CARVATEIO'S SDITTOM.

## GENERAL KNOWLEDGE

 fatar sexsyFOR
CHILDREN.


Embellished wrth numerous Engravings.

## LONDON:

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FRONTISPIECE:


Plate 1.
MECHANICS.


Plate 2.

## GENERAL KNOWLEDGE

> MADE EASY,

OR<br>THE CHILLID $\boldsymbol{F H I R S T}$ STEP

то

| Mechanics | Painting | Logic |
| :--- | :--- | :--- |
| Mineralogy | Drawing | Philosophy |
| Agriculture | Mythology | Poetry |
| Sculpture | Commerce | Religion |
| Architecture | Algebra | Geometry |
| Anatomy | Electricity | Rhetoric |
| Botany | Astronomy | Mathematics |
| Pharmacy | Navigation | Optics |
| Chemistry | Biography | Jurisprudence |

Arithmetic:
ALSO EASY DESCRIPTIONS OF
Clouds-Rain-Snow-Dew-Hail-Tides-Earthquakes-Thunder-Lightning\&c. \&c.

Embellished with Illustrative Engravings.

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# GENERAL KNOWLEDGE 

MADE EASY.

## MECHANICS

Teach the laws of the equilibrium and motion of moving bodies : how one body may be made to act on another, and enable you to raise or move heavy weights; and how to make and construct Machines, Engines, \&c.

The principal things to be considered are, the weight to be moved, the power by which it is to be moved, and the instruments employed to move the same. For instance; you wish to move a large log of wood, and it is beyond your strength : get a strong stick, (or a poker,) and place the end nearly under the wood: a short distance from the same, place a low stool; then let your poker rest on it, and by leaning your weight on the handle, you will be able to move the wood. Now the wood is the weight, the poker the instrument, (or lever) your body the power, and the stool the fulcrum, (or prop.) [see plate 1.]

The lever, the pulley, the wheel and axis, the wedge, the screw, and the inclined plane, are the principal powers in Mechanics.

Tides are caused by the action of the sun and moon upon the earth, which generally occurs every six hourss

## AGRICULTURE

(Or the cultivation of the fields)
Is the most useful, healthy, and important of all pursuits; and is the art of cultivating the ground, so as to render it capable of growing food for man and beast. It teaches the nature of soils, and their proper adaptation and management for the growth of corn, barley, potatoes, \&c. [see plate 3.]

Clouds are a collection of vapours, caused by the heat of the sun; and being heavier than the air, they fall in rain to the earth.

Dew is very small particles of water, condensed by the coolness of the night, as it flows in the air.

Snow is formed from the clouds being congealed; the parts being frozen descend slowly to the earth in flakes.

Rain is produced from the clouds: refreshing the earth as it falls, causing the plants to grow, and the air to be cooled. Springs are supplied, and Rivers are formed from Rain.

## SCULPTURE

Is the art of carving stone, wood, \&c. into images and ornaments. [see plate 2.]


Plate 3.
AGRICULTURE.


Plate 4.
ARCHITECTURE。

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## ARCHITECTURE

Is the art of planning and erecting buildings of every description; and contains five Orders, namely: the Doric, the Tuscan, the Ionic, the Corinthian, and the Composite. [see plate 4.]

Civil Architecture is the building of boats, ships, Harbours, Piers, Bridges, \&c.

Military Architecture is building entrenchments, forts, \&c.

## ANATOMY

Teaches the art of dissecting and separating the several parts of dead bodies; by which means the structure of the frame is ascertained, and we are rendered able to discover the nature of diseases.

The principal part is composed of bones, which form, in a manner, the groundwork of the Animal:muscles being the organs of motion, brain and nerves the organs of sensation and feeling, veins and arteries for the passage of the blood, and viscera to prepare the food: also organs of hearing, smelling, tasting, seeing, and feeling.

## BOTANY

Teaches the art of arranging plants, vegetables, \&c. in their proper classes; describing their several kinds, structures, forms, uses, and virtues; and is a most delightful study.

A few days after a seed is thrown in the earth the two ends open; from one issues a green plant which sprouts upwards, and from the other various fibrous threads strike downwards, and form the root of the same, which gives nourishment to the plant.

There are upwards of 100 different sorts of leaves only. [see plate 5.]

## PHARMACY

Teaches the virtue, choice, preparation and mixture of medicines; and is the business of the Apothecary. [see plate 6.]

## CHEMISTRY

Is the science which explains the nature, laws, and causes of the changes which all bodies are subject to; and teaches the art of decomposing, or separating different substances which are found in mixed bodies; and of composing new bodies, by mixing various substances together.

Solid substances are reduced into powder by being pulverized.

The substance which decomposes another is called a Chemical test.


## Plate 5.

BOTANY.


Plate 6.
PHARMACY.


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Plate 7.
PAINTING.


[^1]MYTHOLOGY.

## PAINTING

Is the art of representing figures, landscapes, \&c. by means of lines and colours; and enables us to display at one view, those objects which without it would be quite forgotten. Drawing is a most useful and pleasing study, and gives rules by which we can draw or imitate any thing from the life. [see plate 7.]

Colouring teaches what colours must be used to produce the desired effect of imitating the colour of every object in Nature, \&c.

## THUNDER \& LIGHTNING.

Lightning is a stream of electrical fire, passing between the earth and clouds; and the Thunder is merely the report of its explosion, with its echo.

Hail is formed from rain congealed as it falls by the coldness of the atmosphere.

## MYTHOLOGY

(Or a description of Fables)
Is the history of the fabulous gods and goddesses among the heroes of antiquity.

The principal amongst the Greeks and Romans are Jupiter or the Thunderer, Juno, Minerva, Neptune, Vulcan, Apollo, Diana, Mercury, Bacchus, Hercules, Cupid, \&c. \&c. [see plate 8.]

