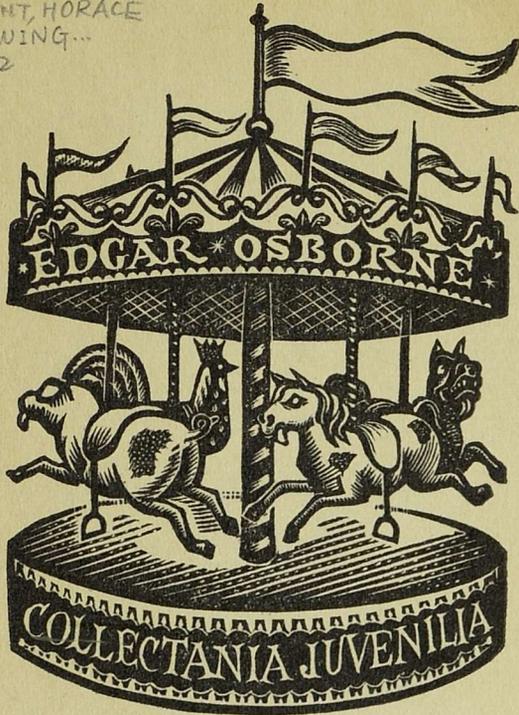


DRAWING  
FOR  
YOUNG CHILDREN

BT  
GRANT, HORACE  
DRAWING...  
1862



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To dear Sydney

from his friend  
and Schoolmaster,

Ashon Gile

2.<sup>nd</sup> Sep.<sup>r</sup> 08.

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DRAWING FOR YOUNG CHILDREN



# DRAWING

FOR

# YOUNG CHILDREN

CONTAINING

ONE HUNDRED AND FIFTY DRAWING COPIES  
AND NUMEROUS EXERCISES

TWENTY-FIFTH THOUSAND

LONDON

HOULSTON AND WRIGHT

65, PATERNOSTER ROW

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## ADVERTISEMENT.

THE "DRAWING FOR YOUNG CHILDREN" was originally published by Mr. Charles Knight, under the superintendence of the "Society for the Diffusion of Useful Knowledge;" whose fostering care, coupled with its own intrinsic merits, speedily obtained for it great popularity.

The Work has been highly commended by many eminent Artists and Draughtsmen, as being thoroughly practical and efficient in teaching the rudiments of Drawing.

Since the "DRAWING FOR YOUNG CHILDREN" came into the possession of the present Publishers, four very large Editions have been exhausted, and a fifth Edition is now called for.

LONDON, *April*, 1862.



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## INTRODUCTION

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Most little children attempt to draw of their own accord, and frequently receive much pleasure from their rude productions; but the want of assistance and encouragement generally prevents them from making any proficiency. The object of this work is to assist the instructor in teaching drawing to young children, or rather to show how children may be put in the way of instructing themselves, and of turning the art to the best account for the improvement of their faculties.

In this work a beginning only is attempted. So much of drawing is given as every person ought to possess, and might easily acquire, under a good system of education. But it is expected that the pupil will acquire real knowledge and power so far as he goes,—something that will affect his being; not a mere shadow, that will leave no trace after it has passed

away. It is also hoped that the explanations and illustrations will be found so full, that the instructor, though previously unpractised in drawing, may commence the art with a young child by taking a very little trouble.

It is usually said that drawing is unfit for little children, who should wait until they have acquired accuracy of eye, steadiness of hand, and something approaching to maturity of intellect; but because children's hands, eyes, and minds, are feeble and unformed, we ought surely not to cast away valuable means of forming them, and trust entirely to chance for their improvement. Improve they will, to a certain extent, under any circumstances; yet as one year of well-directed instruction will do more than a dozen years of chance, are we to prefer chance and discard certainty?

If a young child is to be taught drawing with advantage, he must be taught as a child, not as an adult. The child is profoundly ignorant; he can give but small efforts of attention at any one time; and he requires constant variety. These three points must be always kept in view, if we would succeed with his instruction. Children like to see and to reproduce that which they can understand; they like

to draw a whole object at once and quickly, but do not relish drawings of parts of objects. They take in knowledge in wholes or masses, and have only gone the length of partially analyzing the parts or elements which make up those masses. Perspective, light and shade, and colour, are only understood in their combined effects ; their separate individual effect is not seen. Form being the main element by which we distinguish objects, is the first to be separately understood and analyzed ; and children who have scarcely left the cradle will show, by their rude endeavours to imitate form, how strong a hold this element has taken.

Pursuing the course which nature points out, of educating children in their own way, our first step is to assist them in drawing the most familiar objects in bold, hard outline. There is much satisfaction experienced in the contemplation of an exact representation of a well-known object ; but those masterly touches of an artist, which suggest so much to the educated mind, are entirely thrown away upon the child, whose imitations of them are ludicrous exaggerations. The portion which an artist gives in a little sketch or vignette (not unusually placed as a drawing copy before a child) is sufficient to call up

the idea desired, in an educated mind; but in the child's mind it excites no interest on account of its deficiency: the beauty of the sketch he does not and will not see for a long time, as a sense of the picturesque is not to be acquired at once in early life.

The pupil should begin with drawing in outline familiar objects of the simplest kind, which do not require perspective. Some persons would say, let him copy nature only,—and very properly, if there were no difficulty in making a beginning; but as the child is rather puzzled at first in knowing how to represent a solid object on a plane, it will be as well to let him begin by copying two or three of the simplest sketches from the book, by which means his hand and eye will be somewhat formed, and he will not have every difficulty coming upon him suddenly when he draws from nature. After this he may draw alternately from nature and the copies. By this means he will probably improve faster than if he drew exclusively from either. The drawing copies will teach him how to direct his attention to many points in objects when he is copying from them, which otherwise he might have overlooked; and drawing from nature will discipline his faculties of observation, by obliging him to observe very accurately objects even

in their minutest details, and will give an interest and intelligence to the drawing copies. He will be constantly comparing these with nature, and nature with these, which will open new fields of petty discovery to him.

The pupil should draw nothing that he does not understand. Before he commences with a copy, he should be asked what each part of the drawing is meant to represent. The proper objects to copy first from nature are the simplest possible, which do not require fore-shortening or perspective; and they should be drawn in outline, which, for most practical purposes, is all that is required. It is better to begin with the fewest difficulties, and to put off perspective and shading until common forms are observed accurately, and drawn with ease. Objects and copies increasing in difficulty may be gradually introduced, especially animals, which are found to attract children amazingly, and to promote accuracy of eye and hand, by exhibiting the faults of the pupil very obviously.

Drawing is of use, directly, as a general written language, superior in several respects to penmanship; it is almost indispensable to many professions and trades, and highly useful in many others; and it would, if generally disseminated, be a powerful means

of increasing the innocent enjoyments, good feelings, and good taste of a community.

Drawing is of use, indirectly, by the discipline it gives to the eye, hand, powers of observation, memory, invention, taste, and in some degree to the other mental faculties.

Proceeding to the consideration of the direct advantages of drawing, we may remark how few interesting occupations are provided for little children, and how miserable infants would generally be if they had not wonderful resources in themselves. In bad weather, in the evening, or at other seasons, when it is desirable that they should be provided with interesting and improving occupation of a quiet description, drawing might be frequently introduced, whereby the idleness, mischief, and unseasonable noise and rudeness, which create so many bad feelings in families, might be considerably reduced. A very little assistance, encouragement, and sympathy, will enable the child to convert his rude power of imitation into a source of gratification, always increasing as he advances, and will unite to it the power of invention. A harmless pleasure is thus afforded at an age when that great variety of occupation is indispensable, which our way of life in large towns more and more

precludes, and our domestic comfort more and more requires.

The eye and hand disciplined by drawing would easily acquire penmanship. Indeed there is no question that the time now occupied at an ordinary school in teaching a slow and stiff handwriting, might suffice to make the pupils accomplished penmen and draughtsmen too.

Practical geometry may almost be called a branch of drawing, so firmly are the two arts united; and geography is to be learnt in half the time, and with much greater effect, by the constant employment of drawing in it. Acuteness in perceiving the meaning of drawings, sections, ground plans, &c., and dexterity, when necessary, in making them, are of great use in natural philosophy, chemistry, and all the useful and ornamental arts, as well as in common life.

We have only to notice the delight shown by children looking over a book of pictures, compared with that which they show in reading a book, to be convinced how powerful an instrument of instruction drawing might be made. \* To teachers of most of the arts and sciences some readiness with the pencil is invaluable, for the explanation and illustration of their thoughts; and to those engaged in many of the

mechanical, and all the fancy trades, it would be of great service.

There are few arts of life which are not materially assisted by even a very rude use of the pencil. When boxes, partitions, shelves, cupboards, &c., are to be made, a few lines upon a board will explain more clearly what is required than very many words. When articles are to be manufactured in any of the metals, the form and pattern is readily understood if properly sketched; yet instances are constantly occurring where operatives, in whose daily occupations this art would occasion a valuable saving of time, labour, and money, are not only unable to sketch the form they are about to make, but really cannot understand the representation of it. Traders and private individuals are continually suffering delay and expense from unintelligible verbal explanations, because they cannot draw on paper the simplest forms.\*

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\* The following is a common instance, which occurred lately.—A country trader wanted from London a pair of stirrups of a particular size and form, which could have been easily explained by any one who could make two horizontal and two curved lines; yet he cut out a rude model in leather, of the size and form of the stirrup, which he made up into a parcel, and on which he incurred a charge for carriage nearly three times as great as the postage of a letter.

As regards the discipline of the eye and hand, and the general powers of observation, drawing may be made of great value if it is properly introduced. It requires that objects should be minutely and carefully examined in all their parts, singly and collectively, the observations being then carefully recorded by the pencil, and thus rendered subject to examination and re-examination. It may be considered the art of clear seeing, and the foe to incorrectness and hasty assumption, as far as some of the most important qualities of outward objects are concerned.

The power of remembering objects and localities with such correctness, that a plan or drawing of them may be produced at any time, is occasionally useful in every situation of life, more especially to carpenters, builders, engineers, and those engaged in most of the useful arts. This art, however, is never taught systematically, or deemed capable of being taught at all. In our confined mode of existence in large cities, this and many other of the faculties are not properly developed, for want of the necessity of exerting them in early life. A good education should provide for such cases, and counteract the evil that any particular way of life generates.

We would prosecute the exercise of the memory

by gradually-progressive methods, which alone can be relied upon for producing permanent results. The child may begin very early, by drawing from memory the objects which he has already copied from drawings or from nature. He should then be required to reproduce from memory what he had previously drawn from a copy; to draw from a single inspection of a copy or object; and then from a more distant remembrance of objects.

Carrying these principles a little further, we arrive at the cultivation of the inventive faculties; in other words, we learn how to form the old materials which we have observed and remembered into new combinations, according to the purposes we have in view. And though drawing cultivates these faculties directly, only so far as forms and appearances are concerned, it has a strong indirect influence over them in many other respects.

This arrangement of parts into new wholes, or of objects into new combinations, may be of very different kinds; it may be mechanical, and principally for common use; or in matters of taste, for the express purpose of pleasing; or to raise emotions of various kinds, by uniting elements calculated to excite or heighten emotion.

Besides the constant search after facts which children display, and the numerous experiments on objects which they take delight in, they are constantly exerting their invention and imagination in curious imitations and recombinations of actions, gestures, vocal sounds, &c., and feeding the mind with various wonders of animals, savages, giants, fairies, and all kinds of superior, inferior, and extraordinary creations; and they are always fond of fun, which is a new and striking combination of old materials. We have therefore only to train a faculty which is already, more or less, at work in every young child.

There is a passiveness of mind in merely remembering or copying, which is liable to become permanent if it is not corrected by these more self-relying and creative qualities. Children are not satisfied with observing, remembering, and imitating, or copying: they crave after the excitement of recombination and invention. Much of their mischief (as we call it) arises from the exercise of this faculty in an illegitimate form, because we try to repress it, and do not give it fair scope. At last we generally succeed in forming the thoroughly common-place character. But when nature is too strong for us, our ill-directed

efforts at repression only serve to excite the pupil's dissatisfaction with things as they are,—to inconstancy or extravagance. The imaginative and inventive faculties, when exercising a due force, are consistent with the utmost steadiness and correctness of mind; indeed, the mind cannot be pronounced sound without them; and there is no rank or situation in which their influence is not beneficial.

The power of imagining, inventing, and combining also becomes a great stimulant to renewed observation and correct appreciation of nature. It induces us to examine her in many new ways, and prevents that dull uniformity which a one-sided view engenders; it creates a relish for her, and enables us to extract pleasure from a large range of new objects. A judicious culture of the inventive faculties also promotes our understanding and delight in objects of art. It puts us on the look out for agreeable impressions, and habituates us to regard the beautiful sides of objects.

It is of course only a mere beginning of this striking and hitherto ill-cultivated faculty that can be made with little children by the aid of drawing: yet drawing may, as it is well or ill taught, facilitate or retard the exercise of the inventive powers to a considerable degree. The first exercises must of course be of the

simplest description, and should be introduced very gradually.

Drawing, though carried to no great extent, is found greatly to increase the delight received from scenery, and from the union of common objects in an orderly and tasteful manner. He who has learnt the art of observing will extract pleasure from ordinary objects in a thousand ways. Many who dwell amongst the most beautiful objects see nothing of their beauty, and take no interest in them, because they have not cultivated their taste through its sole medium, the observation. Good taste, however, is a high faculty, long of coming to maturity. It is not merely seeing objects or scenes, but the perception of a thousand delicate shades, circumstances, and combinations, and having a number of ideas and emotions called up by these, that constitute the accomplished observer. And drawing, we repeat, may become one of the means, and a very powerful one, of bringing about this desirable result.

Great care should be taken not to hurry the pupil. His progress, if real, and improving to the mind, must be slow, producing for years nothing that is very striking. The object is to teach him to think and act for himself, not to teach him to mock another.

It will be obvious that most of the illustrations are done in a rough, hard manner, merely to suit the purpose of the work, without any pretension to taste or effect. There are, however, a few sketches, especially among the later ones, which are by a superior hand. The drawings have been engraved on wood, and of a smaller size than might be desired, to admit of the work being published at a very moderate price.

## DIRECTIONS FOR THE TEACHER.

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*Posture, &c.*—The posture of sitting is of great importance both in drawing and writing, and is rarely properly attended to. The body should rest exclusively on the seat, feet, and left arm. The front of the body should not press the table, and the right arm should not support more than its own weight. The most perfect ease should be maintained in every part of the body. The child's seat, if not expressly made for him, must be raised by cushions or books until he can sit at the table with ease, and write without leaning on his chest or right arm. The feet should rest on the ground, or have a rest in front, under the desk or table, to sustain the body.

It is quite indispensable that the pupil should have the paper and desk straight before him, and parallel to each other. If this rule is not observed, it is difficult for him to draw or write straightly.

The drawing copy should never lie flat on the table, but should be placed nearly in an upright position before the pupil, and almost on a level with his eye. The copy should be not less than fifteen inches

from the eye of the pupil, and directly opposite to him. Objects should not be placed at a less distance, and if they are large, the distance must be increased very much.

The greatest pains should be taken to induce the pupil to hold his pen or pencil properly; and he ought never to be allowed, even in play, to hold it ill, or to use a short pencil which cannot be held in a proper manner.

Every part of the body, and every motion, should be perfectly easy.

*Directions for Drawing.*—The pupil should begin by copying several of the first sketches in the book. If he does one ill, he may try it again, or proceed to another, and then return to the former; the greatest care being taken not to disgust him by too much sameness, or to render him heedless by too frequent change.

He should then draw from memory several of those sketches which he has already copied; if he does not recollect any one, the original may be shown to him for an instant. His drawing may be then compared with the copy. This exercise may alternate with the former.

The pupil should begin very soon to draw simple objects from nature, such as a pencil, pin, pen, stick, knife, leaves of various sorts, and such other common objects as do not require perspective. His copies

should not be shaded. They should alternate with the two former exercises. The pupil may return to the same object from time to time.

He may next be required to draw from memory those objects which he has already drawn from nature. He should try to recollect them perfectly; when he does not, the object may be shown to him for an instant.

The pupil should then proceed to copy the sketches in which there is a little shading and perspective, and perform the elementary exercises in perspective and shading which are interspersed. He should also, in a short time, begin to draw from memory in this manner; and afterwards from nature. He will thus acquire a tolerably correct, though limited notion of shading and perspective, and will be prepared to study their principles at a more advanced stage.

The following exercises for the invention and imagination may be introduced as soon as the child is found to take pleasure in them; namely, he should invent and alter simple borders and ornaments, afterwards various forms, cups, jugs, vases, teapots, inkstands, chairs, gates and gateways, and in time cottages, easy landscapes, cattle, figures, &c. The teacher may also occasionally give a verbal description of an object or scene which the pupil should be required to draw, and require the pupil to give a verbal or written description of a drawing.

The pupil should be required occasionally to make his copies exactly twice or three times the size of the original, and occasionally one-half or one-quarter the size. It will also be found better to increase the size of the drawings as the pupil advances.

When the pupil has acquired considerable facility he may be required sometimes to draw against time; one sketch should be drawn in five minutes, another in eight minutes, another in three minutes, &c., according to the difficulty. This exercise will give freedom, promptness, and decision, if used cautiously.

Before the pupil begins to copy a sketch or object, he should examine attentively the relative magnitude and distance of each part. If a dot be made in the centre of the paper, and other dots where the prominent parts of the picture should be drawn, he will commence his work with much more spirit and intelligence. He may occasionally lay his pencil on the copy, both horizontally, and perpendicularly, and diagonally, to trace the direction of the lines and the relation of the parts; and occasionally, when he has finished his copy, he may be permitted to measure it roughly against the original with his pencil.

The pupil ought never to finish a bit of an object before he has sketched or marked out the whole; and he ought not to begin sketching until he has looked at the copy carefully, and has considered and decided on the relative position of the parts.

When it is suspected that the pupil does not thoroughly understand the copy which he has to imitate, he should be asked, before he begins, what each part or line is meant to represent; and the cause of certain parts being in the shade, or foreshortened.

When a drawing copy is wanted in a school for a whole class at once, it is desirable that it should be drawn on a black board, on pasteboard, or on a very large slate, at the least three times as large as the sketch in the book. And the pupil himself should frequently draw sketches of a very large size on black boards with chalk, or on great slates. When desks are used, they may be painted black, and will then serve for drawing boards.

The pupil should not be told of his faults, but induced to find them out by comparison with the original or object. At first the glaring faults alone should be attended to, and in a manner that shall not discourage him.

Great pains should be taken at the outset not to tire the pupil, or convert drawing into a task. It may be commenced as an amusement, continued a few minutes at a time, and desisted from when the child shows any symptoms of weariness or impatience. To a child of six years of age, a quarter of an hour's practice is as much as should be allowed at any one time.

Although pains should constantly be taken with the

position of the body and paper, the holding of the pen, &c., the child should not be annoyed by unceasing directions. Yet the opportunity, when it occurs, should not be lost, of attending to these points, even when children are writing or drawing for amusement.

The number of the drawing copies and exercises is considerable; and they gradually increase in difficulty, that the pupil may be carried on, by the parent or teacher, from the commencement to the period when lessons in drawing are usually taken from the drawing-master, namely, from the age of four or five to ten or twelve.

A  
LIST OF EXERCISES  
IN  
DRAWING.

THE EXERCISES MARKED THUS (\*) HAVE A CORRESPONDING  
DRAWING COPY WITH THE SAME NUMBER.

- \*1 Butcher's block, } These sketches should be copied  
\*2 Milestone,        } by the pupil five or six  
\*3 Knife,            } times, to give some little  
\*4 Extinguisher,    } command of eye and hand.  
\*5 Cleaver,           } None but very glaring faults  
\*6 Bird's head.       } should be noticed, and these  
                          } should not be pointed out to the pupil, but he  
                          } should be induced by questions to discover them  
                          } himself. The pupil should not be kept long at  
                          } any one of the sketches; but, after copying it  
                          } once or twice, should return to it after an interval.  
                          } When the drawings are made on paper the later  
                          } and earlier copies should be kept and compared.
- 7 A pencil should be drawn in outline from the actual object, which should be so placed as to show no very marked shadow.
- \*8 A pen.  
\*9 A bill-hook.

- 10 A large pin or round-headed nail, to be drawn from the object.
- \*11 A plum.
- \*12 A hammer. The pupil should look carefully at the copy before he commences, and try to estimate how much longer the handle is than the hammer.
- 13 The pupil should draw the block and milestone, Nos. 1 and 2, from memory: if he does not remember them exactly, the copies may be shown to him for an instant to refresh his memory.
- \*14 A dog's head.
- \*15 A snake.
- 16 The knife No. 3 should be drawn from memory, as before, in No. 13.
- 17 A hook or common nail, to be drawn from the object.
- \*18 A fish.
- \*19 A hatchet.
- 20 A very simple leaf, to be drawn from nature, the length and breadth being first estimated.
- 21 The extinguisher, No. 4, to be drawn from memory, as before.
- \*22 A leaf. The pupil should examine this copy attentively, and should then draw it from memory, the copy having been taken away: he should afterwards compare what he has done with the original, and point out his own faults. He may then correct his drawing, or make a fresh one.
- \*23 A pump. The relative length and breadth of the different parts should be estimated before the drawing is commenced.
- \*24 A face: the upper part.

- 25 A pen, to be drawn from nature.
- 26 The cleaver No 5, to be drawn from memory.
- \*27 A stile.
- \*28 A cottage.
- \*29 A pickaxe, to be looked at and drawn from memory, as No. 22, the copy being afterwards compared with the original, and corrected where wrong, or entirely redrawn.
- 30 The bird's head, No. 6, to be drawn from memory.
- 31 A large nail, to be drawn from the object; the drawing to be of the size of the object.
- \*32 A face; the lower part.
- \*33 A tobacco-pipe.
- \*34 A thimble, shaded. Before the pupil attempts to copy this, he should be shown a thimble or small circular object in a strong light, so that the light and shade may be marked distinctly, and be asked which part is light (or in the light), and which part is in the shade (or is the darkest); also which side the light comes from. Great care should be taken that the shading lines are drawn straight and parallel.
- 35 A bit of stick or twig, without leaves, to be drawn from nature.
- 36 A pencil, to be drawn from memory.
- 37 A pen, to be drawn from memory.
- \*38 A flower.
- \*39 A penknife. Before the pupil commences the drawing he should examine the copy well, and estimate how much longer the handle is than the blade, and the relative width of each.
- \*40 The pupil should try to find out various orna-

ments or borders that may be made with dots and small circles; he may or may not draw those in the copy, according to his proficiency. These dots, &c. should be made at equal distances in lines as straight as possible.

41 A skewer or bodkin, to be drawn from the object.

\*42 A cottage. After having drawn this from the copy, the pupil should draw it from memory, and compare his two drawings. Before the drawing is commenced, dots should be made to mark the position of the principal points.

43 The pupil should try to invent small ornaments or borders, like those in the latter part of No. 40.

\*44 A snail.

\*45 Leaves.

46 The bill-hook, No. 9, to be drawn from memory. If the pupil has forgotten it, he should be allowed a glance at No. 9.

47 The plum, No. 11, may be drawn in the same way from memory.

48 A table-knife, to be drawn from the object, the relative length and breadth of the parts being first estimated.

\*49 A cottage. The pupil should examine this well before he copies it, and should make dots on his paper for the extremities of his lines. The lines should not be drawn until he is satisfied that the dots are in their right place.

\*50 A moth. The relative length and breadth of the body and wings should be estimated, and dots made for the extremities before the drawing is commenced. After the pupil's drawing is com-

- pleted he may measure it against the original in a rough way, to find out his errors.
- 51 The three copies, Nos. 12, 14, 15, should be drawn over again that the pupil may discover how much better he can do them than on the first occasion.
- 52 The above three copies (Nos. 12, 14, and 15) should then be drawn from memory.
- 53 A leaf, to be drawn from nature.
- \*54 A can, } A dot should be placed as the  
 \*55 A dogs' head. } centre of the picture, and  
 dots for the extremities of the main parts of the drawing. It will also assist the pupil if a perpendicular line be drawn through the centre of his slate or paper, before he begins to copy the can.
- 56 A slate, from nature, as it would appear if viewed directly from above.
- 57 The fish and hatchet, Nos. 18 and 19, to be drawn from memory, and afterwards corrected by the originals.
- \*58 A turnip.
- \*59 A cottage. Dots should be made at the positions of the different angles, before the pupil's sketch is commenced.
- \*60 A flower.
- 61 A poker, from the object.
- \*62 Small ornaments and borders. Several of these should be drawn by the pupil, who should afterwards be required to invent a few others. Some of them should be drawn perpendicularly.
- 63 A hearth-broom, from nature, placed so as not to require perspective or foreshortening.

- \*64 A barn.
- \*65 A flower-pot, with a little shading. The pupil should be previously asked what the dark part or shading means? and from which side the light comes? where would the shaded part be if the light shone on the right-hand side of the pot? If possible, a flower-pot should be shown, with the light shining on it in this manner. Care should be taken that the shading lines are drawn parallel, and at equal distances.
- \*66 A saucepan with a little shading.
- 67 The pump and face, Nos. 23 and 24, to be drawn from memory.
- \*68 A spade.
- 69 The spade, to be drawn from memory.
- 70 Several borders or ornaments may be invented like those in the lower parts of No. 62.
- 71 An extinguisher or thimble, to be drawn in outline from the object.
- 72 A fork, to be drawn from the object.
- 73 The pen and stile, Nos. 25 and 27, from memory.
- 74 Several kinds of leaves from memory.
- \*75 A whipping-top shaded. See remarks at Nos. 54, 55, and 65.
- \*76 A bowl. A bowl may at the same time be shown to the pupil, who may first view it from above, when the rim will appear a perfect circle; afterwards he may go further from it until the rim appears an oval, as in the copy. See remarks at 54.
- 77 A potato, carrot, or turnip, in outline, from nature.
- 78 An apple, or orange, in outline, from nature.

- 79 The cottage, No. 28, and pickaxe, No. 29, from memory.
- 80 A flower-pot or large cup, from nature, with a little shading, great care being taken to make the shading lines straight, parallel, and at equal distances.
- 81 A fire-shovel, from nature.
- \*82 A bottle. It will assist the pupil if he first draws a perpendicular line through the middle of his paper, and takes care that the outline of the bottle on each side of the line exactly corresponds. Care should be taken that the bottle shall not appear to slant, and that the pupil estimates the comparative length of the neck, which is one-third that of the body, and width of the body, which is rather wider than the neck is long.
- \*83 A cottage. The length of the lines should be estimated and dots placed at their ends before the pupil begins to copy.
- 84 The same cottage, to be drawn from memory.
- 85 A tassel, from the object.
- 86 A pear, plum, or gooseberry, from nature.
- 87 The face, No. 32, and the pipe, No. 33, from memory.
- 88 The various kinds of nails the child recollects to have seen, to be drawn from memory; also the various sorts of hooks he remembers.
- \*89 A shoe. A shoe may be shown to the child at the same time, to exhibit the position shown in the copy.
- \*90 Cherries, with a little shading and shadow.
- 91 A house to be invented and drawn by the pupil, having one door, two windows, a roof, and chimney.

- \*92 A bow and arrow.
- \*93 A sailing boat.
- \*94 A butcher's block, shaded. The pupil should discover from which side the light comes.
- 95 A penknife, to be drawn from the object.
- 96 A door, from the object.
- 97 A window, from the object.
- 98 The snail and moth, Nos. 44 and 50, from memory.
- 99 The various kinds of knives the pupil recollects to have seen should be drawn, as a table knife, a clasp knife, a penknife, &c.
- 100 A loaf of bread, to be drawn from the object.
- 101 The length of an inch should be shown to the pupil, who should be required to draw perpendicular, horizontal, and oblique lines of that length, and afterwards correct his mistakes by measuring, until he can draw them accurately at once.
- \*102 A bird.
- \*103 A candlestick with a little shading.
- 104 The bird, No. 102, from memory.
- 105 The bill-hook and hammer, Nos. 9 and 12, should be drawn exactly twice as large as the copies. After the drawings are finished, the pupil may measure them roughly against the originals to ascertain their correctness.
- 106 Perpendicular, horizontal, and oblique lines of various lengths, and each divided into two equal parts by a mark; the parts may be afterwards measured by a bit of paper to ascertain their correctness.
- 107 A watch-key and a comb, from those objects.
- \*108 A pigeon-house.
- \*109 Ornaments or borders; some of these may be

copied, but the pupil should be required to invent others.

\*110 A flower.

\*111 A fly. This copy should be looked at well, and then drawn from memory.

112 The exercise, No. 101, should be repeated, the pupil being required to draw lines of one inch, two inches, half an inch, and an inch and a half.

113 An umbrella, from the object.

114 A birch broom, to be examined attentively, and then drawn from memory.

\*115 A fish.

\*116 A key.

117 Some of the later ornaments in No. 109 may be imitated, and others invented.

118 The exercise, No. 106, should be repeated, some of the lines being divided into two, and others into three and four equal parts.

119 The cottage, No. 59, and flower, No. 60, from memory. The teacher should describe these numbers and show the pattern for an instant, if indispensable.

120 A slipper, from the object.

121 A feather, from nature.

\*122 A cottage. The relative length of the various lines should be estimated, and dots placed at the angles before the drawing is commenced.

123 A quart bottle, to be drawn from the object.

\*124 Two capital letters, I and A, to be drawn large.

125 The exercises, Nos. 106 and 118, to be repeated, and afterwards a third and a quarter marked off from the ends of various lines.

- 126 The hammer, No. 12, and snake, No. 15, to be drawn exactly half the size of the copies.
- \*127 A cheese.
- \*128 A boot. The copy should be looked at and then imitated from memory; when finished, the sketch should be compared with the copy, the faults noticed, and another drawn from memory.
- 129 A spinning top, or a ball of cotton, to be drawn from the object, with a little shading.
- 130 A very simple flower, as a heartsease or primrose, from nature.
- \*131 A boy in a barrel. See remark at No. 54.
- 132 A satchel or bag, from nature.
- \*133 A duck.
- \*134 A face in profile. The pupil should compare this with a face. It should afterwards be drawn from memory.
- 135 A twig, with a leaf or two on it, from nature.
- 136 Exercises Nos. 101 and 112 to be repeated; various lines of the following lengths to be drawn and afterwards measured. An inch and a half; a quarter of an inch; two inches; an inch and a quarter; an inch and three quarters.
- 137 The hatchet, No. 19, and cottage, No. 28, to be drawn twice the size of the copies.
- \*138 A coal-scuttle, shaded.
- \*139 A bull's head.
- 140 A potato, turnip, and carrot, to be drawn from general recollection.
- 141 A fire shovel and tongs, or a spade, from the objects.
- 142 A table fork, from general recollection; to be corrected afterwards from the object itself.

- \*143 Ornaments or borders, several of which may be copied occasionally, with variations; and other ornaments should be invented by the pupil
- \*144 A swan.
- \*145 A tea-kettle, shaded.
  - 146 The dog's head, No. 55, and cottage, No. 59, from memory. See No. 119.
  - 147 The dog's head, No. 55, to be drawn looking the other way.
  - 148 The face, No. 134, looking the other way.
  - 149 A boot or bonnet, from the object.
  - 150 An inkstand and pen, from the objects.
  - 151 A saucepan or phial, from the objects.
- \*152 A woman. The relative position of the main parts should be marked before the drawing is commenced.
  - 153 Several more ornaments, as in No. 143, should be invented by the pupil.
- \*154 A rabbit, }
  - \*155 A porter, } See remark at No. 152.
  - \*156 A stile. }
- 157 The flower and barn, Nos. 60 and 64, to be drawn from memory. See No. 119.
- 158 The woman, No. 152, to be drawn, as far as possible, from memory.
- 159 Exercises, preparatory to perspective, may now be commenced. Let the pupil stand at one end of the table and notice how long the table appears; let him then stoop down till his eyes are almost on a level with the table, and be asked if the table appears as long as it did before. Let him raise himself slowly, higher and higher; does the table appear differently when this is done? Place a

- penny on the table close to you, and another at the far end ; which appears largest ?
- 160 A pair of scissors, from the object.
- 161 A simple flower, from nature.
- 162 The extinguisher, No. 4, to be drawn exactly twice as large as the copy ; then exactly three times as large ; and afterwards half as large.
- 163 Exercises for perspective. Place three books, of the same height, upright on the table, one close to you, one in the middle, and one at the end furthest from you ; do they appear of the same or of different sizes ? which appears largest, and which least ? Does the one nearest you appear tallest only, or any thing more ? Hold this pencil so that it shall appear as long as possible. How must you hold it, and where must you hold it ? Try to hold it so that it shall appear as short as possible.
- \* 164 Six mathematical figures to be copied several times, and of various sizes.
- \* 165 A boy. The prominent points to be first marked with dots.
- 166 A pair of tongs, to be drawn from general recollection, and corrected by the object.
- 167 The flower-pot, No. 65, from memory.
- 168 An easy object, as a knife, key, &c., to be well looked at, and then drawn from memory.
- 169 Perspective. Place a book at this end of the room, and one of the same size at the other end ; do you notice anything remarkable in the different appearance of these books ? How must you place these two candlesticks on the table so as to appear of the same size ? Can you place them in any way so as to appear of different sizes ?

- 170 A jug, to be drawn from the object.
- \*171 A sheep's head, } Dots at the prominent points  
 \*172 A trap and ball, } should be first made.  
 \*173 A profile, }
- 174 A bonnet, hat, or glove, from the object, which should be placed so that there may be the least possible perspective or foreshortening.
- 175 Perspective. Can you hold this penny so as to see nothing but the rim?—all the rim at once?—none of the rim? Can you see it perfectly round?—not perfectly round? How must you hold or place this book so that it shall appear of its exact shape, which is oblong? Can you hold it so that it shall appear shorter?—longer?—so as to see none of the side?—all the side?—so that the side shall appear exceedingly narrow?
- 176 The jug (No. 170), to be drawn from memory.
- 177 The mathematical figures, No. 164, to be drawn exactly twice, and exactly three times as large as the copy.
- \*178 A bat and ball.
- \*179 A soup plate.
- 180 The saucepan, No. 66, to be drawn from memory.
- 181 Perspective. Can you hold this ruler so that it shall appear to have no length? How must you hold your hand so that it shall appear to be of the greatest size?—so as to appear long, but very narrow?—broad or wide, but very short?
- 182 The pupil should draw a finger of his left hand from nature; and afterwards the thumb.
- 183 A pen should be put in a strong light, so as to have a marked shading, which the pupil should try to imitate.

184 The bat and ball, No. 178, from memory.

\*185 A tomb. Dots should be first made at the prominent points.

