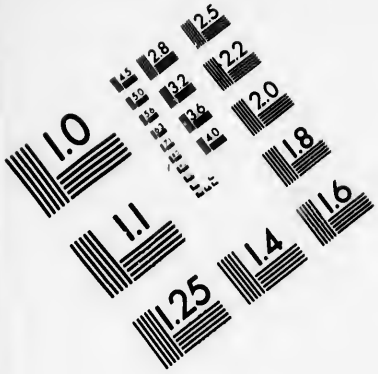

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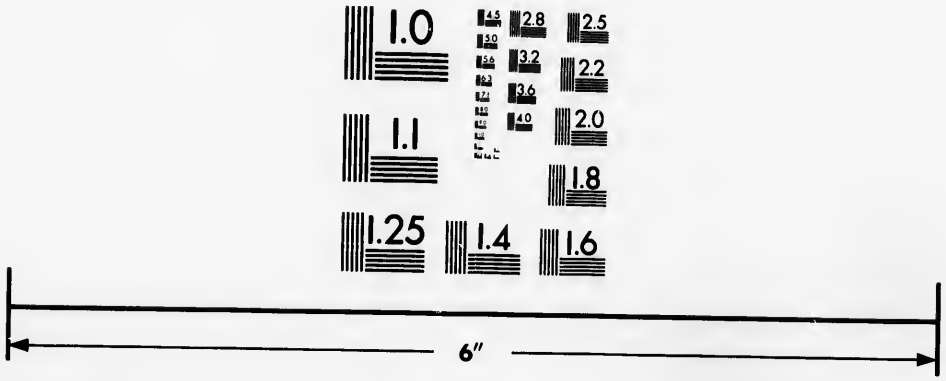

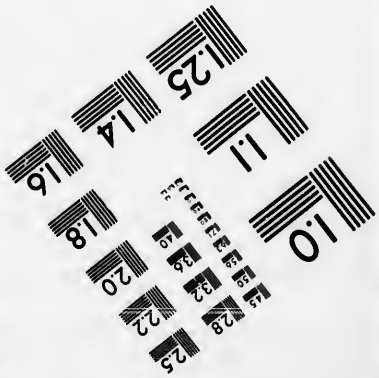

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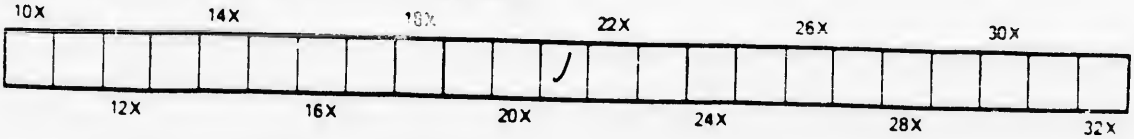

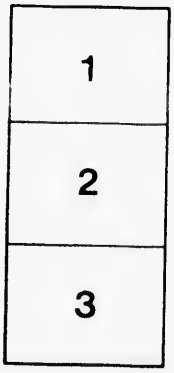

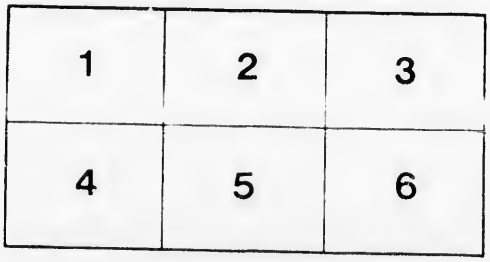

FOURTH BOOK.

OF

LESSONS

FOR THE

USE OF SCHOOLS.

NEW EDITION, REVISED AND CORRECTED.

PUBLISHED BY DIRECTION OF THE

COMMISSIONERS OF NATIONAL EDUCATION IN IRELAND.

BALTIMORE:
J. B. THOMPSON & CO.

HALIFAX, N. S.
A. & W. MACKINLAY.
1857.

PREFACE.

THE FOURTH BOOK OF LESSONS having been compiled on the same principals as the First, Second, and Third, Teachers are recommended to pursue the same methods in using it.—Their Pupils should be made to spell, without the book, all the difficult words in every Lesson; and, though it is expected that Grammar and Geography be now taught from text-books, yet Teachers should continue to put occasional questions on both these branches of education, in the course of the ordinary examinations. Any sentence can be made an exercise in Grammar; and there is a whole Section of Lessons devoted to subjects connected with Geography which ought to be explained from Maps. The Section of Lessons on Scripture History will aid Teachers in communicating to their Pupils an accurate knowledge of the historical parts of the Bible. When an object described in any Lesson, or a plate or drawing of it can be procured, the object itself, or the drawing, ought to be shown to the Pupils; and the Teacher should require them to explain, not only what is said of it in the text-book, but all its distinguishing properties, as well as those which it has in common with other objects of the same kind. After having been examined on a Lesson, they should also be made to state, in their own words, all that they have learned from it. Masters will derive considerable assistance in teaching, and pupils in learning the Lessons, from the list of Latin and Greek roots in the Appendix. Those in the First Section have been arranged according to the Lessons in which they first occur, and have been selected at the rate of six roots to each page of reading. It will be of advantage, therefore, to teach the First Section by prescribing for each Lesson, a page to be spelled, read, and explained, and six roots to be committed to memory. In hearing the Latin and Greek roots, Teachers will

be careful to examine their Pupils on the formation of English words from them, by joining prefixes, affixes, and other words: and they will also cause them to give, in addition to the examples in the book, as many English words formed from the same root as they can recollect. The object of this exercise is to accustom young persons to habits of combination and analysis, as well as to give them a command of expressions in their own language. When the Teacher is examining on the Reading Lesson, he will make his Pupils point out all the words of which he has learned the Latin and Greek roots, explain them according to their derivation, and show how they are formed. Each Lesson of roots does not contain all that are to be found in the Reading Lesson; but the First Section of Roots contains nearly all that occur in the First Section of Reading Lessons. It is recommended, therefore, that when the whole of that Section has been learned, at the rate of a page of reading and six roots for each Lesson, it should be carefully revised, when the pupils should be able to explain every derivative word which occurs. Having done this, they will proceed to the Second Section of Reading Lessons, and also to the Second Section of Latin and Greek Roots, which, containing only those additional primitives which did not occur in the First Section, has not been arranged in Lessons. Teachers will use their own discretion as to the number to be prescribed for a lesson; but they will take care to make their Pupils continue to apply all the roots in the First Section. They will proceed in the same way with the Third, Fourth, and Fifth Sections. — Some of these directions will be made more intelligible by the subjoined example of the method in which the Lessons are recommended to be taught.

