Harry's father had some *siphons* and bent tubes of different shapes made for him. Harry was very glad of this, for he thought he could try many different experiments with these.

The thermometer-man was now paid and dismissed.

As soon as he was gone, Harry and Lucy went to their usual occupations, for they never missed their regular lessons. Then came sawing wood, then walking out.

Happy children!—always doing something useful or agreeable.

This evening, when they were sitting round the fire after dinner, and after his father had finished reading the newspaper, when he was not busy, Harry asked him what glass is made of.

“I thought you had known that long ago, Harry,” said his father; “surely I have told you, have I not?”

“Yes, papa, I believe—I dare say you have; but I always forget, because I never was very curious or much interested about it till now; but now, when we have been seeing, and thinking, and talking so much about glass, I think I shall remember what it is made of, if you will be so good as to tell me once more.”

His father desired Harry to bring him some sand, which was lying in a paper in his study. Harry did so. Then his father said to his mother, “I wish I had some alkali to show the children, and some barilla ashes. Have you any in the house?”—“No.”

There were no barilla ashes; but she recollected that a heap of fern and bean-stalks had been lately burned near the house, and the ashes of these were to be easily had.

Some of these ashes were brought upon a plate; and Harry's father placed the ashes and the sand before him, and said, “These, when burned together, would make glass.”

“I shall never forget it,” said Harry. “Now I have seen the real things of which glass is made, I shall never forget them.”

“That is what I say, too,” cried Lucy; “seeing things, and seeing them just at the very time I am curious about them, makes me remember easily, and exceedingly well.”

“Taste these ashes,” said their father—“this *pot*-ash, as it is called; wet your finger, take up a little of it, and put it into your mouth.”

Harry and Lucy did so; but they said the ashes had not an agreeable taste. Their father said that he did not

expect that they would think it agreeable, but that he had desired them to taste the ashes that they might know the taste of what is called alkali—what is called an *alkaline taste*."

"I shall not forget *that*, either," said Lucy.

"How wonderful it is," continued she, looking first at the sand and ashes, and then at a glass which she held in her hand—"how wonderful it is that such a beautiful, clean, clear, transparent thing as glass could be made from such different looking things as sand and ashes!"

"And I wonder," said Harry, "how people could ever think or invent that glass could be made of these things."

"Some say that glass was invented, or rather discovered, by a curious accident," said his father.

"Pray, papa, tell us the accident."

"Some sailors, or some merchants, who were going on a voyage, were driven by contrary winds out of their *course*, or way. They were driven close to land, and they were obliged to go on shore. The shore was sandy, and there grew near the place where these men landed a great deal of sea-weed. The men wanted to boil some food in an iron pot which they had brought on shore with them. They made a fire on the sands with sea-weed, and they observed that the ashes of this sea-weed, mixed with the sand and burnt by the fire, had a glassy appearance. It looked like a kind of greenish glass. It is said that from this observation they formed the first idea of making glass by burning ashes of sea-weed (called *kelp*) and sand together."

"How lucky it was that they made this fire on the sand with sea-weed!" said Harry.

"How wise these people were to observe what happened when they did so!" said Harry's father.

NEXT morning, when Harry and Lucy went into their father's room, Harry began with his usual speech, "Now for the barometer, papa! And," added he, "we must

make haste, for we are to go to-morrow to my uncle's, and I must quite understand it before I see him again. We must make haste, papa."

"Let us go on quietly from where we left off yesterday," said his father.

"Yes, about the long pipe," said Harry.

"Pray, papa," said Lucy, "when you were speaking of the water staying in the pipe, why did you say that the water would be held up, or sustained, by the pressure of the atmosphere, to thirty-three *or* thirty-four feet high in the tube? Why should you say thirty-three *or* thirty-four feet? Would it not stay either at the one or at the other of these heights?"

"That is a very sensible question, Lucy," said her father. "The reason is, that the *pressure of the atmosphere* is not always the same. In fine weather it is generally greater than when it rains or snows; and before it rains or snows, the *pressure*, or, as it is sometimes called, the *weight*, of the atmosphere, is less than at some other times. So that if we had such a pipe or tube, and if the upper part of it were transparent, so that we could see into the inside of it, we could tell, by the rising and falling of the water in the pipe, when the the air, or atmosphere, was heavier or lighter, and then we might *suppose* that the weather was going to change. I say *suppose*, because we should not be sure."

"Then, papa," said Harry, "if the top of this pipe were of glass, it would be a barometer, would it not?"

"Yes, my dear, it would. Now you know what a barometer is."

"Why do not people make such barometers as this?" said Harry.

"Because they would be very inconvenient," said his father. "In the first place, it would be difficult to place them so as that the rise and fall of the water could be easily seen, because you must go up to the top of the house every time you wanted to consult the barometer. In the next place, the frost would turn the water in the tube into ice; and there would be an end of the baro-

meter. But the shining liquor that you saw in your uncle's barometer is not liable to freeze."

"That shining liquor," said Harry, "is called quick silver, or mercury."

"Yes," said his father. "Here is some mercury; feel the weight of it."