\*186 A spoon shaded, } When the pupil has copied  
 \*187 A basin shaded. } these drawings, he should  
 place the objects themselves in such a light as to  
 verify the original drawings.

188 Perspective. Can you hold this slate or book so that it may appear as large as the door, or seem to cover the door?—or the window?—or the side of the room? Where must you place the slate to make it seem very small? (at a considerable distance.) Can you hold your pencil so that it shall seem as tall as the door? How large would it appear compared with the door, if you stuck it on the door? When do things appear largest?—smallest? If you were to take them further and further away, what would appear at last? (They would appear smaller and smaller till at last they would be out of sight.)

189 A saw, hammer, or sickle, from nature.

190 A carving knife, to be drawn from invention, having a sharp point and a handle, swelling out a good deal at the end.

191 An easy shell, to be drawn from nature.

192 The fish, No. 18, to be drawn twice as large, three times as large, and half as large as the copy.

193 Perspective. Exercises in a street. Look at this road way; does it look as wide at the further part as it does close to you? How does the foot path appear?—and the hedge?—and the wall? &c.?

194 The exercises, Nos. 106 and 118, to be repeated.

- 195 The cottage, No. 122, from memory.
- \*196 A boy whipping a top. Dots should be carefully placed at the prominent points, and a faint outline drawn and corrected before the sketch is made.
- \*197 A jug, shaded.
- \*198 Borders. Some of these should be imitated, and other similar borders invented.
- 199 The exercise, No. 136, to be repeated.
- 200 Perspective. Let the pupil observe in various ways the different compartments of the carpet, or equal portions marked off on the school-room floor, playground, or garden, and observe which appears longest, and which least long. A ceiling may be observed in the same manner, if it has equal divisions.
- 201 Two or three leaves, from nature
- 202 A knife, to be drawn from the object, placed so as to have a marked shadow.
- 203 A dog-kennel, to be drawn, such as the pupil recollects to have seen.
- 204 Whips of various kinds, to be drawn from general recollection.
- 205 Several more ornaments, as at No. 198, to be invented and copied.
- \*206 The two roman capital letters, R and S, to be drawn large, care being taken to keep them perpendicular.
- \*207 A sheep: at first in outline only.
- \*208 A flower.
- \*209 A macaw.
- 210 Perspective. Lay a row of books on the table, and view them from one end of the table; which book appears broadest? How do they appear as

they go from you? How do they appear when you keep at the same distance, but raise yourself and afterwards stoop? Now place the books upright in a row like the fronts of so many houses, and look from one end; how do they appear now? Go in different positions to look at them, and tell me how they appear?

211 The shoe, No. 89, to be drawn from memory.

A shoe, to be also drawn from the object.

212 The cherries, No. 90, from memory.

213 The pupil should draw two fingers from nature.

214 Perspective, &c. Look at that row of houses (or trees, or pales of equal size), how do they appear when near, and at a distance? Look at this man who is near, and at that one who is at a distance, do they seem equally large? Where must a boy stand so that he shall appear to you as tall as a man?

215 An umbrella shut up, to be drawn from the object.

216 The section, or cut face of an apple or orange, from nature.

*217 A house,	} Dots, and a faint outline, to be first used.
*218 A cat,	
*219 A boy.	

220 A loaf may be drawn from general recollection, and corrected afterwards from the object.

221 A bow and arrow, from memory.

222 The boy, No. 219, from memory.

223 A piece of paling, partly broken down, to be drawn from invention.

224 Look at the cows in that field (or horses in that road), which appear largest and which smallest? Do the cows (or horses), going one after another

into that road, seem of the same size? Can a calf ever appear of the size of a cow? How must a cow be placed to appear of the size of a kitten which is close to you?

225 A tea-pot, from the object, in outline.

226 A milk-jug, in outline, from the object.

227 An eye, to be drawn from nature.

\*228 A pair of scales. Care must be taken to make the sides of the balance of equal length, and the scales of equal shape and size.

\*229 A squirrel.

230 A cottage, with two stories; a door and one window below; and two windows above, with slanting roof and two chimnies, to be drawn from this description.

231 A ninepin or skittle, and ball, from general recollection.

232 A birch broom, from general recollection.

233 An open hand, from nature, the fingers and thumb being kept straight.

234 A window and frame, from the object.

235 The boat, No. 93, and butcher's block, No. 94, from memory.

236 Hold up your hand straight before you, with the palm opposite to you, and notice how it appears. Now turn it slanting from you, still keeping it upright; how does it now appear? How must it be held to appear as broad as possible?—as narrow?—as long?—as short? Hold up this knife so as to see the most of it—the least of it:—so as to see little length—little breadth—little length or breadth. When does a horse appear longest?—when least long? Let one

pupil stretch out his arm for another to try how he must view it to see it longest and shortest.

\*237 An old windmill, with shading.

238 The side of the room should be looked at carefully ; its relative length, height, and the position of objects on it should be estimated, and a drawing of it made from memory, which should afterwards be compared with the original. See No. 467, figs. 3 and 4.

239 The dog's head, No. 55, to be drawn first twice and then three times the size of the copy.

240 A bow and arrow to be drawn, first twice the size, and afterwards half the size of No. 92.

241 The pupil, if accustomed to write, may write down a description of the cottage, No. 59, specifying the kind of roof, door, chimney, window, palings, &c.

242 Sugar-tongs, from the object.

243 A simple fire-grate from the object.

244 A penknife, or wafer-stamp, &c., from the object ; to be shaded, and the shadow given. It should be placed on white paper, and in a strong light, that the shaded part and shadow may be distinctly marked.

245 Perspective, &c. If you hold your slate upright and straight before you, and then move it further and further away without changing the position, what difference will appear in the slate ? —will its shape appear changed ? —will its size appear changed ? How must you hold it so that its shape may appear changed ? Place three sticks (or lay three pieces of string) across a long table or bench so as to separate it into four equal parts ;

look along the table or bench with your eye almost on a level with it; of what size do the parts of the table or bench appear? If you look from one corner of the table how do they appear? Look also in as many other ways as you can.

\*246 A porter with a load. This may be compared with No. 155, to show the difference between a slight and a more finished drawing.

\*247 A bridge and landscape. The pupil may be first questioned as to what each part of this landscape is intended to represent, and whether the observer is supposed to be standing above or below the arch, and on which side of it; also respecting the reflection and shadow.

248 The cottages, Nos. 49 and 59, to be drawn reversed; that is to say, each part that is now on the right should be placed on the left.

249 An easy flower or head of grass, to be drawn from nature.

250 A simple shell, to be drawn from nature.

251 A leaf or two, to be drawn from nature, and exactly the size of the original.

252 Exercises in light and shade. Hold your hand up to the light. Can you hold it so that both sides shall have the same quantity of light on them, or be equally well lighted? Hold it so that one side shall have much more light on it than the other. Do you know what the side that has the least light on it is called (the dark side, or the shaded side; or it is said to be in the shade)? Can you hold your hand up so that there shall be a shadow on the wall? If your hand were taken away would there be a shadow? Would there be

a shadow if the light were away? If the wall were away would there be the shadow? What makes (or causes) the shadow on the wall? The following exercises should be performed by candle-light. Can you hold this top (pincushion, or any object lying about) so as to have a light side and a shaded side? Try if you can hold it so that every part shall be in the light; and so that no part shall be in the light? Can you make a shadow on the table with this book? On which side of the book is the shadow?—and on which side is the light? Can you place the candle and shadow on the same side of the book? Can you find out how the candle and shadow always must be?—and where the object or thing that makes the shadow must be? (Between the light and shadow.)

253 A guard's straight horn or trumpet, from general recollection.

254 A shepherd's crook, from recollection

255 A milk-pail or a tub, from general recollection.

256 A spoon, in outline, from the object.

257 A pair of scissors, in outline, from the object.

258 A pepper-castor or vinegar-cruet, in outline, from the object.

\*259 A tumbler. The shape of the rim and bottom may also be compared with that of the object. The pupil may also draw this tumbler with a perfect circle for the rim and bottom, to show how absurd such a representation would be. He may next draw straight horizontal lines for the rim and bottom, and try if he can see the tumbler in that aspect.

- \*260 The capital letters G O, as before, at Nos. 124 and 206.
- \*261 A cross and landscape, slightly shaded. The pupil should be questioned as to the meaning of each part of the picture, and his position with regard to the cross, namely, whether he is above or below it, which part is nearest to him, &c.; and dots should be made before the drawing is commenced.
- 262 Perspective. If you place this slate or book so as almost to touch your eyes, can you see it well?—can you see the whole of it? How must you place it to see the whole of it? How must you stand looking at this table to see the most of it?—and also the least of it? Can you place yourself in this room so as to see every part at once, without moving your head or eyes? Where must you stand to see the most of it? What are the parts of the room you can see when you stand in the middle of the room without moving your body, head, or eyes? Can you see behind you? Can you see before you without changing your position? Can you see before and behind you at the same time? Can you make what was behind you appear before? Can you see before and to the right and left all at once? In how many directions can you see perfectly at the same time? Can you look at the sky or the ceiling and your feet at the same time? Can you hear behind you and before you at the same time? Look at what is before you without moving your head or eyes; now turn directly opposite and notice what you see without moving your head or eyes. By these

two looks can you see everything that is round you, or do you need three such looks, or four, to see all round perfectly? When you go close to the wall or to a door can you see the whole of it?

263 The porter, No. 155, going the opposite way.

264 The capital letters I A G O, to be drawn half the size and twice the size of the copies, Nos. 124 and 260.

265 A pigeon-house made of a barrel stuck on a long pole, to be drawn from invention.

266 A bunch of cherries, currants, or gooseberries; or a group of two or three apples or oranges; to be drawn in outline from nature.

267 An apple, orange, or ball, placed in a strong light, to be drawn from nature, with the shading and shadow.

268 The pupil should draw the various kinds of palings he recollects.

269 The pupil may invent an iron railing with an ornamental head.

270 Perspective. Can you see the whole of the side of that house when you go so close as almost to touch it? Where must you stand so as to see the whole side of the house well at one view? Where must you stand to be able to see some of the roof of the house? Tell me all the different shapes which the rim of this tumbler or cup appears to have, when held in different ways. (Round, oval (more or less), a straight line, a curved line.)

271 A description should be given in writing of the woman, No. 152, her apparent age, dress, what she appears to be doing, &c.

- 272 A bird, to be drawn from memory, and corrected by No. 102.
- 273 The same bird, to be drawn looking the other way.
- \*274 A book, in perspective. The pupil should also place a real book in a proper position, that it may be compared with the copy.
- \*275 A cock.
- 276 A chimney and mantel-piece, from the objects.
- 277 As many gates as the pupil recollects may next be drawn.
- \*278 A cottage. Dots, &c. to be first used.
- \*279 A hat, shaded. A real hat may be compared with the copy.
- 280 General exercise. What must you have given to you before you are able to draw? If you had no pencil what could you have to draw with instead? What things will do for drawing on? Here is a leaf, could you draw it if you were to try? Could you draw it if you had never seen it? Could you draw it if it were away, provided you had once looked well at it? What should you call drawing in this last way? (Drawing from memory.) Could you draw the leaf if it were here, though it was quite dark?—if it were here but you were blindfolded?—if your hands were tied behind you? What else do you need to have before you can draw this leaf? Now try if you can tell me all the things that are needed to be had or done before the leaf could be drawn. Could the cat draw the leaf if she had paper, pencil, and the leaf before her? Why could she not draw it? Could a baby draw it? Each question must be varied according to the pupil's preceding answer.

- 281 A tea-pot or milk-jug, from the object, with shading and shadow, the object being placed in a strong light.
- 282 A shoe, with shading and shadow, from the object.
- 283 The sole of a shoe not in any way foreshortened, which is, in fact, a ground plan.
- 284 A section of the shoe, supposing it to be cut through across ; also the cross section at an equal distance between the toe and instep. A section of the shoe, supposing it to be cut across half way between the instep and heel. A section of the shoe, supposing it to be cut into two in its whole length.
- 285 A cart-wheel, from memory.
- 286 The candlestick and pigeon-house, Nos. 103 and 108, from memory.
- 287 Various sorts of combs from general recollection.
- 288 Shading. Is every part of this pincushion (or box, &c.) equally in the shade, or are some parts more in the shade than others? Are all the light parts equally in the light? Which part of this cup is most shaded? Which part of it is least so? Which parts of the inside are most in the shade? Why is that part of the inside which is nearest the light most shaded? Can you place the cup so that no part of the inside shall be in the shade?—and also so that no part of it shall be in the light?
- Shadows with candle-light. Look at the shadow of this cup on the table: keep the candle still, but move the cup to different parts of the table; does any change take place in the shadow? What

must you do to make the shadow longer?—shorter? Can you make the shadow lighter or darker in any way? Now keep the cup still, but raise and lower the candle in different ways, and say what changes are made in the shadow. Can you make the shadow go along the whole of the table? Watch several of these shadows, and try if you can find out whether they are all of the same degree of darkness in each part. Which part of a shadow is generally the darkest?—and which is the lightest?

289 A tea-kettle, from the object, with shading and shadow.

290 A hat or bonnet, from the object, part of the inside being visible, with shading and shadow.

291 Various forms, in which milk-jugs might be made, to be invented and drawn by the pupil.

292 The ground plan of a yard, court, playground, or small garden, to be drawn by the pupil. See No. 467, fig. 5.

293 The section of a hat made long ways and short ways should be drawn by the pupil, a hat being before him.

\*294 A boy jumping.

\*295 A dog.

296 The same dog to be drawn reversed, or looking to the left instead of the right.

\*297 A duck: at first from memory only.

298 Shadows by candle-light. Make the shadow of your hand on the wall. Try in which way you can make it the smallest. Now try how you can make it largest. Try and make it as dark as possible: and as light as possible. Make the shadow so that

- it shall be the best picture of your hand. Is it the best picture of your hand when it is smallest or largest?—and darkest or lightest? Try how the candle must be held so as to make the clearest and darkest shadow. Try and make some shadow-pictures on the wall with various objects, as a cup, a ring, a top, a pincushion, a ball, &c. &c. Try if you can make a shadow-picture or profile of my face on the wall. Try and make some shadows on the wall in different ways, but so that the shadow shall not be at all like the object. Make some shadows of different objects, as of pencils, pens, &c., first on a table, or on a piece of white paper laid flat on the table; next on a piece of paper held upright or vertically; next on a piece of paper held slantingly or obliquely; next, when the object is held exactly between the light and the paper, so that the paper and light shall be even or parallel with each other; next, when the paper and light are not held even with each other, but the paper is held obliquely.
- 299 A lump of coal, or a large stone, to be drawn from nature, with shading and shadow.
- 300 A flower from nature.
- 301 A small plant, entire, from nature.
- 302 An ornamented gate, to be invented and drawn by the pupil.
- 303 An ornamented poker, to be invented and drawn.
- 304 A shell, to be drawn and shaded after nature.
- 305 Two or three vegetable roots, as potatoes, onions, carrots, and turnips, to be piled up in a picturesque manner, and drawn from nature, with a little shading.
- 306 Perspective. Hold this picture so that you may

- see every part of it well. (A landscape, with the various distances clearly marked, should be shown to the pupil.) Remove it further: what parts do you not see so well now? Further still: could you tell now what it is a picture of if you did not know? This process may next be reversed with another picture, the picture being viewed first from the most distant point. When you are far from a house can you see each of the bricks, tiles, or slates, panes of the windows, &c.? If you were a great way off a house could you tell there was one, though you could not see the windows?
- 307 The various kind of fish the pupil knows, to be drawn from memory.
- 308 A quart bottle, to be drawn from memory, with shading and shadow; the drawing to be afterwards compared with the object, and corrected.
- 309 Various sections of an inkstand to be drawn. See No. 467, figs. 1 and 2.
- 310 The ground plan of a room, and of several pieces of furniture in it, to be drawn. See No. 467, fig. 6.
- 311 The boy jumping, No. 294, to be drawn jumping back again.
- 312 An old woman in a cloak, to be drawn from invention.
- 313 A group of two or three shells, to be drawn from nature.
- 314 Let the pupil draw some cottage that he recollects to have seen.
- 315 Perspective. If you are directly in front of a house, or tree, or man, or cup, &c., and go straight back, do these objects appear the same in shape at different distances? Do they appear the same in

other respects as well as shape? Can you place this sphere or ball in such a position as that you shall see all the outside at once? How much of the outside can you see at once?

\*316 A pig.

\*317 A hare.

\*318 Ornaments and borders of various kinds, and on the general plan of those in the copy, to be invented by the pupil, who may also copy two or three.

319 Let the pupil draw from this description an arched gateway, with an embattlement on the top: the arch should be round.

320 Let the pupil describe in writing the castle, No. 371, stating its different parts; their shape; the parts which are and are not in the light; what the castle stands on; and what there is besides castle and rock.

321 Pens and inkstand standing on a book, to be drawn, and slightly shaded, from the objects, which should be placed in a strong light.

\*322 A monkey shaving.

323 Colour. Do those very distant trees appear of the same colour as these nearest trees? Does the grass nearest to you and the most distant grass appear of exactly the same colour? Does the trunk of that tree near you appear as dark as anything in the distant ground? Does it seem darker? Do the slates or tiles of that house close to you appear to have more colour than those on the house at a great distance?

\*324 A man fishing.

\*325 A wine-glass. The pupil may compare this sketch with the object. He may also place a

- wine-glass in various positions, and try to represent it.
- 326 A piano, or some large piece of furniture, to be drawn from the object. The pupil, in making the sketch, should be as far from the object as possible, and should first estimate the apparent length of the parts.
- 327 The pupil may draw a dwelling-house. He should not be very close to it when making the sketch.
- 328 Some particular gate, sign-post, or easy object, may be attentively observed by the child when he is out of doors, and drawn afterwards from memory.
- 329 The section of a chimney and chimney-pot may be drawn. See No. 467, figs. 1 and 2.
- 330 A ground plan to be drawn of a cottage, consisting of a passage, two rooms, a garden in front and one behind, with a pigstye in the latter. See No. 468, fig. 2.
- 331 Perspective. When you are very close to a tree can you see each of the leaves that is not hid by the rest? Go a little further off, and tell me what you see. Can you see the boughs further off than the leaves? When the tree is very far off can you see the boughs? How do you know that it is a tree if you do not see the leaves or boughs? Ought you to draw and paint a near tree and a distant tree exactly alike? What difference should you make?
- 332 The pupil may be required to invent various forms for tea-cups, mugs, flower-pots, and objects of that description.

\*333 Punch.

\*334 Boy and dog.

\*335 Tree and landscape.

336 A stump of a tree, or some easy object, from nature.

337 A cup and saucer, from the objects, with shading.

338 The tree and landscape, No. 335, may be tried again.

339 A flower, with a stem and few leaves, to be drawn from nature.

340 Some leaves, placed in a strong light, may be drawn from nature, and carefully shaded.

341 The pupil may attempt to draw a group of two or three children from nature, in simple rough outline.

342 An easy church or building, to be drawn from nature.

343 The tree and landscape, No. 335, may be drawn from memory.

344 Some leaves, placed in a strong light, and on white paper, to be drawn from nature, and shaded, with the shadow also on the paper.

345 Perspective. Let the pupil watch a person at a considerable distance who is gradually approaching, so that the appearance of age, size, dress, &c., at different distances, may be perceived and stated. The same exercise may be performed with various animals. Let the pupil go to a great distance from a tree, and gradually approach it, giving an account of the appearances at five or six distances. The same thing may be done with a cottage, cow, &c. The exercise may then be reversed, by beginning

- near, and ending far off the object, which is more difficult.
- 346 Two or three shells and stones, arranged tastefully, and drawn from nature.
- 347 An old woman, to be sketched quickly and roughly from nature.
- 348 A book placed diagonally towards the pupil should be drawn.
- 349 Various forms for vases, flower-pots, &c., to be invented.
- 350 A pattern to be invented for a hearth-rug.
- 351 The pupil's own left hand, to be drawn from nature.
- \*352 A building in outline.
- \*353 A cow.
- \*354 A fisherman.
- \*355 Bird's head.
- 356 A man, to be drawn quickly and roughly from nature.
- 357 A book, to be drawn in various positions from the object.
- 358 A stool or chair should be drawn from the object, which should not be placed very close to the pupil.
- 359 The boy in a barrel, No. 131, from memory.
- 360 The duck, No. 133, from memory.
- 361 The face in profile, No. 134, from memory; also the same face looking in the opposite direction.
- 362 The outline of a face in profile, from nature.
- 363 Various forms for inkstands and lamps to be invented.
- 364 The bull's head, No. 139, to be drawn half the size of the copy; also exactly twice the size and three times the size.

- 365 A table, to be drawn from the object.
- 366 A spoon, to be drawn from the object, with shading and shadow.
- 367 A group, consisting of pen, pencil, India-rubber, and knife, or of a few simple objects of any kind arranged so as to look well, to be drawn, with shading.
- 368 The pupil may draw the copies, Nos. 1 to 6, with the greatest possible rapidity consistent with correctness.
- \*369 A turkey.
- \*370 A girl. (Morland.)
- \*371 A castle shaded.
372. Perspective. A square box or cube may be examined in front, on each side, and from above and below, and also when the edge and when the corner are nearest the pupil, who should observe its various appearances; and the following questions may also be asked: What is the greatest number of sides you can see at once?—and the least number? When you place the box in front, and the top edge level with your eye, what sides do you see?—also when it is in front and above your eye?—in front and below your eye?—on each side, both above and below the eye? When you see three sides, does each side appear an exact square? What shape does each side then appear of? When you see two sides, do they appear squares? The pupil may be exercised in a similar manner with an oblong box, a thick book, and other objects which have regular plane sides.
- 373 Two or three simple flowers in a group or bunch, to be drawn from memory.

- 374 The whole of a grate, fire-place, and mantel-shelf, to be drawn from the objects.
- 375 The most distant half of a room, to be drawn by the pupil standing at the opposite end.
- 376 A castle, consisting of a large round tower in the centre, a high wall in front, and a smaller round tower at each end, to be drawn by the pupil from the description.
- 377 The bridge, No. 385, to be described in words, or a written description to be given of it.
- 378 The copies, Nos. 8, 9, 11, 12, 14, and 15, to be drawn as rapidly as possible, first of the size of the copies, and afterwards half the size.
- 379 A section to be made of a chest of drawers. See No. 467, fig. 1. 2.
- 380 The swan, No. 144, and rabbit, No. 154, to be drawn from recollection, and corrected by the copies.
- 381 A shawl or handkerchief hung on a chair-back, with a few large folds well marked by the light, to be drawn from the object.
- 382 The woman, No. 152, to be copied as quickly as possible, and afterwards to be drawn from memory, one-half the size of the copy.
- 383 Two or three flowers, well arranged in a small cup or phial, to be drawn from nature.
- \* 384 Boy and girl running.
- \* 385 A bridge.
- \* 386 A dog.
- \* 387 A chair, in perspective. This copy should be carefully compared with a chair in the same position before the child draws it.
- 388 A cat or dog, to be drawn from life.

- 389 An old tree, with a few branches and no leaves, to be drawn from nature.
- 390 A building, as a barn or cottage, to be drawn from nature.
- 391 A distant tree, to be drawn from nature, the distance being such that the more minute details cannot be seen.
- 392 Exercises on colour. Do objects very far off appear to have as many colours as objects close by? Look at that person who is so far off that you can scarcely see him—what is the colour of his clothes? Does the grass in that field, some distance off, appear as bright and green as the grass close to you? Let the pupil then compare objects in the front ground with objects at a less distance than the most distant ground in the same manner, and let the objects which are most strongly coloured be compared first. After this let the pupil compare the colours of the most distant ground with those of the different distances between that and the front ground.
- 393 The fisherman, No. 354, to be drawn twice the size of the copy, and afterwards half the size, and with rapidity.
- 394 The copies, Nos. 18, 19, 23, 28, 33, and 39, to be drawn with the greatest possible rapidity, but with perfect calmness, and without hurrying.
- 395 A cottage, such as the pupil would like to live in, to be invented and drawn.
- 396 The pupil should measure the space which a piece of furniture covers, and make a drawing or ground plan of it on the scale of an inch to the foot, according to the plan shown in No. 467, fig.

- 6, which is a plan of a room with various articles of furniture.
- 397 A dog, sheep, or some domestic animal, to be drawn from nature: or No. 207 may be copied.
- 398 One of the child's companions, to be drawn from life, sitting and standing, quickly, and with little detail.
- 399 Various kinds of paling for gardens, more or less ornamented, to be invented.
- \*400 A goat.
- \*401 A cottage, shaded.
- \*402 A pack-horse.
- 403 A chair from nature. Previously to drawing this object, it should be carefully examined in the following manner. When does its seat appear narrowest?—broadest? Can you stand so as to see none of its legs?—so as to see all four legs?—three only?—two only?—one only? Do the legs always appear to be of the same length? Do they ever appear so? Does one ever appear longest? Do two ever appear of the same size? Do three? When does the back appear broadest?—when narrowest?—when longest?—shortest? What parts of the chair can you see, when you place it on the table, which you cannot see when it is on the ground? Does it appear the same when it is on the ground, and when you stoop down as when you stand up? Does it appear the same when you stoop to it as when you raise it to you?
- 404 An ear from nature.
- 405 An eye from nature, front view and profile.
- 406 A closed hand from nature.
- 407 Perspective. Take a square box with the lid

off, and let the pupil try in what positions the inside can and cannot be seen. Also the positions in which one of the inner sides, and bottom, and two, three, and four of the inner sides and bottom, can be wholly or partially seen. When all the inside can be seen, is any part of the outside visible? Some exercises should then be done with the box reversed. Where must you be placed to see the top, and nothing more, of a flat-roofed house?—to see none of the top?—to see the top very narrow? The pupil may answer these questions by the aid of a bit of wood, or a box raised to different heights; but if possible should verify the observations from nature.

- 408 Several small pieces of furniture may be measured and their ground plan drawn, as in No. 396, but on a scale of two inches to the foot. Some large pieces of furniture may be drawn in the same manner on the scale of half an inch to the foot.
- 409 The pupil should draw several of the simplest objects he can find out of doors, from nature.
- 410 Several distant trees to be drawn from nature.
- 411 The pupil may draw several objects that he has seen out of doors, from memory.
- 412 A man and woman, to be drawn from invention, of a small size, and quickly and roughly.
- 413 The pupil may try to draw a cottage from invention.
- 414 The pupil may draw the copies Nos. 49, 50, 54, 55, and 59, with the greatest possible quickness, but so that they shall not be drawn positively ill.
- 415 A bridge, to be invented and drawn, consisting

- of three round arches, the centre arch to be the largest; the banks to slope on each side.
- \*416 A gardener with watering-pots.
- \*417 A house shaded.
- 418 Perspective. Examine a saucer. Can you see all the inside and outside at once? When you see all the inside can you see any of the outside? When you see all the outside can you see any of the inside? When does the rim appear round?—when oval?—when a horizontal straight line?—when a perpendicular straight line? When does the side of it appear the deepest?—when the shallowest? Examine a basin, teapot, candlestick, and snuffer-tray in the same manner. Try in how many ways you can hold a ruler so that it shall appear of different shapes; also a square stick or wooden brick.
- 419 A head and face, to be drawn in profile from nature, quickly and roughly. (Beginners usually draw the head much too small in proportion to the face. As much is above as below the eye.)
- 420 The pupil may try to draw a full face from nature in the same manner, at first only marking the place for the eyes, nose, and mouth, by short lines.
- 421 A dog and dog-kennel, to be drawn from general recollection.
- 422 The porter, sheep's-head, trap and ball, and profile, Nos. 155, 171, 172, 173, to be drawn from memory.
- 423 A ground plan of a room may be drawn, one inch to the foot or yard. See No. 468, fig. 3.

- 424 The copies Nos. 49, 55, 59, and 64, to be drawn double the size, and as rapidly as possible.
- 425 The pupil may invent, as well as he can, a boy with a hoop.
- 426 A small bunch of flowers, to be attempted from fancy.
- \*427 Boys at play.
- \*428 A cottage.
- \*429 A leaf, foreshortened in different ways.
- 430 The pupil should draw from nature a leaf of a different shape, foreshortened as above.
- 431 Colours. When the sun shines do objects appear of exactly the same colour as when it does not shine? Did you ever notice any difference of colours in a dark day and a bright day? How do the colours of objects at a little distance appear in foggy weather? Can you see the colours of objects as well by moonlight as by daylight? Can you see colours at all by moonlight? Can you see as far by moonlight as by daylight? Can you see colours as well by candlelight as by daylight?
- 432 A ground plan of a room, with the furniture in it, as in Nos. 396, 408, and 423, on the scale of an inch to the foot, or half an inch to the foot, according to the size of the room and the pupil's slate or paper. The furniture may also be drawn separately, cut out, and arranged in different ways on the plan of the room; which will be found useful in showing where the furniture will stand, and how it may be placed without moving it.
- 433 Various objects seen by the pupil out of doors

- may be drawn from recollection, as a wheelbarrow, cart, lamp-post, plough, barn, cottage, tree, &c.
- \*434 Various fancy ornaments, borders, and patterns, to be invented by the pupil, who may also copy several of those given in this exercise, and alter others.
- 435 A plate of fruit of various kinds, arranged well, may be drawn from nature.
- 436 The bat and ball, soup-plate, tomb, boy and top, and jug, Nos. 178, 179, 185, 196, and 197, to be drawn from memory.
- 437 A garden in a square space should be planned, with beds and walks, and the site of a summer-house. See No. 467, fig. 5.
- 438 A group may be invented by the pupil, of a bat, trap, ball, wicket, and other appropriate objects.
439. Perspective. An examination may be made of a stool, table, piano, drawers, &c., similar to that noticed in No. 403.
- 440 The objects, Nos. 83, 89, 90, and 92, to be drawn of half the size of the copies, carefully, but with the utmost rapidity.
- 441 Fancy ornaments, as in No. 434, continued.
- \*442 Rabbits. (Morland.)
- \*443 A church. If thought too complicated the tower may be drawn at first separately.
- 444 Another side and full face, as in Nos. 419 and 420, may be attempted from nature.
- 445 A man digging with a pickaxe, to be invented and drawn by the pupil.
- 446 Nos. 294 and 295 may be drawn of the largest size the pupil's slate or black board will allow.

- 447 A child, to be drawn roughly from nature, in several attitudes.
- 448 Perspective. How must a face be placed so that you shall see all of it? Try if it can be placed in any other way. Can it be placed so that you shall see exactly half of it?—also so that you shall see one half and part of the other half? How must a face be placed so that you may see all the upper, but only a part of the lower portion?—to see the the top of the head but none of the face?—the face and none of the head? This exercise should be performed by the actual observation of a face; it may be also varied by using a bust.
- 449 Exercises on a landscape, either painted, drawn, or engraved. Which part of this picture is intended to represent the fore ground?—and which the distant ground?—and that which is neither the fore ground nor the distant ground? How do you know that this is the most distant ground?—that this is the nearest ground?—and that this is the middle ground?—that this tree is in the distant ground?—that this house is in the middle ground?—that this man is in the fore ground? &c. Another picture may now be taken, and the exercise usefully varied if the teacher points to each part or object, and inquires what it is meant to represent. If that near tree had been in the distant ground how would it have appeared?—and how if in the middle ground? And the exercise may be continued with other objects in the picture.
- 450 A monument should be invented formed of a pedestal and long pyramid; also one formed of a cubic pedestal and pillar, ornamented at top.

- \*451 A tree.
- 452 A cat, dog, fowl, or some other domestic animal, to be drawn from nature.
- 453 Nos. 178, 196, and 207 to be drawn from memory but much larger.
- 454 The pupil may try to make a ground plan of a floor, consisting of one or more rooms, and a passage, &c.
- 455 Nos. 417 and 451 to be drawn again.
- 456 Perspective, &c. Take a hollow cylinder, as a large roll of paper. Can you place this cylinder so as to see all the outside at once?—all the inside at once?—all the inside and some of the outside at once? In what position does it appear longest?—in what position shortest?—in what, between the two? When you look through it do you notice any difference in the rims or circles at the opposite ends? Can you place it towards the light so that none of the inside shall be in the shade? so that all the inside shall be shaded?—part only shaded? Can you make all, a part, and none of the outside shaded? A similar exercise should be performed with a hollow cube or oblong, which may be made by a stiff piece of paper folded, or four pieces of wood or books, two opposite ends being left vacant.
- \*457 A group of trees.
- 458 A man or woman, to be drawn from nature, quickly and roughly.
- 459 Nos. 122 and 134 should be drawn on the largest scale the pupil's materials will admit.
- 460 The pupil may try to make a ground plan of the space the house stands on, including the yard, garden, &c. See No. 468.

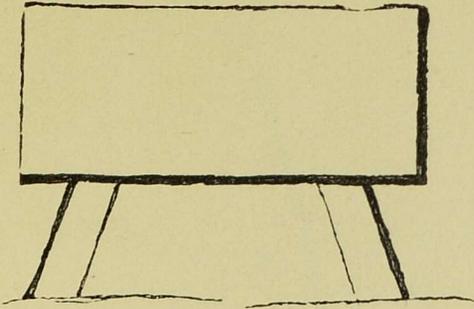
- 461 Nos. 110, 128, 138, and 156, to be drawn the size of the copies with the utmost rapidity.
- 462 Several sorts of porches for cottages may be invented by the pupil.
- 463 Perspective, &c. An exercise similar to that given in No. 449 may be performed in a real scene.
- \*464 An oak.
- 465 Let the pupil invent a circular temple, consisting of a dome supported on eight pillars, the two centre pillars intercepting the view of the two behind. A ground plan of the same temple should afterwards be made. See No. 468, fig. 1.
- 466 Nos. 457 and 464 to be drawn again.
- \*467 Sections and plans.
- Fig. 1. Section of a bell.
  2. Section of a pump.
  3. Plan of the end of a room.
  4. Plan of the side of a room.
  5. Ground plan of a garden.
  6. Ground plan of a room with furniture.
- \*468 Ground plans.
- Fig. 1. Temple and ground plan.
  2. Cottage and ground plan.
  3. Room; ground plan drawn to a scale.
- \*469 Dog's head, No. 14, finished.
- \*470 Dog's head, No. 55, finished.
- \*471 Bull's head.
- \*472 Angler.