"Linnæus, the great Swedish naturalist, characterizes and "divides the three kingdoms of nature, the animal, the vegetable, and the mineral, in the following manner; 'stones "*grow;* vegetables grow and *live;* animals grow, live, and "*feel.*'"

The Teacher having seen that his Pupils can spell every word in this sentence, and read it with proper pronunciation and accent, may examine them upon it as follows: — Who was Linnæus? A Swedish naturalist. From what Latin root is *naturalist* formed? *Natura*, nature. What is the first

affix added to *natura*? — *Al*, of or belonging to. What part of speech is *natural*? — An adjective. What affix is then added to natural? — 1st, a doer. What part of speech is *naturalist*? — A noun. Why is it called a noun? — Because it is applied to a person. Applied to persons what should it be? — *Naturalist*, in the plural number. Is it applied to males or females? To both, and is therefore of the common gender. What is the meaning of the word *Naturalist*? — A person who studies nature. What kind of a naturalist was Linnæus? — Great. What part of speech is *great*? — An adjective, because it expresses quality. Where was Linnæus born? — In Sweden. Where is Sweden? — In the north of Europe. Point it out on the map. What is Linnæus said to have done? — He characterized and divided, &c. What parts of speech are these words? Verbs, because they express what Linnæus did. Any affix in *characterize*? — *Ize*, to make. The meaning of the word? — To make or give a character or name to. Give me some of the derivatives of *divide*. — *Divsion*, *divisible*, *indivisble*, *dividend*, *&c.* What did Linnæus characterize and divide? — Animals, vegetables, and minerals. What are these called? — The three kingdoms of nature. How did he characterize minerals? — They grow, &c., &c. State to me, in your own words, what you have learned from this sentence. — Linnæus was a great naturalist — He was born in Sweden — He formed all natural objects into three great classes or kingdoms — And he thus distinguished each of these kingdoms from the other: "stones *grow*;" *&c.*, *&c.*

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III. — LATIN AND GREEK ROOTS.

FOURTH BOOK.

SECTION I.

NATURAL HISTORY, OR KINGDOMS IN NATURE.

LESSON I.

INTRODUCTION TO THE NATURAL KINGDOMS.

ALL that we know of the works of God connected with our own world, has been placed under three heads, which have been called *Kingdoms* in Nature, or rather *Natural Kingdoms;* because they are each subjected by God's providence to certain laws or rules, by which their order is maintained, even as kingdoms among men are governed by rules laid down and maintained by the king's authority.

The *first* of these kingdoms has been called the Mineral Kingdom. It consists of substances which have no life, such as earths and stones, and which, when they increase in size, do not grow as plants and animals do, from materials taken *into* them, but by such as are added on them *from without*,

The *second* kingdom has been called the Vegetable Kingdom. It includes all those productions of the earth which both live and grow, but which are *inanimate*, or have no feeling. These vegetables include the tallest tree which lifts its head to the sky, as well as the minutest moss or lichen which grows at its feet.

The *third* is the Animal Kingdom, including all animate objects—viz., such as *live*, *grow*, and *feel*—man, beasts, birds, fishes, insects, &c.

PART I.—THE MINERAL KINGDOM.

LESSON II.

STONES AND EARTHS.

STONES, earths, and metals, are called mineral substances. Stones and earths are portions of the outside or crust of our globe; and metals are those shining substances which we find embedded in them, or filling up veins and crevices among them. A knowledge of the position of these rocks, and of the changes which they have undergone in the course of ages, is called Geology.*

Those which† used to be accounted the oldest rocks of the earth—because they are found beneath the others—are uniform and even in substance, like the beautiful sparkling granite which you see lying in masses in the neighborhood of Dublin, and which is quarried for building and paving streets.

Those rocks which are supposed to be newer (more lately formed) than the others, because they lie uppermost, consist of beds or layers (called strata) many feet in depth, formed of earths, stones, and broken shells, and contain the remains of those plants and animals which died during the ages in the course of which they were being formed. These plants and animal remains, though they are now become stone, retain their shape, and are easily distinguished; they are called fossils.

The mineral productions of our globe are very numerous. Some of them are found in the state of earths of various kinds; others solid, as slates, marbles, &c.; others are metals, as gold, silver, iron, &c.

I shall describe a few of each sort of these, that you may learn to estimate the value of the mineral kingdom.

* From two Greek words, *ge* earth and *logos* law.
† This has of late been doubted.

Clay is one of the least beautiful, but most useful, of mineral productions. It is an earth, formed, as all earths are, by the wasting away of certain rocks, and is found in every part of the world. It is usually coloured with a tinge of dusky blue, red, or yellow, but is sometimes found of a pure white.

Clay is stiff, yet *ductile*, that is, it holds together, and can therefore be spread out or moulded at pleasure. It is not at all porous, and will therefore hold water. By means of clay beds or caverns in the earth, natural wells or reservoirs of water are formed. We, too, in imitation of nature, line our ponds and canals with clay, in order that the water may not sink through. We use clay for building the walls of cottages, first mixing it with chopped straw, to make it bind more firmly.

Clay becomes hard by exposure to heat. It is therefore used for making bricks, and for all sorts of pottery. For making bricks, a common sort of clay mixed with sand is dug up, and when it has been well kneaded, is passed through moulds of the proper size, and placed in rows to dry. The bricks are then baked or burnt in a furnace called a kiln, till they are hard enough for use.