## COMMERCE

Is the art of bartering or exchanging one article for another, or buying and selling with a view to gain: by this means, one Country participates in the productions and manufactures of all others. In Commerce, Great Britain may be said to be the richest Nation on the globe, and to have three times as many Merchant's Vessels on the seas, as all other nations put together.

Arithmetic is the art of computing by numbers, namely; $1,2,3,4,5,6,7,8,9,0 ;$ and consists of four operations: Addition, Substraction, Multiplication, and Division.

Addition is the adding of two or more numbers together; as 2 and 3 are 5.

Substraction is deducting a certain number from a greater; as 5 from 9 , there remain 4.

Multiplication is multiplying a certain number by a smaller; as three times 4 are 12.

Division is dividing or parting a greater number by a lesser; as 12 divided by 3 gives 4 . Example: mamma gave 12 cherries between 3 of you; that would be 4 for each.

Algebra is the method of calculating by means of letters, in lieu of figures as used in Arithmetic.

An Earthquake is a sudden shaking or trembling of the earth, supposed to be caused by electricity; and instances have too often occurred of the earth opening and swallowing up houses, inhabitants, \&e.

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Plate 9.
ASTRONOMY.


## ASTRONOMY

Is that sublime science which teaches the forms, motions, distances, appearances, and revolutions of the planetary bodies. The Sun is the centre of a vast system of planets, namely; Mercury, Venus, the Earth, Mars, Jupiter, Saturn, Herschel, \&c. all of which move round him at various distances. A Secondary planet is one which moves round a primary one; as the moon moves round the earth. The Sun is $95,000,000$ of miles from us. [see plate 9.$]$

The Earth has two motions; its daily on its own axis, and its annual round the sun.

## MINERALOGY

Is that science which acquaints us with the character of Minerals; or, in other words, the numerous bodies that lie buried in the earth; as stones, salts, metals, \&c. which are divided into four Classes. It also teaches the mode of distinguishing them, so as to recognise and describe them whenever they occur.

Electricity is a power which is made to show itself by means of friction, or rubbing two bodies together. If a piece of glass be rubbed on a piece of dry woollen cloth or silk, and instantly held over any light substance, as feathers, they will be moved towards it, and put in motion: this power is called Electric, and if done in the dark, the glass will exhibit faint signs of light, which is called Electric Fluid.

## NAVIGATION

Teaches the art of guiding a Ship through the sea, from one port to another, by steering (going) the shortest way; at the same time avoiding rocks, shoals, \&c. it also comprises a knowledge of the figure and motion of the earth, the solar system, the tides and winds; also the use of the $\log$, half-minute glass, quadrant, compass, maps, charts, \&c. by means of which, a ship can now sail from England to Calcutta in 60 days; which, before these things were invented, occupied 6 months. [see plate 10.]

## BIOGRAPHY

Is the lives of Eminent Men; and may be called the science of men and manners; which is highly entertaining and instructive, as it gives a knowledge of human nature, by teaching from experience, and tends to excite our imitation of their good qualities.

Ethics (or morals) is the science of manners, or proper conduct; and teaches us the exercise of reason in all our affairs and actions, so as to make us happy in ourselves, and respected and loved by all who know us.

Logic is the art of reasoning justly, and employing our inquiries after truth and knowledge, by explaining our thoughts to others; and is divided into 4 parts, namely; judgment, perfection, reason, and method.

## PHILOSOPHY

Is the study of Mind, of Nature, and of Morality, on the principles of reason and experience; and is divided into three parts; that which treats of the nature of the human sonl, and of beings in general ;that which teaches our duty; and that which teaches us the study of all natural objects, their causes and effects, and the action of one body on another.

## POETRY

Is a description in verse, of any event; may be termed a speaking picture, and is a number of words, generally delivered in certain numbers, so as to give a sort of harmonious sound. It at once refines the heart, and elevates the soul.

## RELIGION

Is the worship we offer to the Supreme Being, in that manner which we conceive to be most agreeable to his revealed will, for his many mercies towards us, for his blessing and guidance in this life, and happiness in a future state.

Religion teaches us to do unto others, as we would wish them to do unto us, in mutual confidence, peace, and love.

## GEOMETRY

Is particularly useful to Architects, and is the stepping stone to mechanics, and most of the arts; it treats of magnitude and extension, angles, lines, surfaces, and solids. A line is a space in length;-a surface in length and breadth; and a solid in length, width, and thickness.

## RHETORIC

Is the art of speaking (or writing) our ideas in an easy, pleasing, and pursuasive manner; and requires a complete command of language, a good memory, an easy delivery, and a good judgment. [see plate 11.]

## MATHEMATICS

Are the sciences which teach the quantity and proportion of matter; and as they rest on clear proof, are the most perfect of all sciences. They consist of Arithmetic, Geometry, Hydrostatics, Geography, Pneumatics, Algebra, Astronomy, Mechanics, Optics, Architecture, and all that relates to number and magnitude.

## OPTICS.

The science of Optics treats of Vision, whether performed by the eye, or assisted by instruments; and explains the nature of light and colours; and gives the the reasons for the various alterations which the rays of light undergo in the eye. It also teaches the use and construction of Telescopes, Microscopes, \&c.

A Microscope represents objects larger than they really are; and that which the eye cannot perceive, is rendered quite plain and distinct.

A Telescope brings objects to a nearer view, and is a most amusing instrument. [see plate 12.]

## JURISPRUDENCE

Is the art of properly managing the affairs of a community, so as to promote the happiness and prosperity of each individual.


Plate 11.
RHETORIC.


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[^0]:    London:-Published by D. Carvalho, 74, Chiswell Street,

[^1]:    Plate 8.