ONE HUNDRED AND FIFTY  
DRAWING COPIES

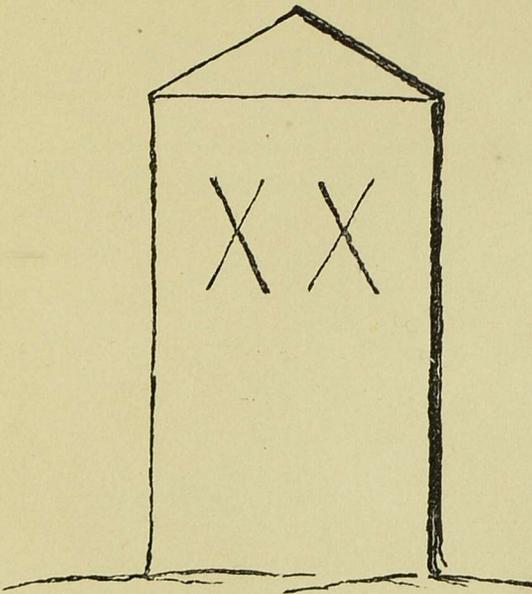
FOR EXPLANATIONS OF THE COPIES, SEE THE LIST OF EXERCISES,  
PAGES 29 TO 70.



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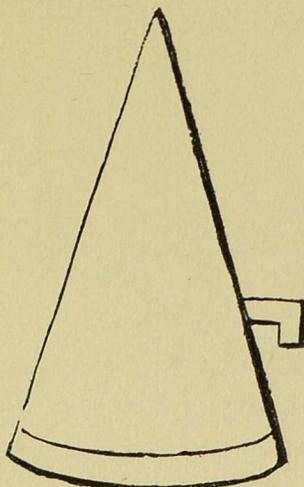




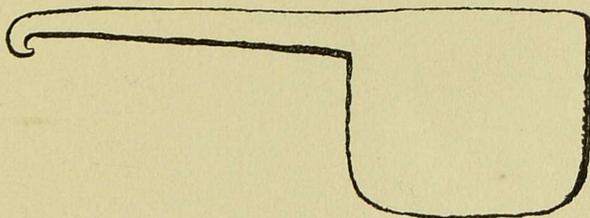
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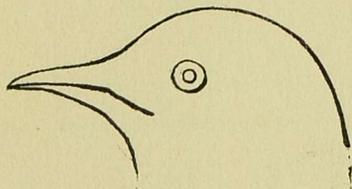
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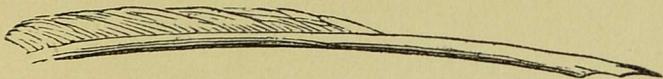


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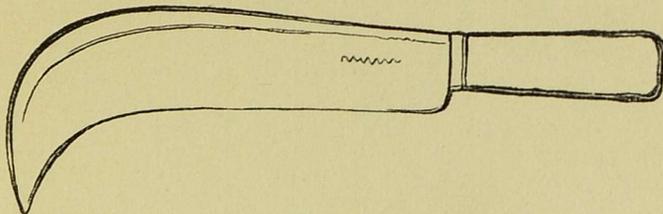




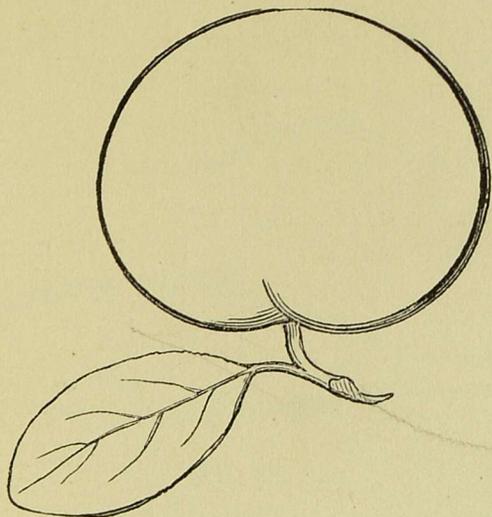
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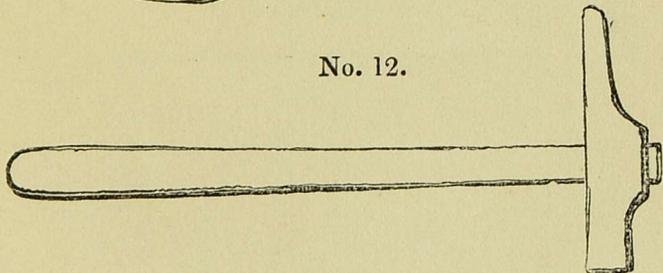
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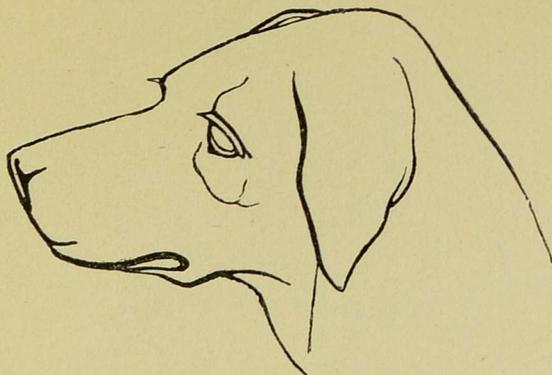


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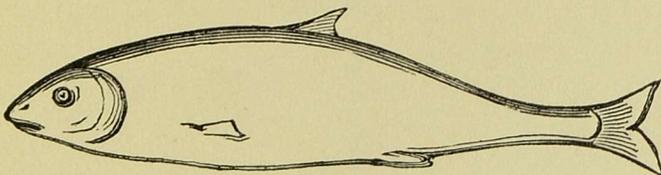
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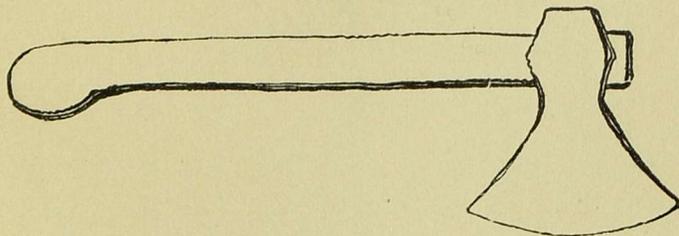
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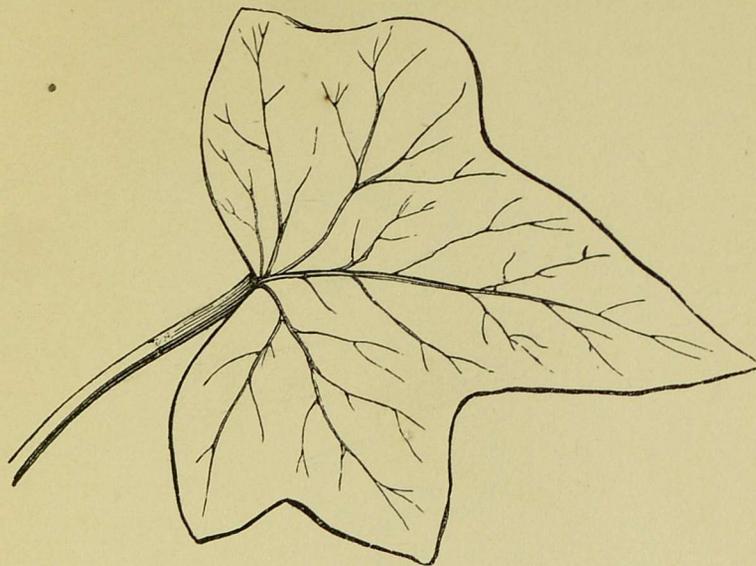


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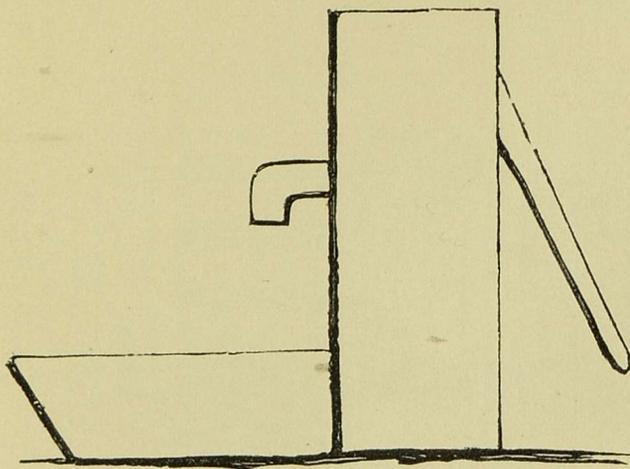




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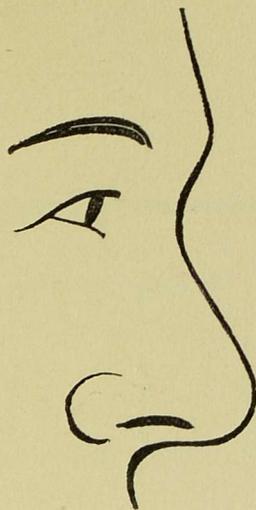


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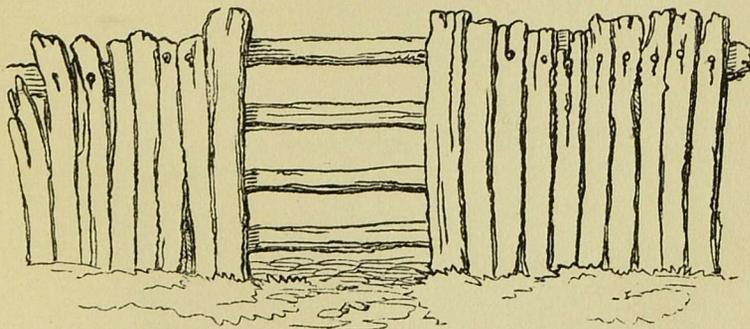




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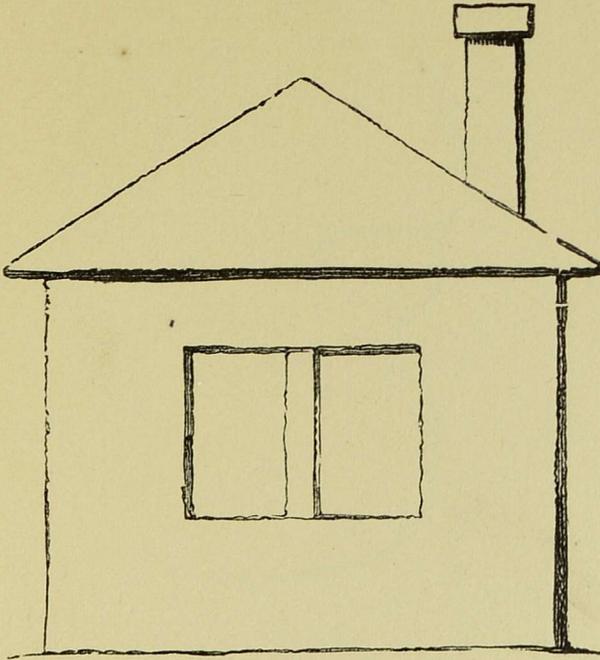


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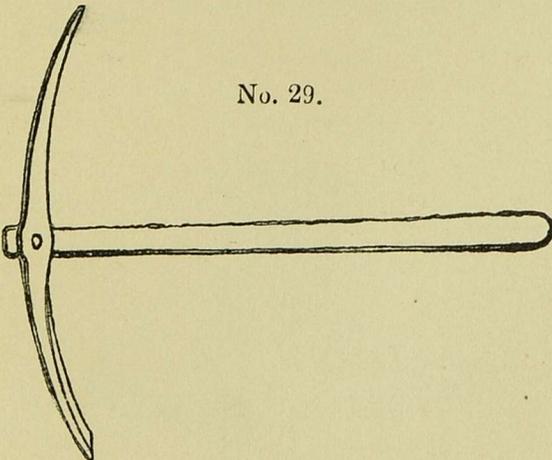




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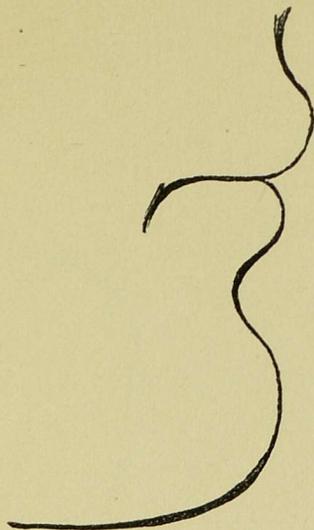


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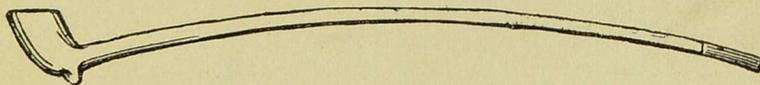




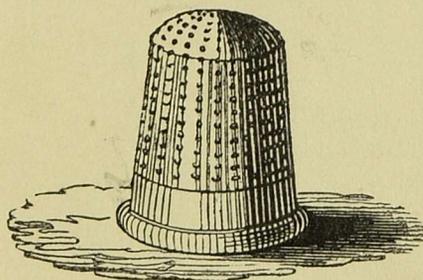
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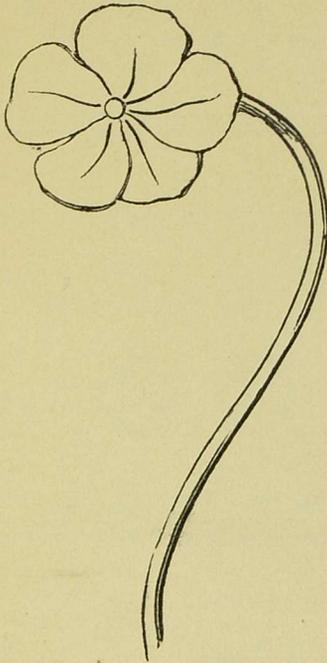


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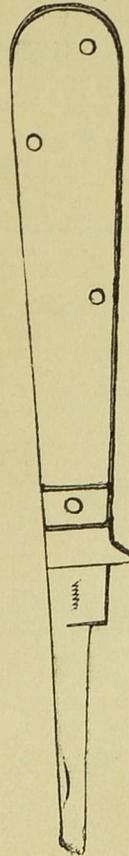




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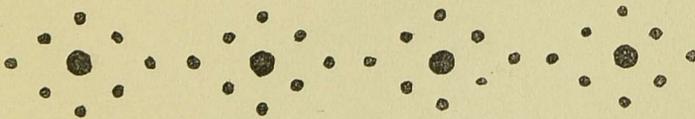
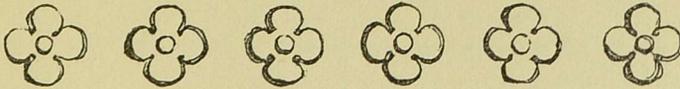
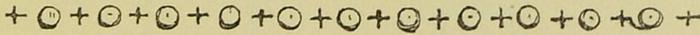
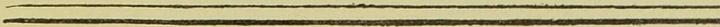
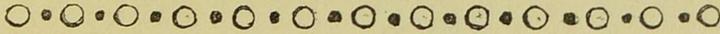
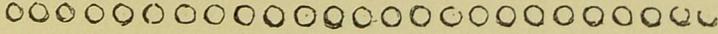


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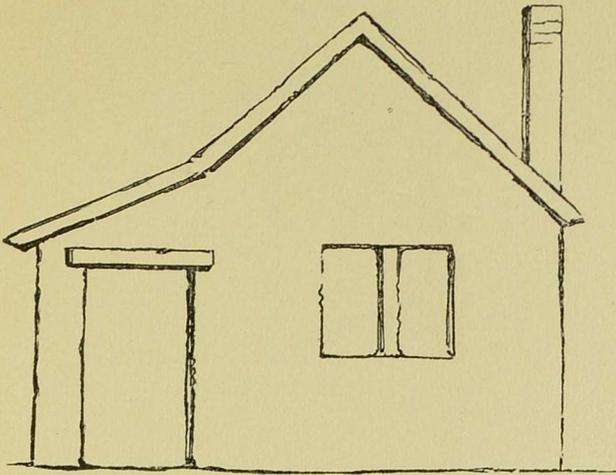


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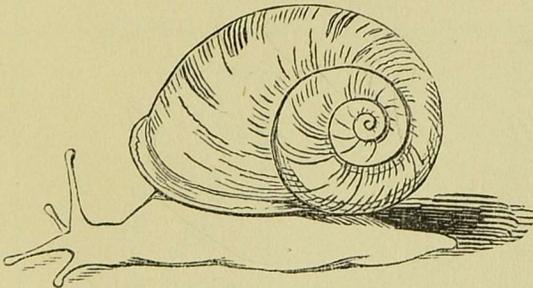




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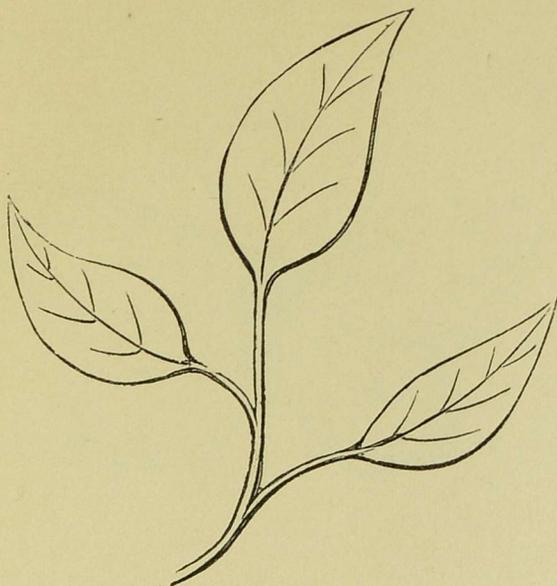


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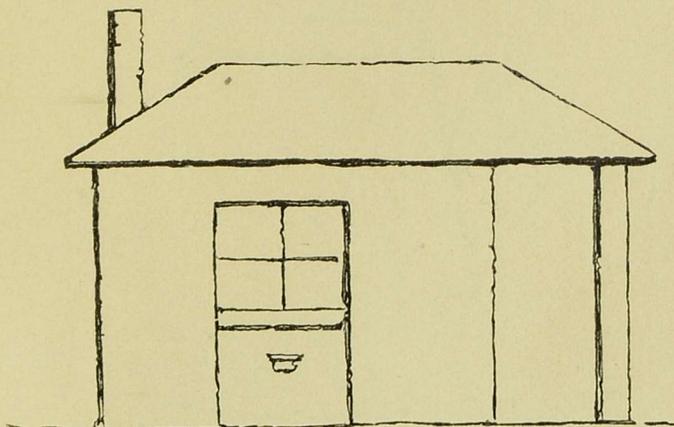




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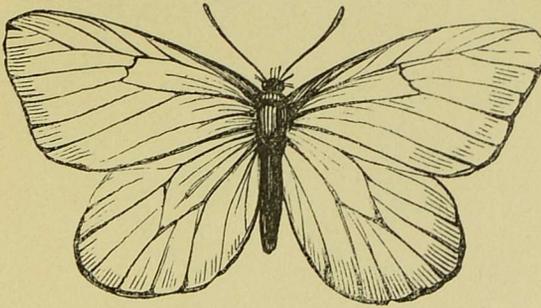


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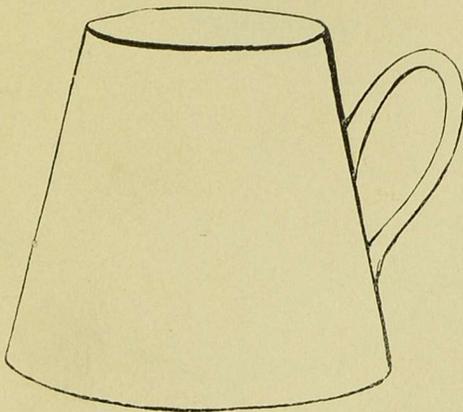




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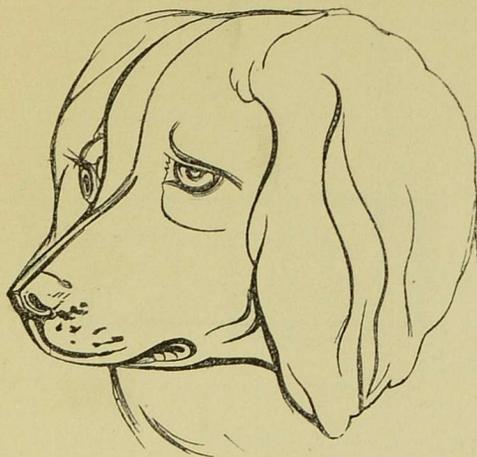


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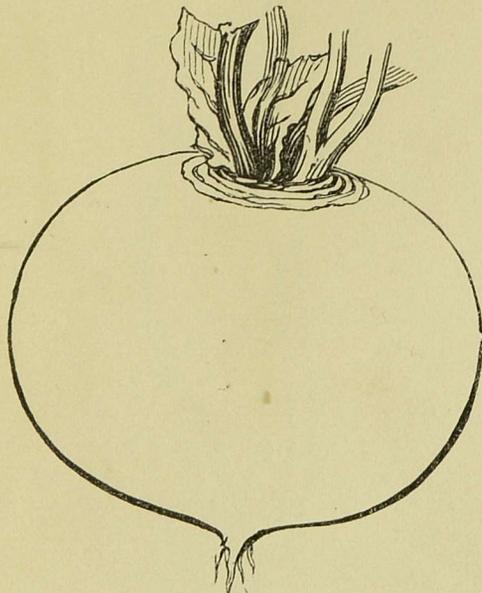


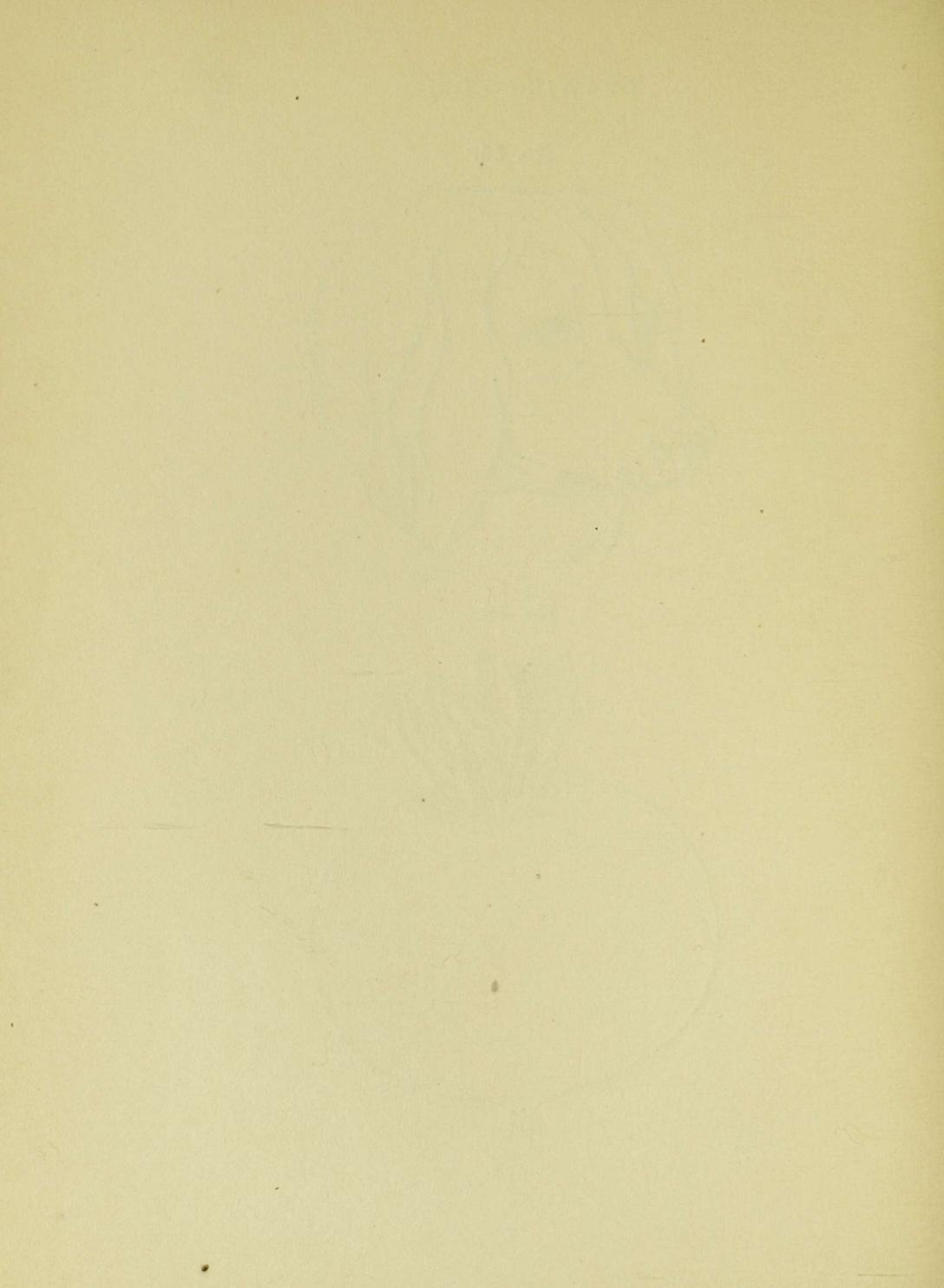


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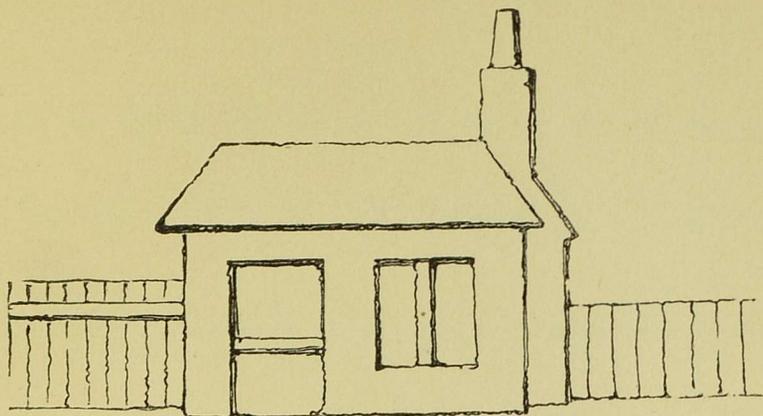


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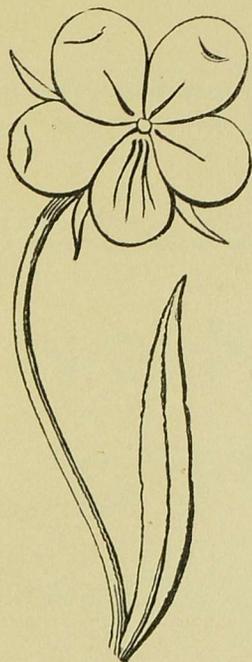




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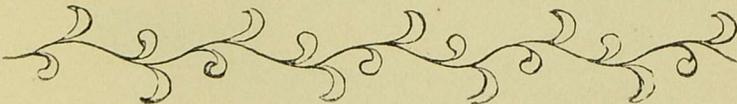
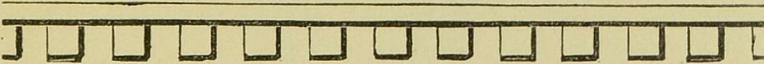
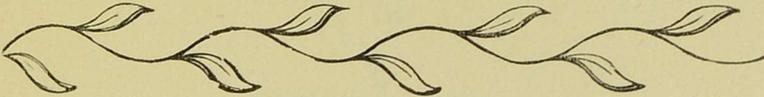
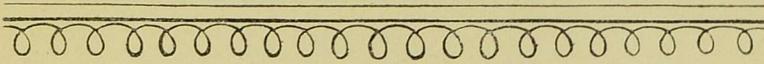
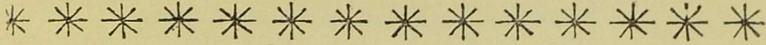


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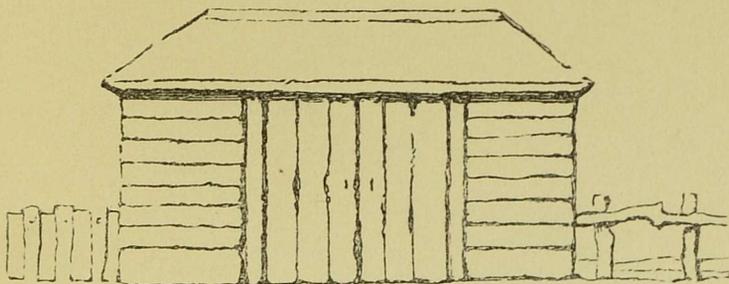


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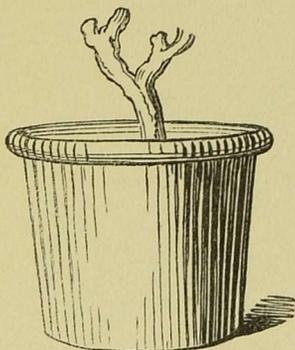




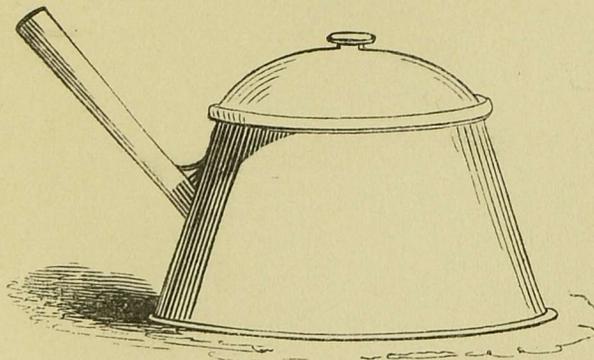
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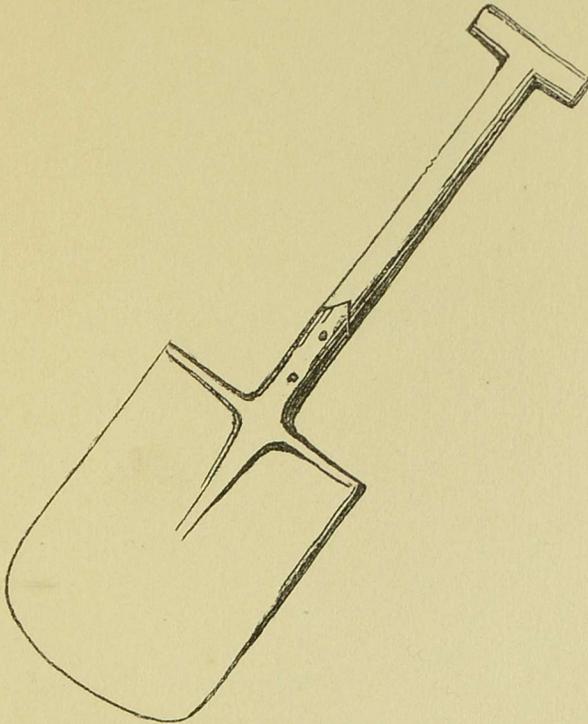


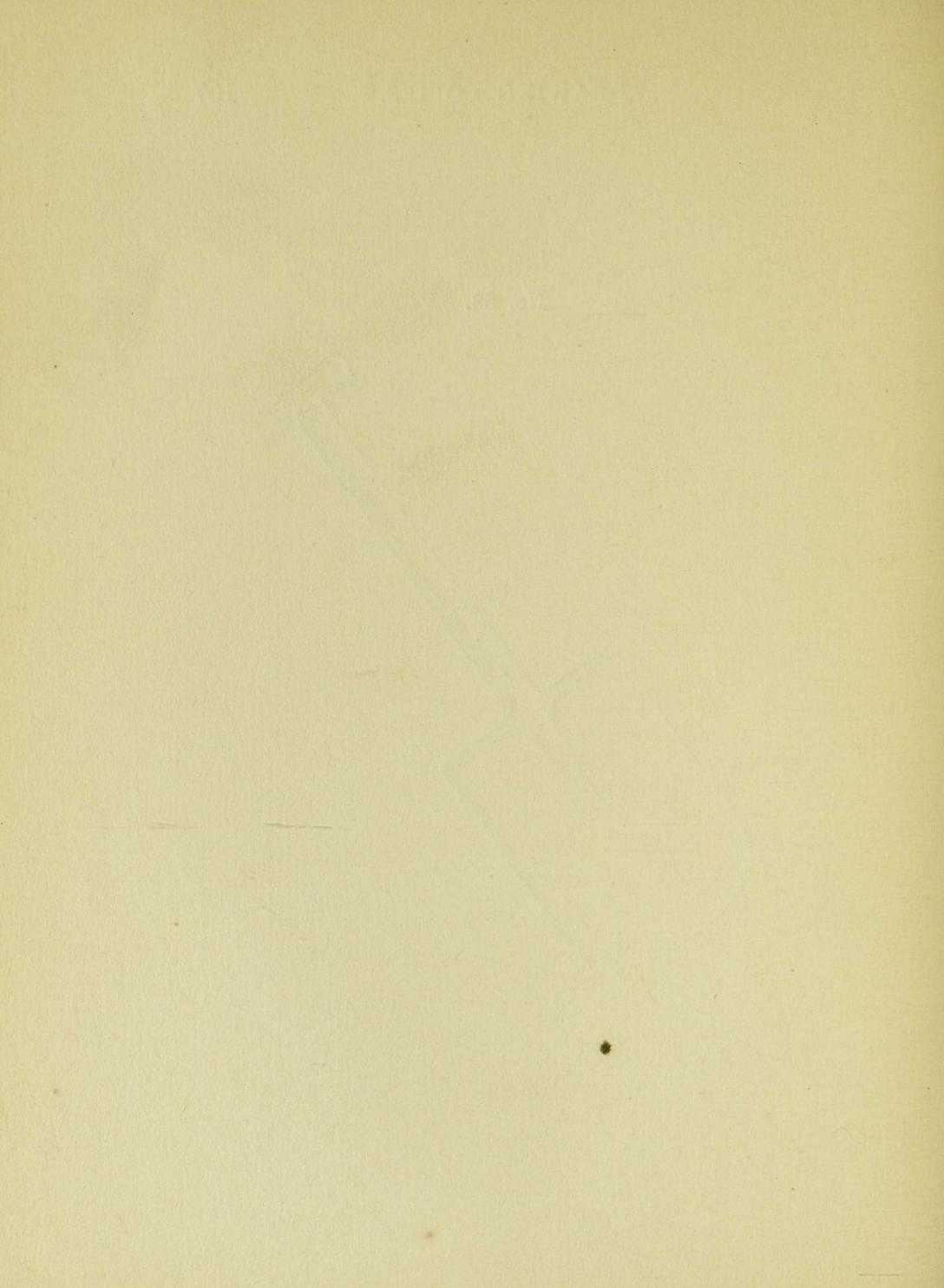
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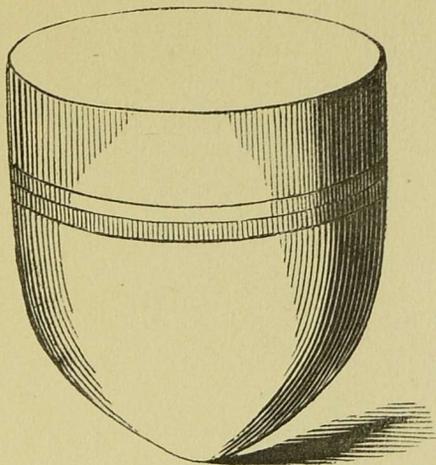