The art of making bricks seems to have been known in very early ages of the world. They are mentioned in Scripture, in the account given of the building of the Tower of Babel; and they were used during the captivity of the Children of Israel in Egypt, who were employed in making them. These bricks must have been dried in the sun, and not burned, since we find that they were mixed with straw, which would have been consumed in burning.

It is mentioned as part of the heavy labour imposed on the Israelites, by their Egyptian masters, that they had to gather straw for their bricks themselves, and all this under the burning sun of Egypt.

There are vast tracts of clay-land in England and

Ireland, which, however useful to the brickmaker, give much trouble to the farmer in ploughing, trenching, and digging, and using various other means, to make it fit for the growth of corn.

A finer sort of clay is used for pottery.

Clay Slate.—You have specimens of this useful mineral in the slates you write on, and in those of a coarser description which are used for roofing houses.

Many of our mountains, especially in the north-west of England, are composed chiefly of slate. It has a tendency to split into leaves, and is therefore called foliated, from a Latin word which means a leaf.

The slates intended for writing on are chosen of the finest texture, and dark in colour, but they undergo processes of smoothing and polishing before they are considered fit for use. Slates are sometimes found so large and thick as to be used for gravestones, chimney-pieces, and pavements.

Lime exists in great quantities on the earth. It is chiefly found united with a substance called carbonic acid, and appears under several forms in the rocks of the earth.

Vast limestone rocks and mountains are to be met with in all parts of the world. Sometimes the limestone is dark, like that broken up and spread on the roads sometimes white, and of a beautiful texture—it is then called marble, and is used, when cut and polished, for statues, chimney-pieces, &c.

Chalk is another form of limestone.

Chalk is known to you as a soft, crumbly stone, used chiefly for drawing, or marking down figures on dark boards. But there are beds of chalk in England extending from one end of the country to the other—sometimes rising into hills, and breaking off into cliffs; sometimes sinking down into hollows or valleys. The city of London is built on beds of clay and gravel,

which, in the course of ages, have filled up one of these hollows in the chalk; and in digging through these beds very deep for wells, you come to it.

Part of the south and south-east coast of England is defended from the sea by great chalk cliffs, dazzling from their whiteness, and when partly clothed with green brushwood and creeping plants, very beautiful to look at.

In Ireland there is only one bed of chalk, and none in Scotland; but it is found on the opposite coast of France, and in many parts of Europe.

Chalk is formed chiefly of broken shells, which shells were made of lime. Numerous shells and corals, the remains of past ages, are also found quite perfect among the chalk; and also large flint stones of curious shapes, which are used for various purposes.

There is another form of lime called Gypsum, which is beautifully white, and much resembles chalk. Plaster of Paris is made from it, in which they mould those beautiful little white images which you see carried about the streets on boys' heads, for sale. Alabaster is a substance of this kind, only it is semi-transparent.

But lime is useful as well as beautiful. It may be obtained in a pure state from limestone, by burning in a large kiln or furnace. It is then called quicklime, and is used for making mortar to build with. In order to make it into mortar, it undergoes a process called slaking, which is curious to watch, though dangerous, on account of the fumes; which hurt the eyes. The quicklime is placed in a heap, and cold water is poured on it, when a violent heat takes place, it swells and falls to powder; this is mixed with sand into a paste, which is called mortar. Lime is also used in refining sugar, in making soap, and for other purposes.

Flint (*Silex*) has already been mentioned as found in dark lumps of irregular shape, in beds of chalk. It is the same substance as quartz, a hard, delicate, white

rock, which is sometimes half-transparent, and is then called rock crystal; but it is often united with other minerals, as in granite, where you may see it along with felspar and glittering mica.

Flint is so hard that it draws forth sparks from iron when struck against it; and though this mode of *striking a light*, as it is called, is now almost disused, since prepared matches are become so cheap, yet it continues to be employed for fire-arms, to strike out sparks from steel.

Flint is used for another and very different purpose—for making glass. The flints are made red hot, and then thrown into cold water, when they become white and crumbly, and are easily ground into a fine powder, which is mixed with soda or potash, and melted.

A fine sort of white sand is also used for the best glass, and a coarser sort for green bottle glass.

Sand comes from flint or quartz rocks broken off, and the stones ground against each other by the dashing and rolling of waters continued for many ages. Any softer substance of rock becomes mud or clay after it is worn down. In this way those vast tracts of sand on the sea shore, and also the great deserts of sand which we read of, must have been formed.

Mica.—Those beautiful little silvery scales which you find in the granite about Dublin are mica—the word means shining. It is a transparent substance, and in Russia, where it is found in large thin plates, it often serves for window panes.

Salt.—Common salt—for happily it exists in such quantities as to deserve the name of common—is found both in the sea and also in rocks beneath the earth. The rock salt is found in large quantities in the county of Cheshire in England; there are also vast and beautiful mines of salt in Poland and other places.

Salt is procured from the sea by taking out large

quantities of water, and evaporating it; that is, making it pass into vapour by heating it, so that the salt, which had been held in solution, or melted in the water, sinks to the bottom, and is left dry.

Nitre, or *Saltpetre*, is found on the surface of the earth in some countries, like hoar frost. It is used in many of our manufactures, especially in making gunpowder. This salt is sometimes used along with common salt, for curing meat, and gives to it a red appearance.

LESSON III.

COMBUSTIBLE MINERALS, PRECIOUS STONES, AND METALS.

THERE is a class of minerals which are called combustible, because they can be wholly or partly consumed by fire. Among the most useful of these is *Coal*, which, though a vegetable formation, is found in beds of vast extent beneath the surface of the earth: they extend through several of the English counties, and are called from their vast extent coal fields.

Plumbago, or *Wad*, is another of these minerals; our drawing pencils are made of it. The best in the world is found in one mountain in Cumberland.