"The quicksilver that is in this glass, papa," said Lucy, "seems as heavy as all the water that is in that decanter."

"Yes," said her father, "mercury is more than fourteen times heavier than water. Now, Harry, if the pipe, forty feet long, of which we were speaking before, was filled with quicksilver, do you think that the pressure of the atmosphere would hold up the quicksilver thirty-four feet high?"

"Certainly not, papa," answered Harry, "because the quicksilver is so much heavier than water."

"Would it hold it up one quarter the same height?" said his father.

"No, it would not," answered Harry, "because it is easy to perceive that the quicksilver is more than four times heavier than the water."

"Very true, Harry. It has been found, by experiment, that the pressure of the atmosphere will sustain a column of mercury about twenty-nine inches high; sometimes it will sustain only a column of twenty-seven inches; and sometimes a column of thirty, more or less, according to the pressure of the atmosphere."

"How long is the tube of a barometer?" said Harry.

"It is generally about thirty-six inches long; but the mercury never rises to the top of the tube, there is always an empty space between the top of the mercury and the top of the glass, which allows the mercury to rise or fall as the pressure of the atmosphere increases or diminishes. The glass tube of a barometer is about one-fourteenth part as long as the leaden pipe which you said would make a water-barometer; but the quicksilver is fourteen times as heavy as the water."

"All this is rather difficult," said Lucy.

"So it must appear to you at first, my dear," said her father; "but when you have seen it often, and talked with your brother about it, you will understand it more clearly."

"But at least," said Lucy, "I know now, papa, what is meant by the *falling* and *rising* of the glass. It does not mean that *the glass* falls or rises, but that the mercury rises or falls in the glass."

"Very true, my dear Lucy; saying that the glass rises or falls, is an inaccurate mode of speaking. Now, my dear boy, I think you will be able to understand your uncle's barometer when you see it to-morrow; particularly if you will read to-night an excellent description and explanation of the barometer, which you will find in this little book," said his father, putting "Scientific Dialogues" into his hands: it was open at the word *barometer*.

"Oh, thank you, father!" said Harry.

"And, my dear Lucy," said her father, turning to Lucy, and showing her, in a book which he held in his hand, a print, "do you know what this is?"

"A thermometer, papa! Fahrenheit's thermometer. Oh, I remember what you told me about Fahrenheit's thermometer."

"I think you will be able now to understand this description of thermometers, my dear; and you may read it whenever you please," said her father.

"I please to read it this instant, papa," said Lucy.

So Lucy sat down, and read, in the "Conversations on Chemistry," the description of the thermometer; and Harry read the explanation of the barometer, in "Scientific Dialogues." And when they had finished, they changed books, and Harry read what his sister had been reading, and Lucy read what Harry had been reading; and they liked the books, because they understood what they read.

"I wonder what the rest of this book is about," said Harry, turning over the leaves; "here are many things I should like to know something about."

"And I should like," said Lucy, "to read some more of these conversations between Emma, and Caroline, and Mrs. Barbauld. There seem to be drawings here, and experiments, too. Since papa has shown us some experiments, I wish to see more."

"But, my dear," said her father, "you are not able yet to understand that book. Look at the beginning of it. Read the first sentence."

"*Having now acquired some elementary notions of natural philosophy—*"

"What are *elementary notions*?" said Lucy, stopping short.

"I know," said Harry, "for I heard the writing-master the other day tell my father that he had given Wilmot, the gardener's son, some elementary notions of arithmetic; that is, first-foundation notions, as it were."

"Then I have no elementary notions of natural philosophy, have I, papa?" said Lucy.

"In the first place, do you know what *natural philosophy* is, my dear?" said her father.

Lucy hesitated; and at last she said she did not know clearly. She believed it was something about nature.

Harry said he believed it meant the knowledge of all natural things: things in nature, such as the air, and the fire, and the water, and the earth, and the trees, and all those things which we see in the world, and which are not made by the hands of human creatures.

Their father said that this was partly what was meant.

"Then," said Lucy, "I have no *elementary notions of natural philosophy*."

"Yes, you have," said Harry. "All we have been learning about the air, and the wind, and the pressure of the atmosphere, and all that papa has been showing us about water and quicksilver, these are elementary notions of natural philosophy, are they not, papa?" said Harry.

"Yes; but you have, as yet, learnt very little," said his father; "you have a great deal more to learn before you will be able to understand all that is in these 'Conversations on Chemistry' and in 'Scientific Dialogues.'"

"Well, papa," said Harry, smiling, "that is what you used to say to me about the barometer. You used to say, a little while ago, that I must know a great deal more before I could understand the barometer; but now I have learnt all *that*, and now I do understand the barometer; and, in time, *I* shall—we shall, I mean—know enough, I dare say, to read these books, and to understand them, just as well as we now understand the barometer and the thermometer."

"Yes, and very soon, too, I dare say! shall we not, papa?" cried Lucy.

"All in good time; we will *make haste slowly*, my dear children," answered their father. "Now go and get ready, as quickly as you please, to go with your mother and me to your uncle's."

THE END.

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Miss J. Brook

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