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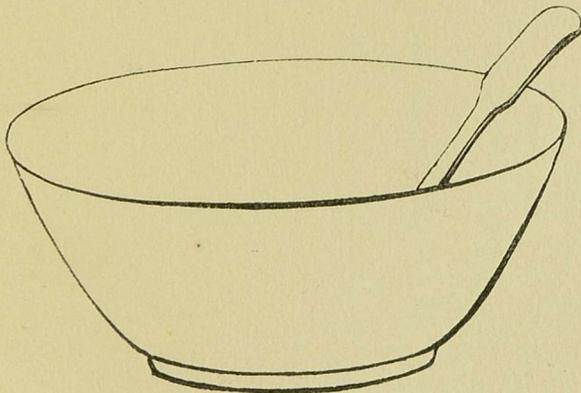




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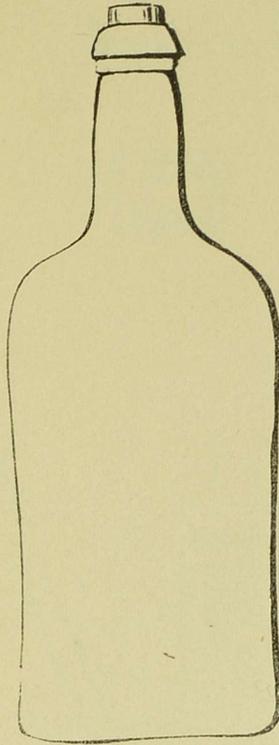


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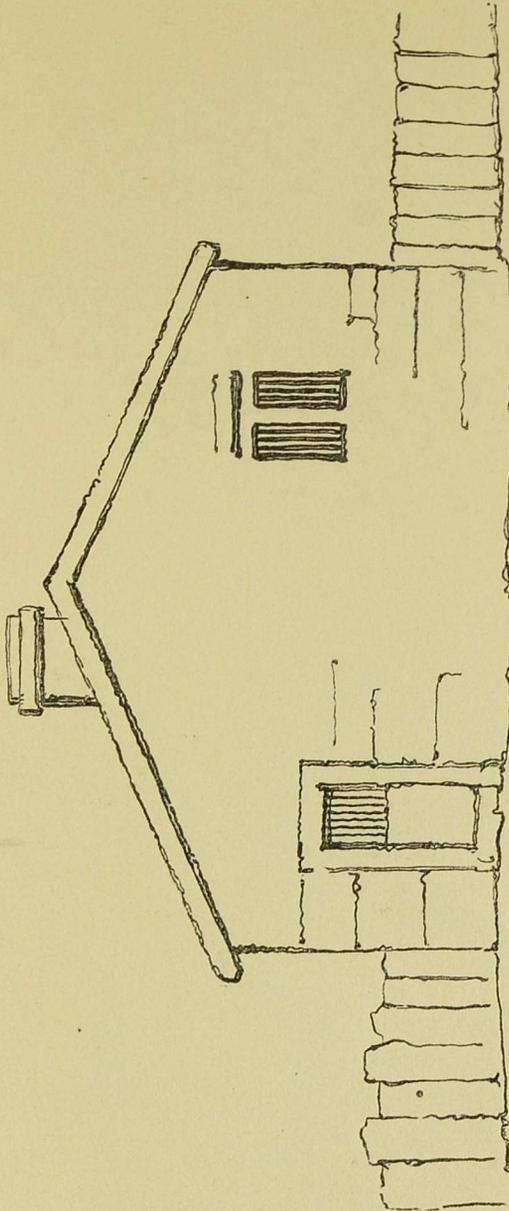


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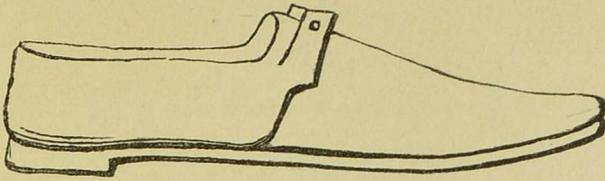


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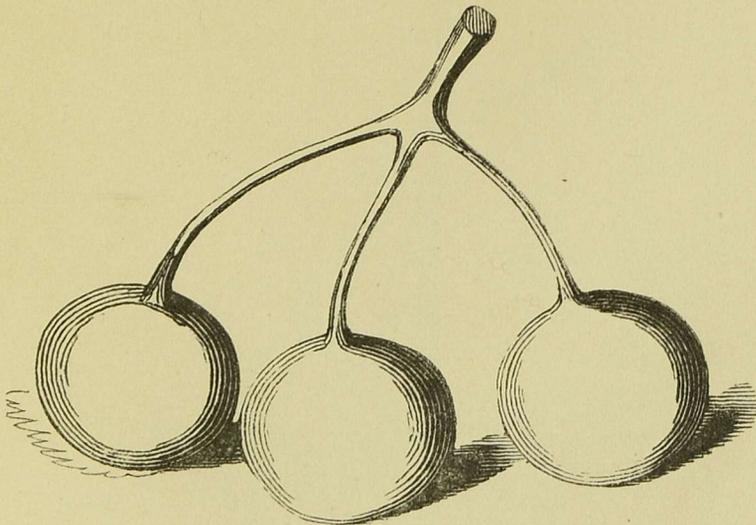




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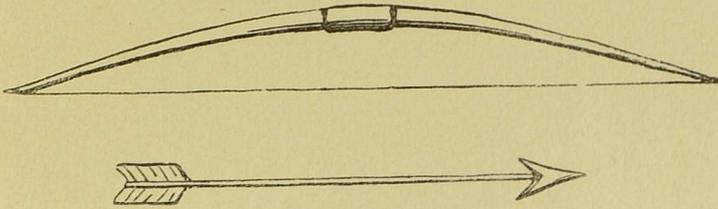


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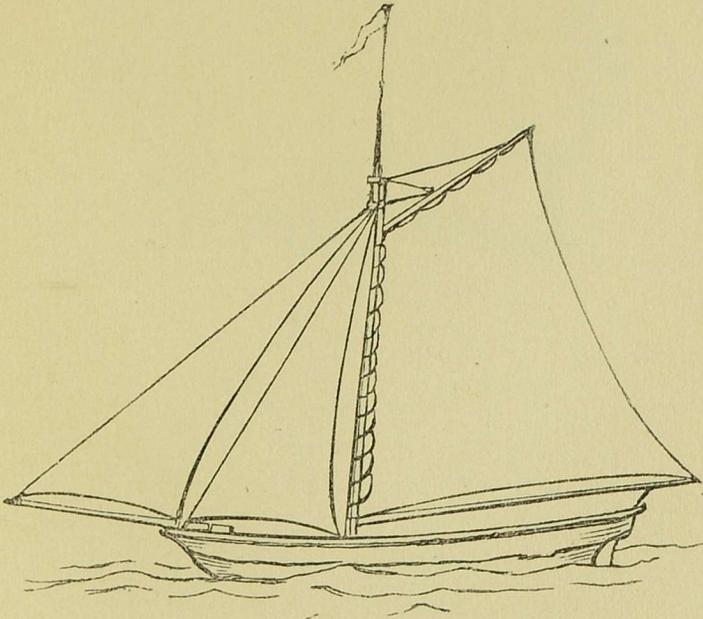


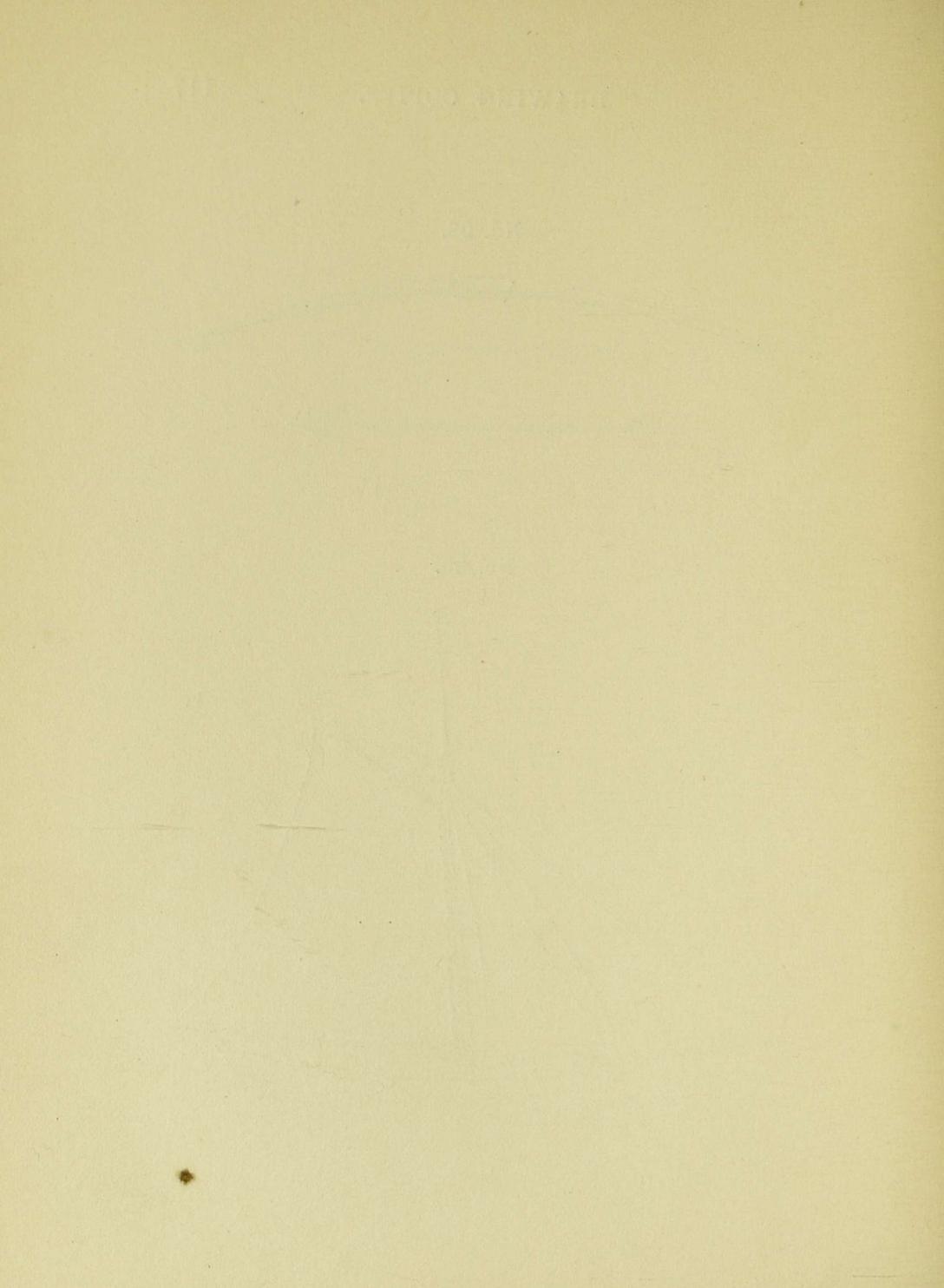


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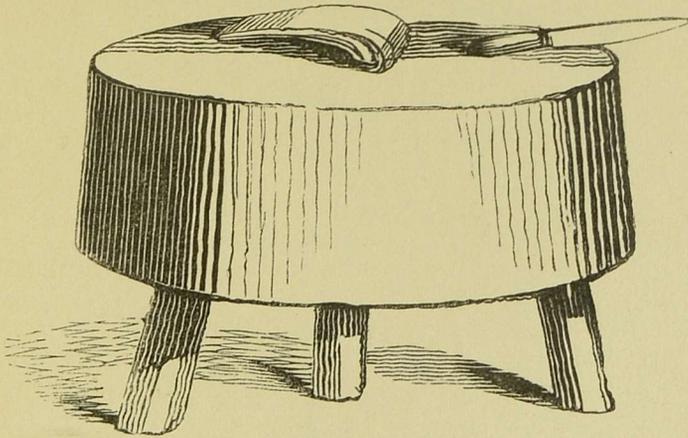


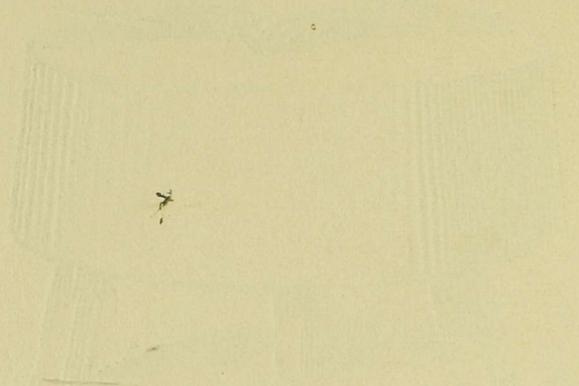
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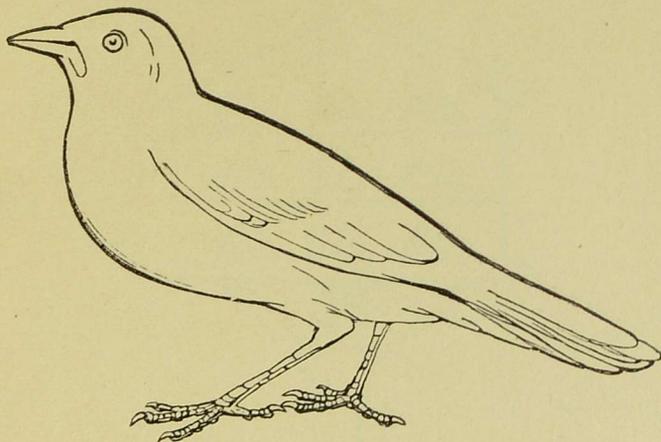


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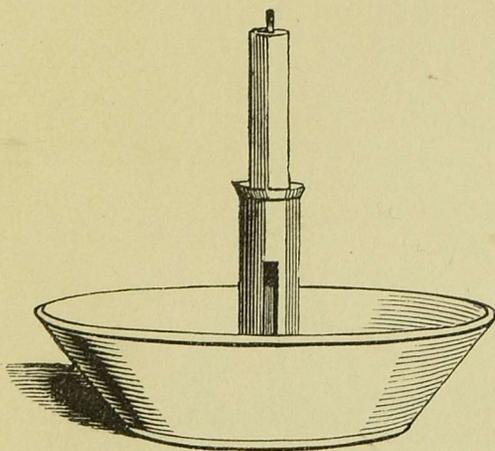




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No. 103.





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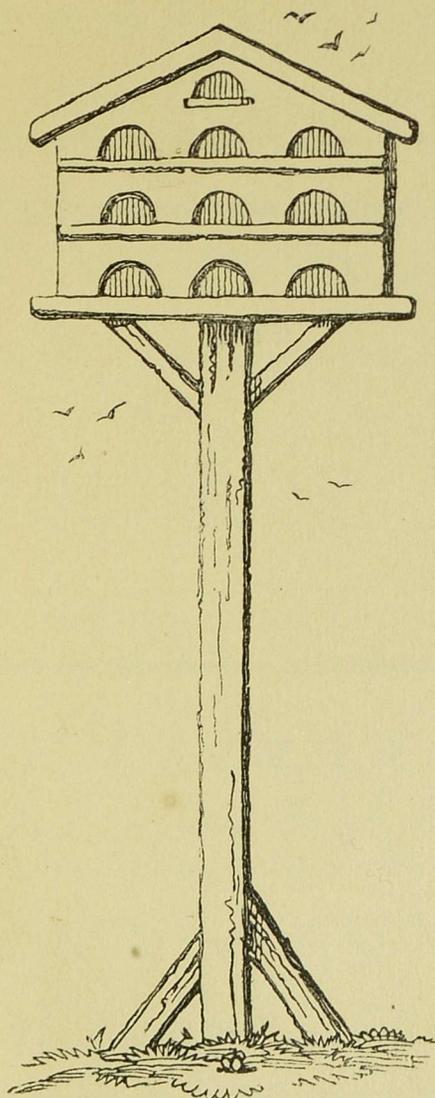
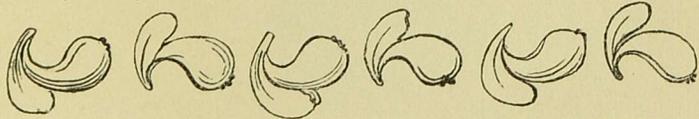
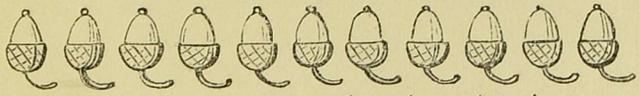
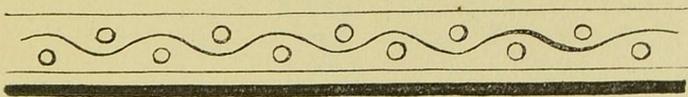
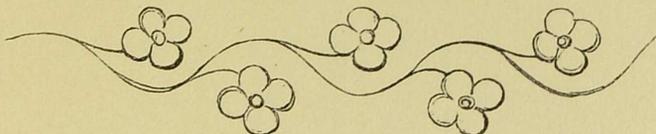
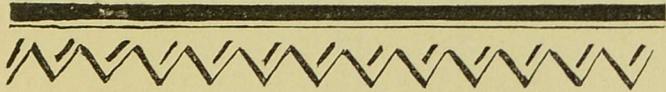
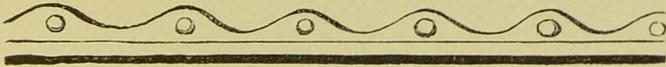
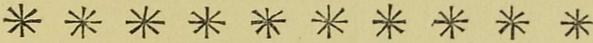


Fig. 100

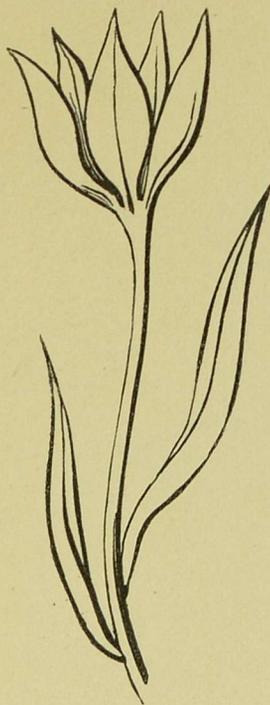


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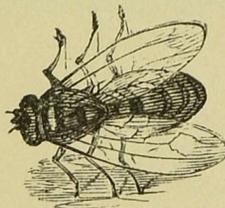




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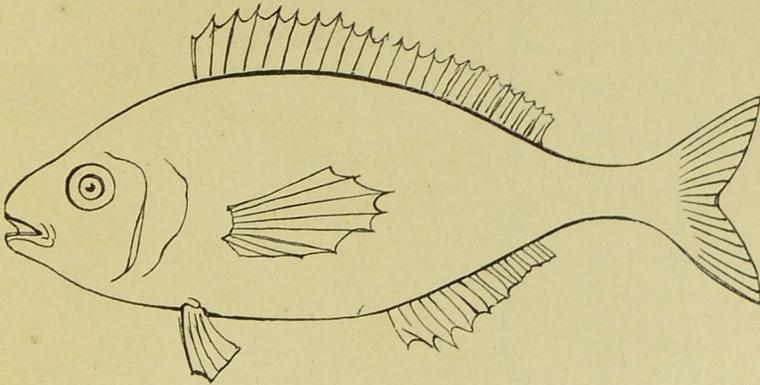


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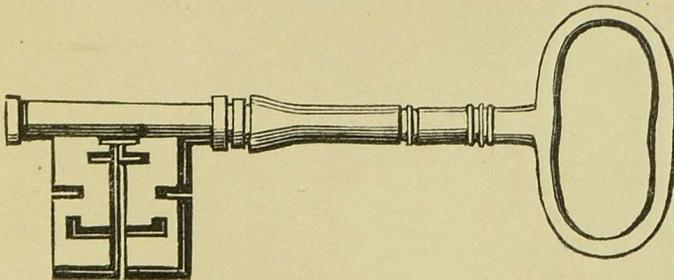




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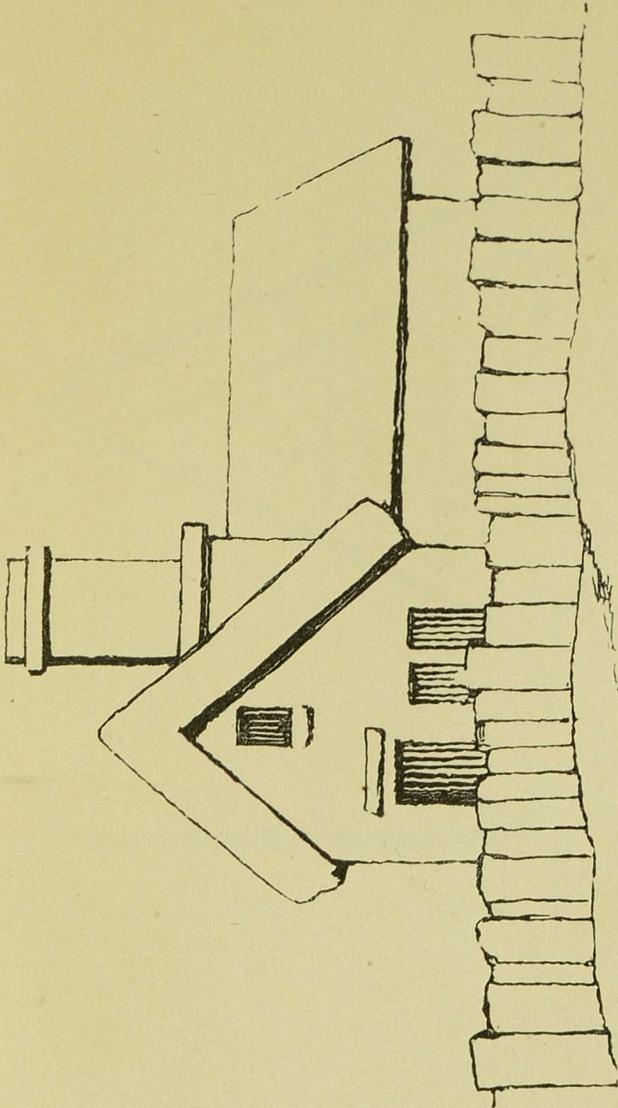


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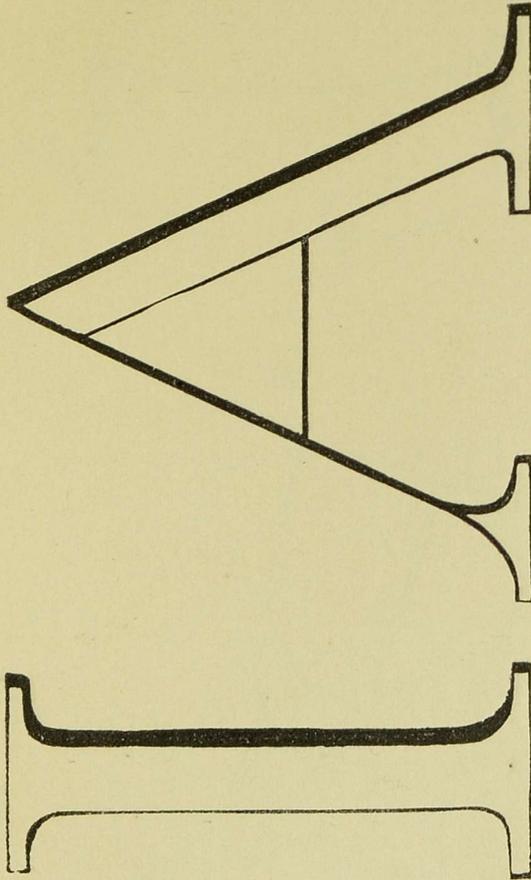


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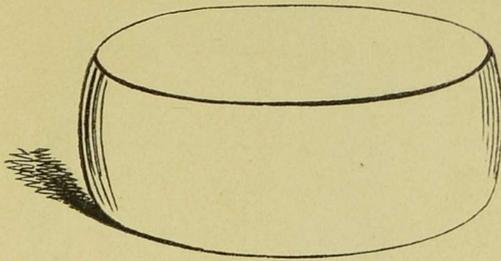


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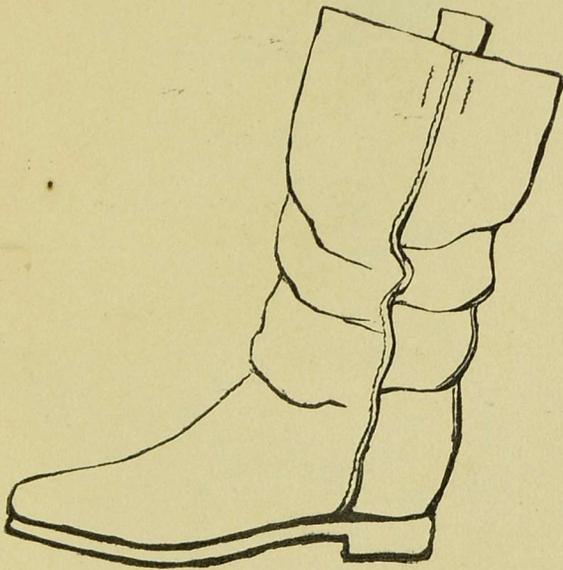


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No. 127.



No. 128.



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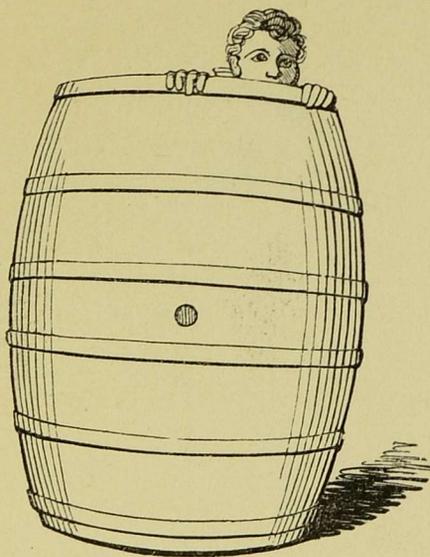
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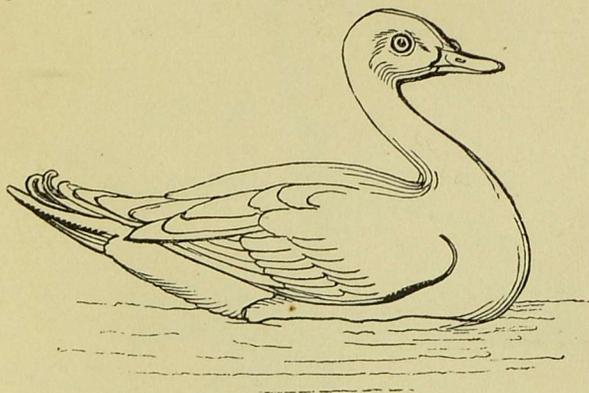
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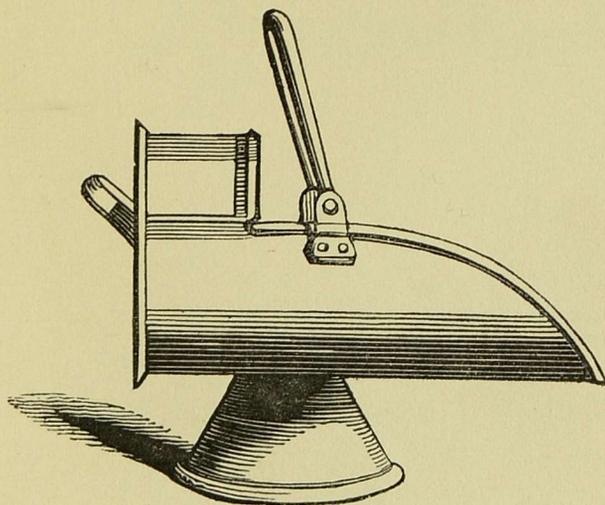




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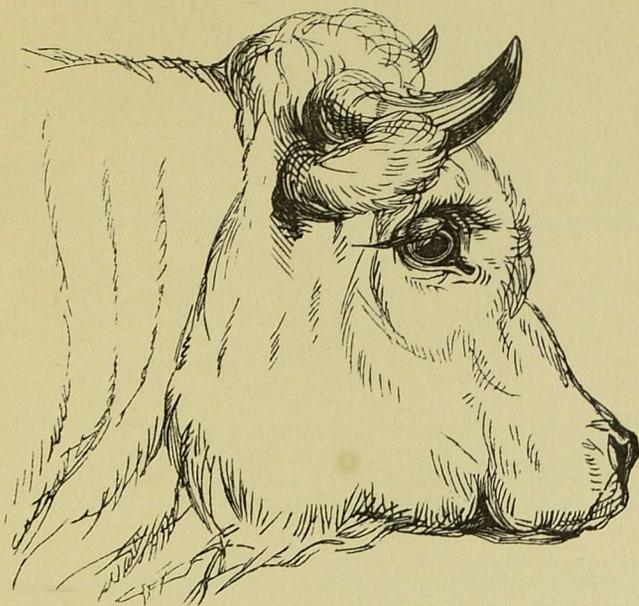


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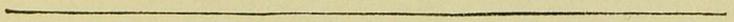
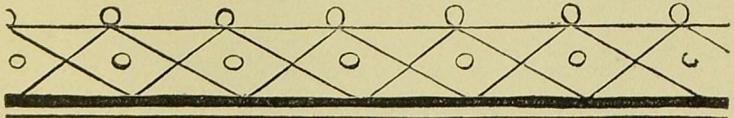
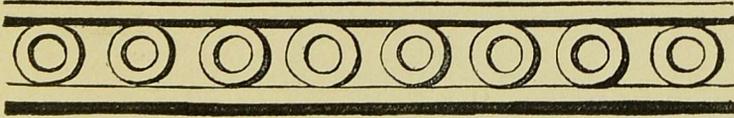
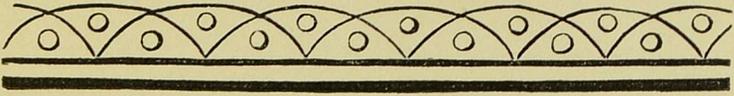
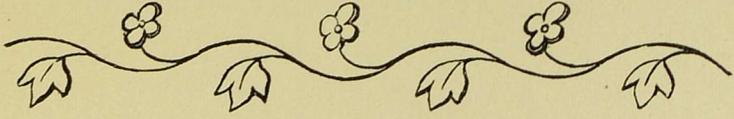
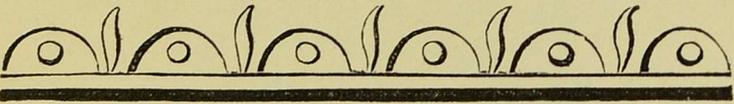
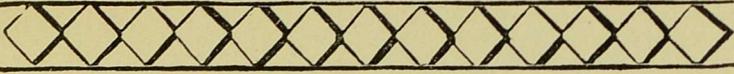
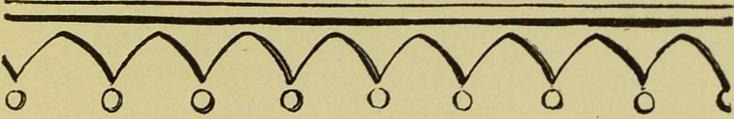


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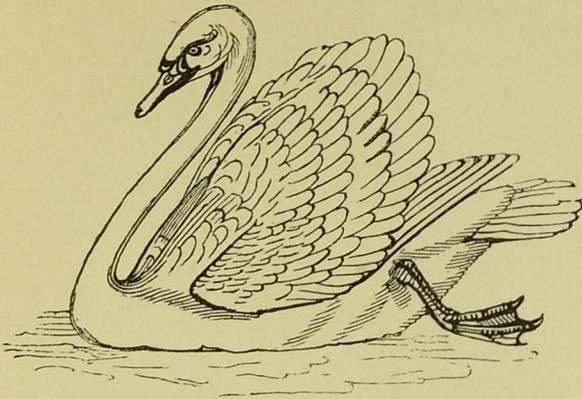


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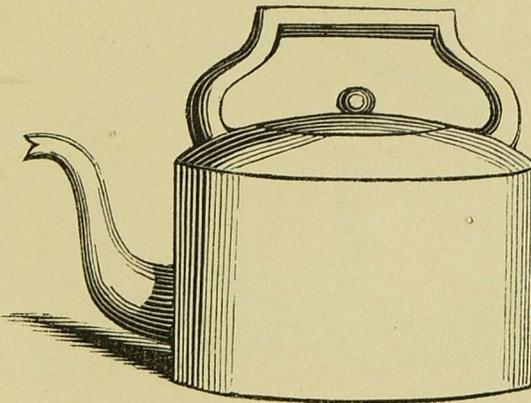




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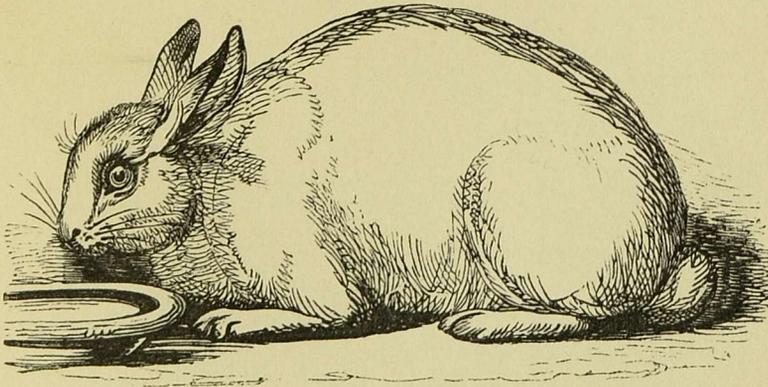




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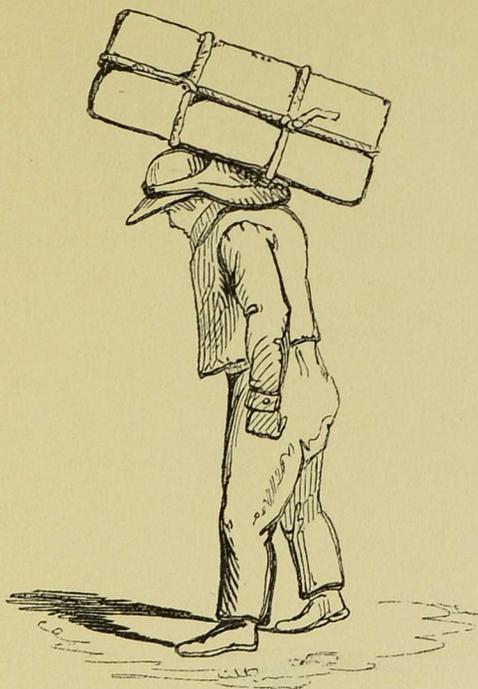