Sulphur is a beautiful, pale yellow mineral, very brittle which catches fire so readily that it is used for making lucifer matches.

Bitumen is a mineral pitch, which is found in Asia and in the West Indies, and in one spot also in England. It was anciently used as a cement; and the bricks of which the walls of the great city Babylon were built,

are said to have been cemented by bitumen. It is this mineral which exists in coal, and which makes it burn so brightly.

There is a beautiful kind of coal called pitch coal, the harder and finer portions of which are cut and polished for trinkets, and are called jet.

Amber is a fine clear yellowish brown stone, resembling the gum of a cherry tree, which is found sometimes on the sea shore, and sometimes in gravel beds. It is supposed to be a resin, like that you may have seen ooze out from fir trees; that is, it *was* once a resin, which has become in the course of ages like a stone. It is combustible also.

PRECIOUS STONES.

There are certain stones which, when cut out and polished, are very bright and beautiful, and being rare also, are highly valued, and to which therefore the name of *precious stones* has been given. Of these the Diamond is considered most precious, though not much more beautiful than cut-glass, which it resembles. It is so hard that it will cut glass, and glaziers use it for that purpose. Though so delicate and brilliant, it is found to be composed of carbon (charcoal), and at a very great heat may be perfectly consumed.

The Ruby, a pretty pink stone, and the Sapphire, a blue one, are both formed from an earth called alumine, which is found in clay.

The Garnet, a red stone, consists partly of flint (silex). Thus we see how the hand of God can call beauty and brightness out of the meanest materials.

METALS.

We now come to a lustrous or shining class of mineral substances, called metals. They are found either in beds or veins of rocks, or in muddy or sandy water courses, or in actual beds of rivers. Each is usually

combined with some other metal or mineral, in which case it is called a metallic ore.

Metals are fusible, *i. e.* capable of being melted. The most useful to us are those which are what is called *malleable, i. e.* capable of being hammered out to any degree of thinness; and *ductile, i. e.* capable of being drawn out into wire without breaking.

Platina is the most weighty of all the metals; it is also the hardest and most capable of resisting fire — it can only be melted at the greatest heat — (beyond that of common fire.)

Platina is darker in colour than silver, very solid, and very tough, so that it may be drawn out *without breaking*, into a thread, too slender to be seen by the naked eye. It is found in small flattened grains often along with gold, in Mexico, and in other parts of America. It is also found in Russia.

Gold, one of the yellow metals, is found in veins and clefts of mountains, among broken fragments of rock and sand, or in the form of dust, in the sandy beds of some of the African and American rivers. Lumps of gold have been found in the county of Wicklow in Ireland, and in other parts of Europe.

Gold may be hammered out to any degree of thinness. A single grain may be made to cover fifty-six square inches, which property enables us to cover copper or wood with it — *i. e.* to *gild* — at a small expense.

Gold being limited in supply — that is, produced in small quantities — is extremely valuable, and is therefore coined for money. One small piece, the size of a shilling, and called a sovereign from having the Queen's head stamped on it, is worth 20 shillings, or 240 pence; because the copper of which *one* penny is made is twelve times less valuable than one silver shilling, and 240 times less valuable than 20 shillings or one sovereign.

A pound weight of gold is worth about 50 sovereigns

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Silver is a brilliant metal, of a greyish white colour, and rather soft. Pure or native silver is found in delicate curled fibres, like white floss silk, filling little cavities in quartz rock, and also in a more solid form branching out into the rock. When found mixed with other substances, it is called silver ore.

Mercury, called also Quicksilver, is found in small globules of a shining silvery hue. It is fluid at the common temperature of the air, but under extreme cold it is solid, and may be hammered out like other metals.

The uses of mercury, both in medicine and in the arts, are many. It is mixed with tin, and put on the backs of glasses to make them reflect objects. It produces a beautiful paint called vermillion, when melted with sulphur; and is serviceable to us in many other ways.

Iron, the most useful, though not the most costly of our metals, is, providentially for mankind, found in most parts of the world: it is indeed diffused throughout creation. It is met with in plants, in stones, and in earths.

Iron is very seldom found pure; it is usually mixed with earthy and other substances, and it undergoes several processes in order to purify it. It is then employed in three different states.

First as *cast iron*, for which it is melted, and then poured into moulds made in clay or sand, of the shape required. Thus it is that stoves and pipes, fence-work, wheels, and even bridges, are made. Sometimes it is set off in furrows of sand, to be kept for use; it is then called pig iron.

The second state in which iron is employed, is called *wrought* or malleable iron. To bring it into this state it is made red hot, and then hammered out; after which, it is cut and shaped with instruments for the

purposes intended. Wrought iron is tougher and less liable to break than cast iron.

The third state into which iron is brought is called steel—a beautiful very hard material, taking a fine polish, of which knives, scissors, and all sorts of cutting instruments, and also pretty trinkets are made. To make the iron into steel it is mixed with charcoal and exposed to strong heat. When heated red hot, steel is hardened by being plunged into cold water. This process is called tempering.

Copper is a pale brownish red (or orange colored) metal, and very sonorous—that is, it gives out a sound (as does silver) when struck. Copper is so tenacious (tough) that it may be drawn out in wire to an immense length without breaking. A wire of one-tenth of an inch will bear a weight of 299 lbs. Copper is found in all parts of the world, and is used for a variety of things—tea kettles, saucepans, &c. When mixed with a metal called zinc, it becomes brass, which is much harder than either metal alone. The rust of copper or brass (called verdigris) is very poisonous. It is of a green color, and is used as a paint.

Lead is a very heavy, rather soft metal, of a pale grey color. It is very useful both in medicine and the arts. When mixed with tin and brass it becomes pewter, which is used for plates, spoons, mugs, and many other things. Lead is used in making paints of various kinds, in making glass, glazing earthen ware, in the types from which we print, and in the bullets used for guns.