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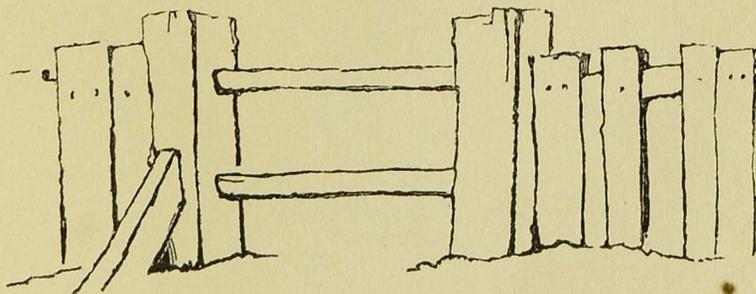


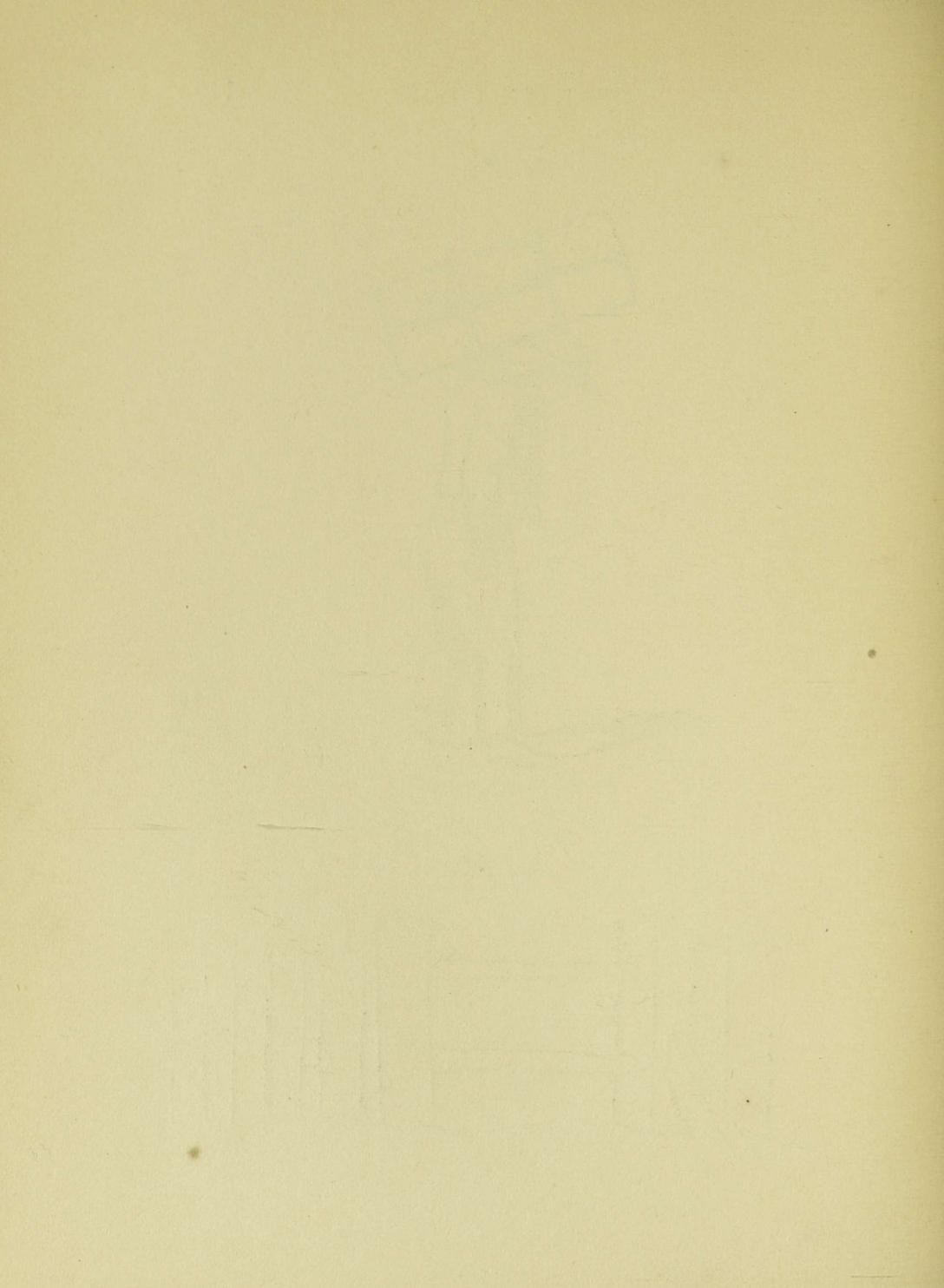


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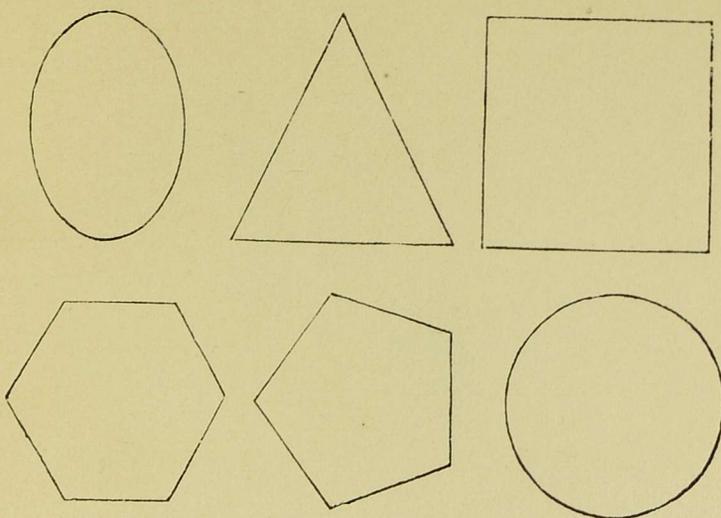


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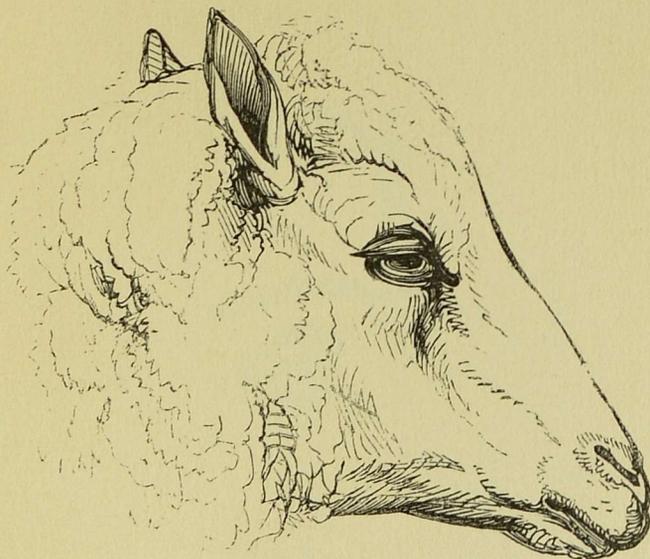


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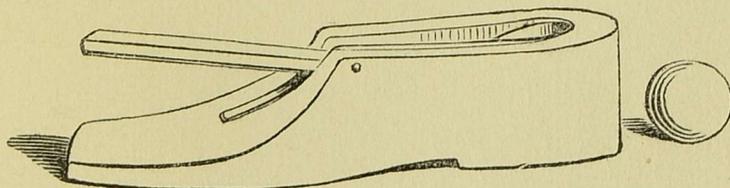




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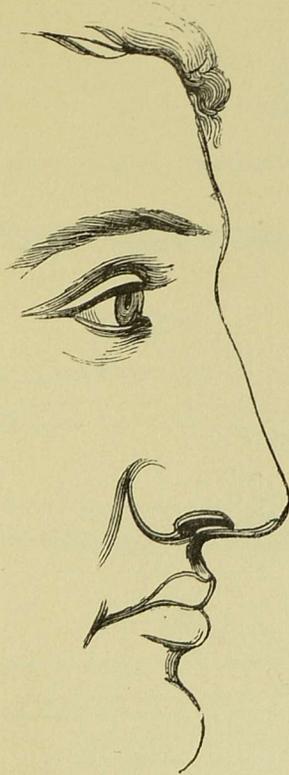
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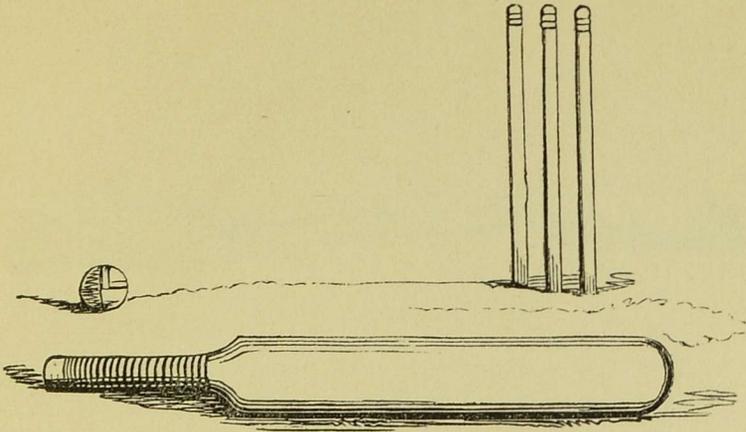


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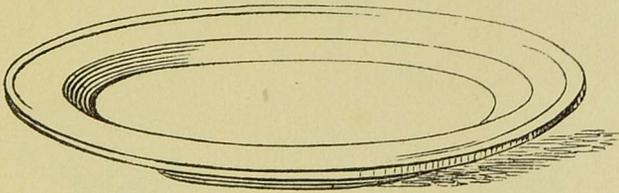




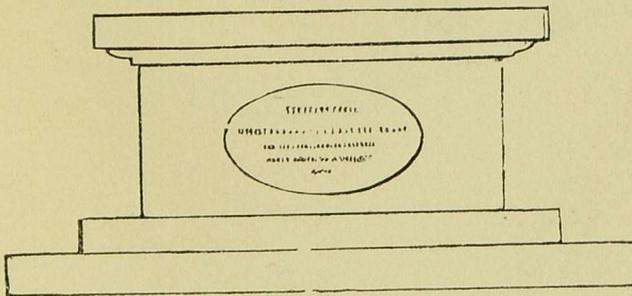
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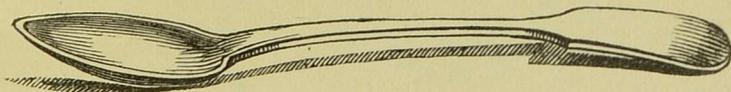


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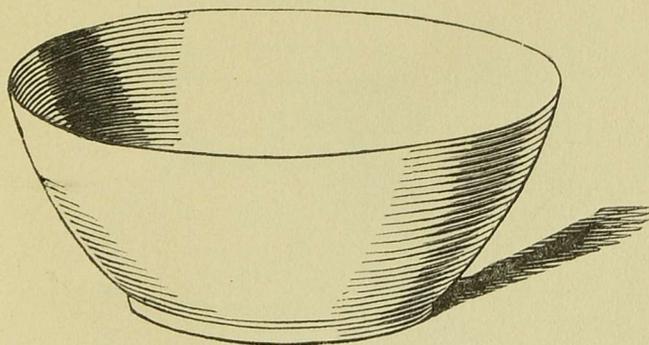




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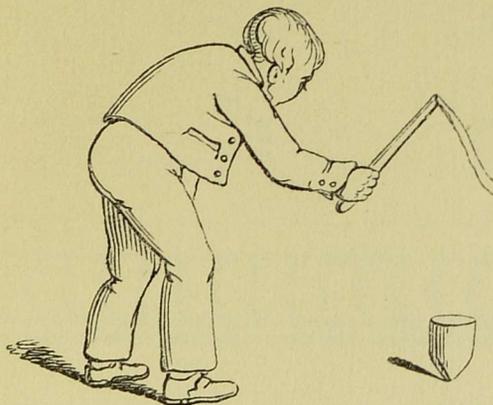


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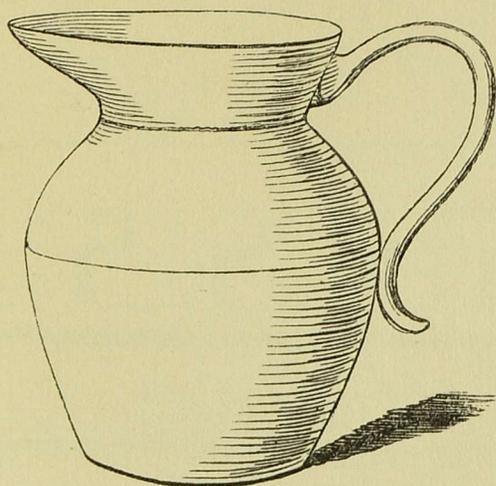




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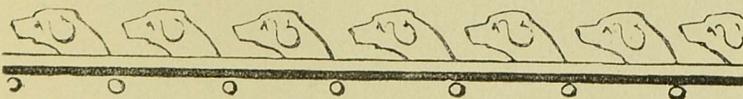
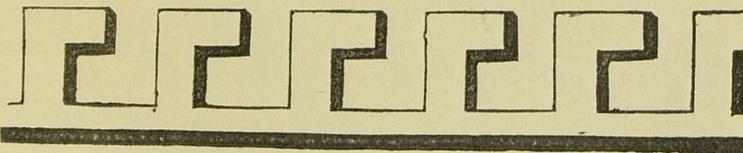
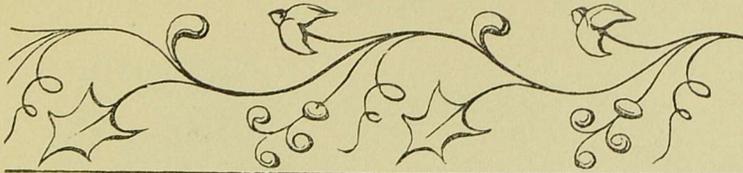
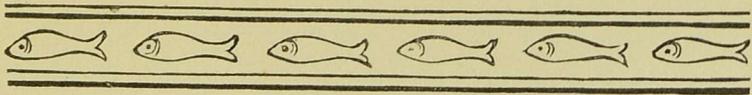
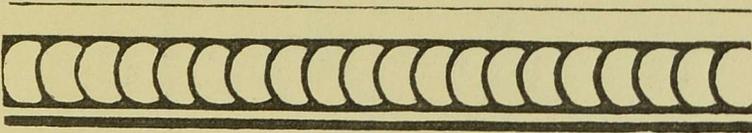
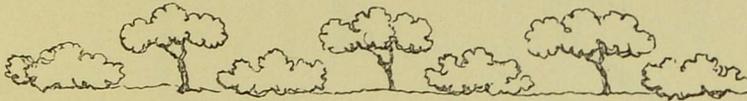


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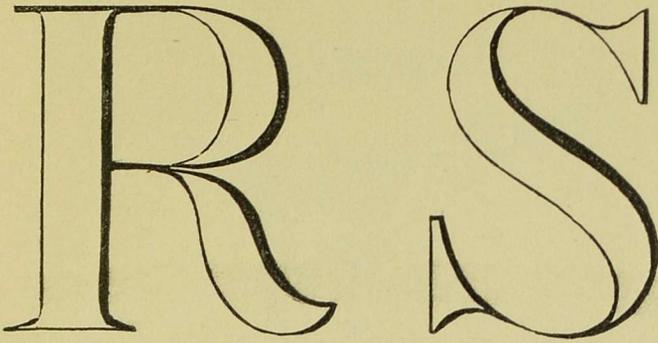


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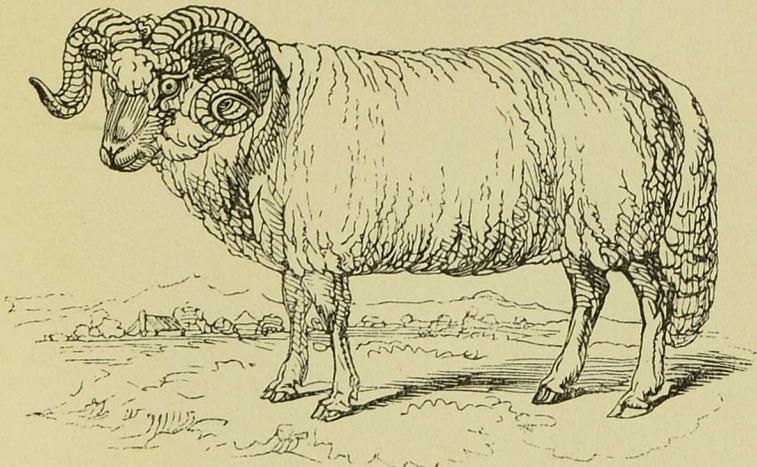




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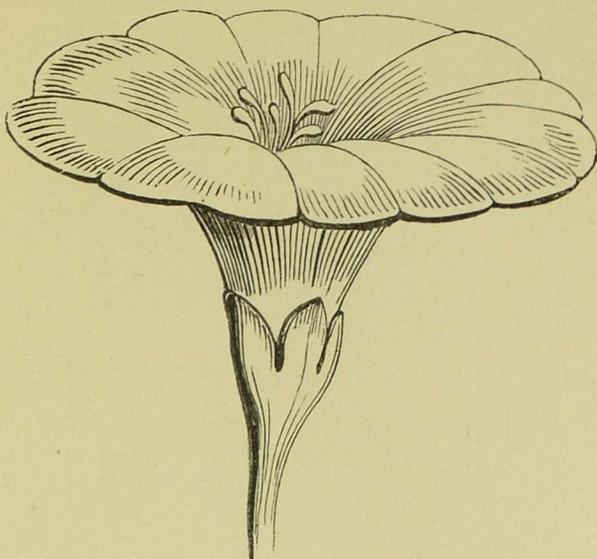


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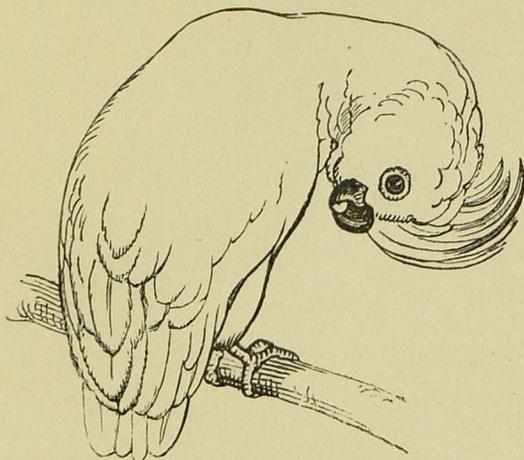




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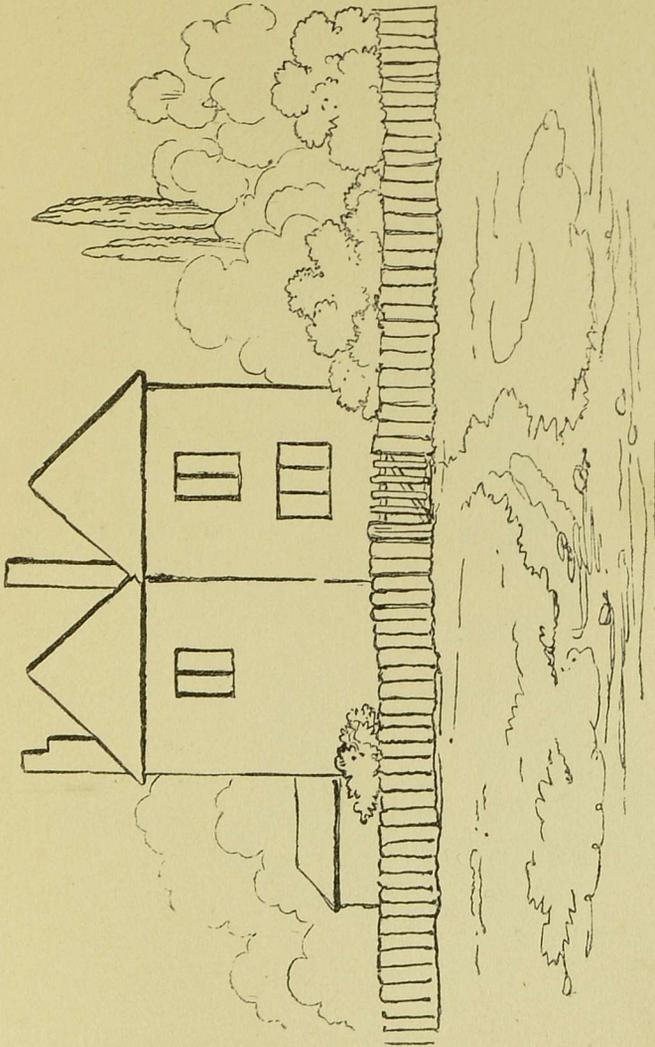


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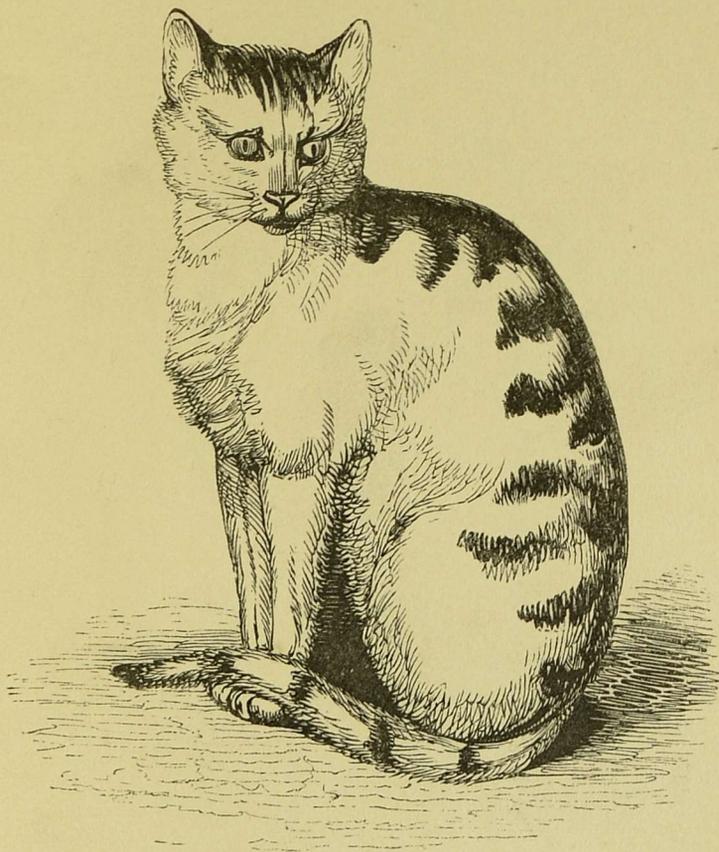


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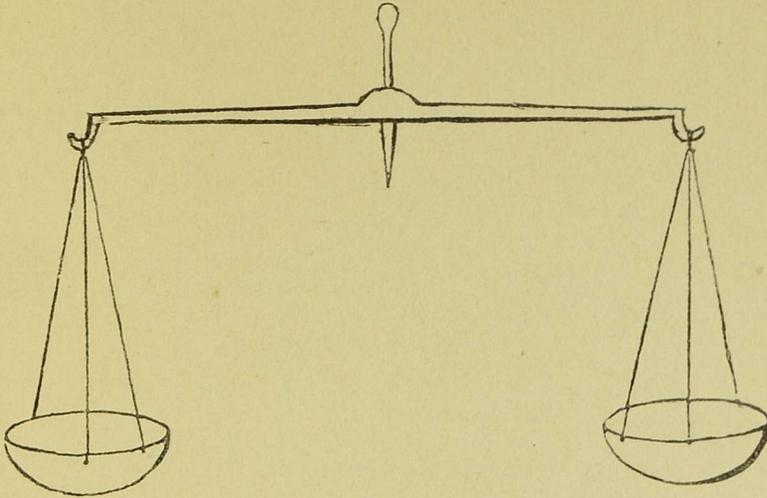


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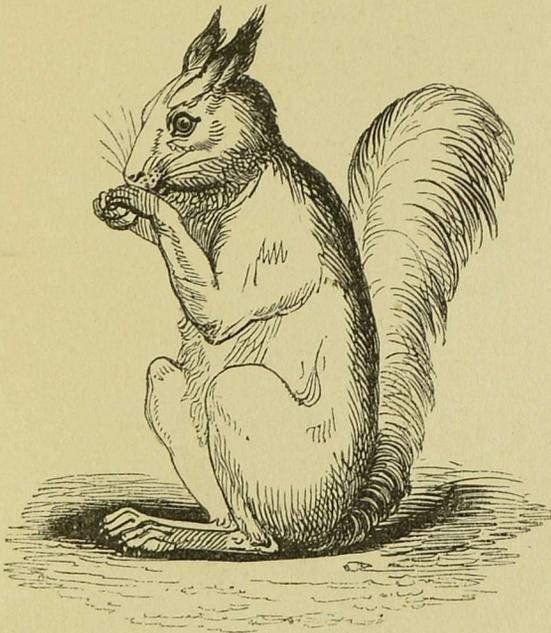




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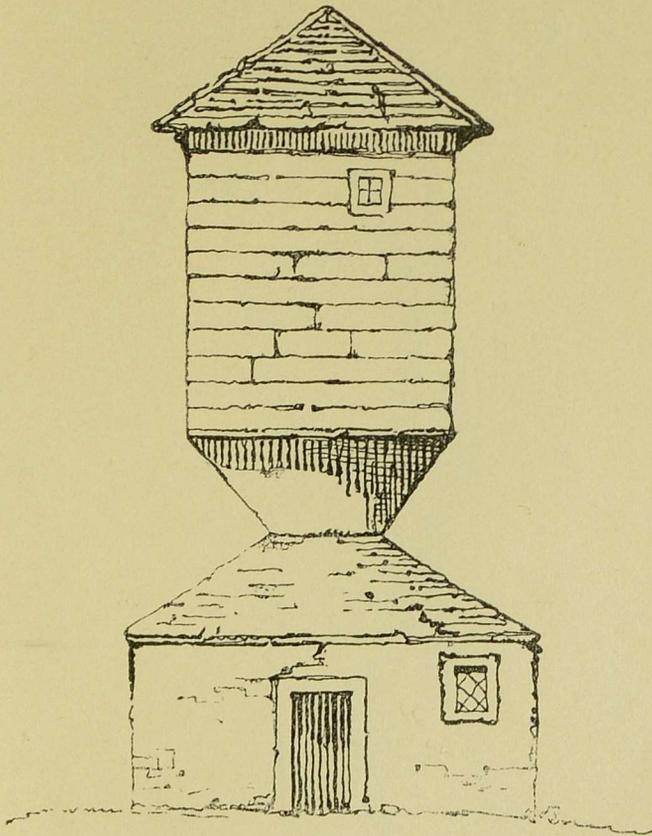


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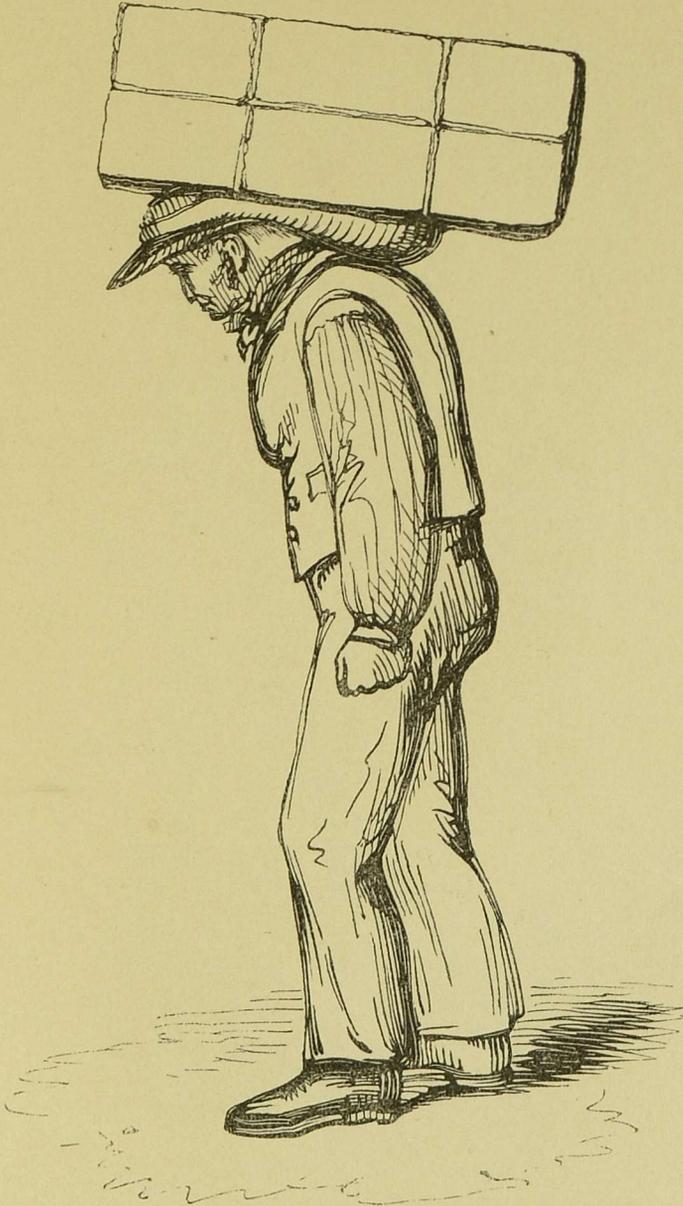


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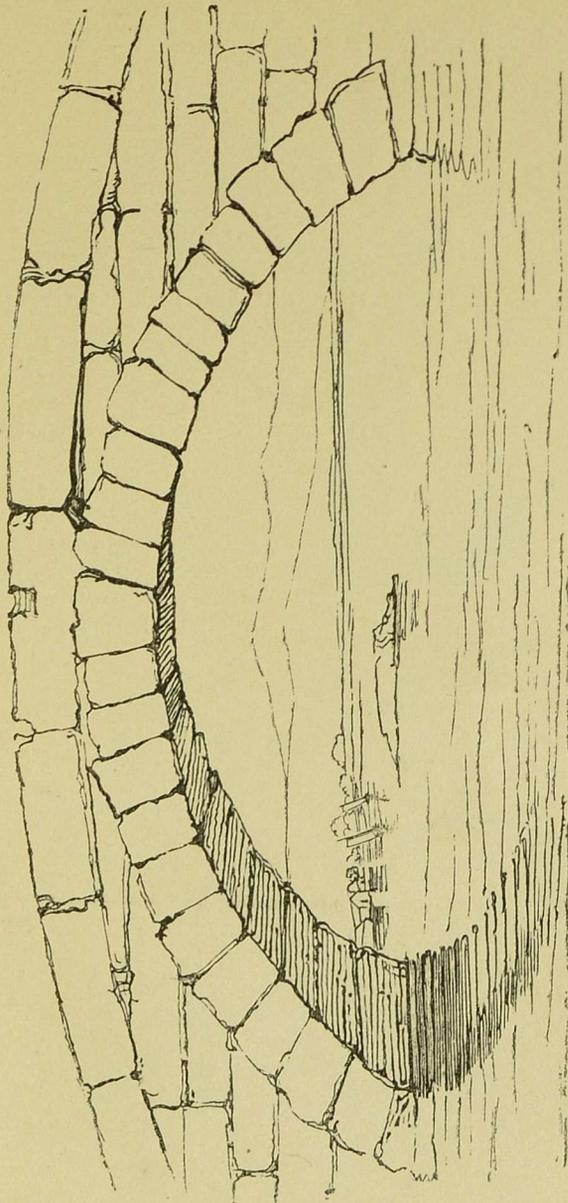


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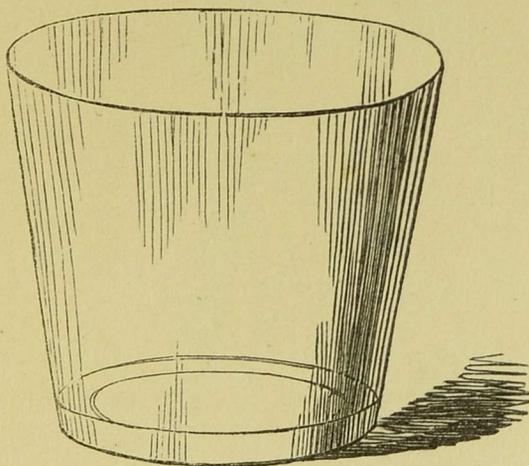


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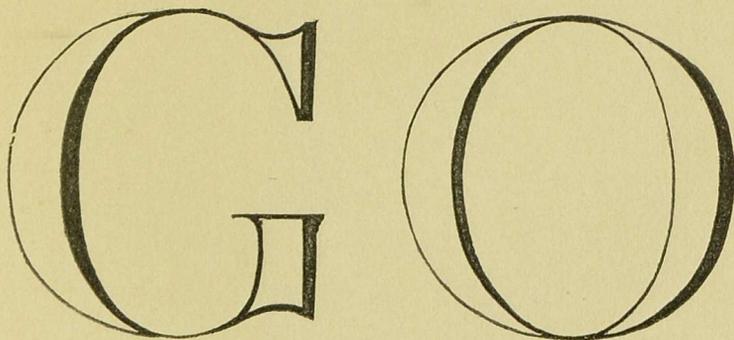




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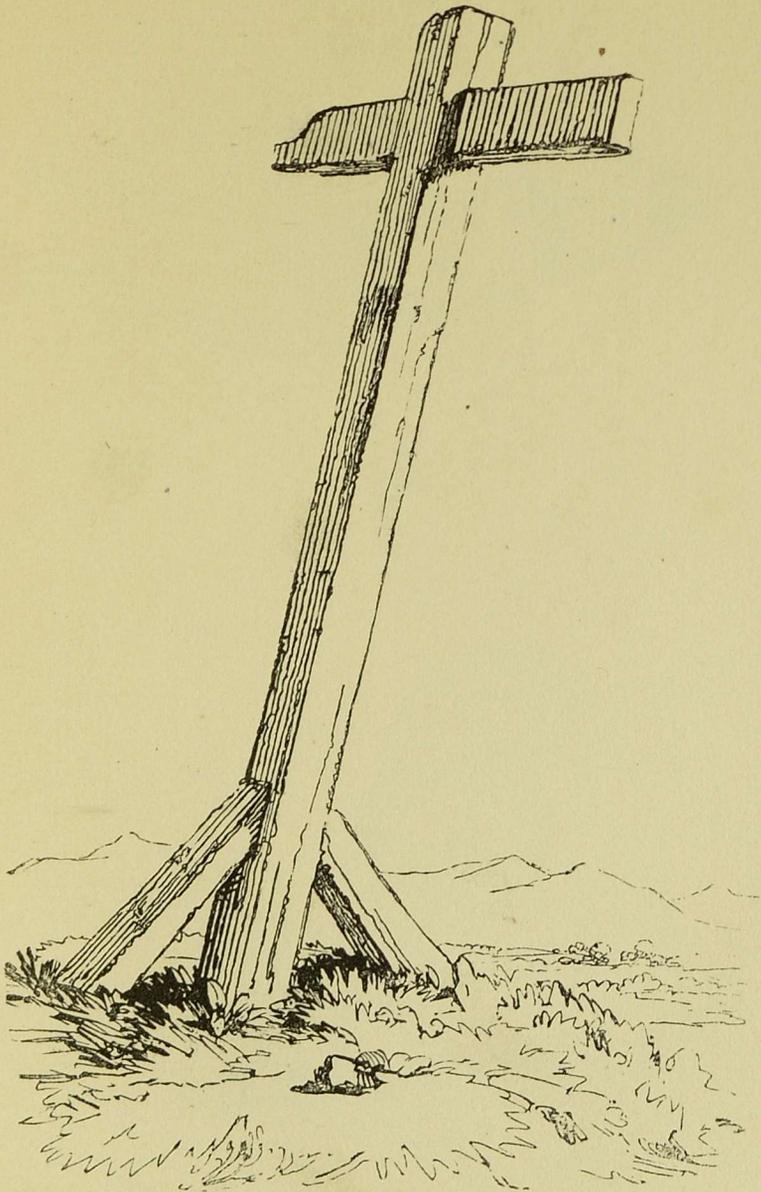


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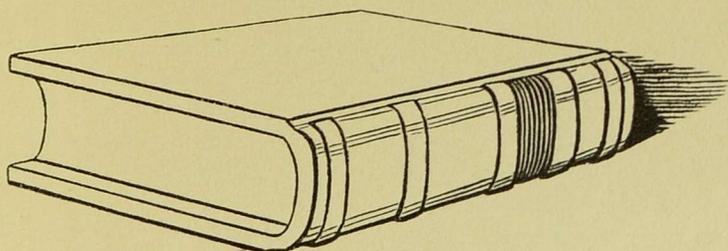


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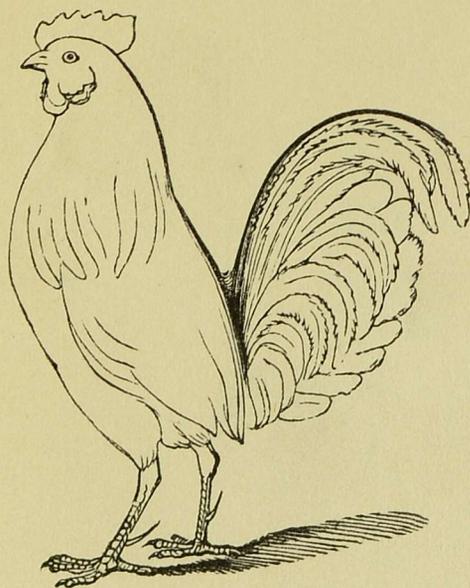




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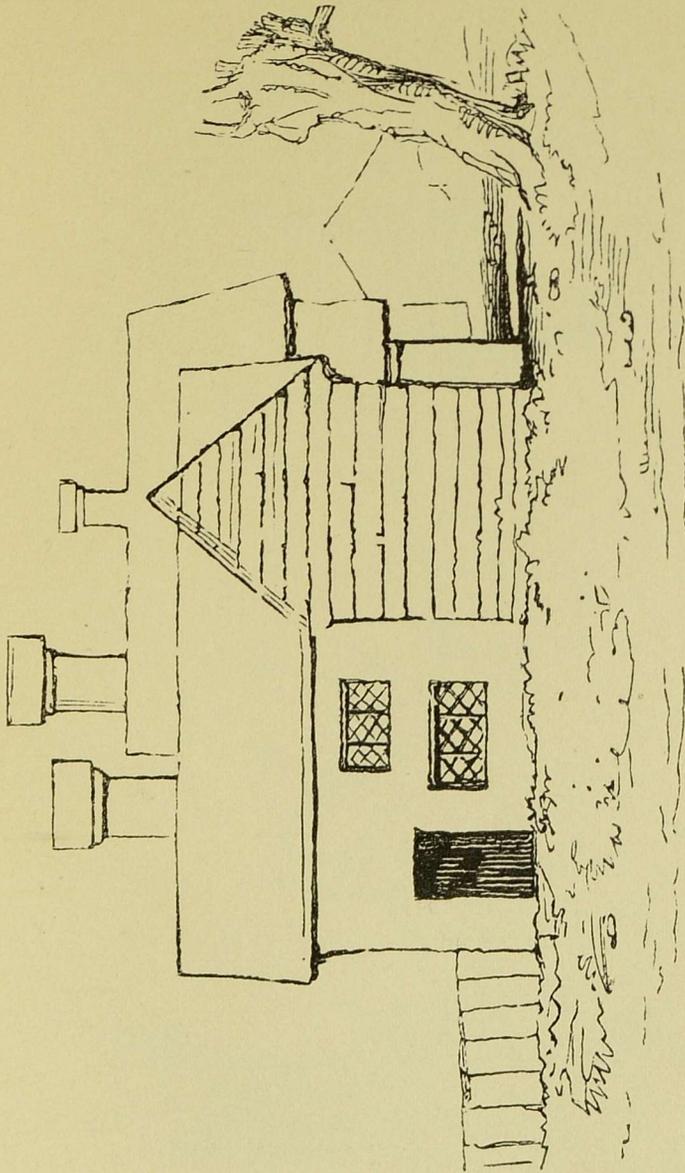


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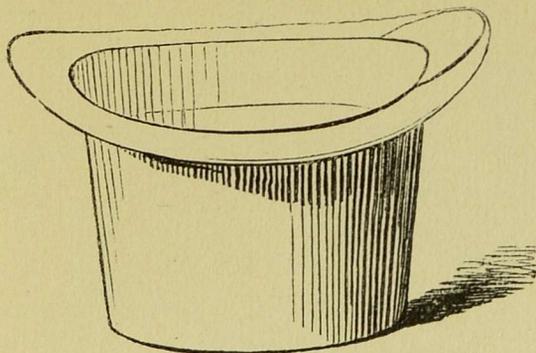


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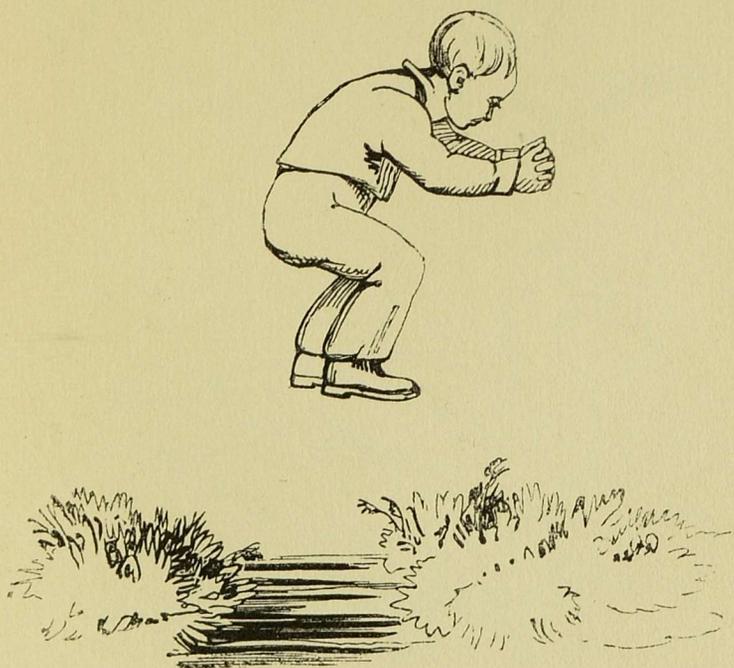




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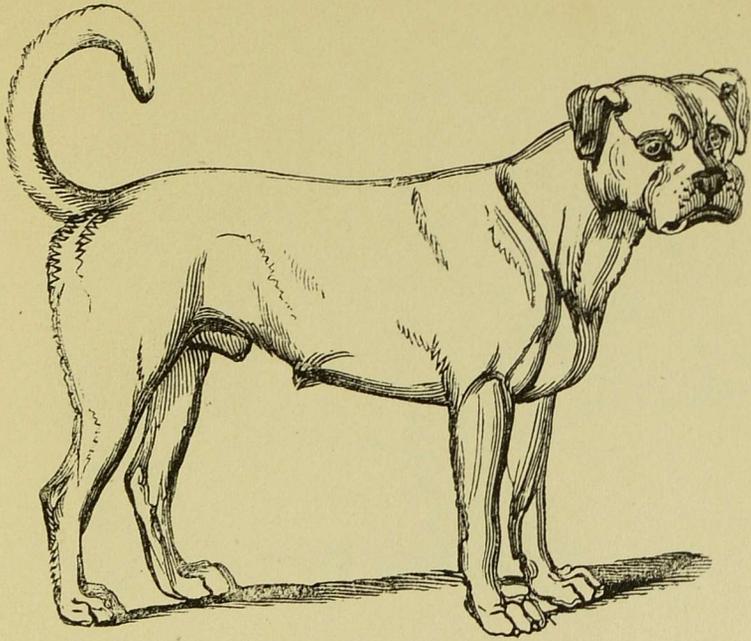


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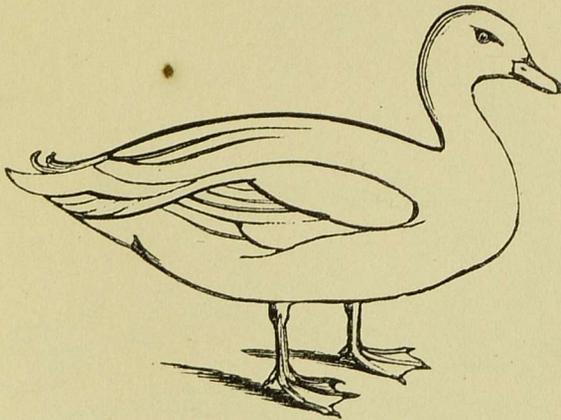


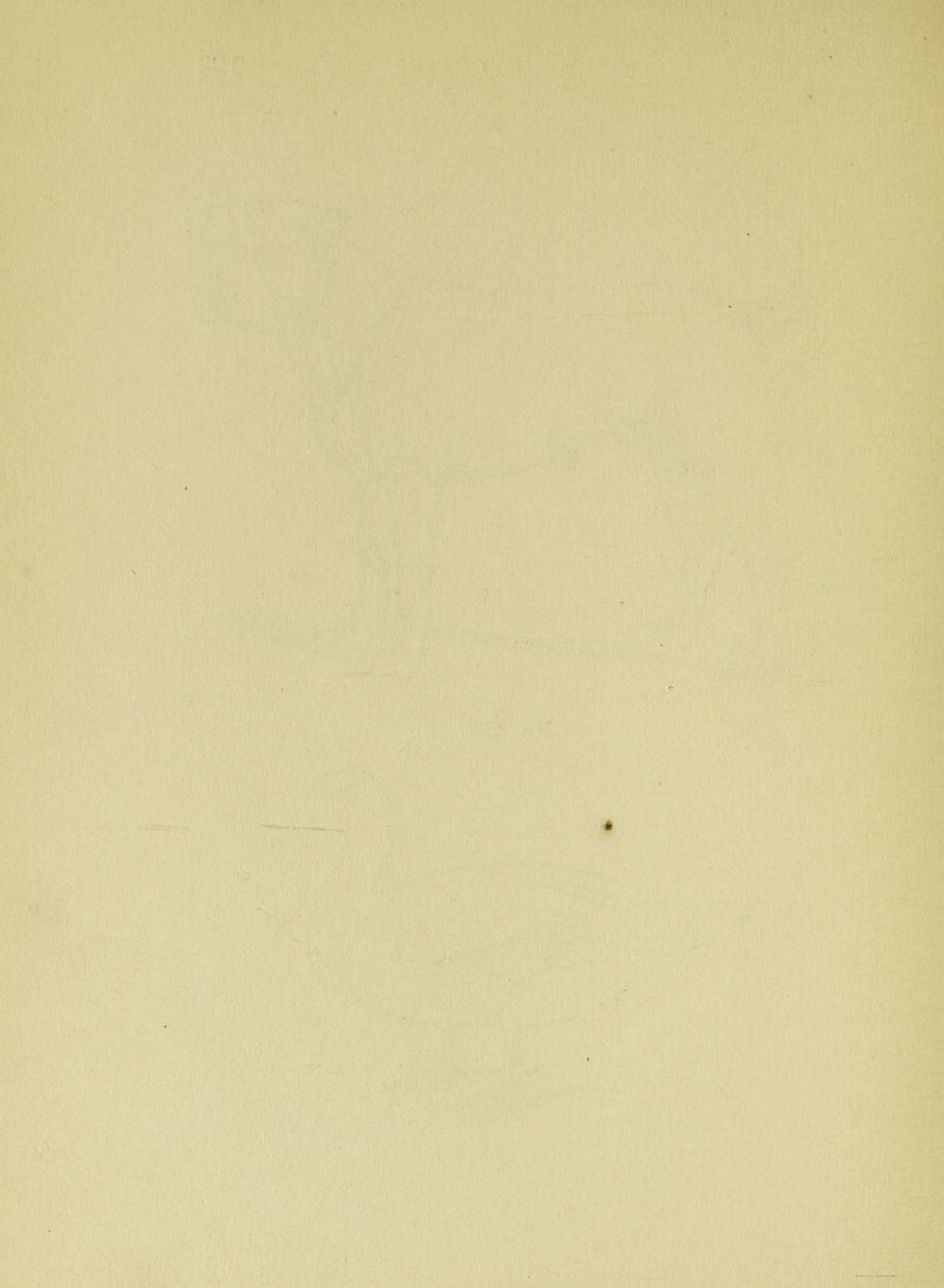


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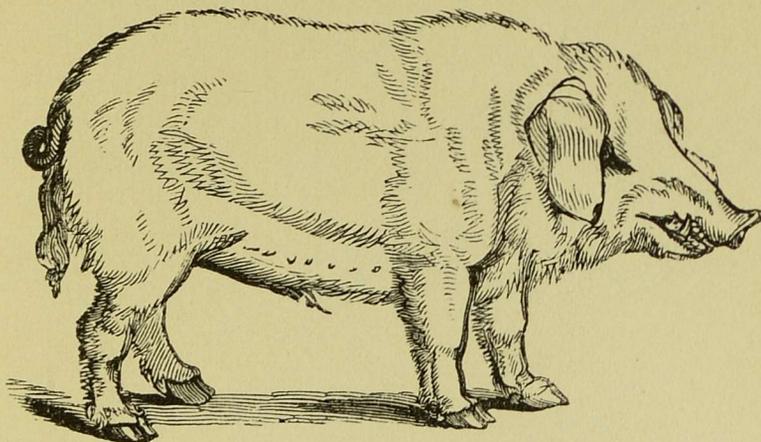


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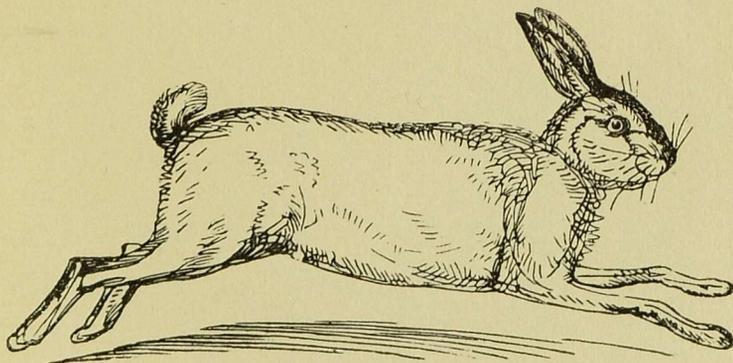




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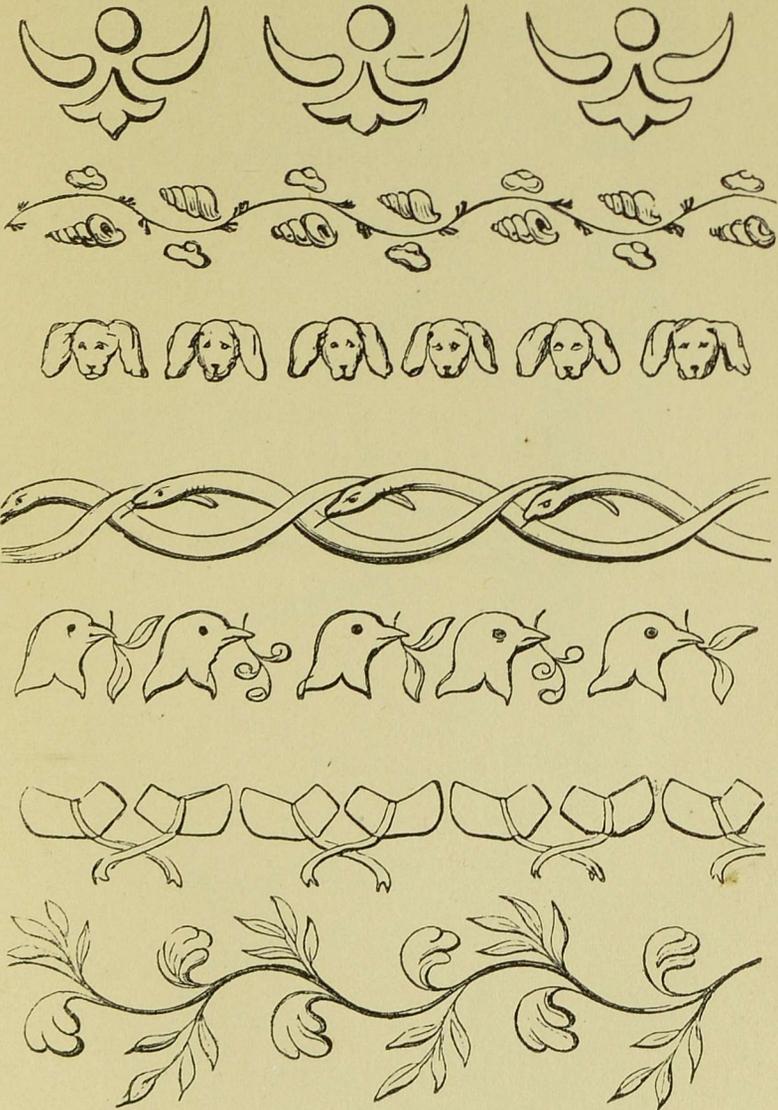


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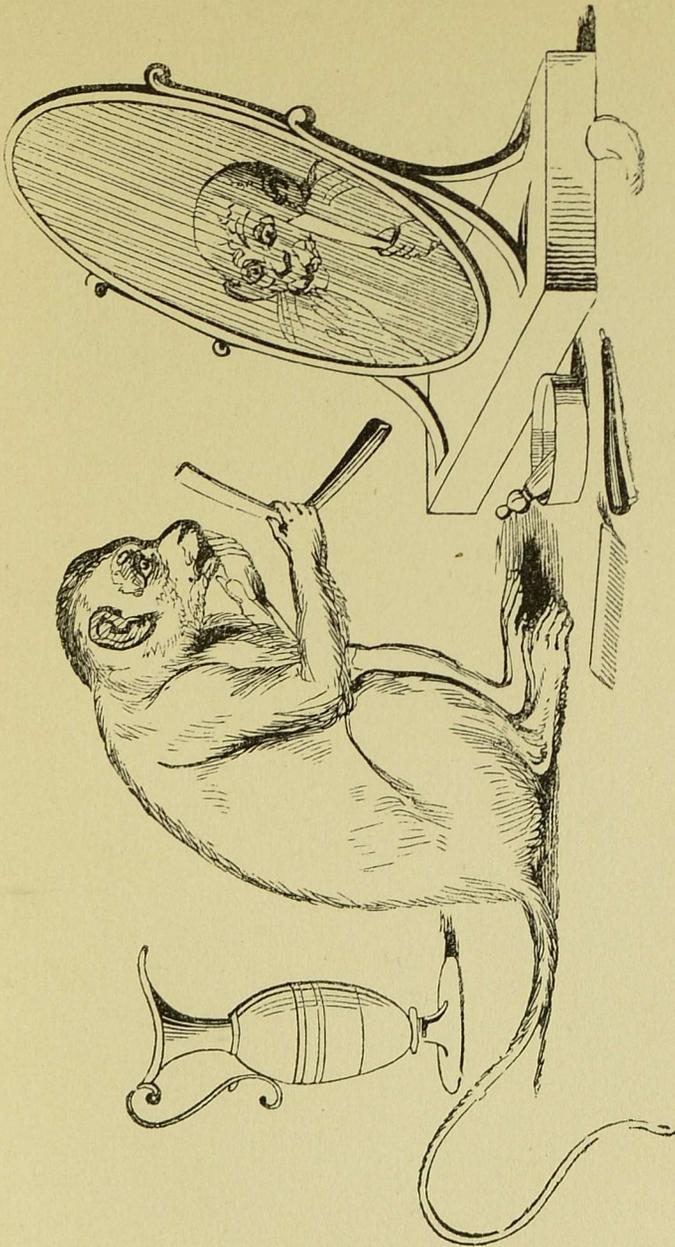


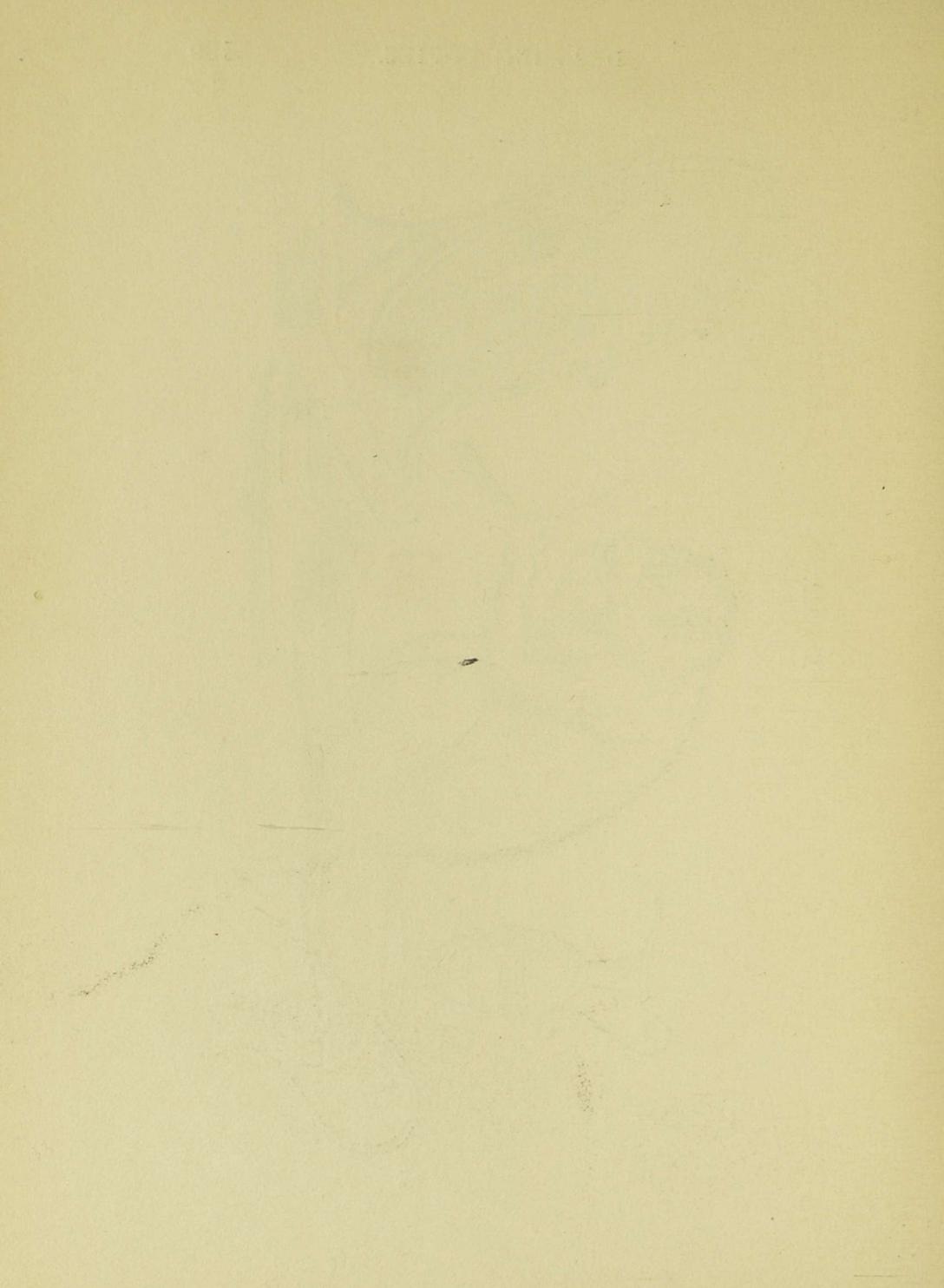
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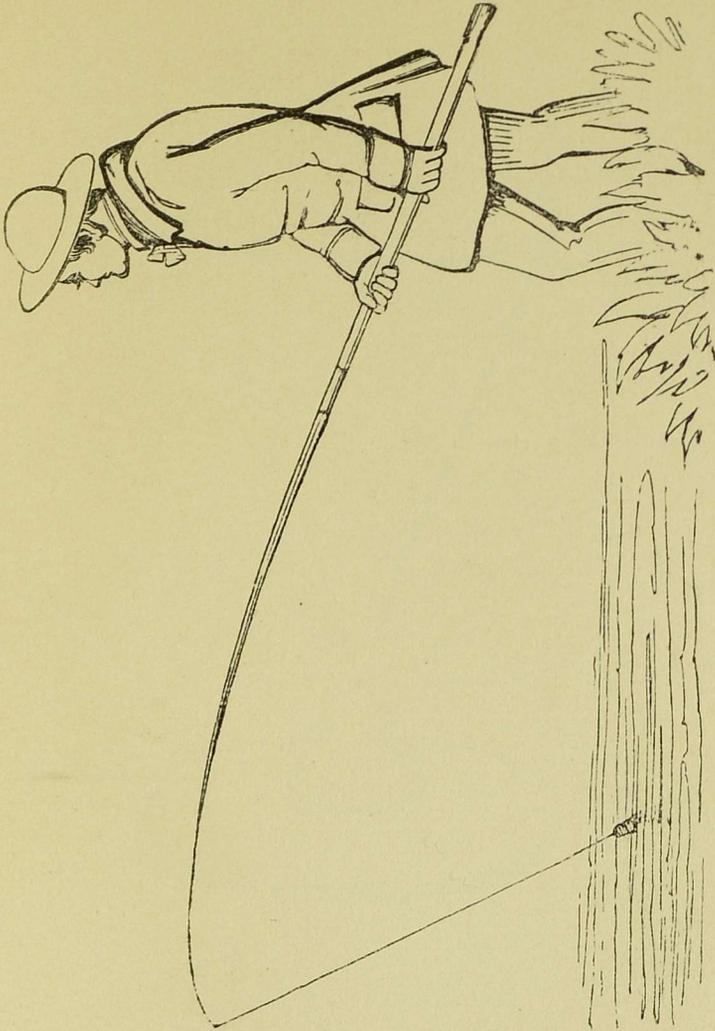


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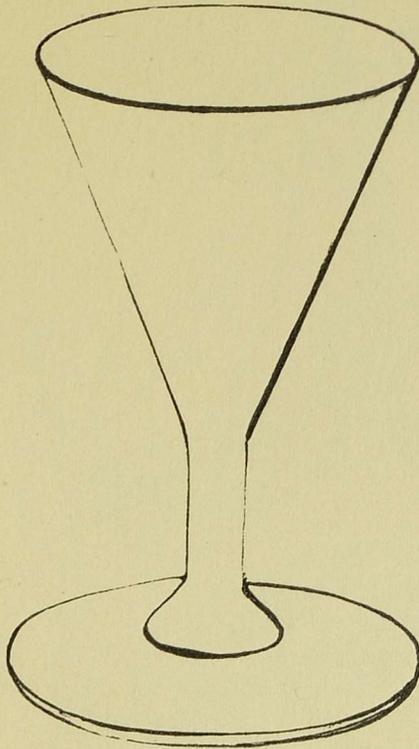


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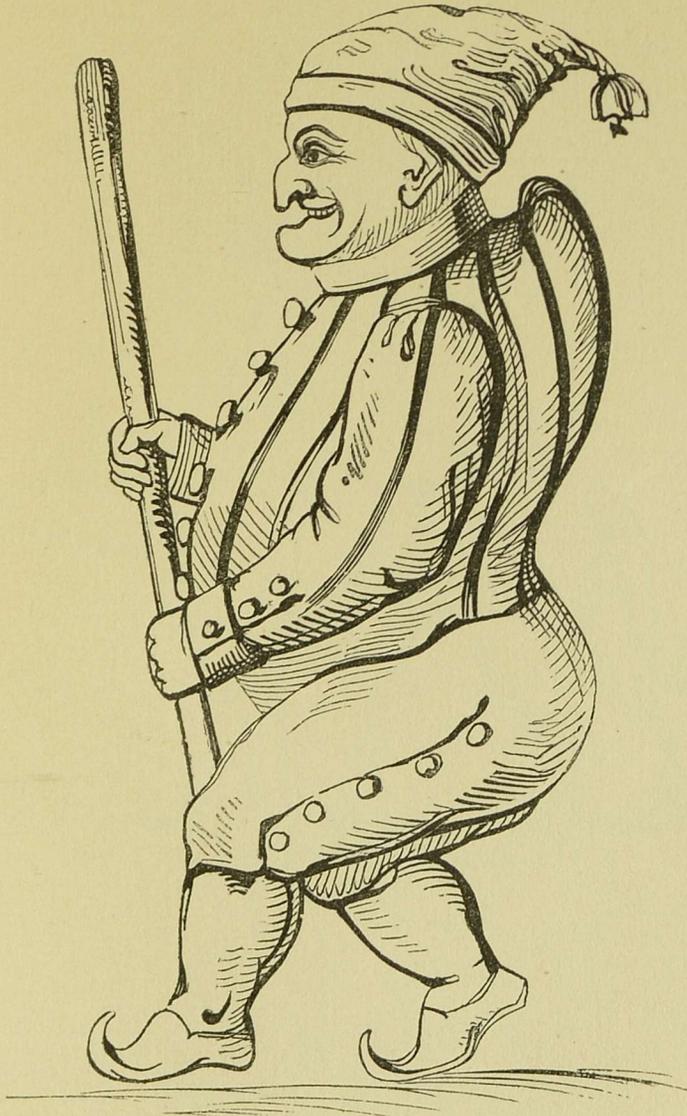


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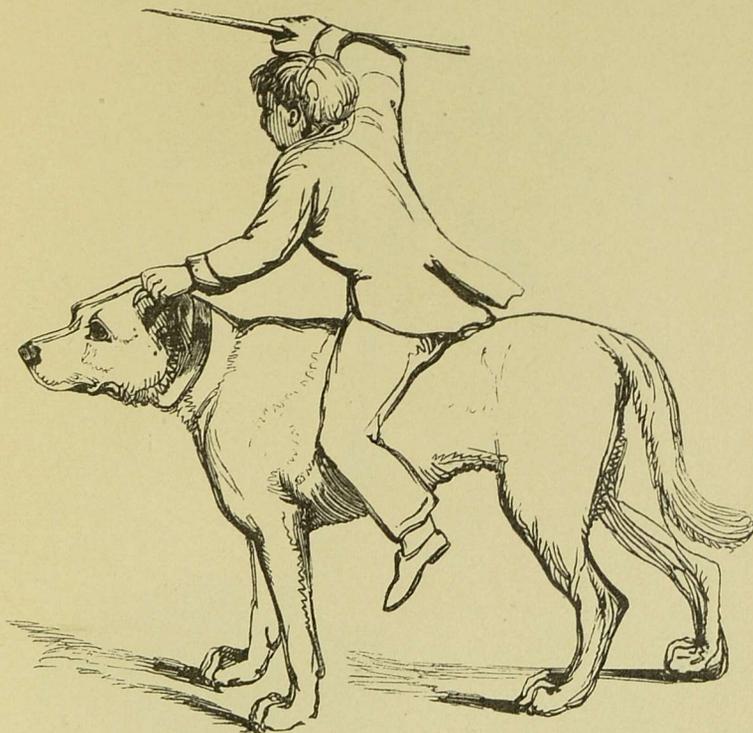


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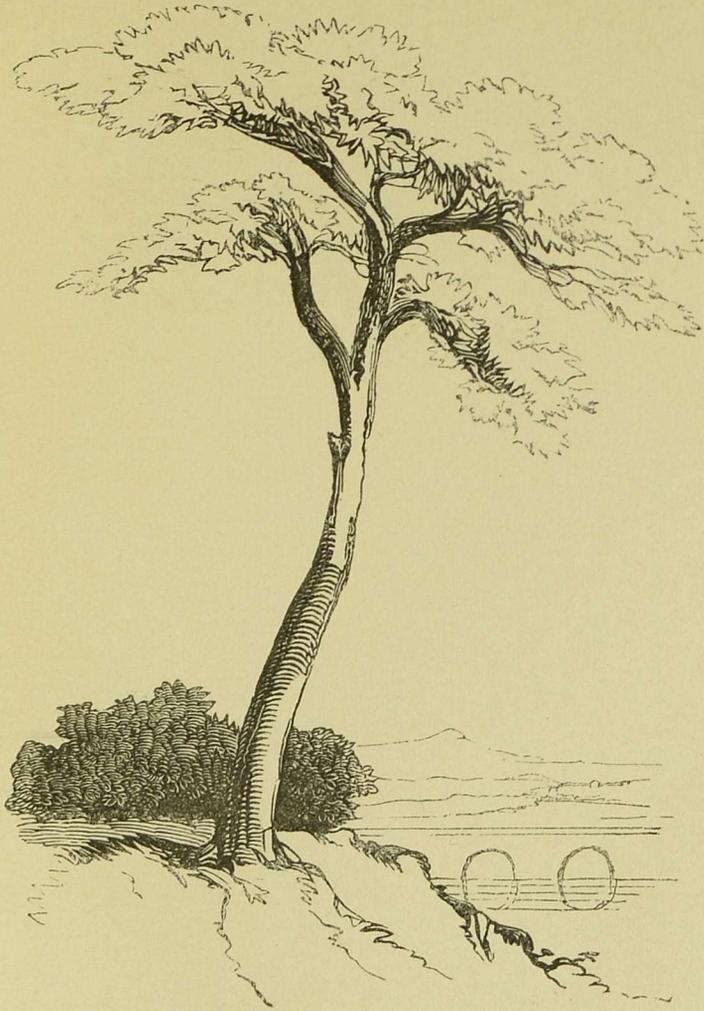