Tin is white and bright like silver, but much lighter, and easily bent or bruised, so that it is chiefly used combined with other metals. It does not easily rust, and therefore iron for saucepans and other vessels is dipped into melted tin, a thin film of which adheres to the iron, and preserves it; so also it is employed for tinning iron vessels and copper vessels, which would

otherwise give an unwholesome taste to food boiled or kept in them. Another use of tin is, melting it with lead, to make solder, for fastening metals together. It is now the custom to melt the edges of the metals we wish to join, by applying intense heat, and then to fix them together as you do when you join two pieces of sealing wax, whose edges you have melted at the candle. In wrought iron the parts are hammered together while red hot, which is called *welding*.

Arsenic is one of the brittle metals, very unlike those we have been speaking of. When pure, it is very brilliant. It is a powerful poison, but is found useful in many of our manufactures.

Antimony is another of the brittle metals used in medicine and the arts, especially in giving hardness to the lead of which printing types are made.

BLESSED BE THY NAME.

Blessed be Thy Name for ever,
Thou of life the guard and giver!
Thou can'st guard Thy creatures sleeping,
Heal the heart long broke with weeping.
God of stillness and of motion,
Of the desert and the ocean,
Of the mountain, rock, and river,
Blessed be Thy Name for ever!

Thou who slumberest not, nor sleepest,
Blest are they Thou kindly keepest;
God of evening's parting ray,
Of midnight's gloom, and dawning day
That rises from the azure sea,
Like breathings of eternity;
God of life, that fade shall never,
Blessed be Thy Name for ever!

THE ETTRICK SHEPHERD.

PART II.—THE VEGETABLE KINGDOM.

LESSON IV.

THE VEGETABLE KINGDOM.

It is vegetation which renders the world capable of supporting animal life; for the mineral kingdom, with all its rich metals, and precious stones, and useful earths, contains no substance fit for the nourishment of man or beast: but then it supplies ample food for plants. More than 100,000 species of plants and trees cover the surface of the earth; some of them affording food for man, some for beasts and birds, others for clothing, others for medicine, whilst all of them are adorned with such lovely forms and colours, that we might well suppose them to have been created solely for our amusement.

This beauty of plants is distinct from their usefulness. They would be equally suitable to the wants of man, if they had been dyed, as their roots usually are, in homely earth-colour. We may be sure, then, that it is given with a view to our gratification, and that the lovely green of our woods and fields, the gay and delicate colours of our flowers, the fine forms of our trees, the glowing hue of our fruits, have been added to them by their and our Creator, for the pleasure of His creatures—a pleasure well suited to lead our thoughts, during our lighter hours, to Him who has thus clothed the hills, and plains, and hedge-rows, nay, the very road-side paths, in beauty, for our common enjoyment.

Plants have five parts essential to their growth, their perfection, and propagation,—the root, the stem, the leaf, the flower, and the fruit. By the fruit, I mean the seed, whether bare, or enclosed in a berry, an apple, a pod, or a nut, or any other kind of a seed-vessel.

The Seed.—If you examine the seed of a bean, or pea, or lupin, you will find that it easily splits open

into two parts, and that the germ of the future plant lies between them. These two sides of the seed are called cotyledons. A little while after the seed is put into the ground, these cotyledons swell, split open, and separate of themselves, giving room for the young plant to sprout up and down. The part which sprouts upwards is called the plumule; that which shoots downward, the radicle, which, descending into the earth, becomes the future root. But until the root is strong enough to draw up fruit for itself, these fleshy cotyledons supply the young plant with nourishment. Plants whose seeds have two of these cotyledons, are called *di*cotyledons, *di* meaning *two*. All our large trees, and a large portion of our plants, have two; many of those belonging to tropical climates, and some of our own smaller plants, have but one, and these are called *mono*cotyledons, *monos* meaning *single*. There is another class of plants which have no cotyledons, such as mosses, lichen, sea-weed, and mushrooms; these are called *a*cotyledons, *a* (Greek) meaning *none*.

When the young plant comes up you may easily see then to which of these three sorts it belongs; and by the number or absence of these little fleshy parts of the seed, you may foretell what kind of stem and leaf the plant will possess, as will be shown hereafter.

Of the Root.—The root of a plant has two uses: the plant is held by it firmly in the ground, and receives the nourishment drawn up by it from the earth through little openings or mouths at the ends of those fibres or threads, which are the most important parts of the root. These fibres, which are also called *radicles*, commonly die in the winter, and are renewed in the spring.

Some roots are branching and woody, like the underground branch of a tree, to which these fibres or radicles have been attached. This kind of root is very strong, and holds our largest trees firmly fixed in the ground.

Some roots are made up of long threads or fibres, now thick and strong—now slender as a thread, sometimes single, sometimes branched, sometimes creeping horizontally under ground.

In other plants the root consists of a fleshy stem, from the top of which grow the leaves, from the bottom the radicles or fibres; of this sort are the carrot, parsnip, and radish.

This kind of root sometimes looks as if it were bitten off at the part which sends forth the radicles; you may then know that it belongs to a different species of plants, such as the cowslip and primrose.

There are roots formed of little branches which terminate in fleshy knobs called tubers. These tubers contain the buds from which the new plant will be produced. The potato is a tuber, and the little eyes which you have seen people cut out for planting, are the buds.

Some roots are attached to a bulb, and are therefore called bulbous roots. But this bulb is not the root, but a bud. It is usually formed of fleshy layers or coats, one over the other, as in the onion, which is a bulb; sometimes of leaves laid over each other, as in lily roots. This bulb contains all that part of the future plant which rises above ground; the true roots are fixed to the end of it, and descend into the earth.

Uses of the Root to Man.—The roots of plants form an important part of the food both of man and cattle. The most substantial are those with a fleshy stem, such as carrot, turnip, and mangel worzel; the tuberous roots, as the potato, which was brought a great many years ago from America; and the bulbous roots, like the onion.

LESSON V.

DESCRIPTION OF PLANTS.

The Stem.—The stem may be called the body or column of the plant, which supports its branches, foliage and flowers. It is either woody, as in our trees and bushes, or fleshy, or hollow, as in the grasses and corn.

The stems of plants have been divided, according to their mode of growth, into two kinds.

First, those whose growth takes place *from without* by layers of woody fibre added on their stem outside, till it attains its proper size.* If you look at the trunk of a tree cut across, you may see these layers marked by different shades of colour, circling round the centre or heart of the tree, which is the hardest part. By counting these rings you may tell how many years old the tree is. This kind of stem is always found in *dicotyledonous* plants—*i. e.* plants whose seeds have *two* cotyledons. It belongs to all our large trees, and most of our plants.

Second, those stems whose growth is *from within*,† which enlarge, *i. e.* from the centre of the stem, while the outside is soft and yielding. When the outside becomes hard, the stem can grow no more in thickness. These stems are soft at the heart, and sometimes hollow. They belong to all monocotyledonous plants and trees—viz., to trees and plants whose seeds have but one cotyledon, so that it is as true as it is curious, that you may predict from the seed what kind of stem the plant will possess.

Most of our trees and bushes have woody stems; the only difference between them being, that the bush has many stems, the tree one. There is a very remarkable

* These are called exogenous stems, *exo* meaning without,
† They are called endogenous, *endo* meaning from within,

sort of tree which has the property of sending out new stems from its branches in the form of fibres, which drop to the ground, take root, grow, and become trees. The Mangrove is one of this sort; but the "most remarkable example of this kind of tree is that of the celebrated Banyan tree of India. It is also called the arched Indian Fig-tree. It increases like the Mangrove. Fibres are thrown out from its branches, which descend, take root, and in time are converted into great trunks, like trees, and in this manner it forms a kind of grove. There is a Banyan tree growing on the banks of the river Nerbudda, in Hindostan, which, although a considerable part of it has been swept off by high floods, yet still, measuring round the chief stems, occupies a space of about 2,000 feet in circumference. The larger trunks of this single tree amount to 350, and the smaller ones exceed 3,000. Each of these stems is constantly sending forth branches and hanging roots, to form others, which become the parents of future trees.

"This tree has given shelter to an army of 7,000 men. The Hindoos almost worship the Banyan tree; they plant it near their temples, and where no temple is erected, the tree itself serves the purpose; they place an image of their idol against its trunk, and there perform their devotions."*

The woody stems of our own country sometimes grow to an immense size; but there are also very minute ones. The arctic Bramble is so small that an entire tree may be placed in a six ounce phial; and of the dwarf alpine Willow, "half a dozen trees, with all their branches, leaves, flowers, and roots, might be compressed between two of the pages of a lady's pocket book, without touching each other."

The plants of hot countries have frequently thick and fleshy stems. And in all stems there is a delicate

* See *Drummond's Botany*.

substance called pith, which you may see dry in the young shoots of elder, and also in rushes.

A great number of herbs and plants have scarcely any stems. In some it lies flat on the top of the root; in others it is under ground, and what appears to be the stem is the flower stalk, which springs up straight from the ground. Some stems do not stand upright, but cling to other trees, or to walls, for support. These are called parasitical plants.

The ivy has little hooked fibres, by which it clasps the tree or wall uo which it runs. This is called the clasping stem.

The pea and the vine have little curls or tendrils, by means of which they climb and support themselves round poles or other plants. They are called climbers. The hop and the convolvulus twine round and round the plant or pole they ascend. This sort of stem is called the twining stem.

To the stems of some plants and trees are attached prickles, which belong to the bark, and may be taken off with it, as those of the Bramble; to others, thorns, which are wood, and belong to the stem itself, as those of the Blackthorn.

The stems of plants which have one cotyledon (monocotyledons), are sometimes hollow and jointed like grass, or filled with pith, as rushes.

Uses of the Stem and Stalk of Plants to Man.—No part of a plant is more valuable to us than its stem, nor is the flower stalk without its uses. Both, in numerous plants, are eaten by cattle, and some by man, while in other ways also they minister to our comfort. The use of the trunk in our large trees is well known to all. When cut down and seperated from its branches, it is called timber, and is laid up for building and other uses. But there are other parts of the stem, apparently insignificant, which the ingenuity of man has applied to his use.

The bark, or outer covering of various trees, is among them. The bark of the Oak is used in tanning, or making skins into leather; that of the Cinchona tree of South America, and of others, is used as medicine—and in countries where agues and low fevers prevail, it is the means of saving thousands of lives yearly.

The sweet smelling bark of the Cinamon tree, a native of Ceylon, is used both in medicine and cookery. The bark, which is green at first, afterwards turns to a reddish brown; it is peeled off, and when dried in the sun, curls up into those little rolls in which we buy it. Numbers of people are engaged in peeling and preparing this bark, and it forms an article of commerce.

In some parts of the world, especially in the Society Islands, the bark of a tree is used for making clothes. It is stripped off in long pieces, which, after having been soaked in water, are joined by being laid a little over each other, and then pressed and hammered down till they adhere, when the dress is cut out and hammered together without help of needle or thread.

Paper is prepared in China from the bark of the same tree, which is a species of Mulberry tree.

The fibrous stems of the flax and hemp plants furnish us with all kinds of linen. Flax is used for fine linen, hemp for very coarse, and for ropes.

The pith of certain plants and trees, while it is necessary for their nourishment, has many uses for us also. It is the lightest substance known, and hence pith balls are used for certain scientific purposes requiring extreme lightness.

The beautiful substance called rice paper, which we get in small sheets, from China and India, for painting on, is made from the pith of a plant growing in the waters of the Ganges in Hindostan, and on the banks of some of the Chinese rivers.

The pith of our common rush must be known to all.

Who has not amused himself with peeling the rush to get at the delicate cream-coloured pith? It has long been employed in making a thin, tall sort of candle, called from it, *rush-light*.