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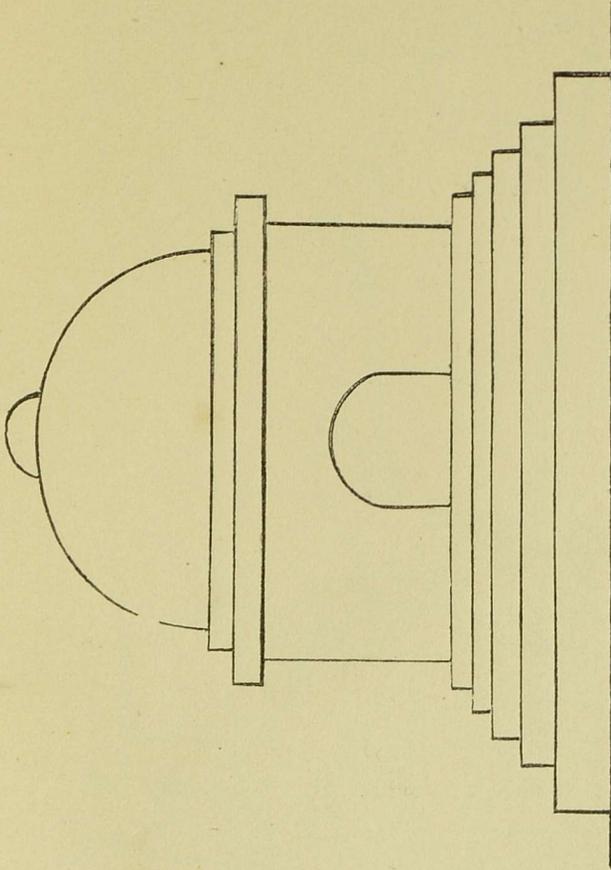


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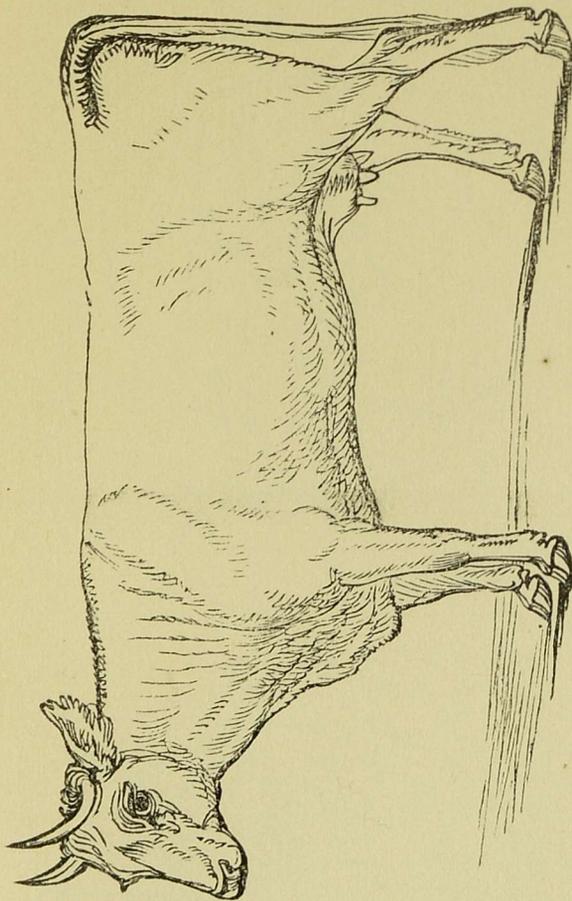


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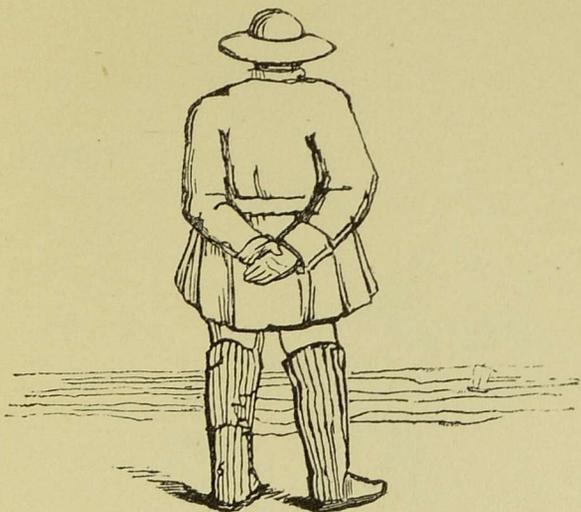


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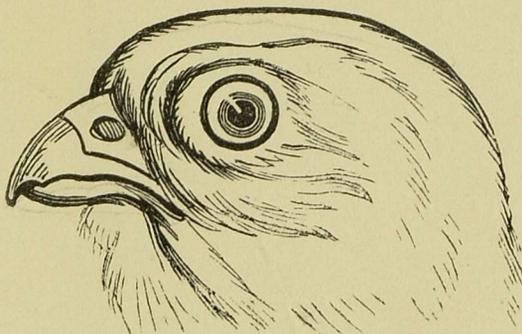




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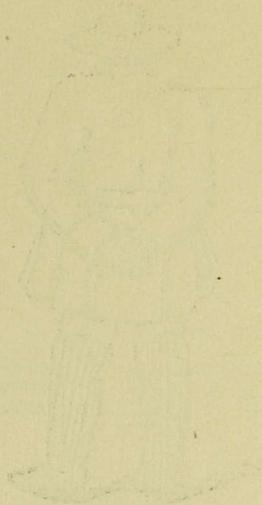


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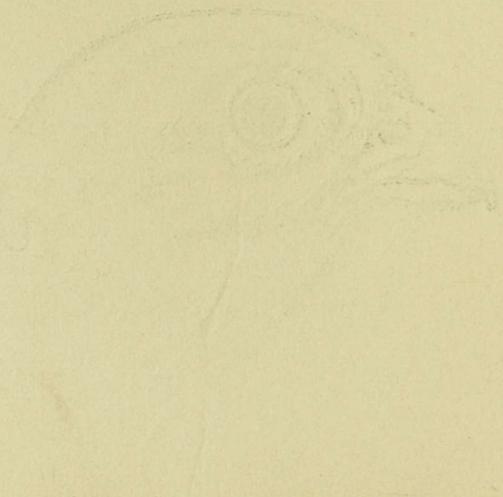


313

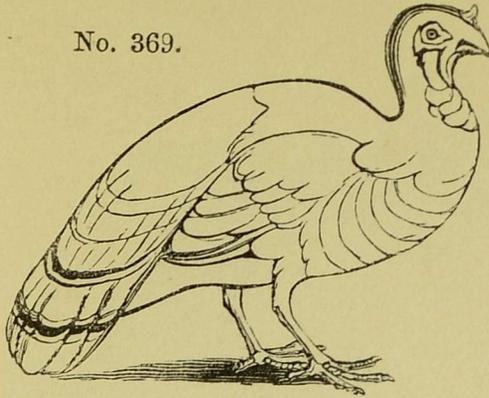
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1870



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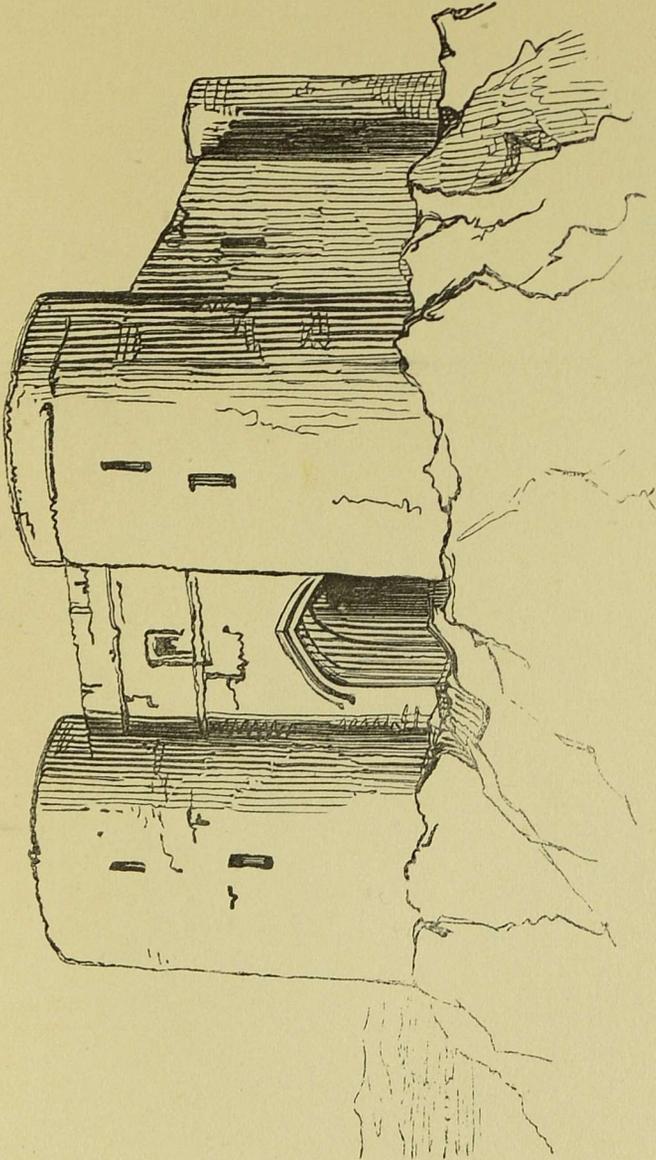


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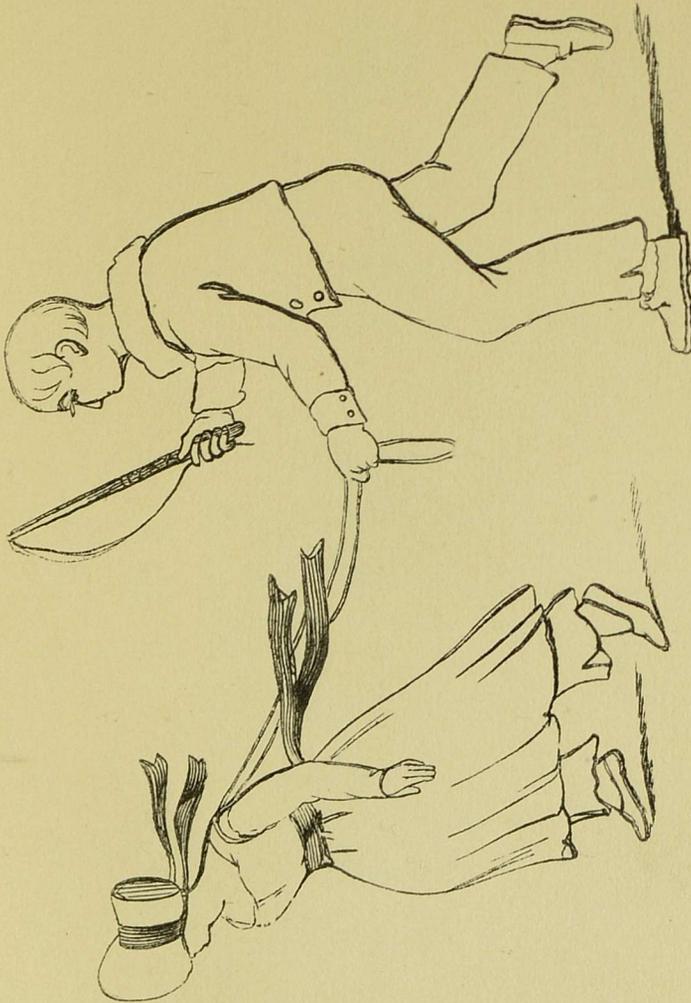


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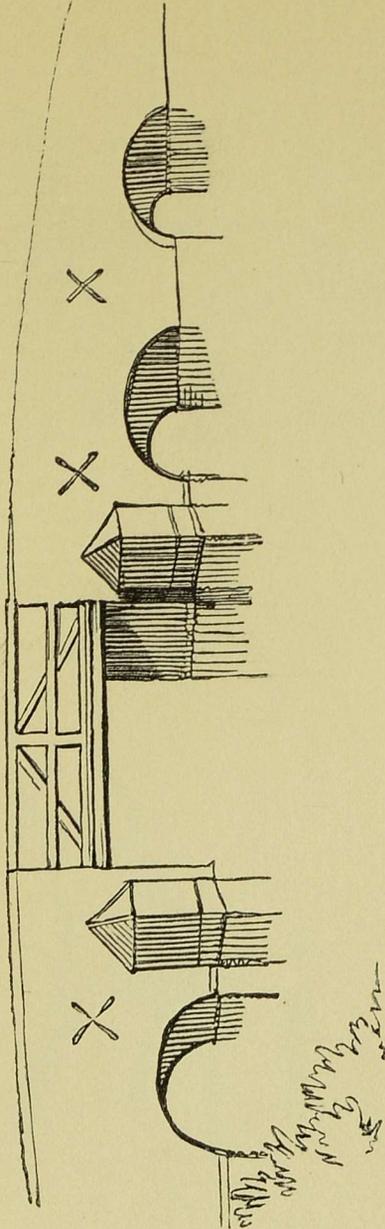


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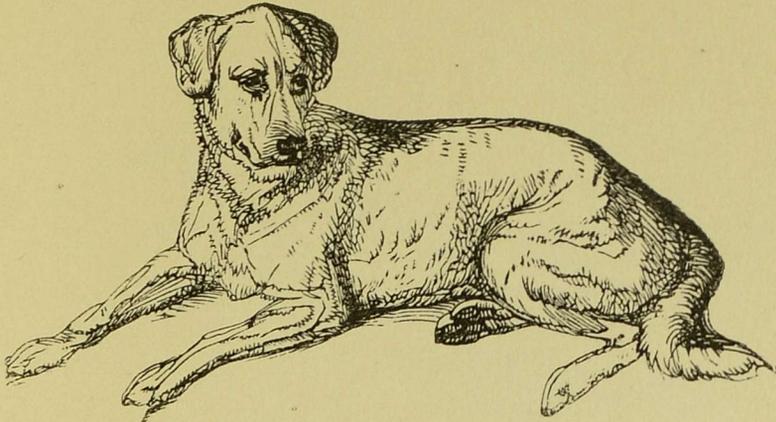


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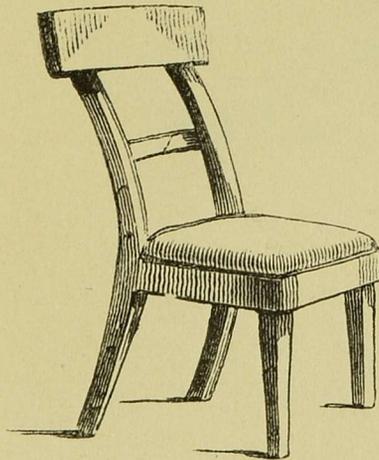




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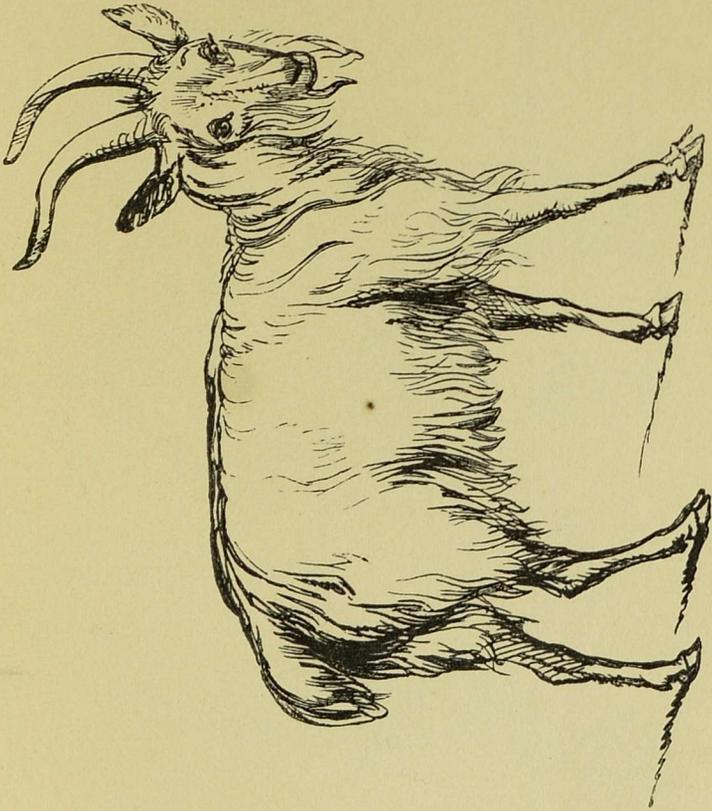


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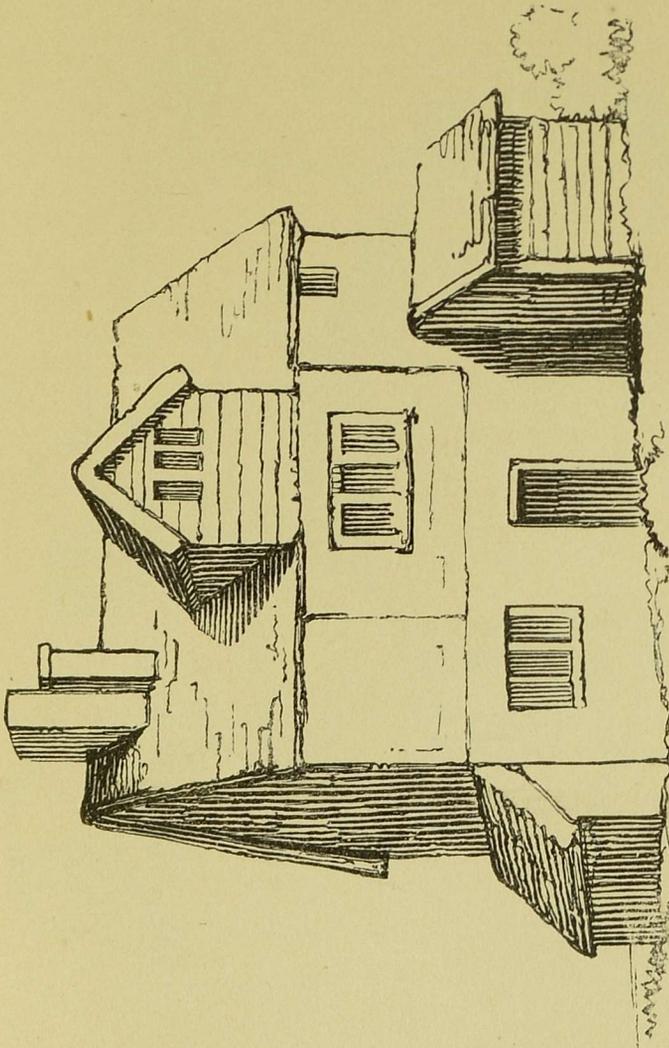


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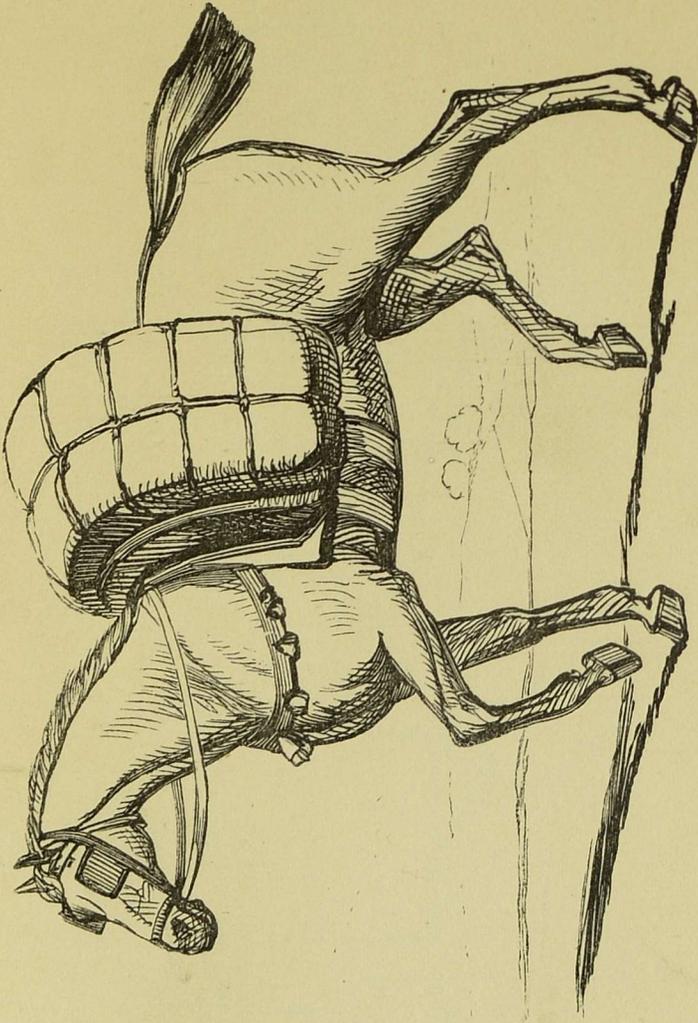


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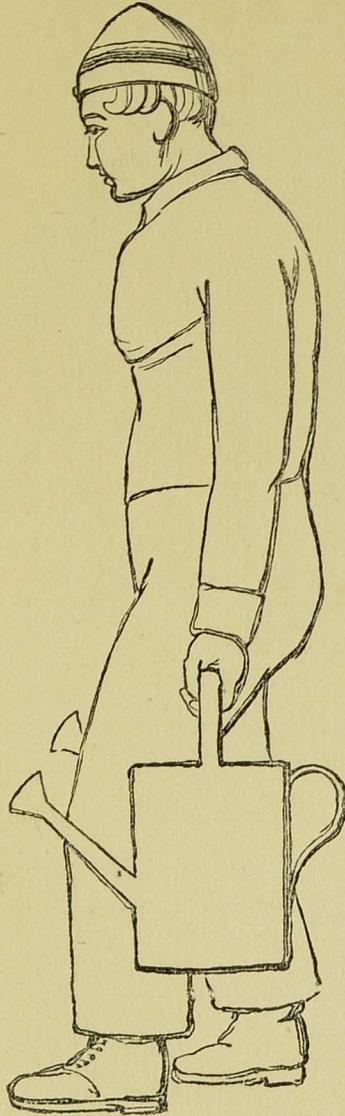


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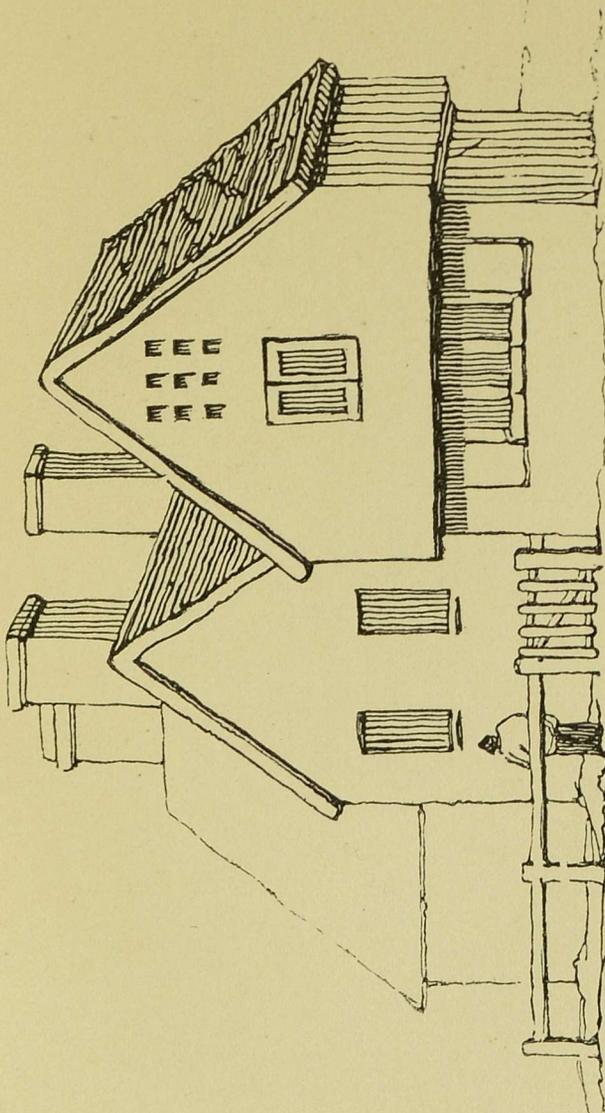


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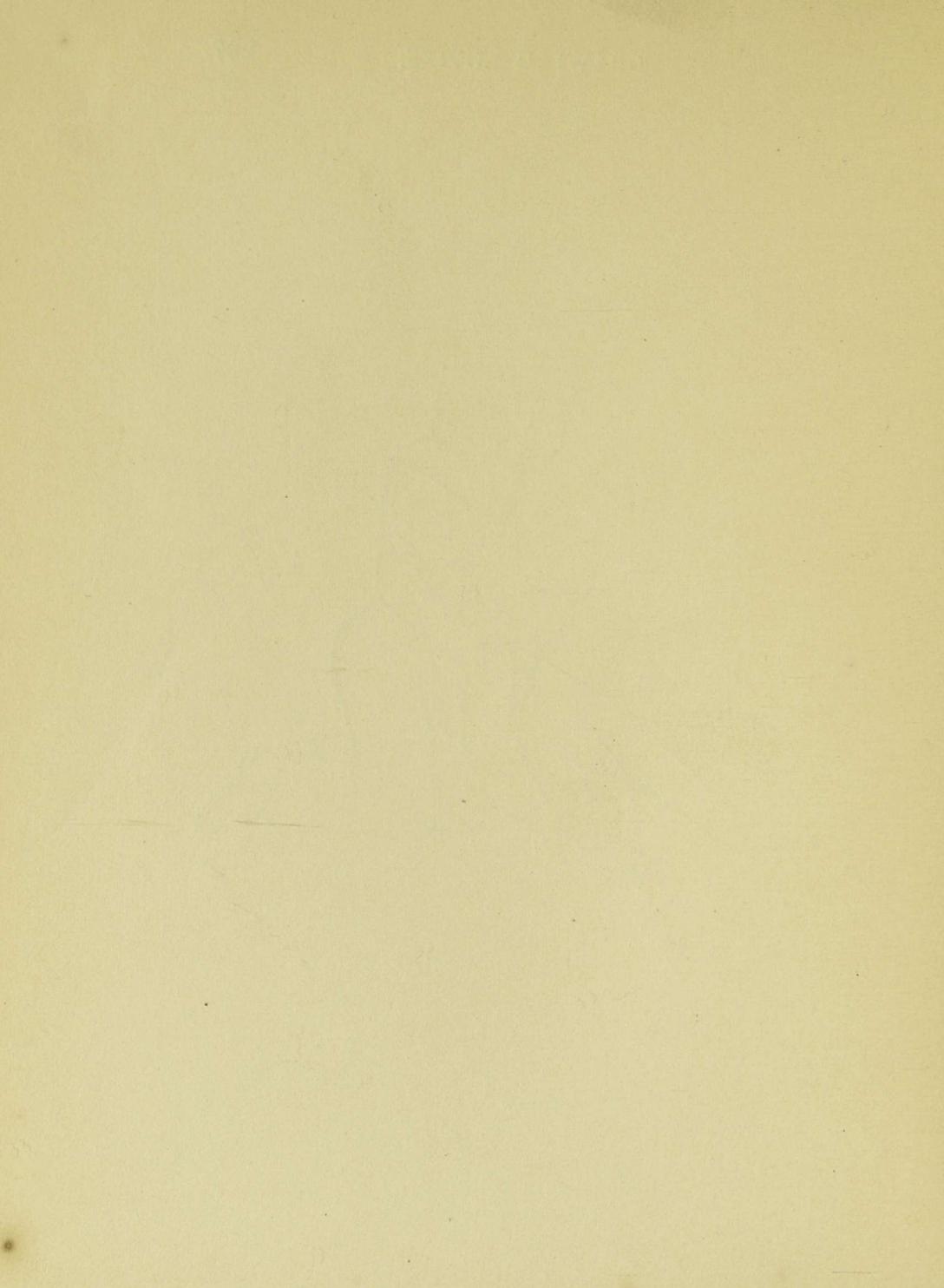
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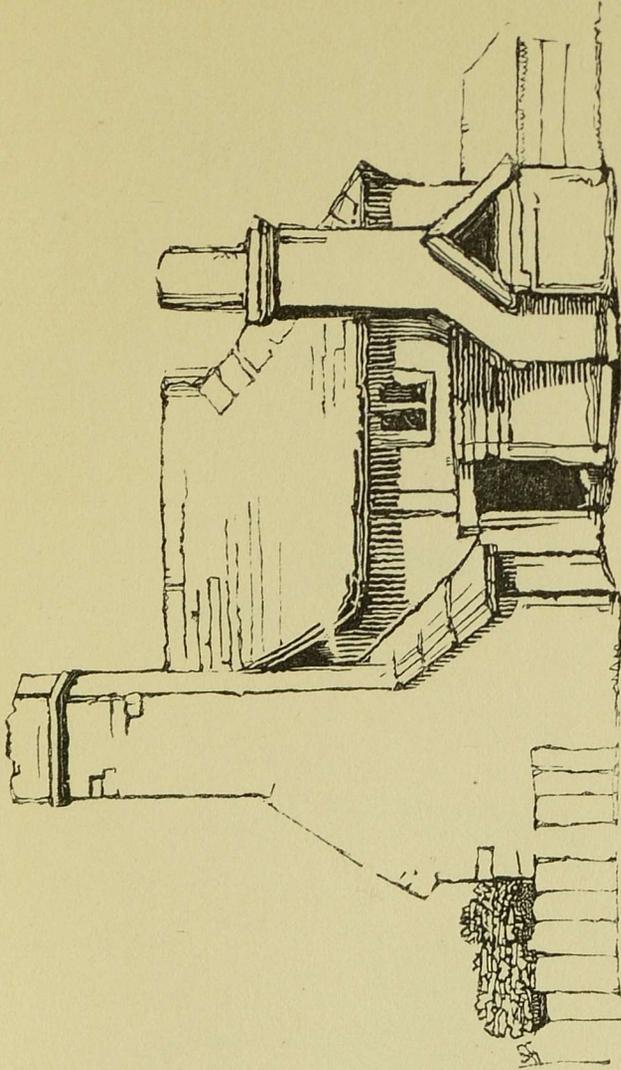


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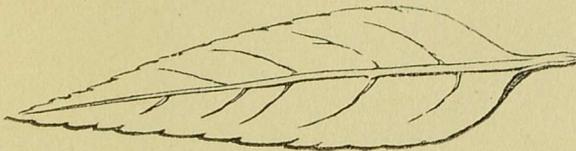
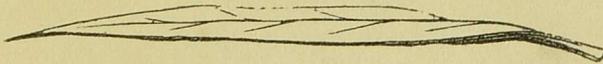
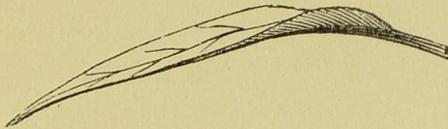
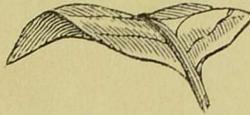
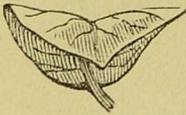
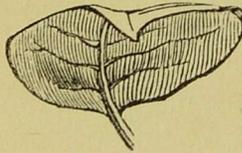


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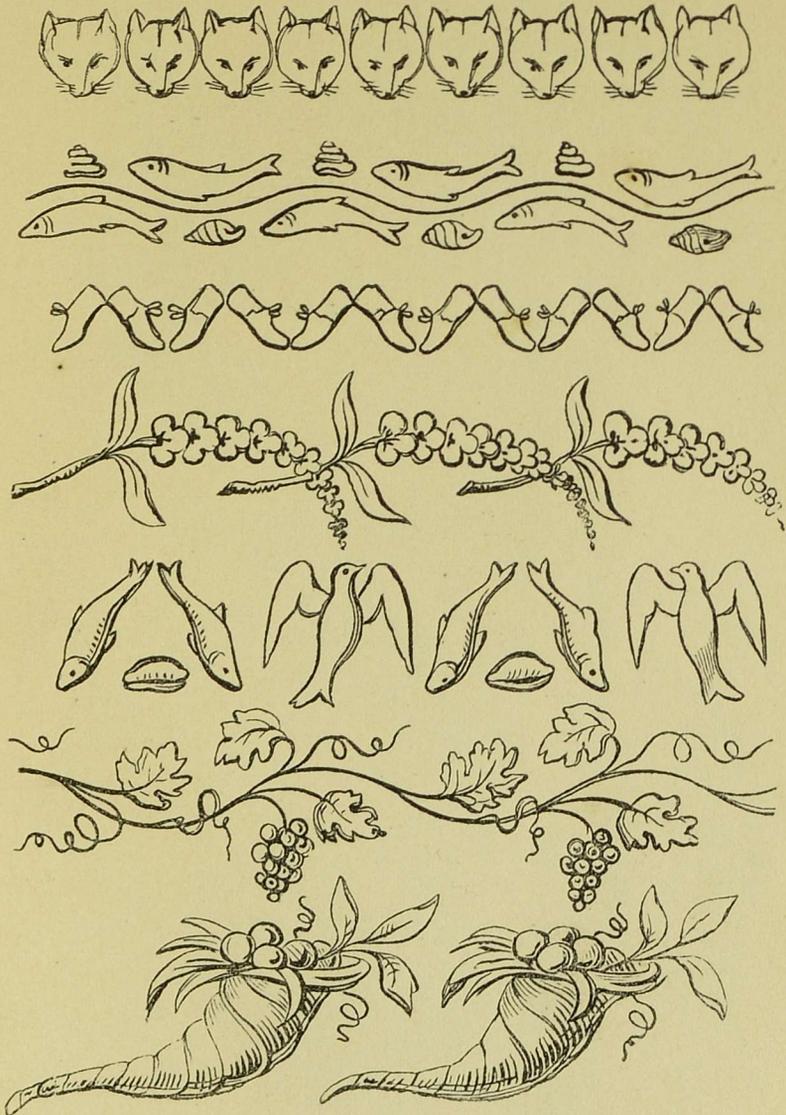


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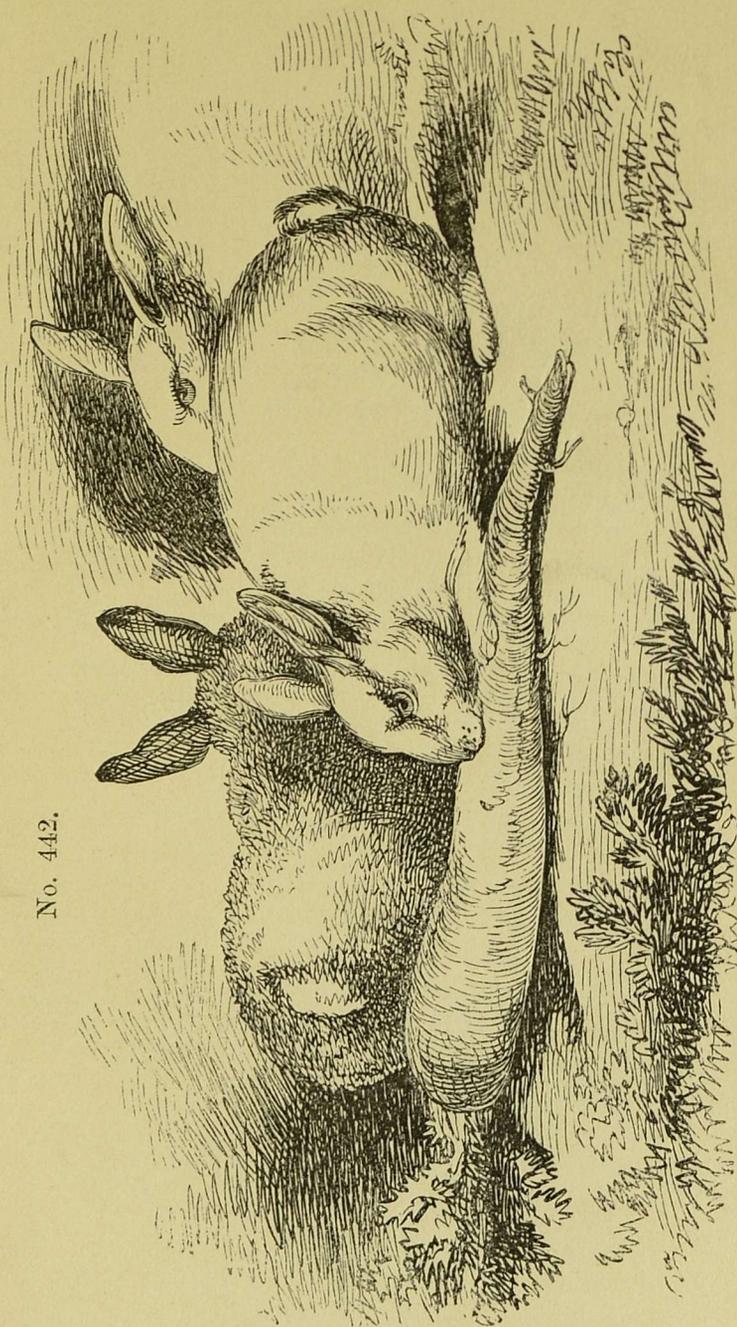




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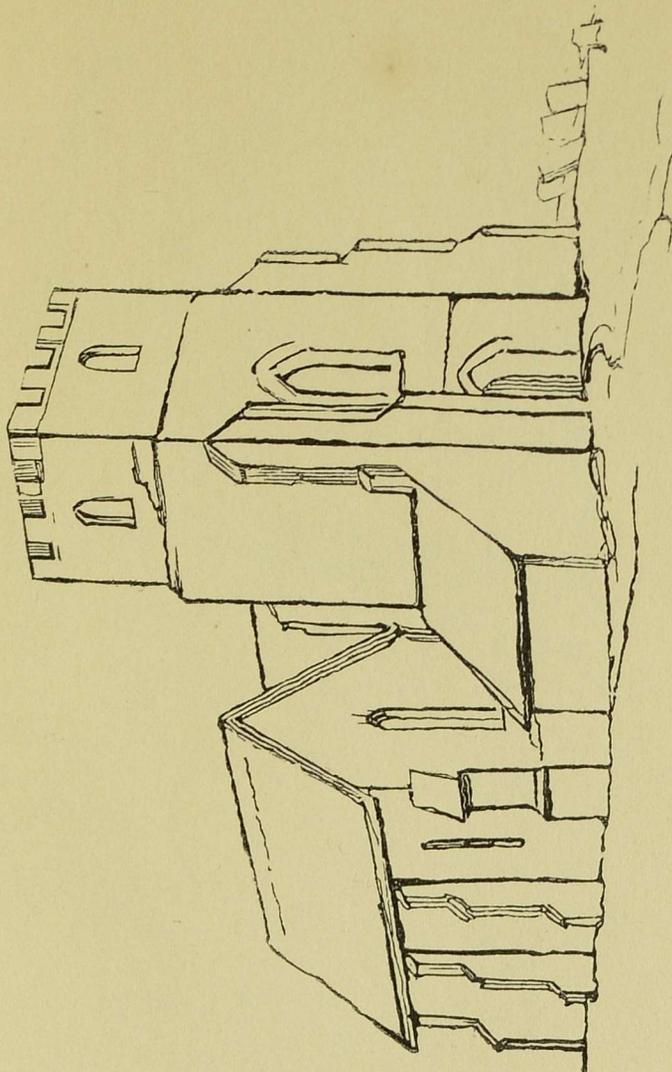


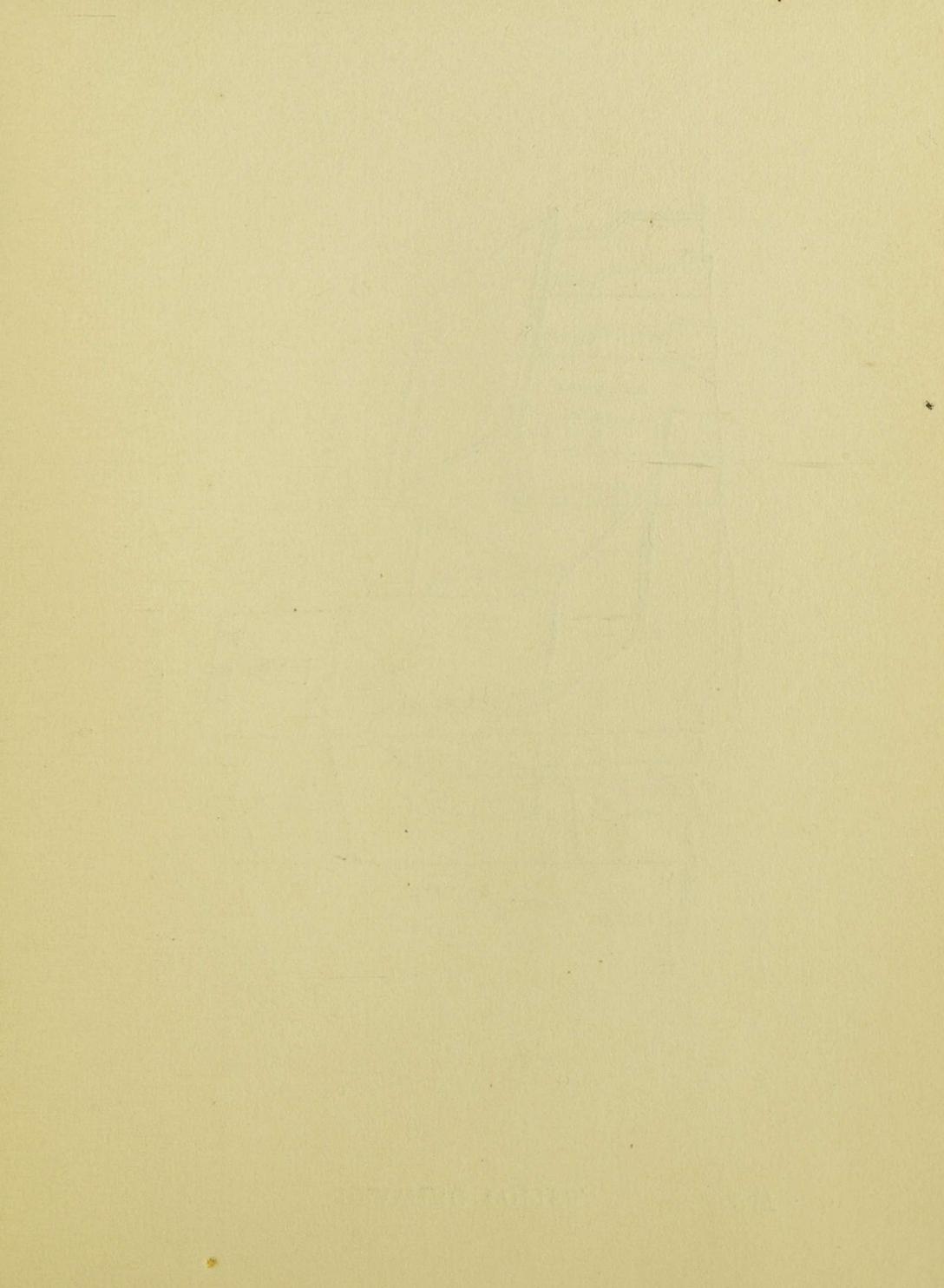


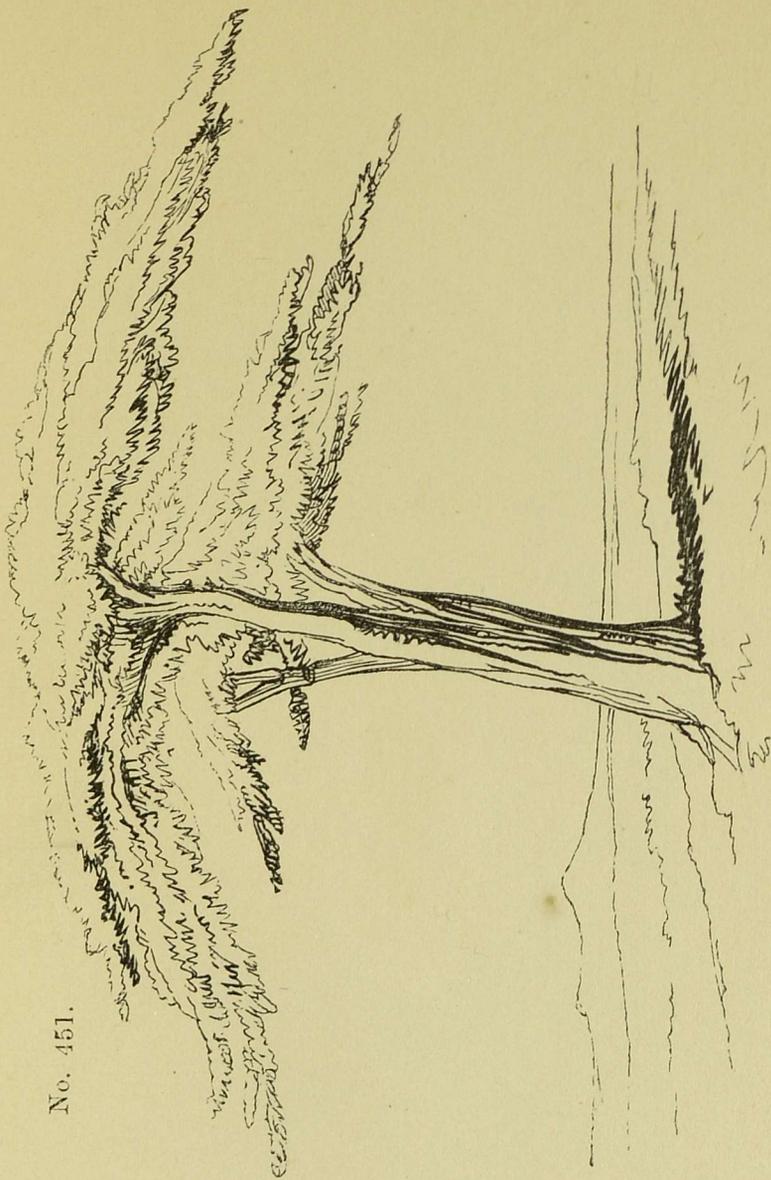
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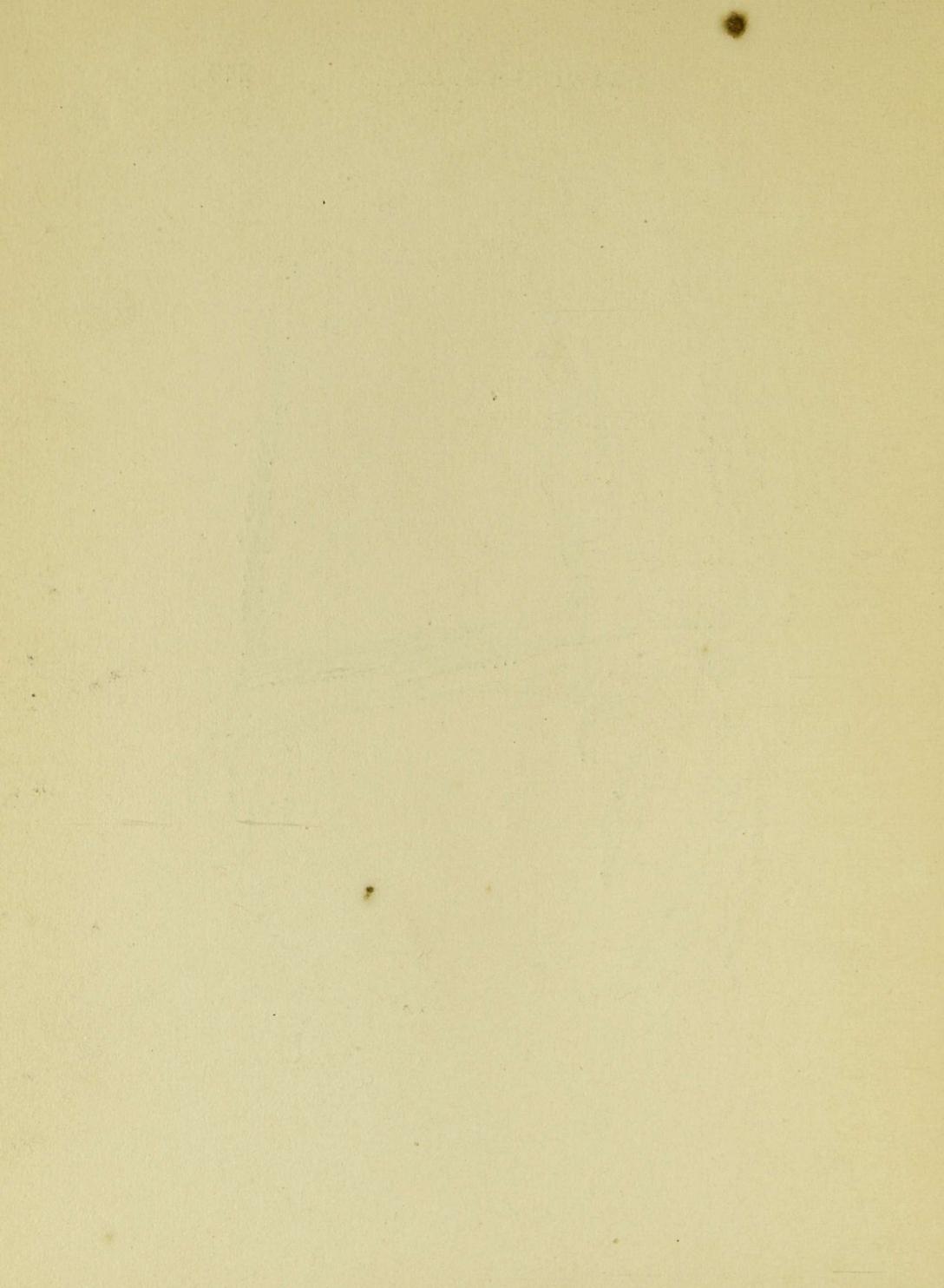
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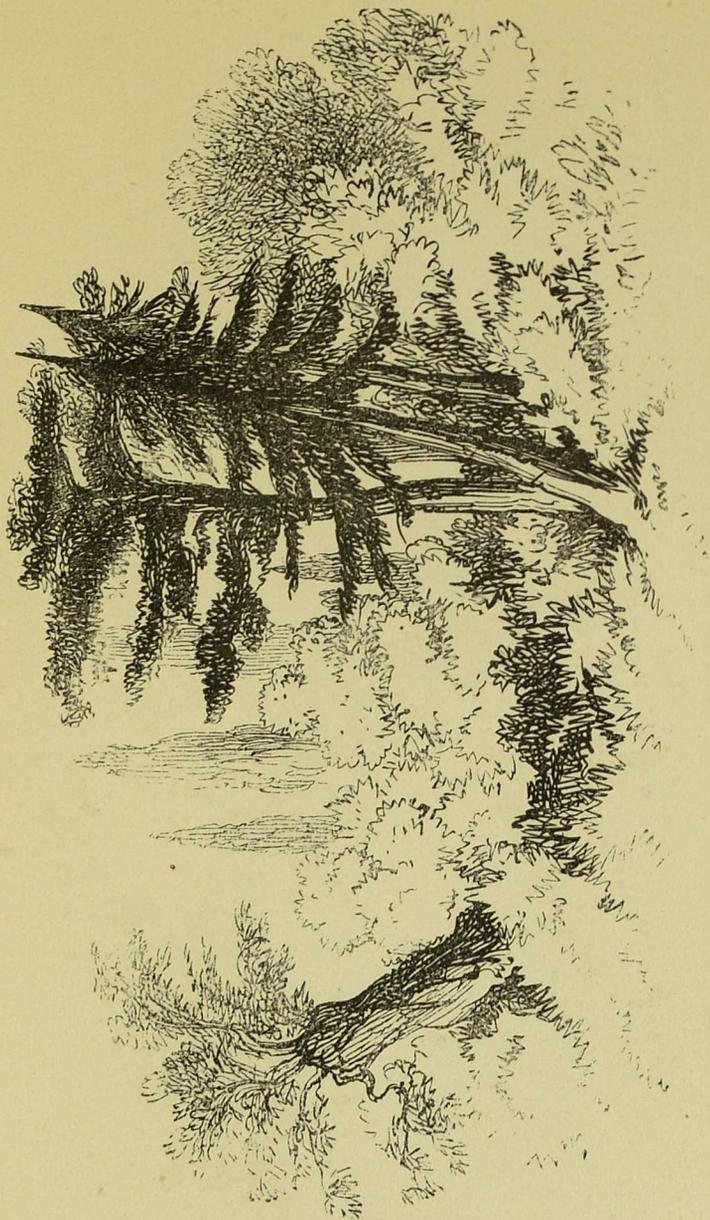




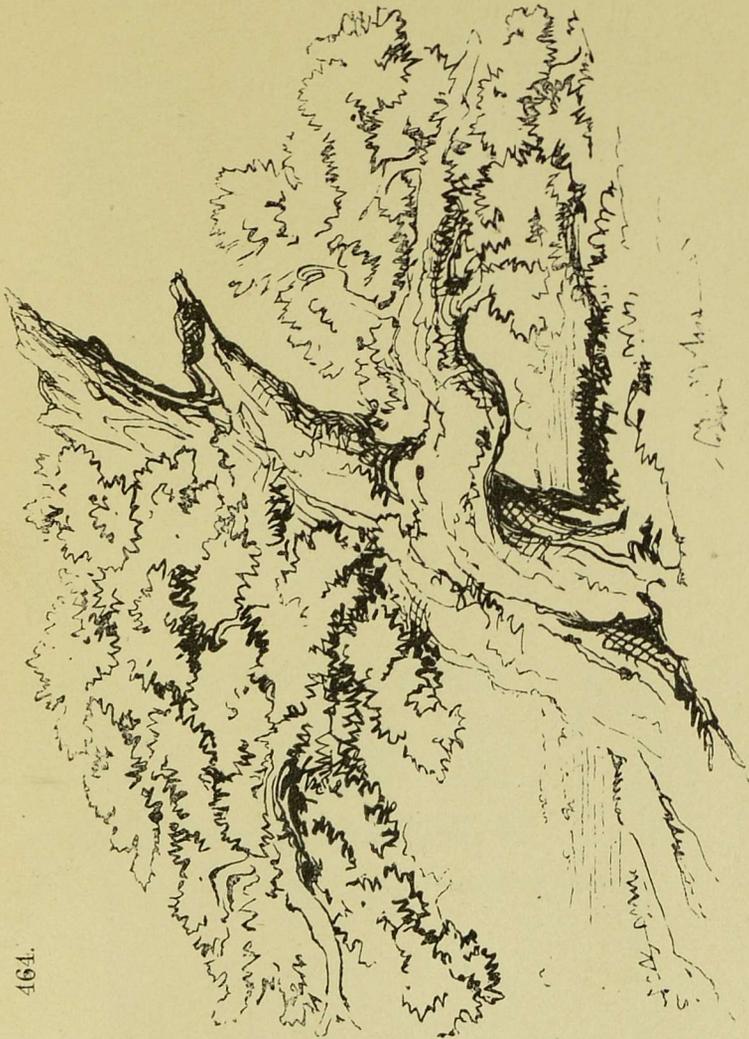
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No. 457







464.



No. 467.

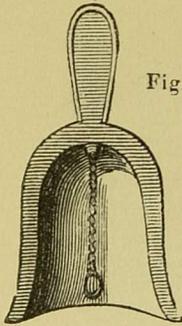


Fig. 1.

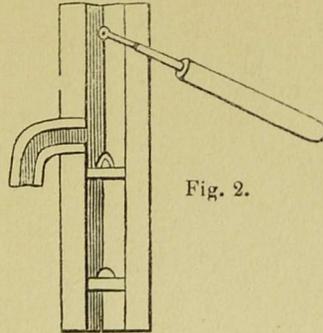


Fig. 2.

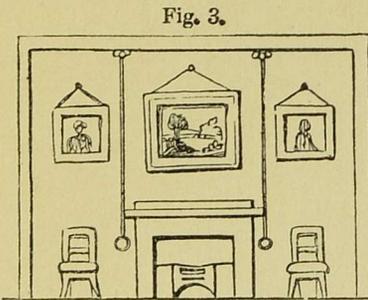


Fig. 3.

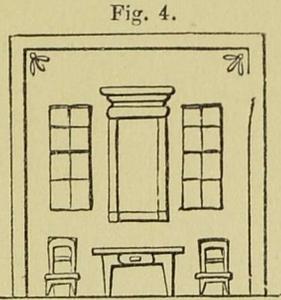


Fig. 4.

Fig. 5.

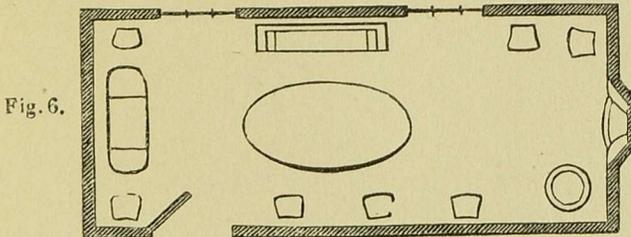
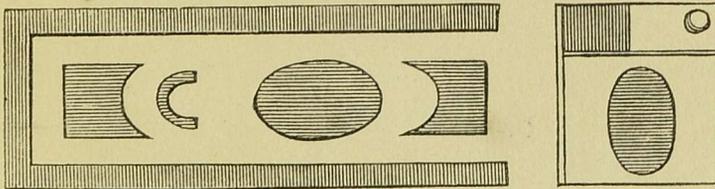
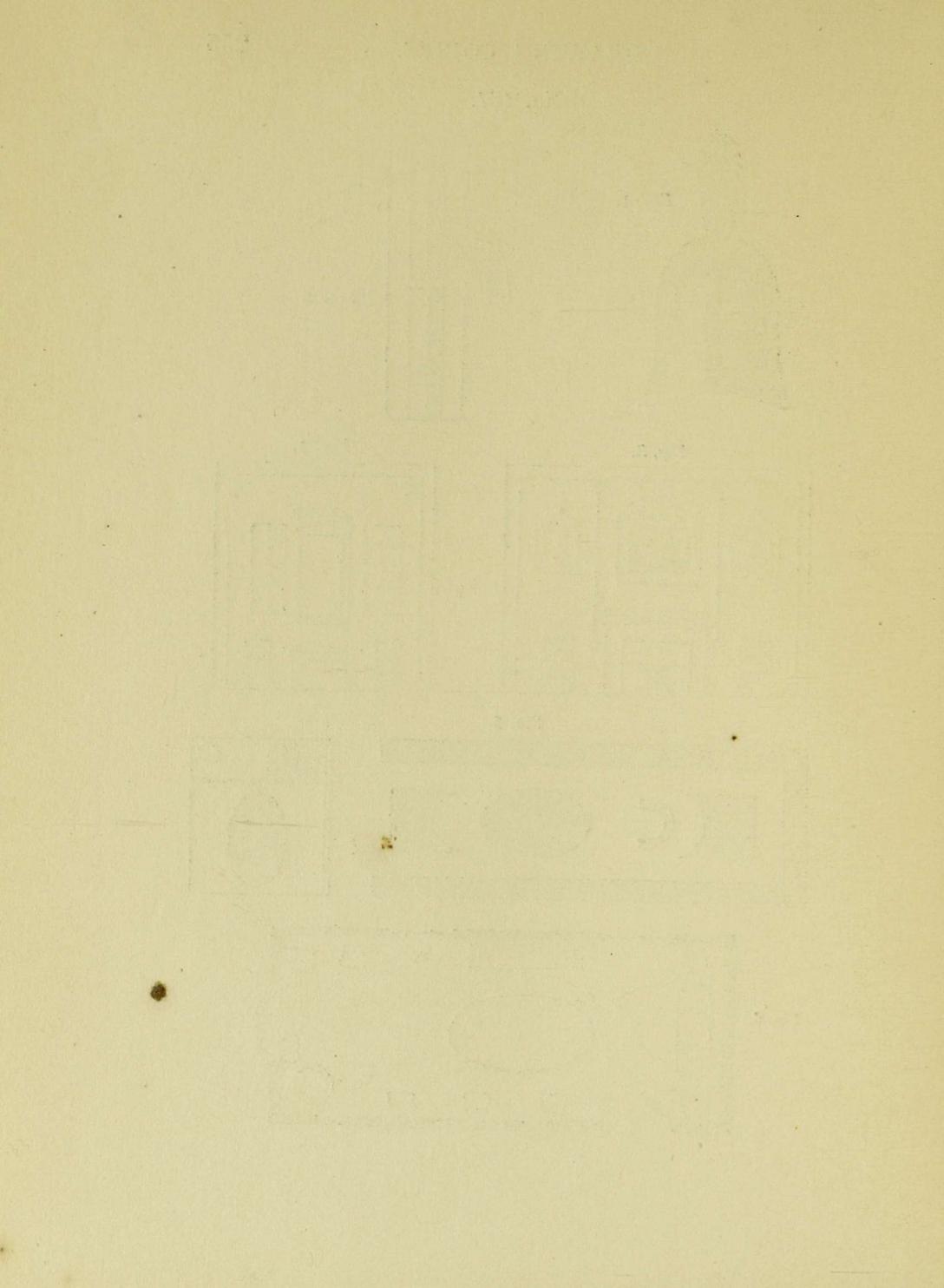
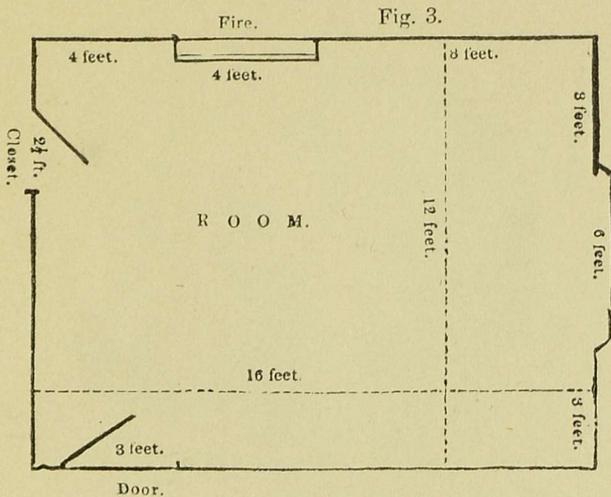
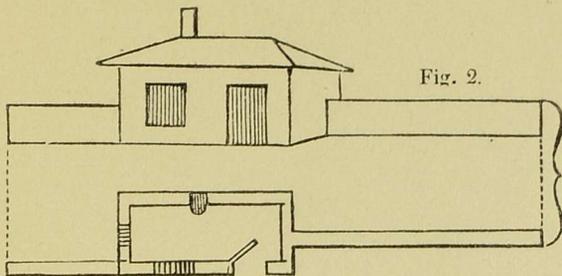
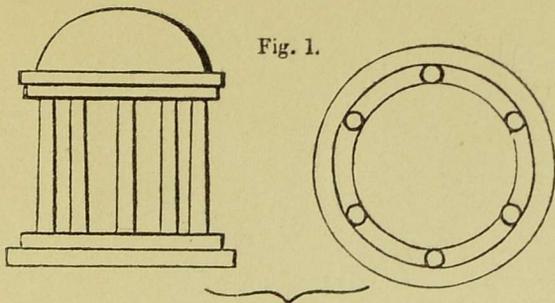


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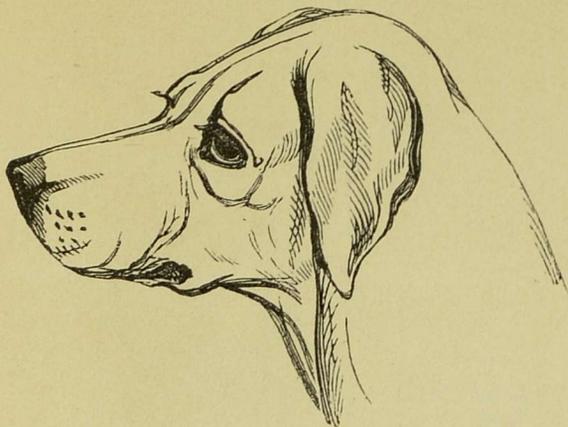


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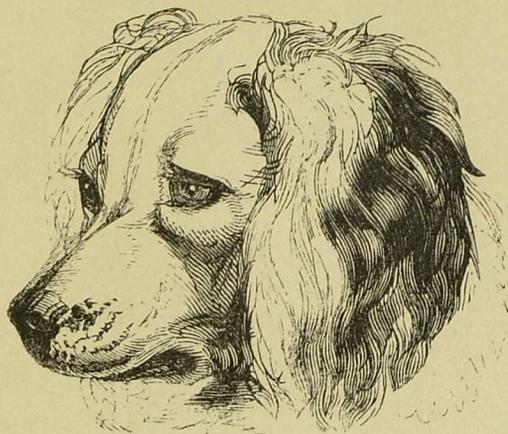




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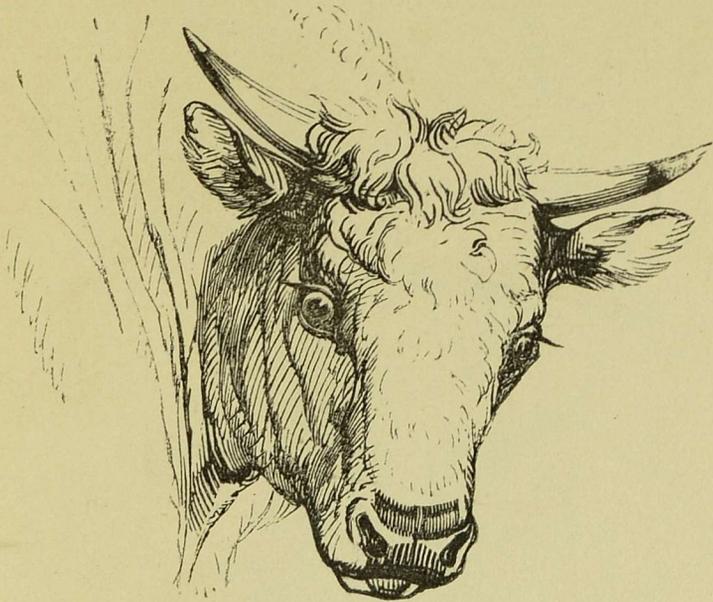


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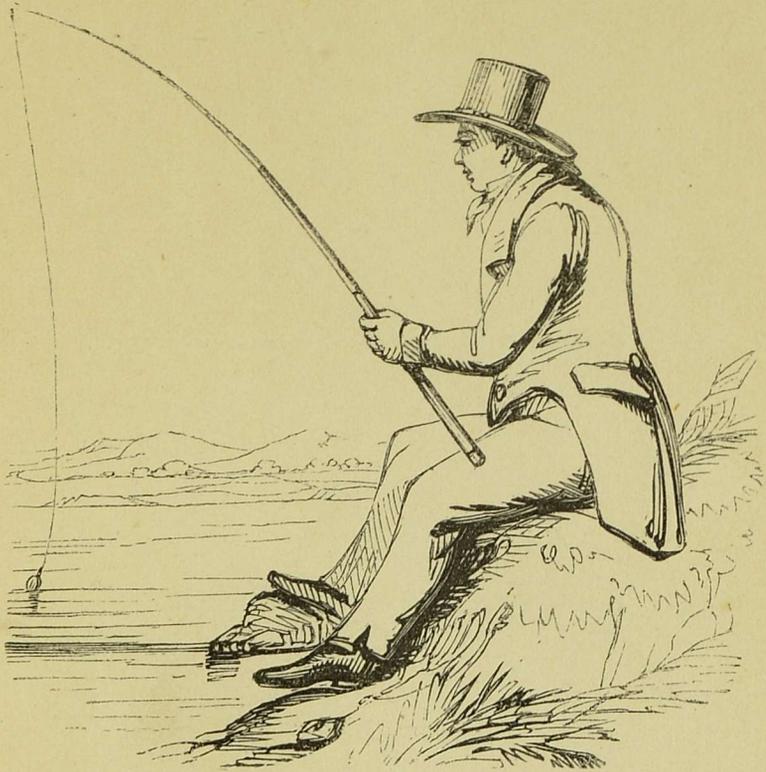


No. 471.





No. 472.



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