People in some parts of England used to make rush-lights for themselves. Their children collected and peeled the rushes, and the parents prepared and cut them in lengths, dipped them in hot grease, and hung them up to cool.

A gentleman, who was anxious to assist his poorer neighbours in their domestic affairs, tells us at how small a cost they may be made, even when the rushes are bought ready prepared.

"A pound of common grease may be bought for fourpence, and about six pounds of grease will dip a pound of rushes. A pound of rushes ready prepared will cost three shillings, but this pound of rushes will contain about 1,600. Now suppose these to burn, one with another, only half an hour, then a man will purchase 800 hours of light (which is more than thirty-three entire days) for five shillings; and a poor family may thus enjoy above three hours of comfortable light for one farthing."

The pithy stem of a species of palm tree produces the sago, which we often use as a nourishing gruel for the sick. A single trunk will produce 600 pounds weight of sago.

The reed, which grows so profusely in swampy places, is a very useful plant. The tall common reed of this country is found superior to straw for thatching; but as it loves marshes, its growth marks an unhealthy soil. Reeds have been made into a musical instrument called Pan's pipes, and in some countries they are used instead of pens.

The reeds and grass-like trees of tropical climates are very curious and beautiful. The bamboo, whose stem is jointed and hollow like that of corn, is both extremely light and hard, and grows to the height of

forty or fifty feet. Its stem is most useful to the people of the country where it grows. Their houses, chairs, bedsteads, and bedding are made from it, as well as their fences and tools, and the fibres are made into cordage for rigging their ships.

The sugar cane is another of these tall grass-like plants. It grows to the height of twenty feet, and from its stem our sugar is obtained. It is chiefly cultivated in the West Indies, and the sugar is obtained from it in this way. The canes or stems, when ripe, are cut up and bruised between the rollers of a mill, to squeeze out the juice, which is then collected and put into large boilers, with a small quantity of quicklime, or some vegetable ashes. When this has been boiled to the consistence of a syrup, and carefully skimmed, it is drawn off, and allowed to cool in vessels bored with small holes, through which the impure liquid part, called molasses, or treacle, escapes, and is caught in a tub below; while that which remains in the vessel becomes a heap of small hard grains of a brownish colour, which we call moist or raw sugar. In this state it is brought to England, where part of it is still further refined, and made into loaf sugar.

Besides the *juice* of the sugar cane, its leaves and tops are nourishing food for cattle.

The stems of certain trees yield turpentine and resin; from others ooze out valuable gums; from others, healing balsam.

These are some of the advantages we derive from the stems or stalks of plants.

LESSON VI.

DESCRIPTION OF PLANTS—THE LEAF.

THE leaf of the plant seems to have the office of maintaining its health and vigour. Those beautiful

veins which we see in leaves, contain the juices, which the roots of the plant have drawn up from the earth.

The leaf, like our skin, has many little pores or holes, through which it gives out its too abundant moisture to the atmosphere; and also others, by which it takes in a fresh supply.

That the leaf is necessary to the health of the plant, may be seen in the gooseberry bush, for instance; which, when its leaves (as often happens) have been eaten by caterpillars, will not ripen its fruit.

Air and light are necessary to plants. If a leaf is deprived of light, it loses its colour, as you may observe in celery when earthed up, and in the dandelion, the stalks and leaves of which become a yellowish white, when accidentally covered with earth or dry leaves.

The size of the leaf bears no proportion to the size or strength of the tree, but the number does. Some of our largest trees, as the fir and willow, have small leaves, while the cabbage and other small plants have very large ones; but then the others make up in number what they want in size. The largest leaf known, perhaps, is that of the talypot palm, which will shelter, it is said, seven or eight men.

The leaves of most of our trees and plants fall off once in the year, leaving the tree bare; they are called *deciduous*, or *falling*. Those trees which preserve their leaves *green* all the year are called evergreens. Their leaves either do not fall till the young ones are nearly grown, or only once in two or three years. Of the former kind are the bright and shining holly, the yew, the fir, and many others.

The leaf springs either from the root, as in the cowslip or violet, from the stem, or from the branches.

When we turn our attention to the leaves of plants, nothing strikes us more than their immense variety—some leaves standing single on their stalk; others compound, or made up of several, as the rose leaf;

some with the edge or margin crimped; some scalloped; some plain; some divided like fingers; some shaped like a heart; some like a comb; some are armed with prickles, as the holly; some with down; some with hair; but all beautiful in their various forms. And very amusing it is to make a collection of leaves, and copy them with pen and ink or pencil.

The Uses of Leaves to Man.—Besides the leaves of grasses and other herbs, on which our cattle feed, there are many which afford to ourselves medicine, food, and refreshment. Such are the cabbage, lettuce, spinach, and many other vegetable leaves.

The tea, which is so refreshing a drink, is made from the leaves of a tree which is a native of China and Japan, and is cultivated to a great extent in those countries. The tea tree is an evergreen, about ten or twelve feet in height; its leaf and flower resemble our myrtle not a little.

As tea is sent out by the Chinese to all parts of the world, they cultivate it with great care. They put from six to twelve seeds in holes of five inches deep, at regular distances, it being supposed that only a few out of the number grow. When the tree is three years old the leaves are fit to be gathered. The men who gather them wear gloves, that the flavour may not be injured. They pick them off one by one, taking great care not to bruise them; and though this seems a slow process, a person may gather from ten to fifteen pounds a day.

The leaves, when gathered, are exposed to the steam of boiling water, after which they are put on plates of copper, and held over a fire; they are then spread upon mats, and some of the laborers are employed in stirring them to cool, and others in rolling them.

The tea leaves are gathered three times in the year. The youngest are accounted the most delicate in flavour.

"In China and Japan, tea is sold on the public roads, and in towns, as beer is in England, and drank by labourers and travellers without sugar or milk." *

LESSON VI.—(*Continued.*)

DESCRIPTION OF PLANTS.—THE FLOWER, &c.

THE flower is not only the most beautiful, but also one of the most important parts of the whole plant, as it is that part which produces the fruit.

The flower consists of several parts. First, there is the little cup at the top of the stalk, in which the flower is seated, which is called the calyx, and is usually formed of green leaves. But as nature loves variety, some flowers are found without any calyx, as the crocus; and some have a calyx which is not green, as the fuschia, which has a red one.

The second important part of the flower—important at least to its beauty—is the corolla or blossom, which is either formed of several coloured or white leaves called petals, as the yellow leaves of the buttercup, or of one petal, as the bluebell. Though the blossom is the most beautiful and remarkable part of the flower, it is not essential to the formation of the fruit.

When you look at a flower, you may observe in the centre some little dusty heads fixed on threads or spikes, and generally surrounding one or more, rather thicker and differently shaped. These are called *stamens*, and the thicker one the *pistil;* the lower part of this pistil contains the fruit or seed, the others being necessary for its perfection.

These parts, viz., the stamens and pistils, are always found, † though in some plants—in some of our largest

* From *Botany by a Lady.*

† Though sometimes in different flowers on the same plant.

trees—the corolla or blossom itself is wanting, and they are therefore commonly said to have no flower. The violet, during the summer, has no petals, though it continues blowing. Its beautiful blue blossoms only last through the spring.

These little stamens and pistils being such important parts of the flower, plants have been divided according to the number and position of these, into twenty-four classes. And people can tell whether the fruit of any plant which they have never before seen, will be poisonous or wholesome by the position of its stamens; if they grow out of the calyx, so that you cannot take off the calyx and leave them behind, the fruit will be wholesome, even if the rest of the plant be poisonous.

Some plants, as the red valerian, have only one stamen; others, as the poppy, some hundreds. In double flowers, as roses, the stamens become petals, and the flower bears no seed. When you observe flowers with attention, you will find many things to interest you in the variety of their mode of growth, their colour, and form; some growing single, some in bunches, some in a circle round the stalk, some from little stalks branching out like the spokes of an umbrella, some ranged close along a slender thread, as the catkin.

Some flowers are called compound—that is, they are formed of several flowers growing out of one calyx. Such are the daisy and dandelion. If you were to take a daisy, and pull out those little yellow dots in the centre, and look through a glass at them, you would see that each dot is a separate flower, and the little pink-tipped petals which surround them are also separate flowers, only these last have no stamens. The little holes which you see on the cushions of the daisy, when you have pulled out the flowers, are the places where the seeds were fixed.

The difference of size and variety of shape in flowers is curious: some so minute, as the little red sheperd's

warning, which you find in the grass; some so large, as the great peony, some shaped like a butterfly, as the pea, the broom, and furze (hence called papilionaceous flowers:) others like a cross; others like a bell.

Flowers have not only their seasons for blowing, but also their hours for opening and shutting when they are blown. All papilionaceous flowers close their wings at night. The marigold opens with the first ray of the sun, and closes when he sets; so does the daisy—

"When evening brings the merry folding hours,
Then sun-eyed daisies close their winking flowers;"

and so they do in wet weather, for the daisy does not love rain.

The water-lily is a sluggard, and does not unfold her flowers till noon-day. One sort of cactus blooms only for a few hours in the night. Some flowers shut up regularly at noon, as the flower of the goatsbeard, which is called in some parts of England, "John go to bed at noon."

The Uses of Flowers to Man.—The flower is to us the least useful, though the most beautiful part of the plant. We obtain some beautiful dyes from flowers, and we use parts of them in medicine and cookery. The pistils of the crocus or meadow saffron, supply us with the yellow substance called saffron, which is used in medicine, and which gives the yellow tinge to cakes, called saffron cakes. The flower of one sort of cabbage, called cauliflower, is, as you know, commonly eaten before it opens. From the nectary of flowers, which is a little tube formed by the folding of the petal, the bee obtains honey for us. You may taste it in the honeysuckle.

Some of our sweetest scents also are provided by flowers, by lavender, roses, jasmine, &c.

The Fruit or Seed Vessel.—We now come back to the seed, with which we began the history of plants. It is contained in the lower part of the pistil, which is called the germen or seed-bud. Some flowers have only this part of the pistil, as the poppy. When the flower falls off, the seed-bud having attained its full growth, is called the seed vessel. But in some flowers the seed is not shut up in a seed vessel, but grows out of the cushion of the calyx, as in the daisy.

Seed vessels are of various kinds. Sometimes the seed is enclosed in a shell, and the shell in a husk, as in all kinds of nuts.

Or the shell is enclosed in a juicy fruit, as in the plum, cherry, or peach.

Or the seeds lie in little cells, surrounded by a fleshy fruit, as in the pear or apple; or in a pulpy fruit, as the orange and lemon.

Sometimes the seed has no covering, but it is embedded in a juicy fruit, as in gooseberries, currants, and grapes.

All sorts of grain, as corn and rice, are contained in a little husk. Other seeds are placed in pods, properly called legumes, as peas and beans. These seed-vessels are improperly called shells, and people talk of shelling their peas and beans. Some seeds are wrapped in soft down, as the cotton seeds. Some seeds are furnished with down feathers, by which they are blown about over the face of the earth, and supply food far and wide for birds; such are the seeds of the dandelion, the thistle, groundsel, and many others.

Seeds are usually very numerous. One plant of the common spear thistle will produce 24,000 seeds; and one of the poppy above 30,000.

Uses of the Seed to Man.—As the seed is the most essential part of the plant, because it has the power of re-producing it, so it seems, of all vegetable productions, most important to man.

The grain of wheat, barley, oats, and rye, either boiled or baked, in the form of bread, cakes, porridge, or gruel, may be considered as the staff of life among the Hindoos and other nations in Asia.

In some countries people live chiefly on nuts. Chesnuts, in the south of Europe, are eaten roasted or made into bread.

The cocoa nut, which grows as large as a man's head, both in the East and West Indies, affords substantial food and refreshing drink; for the nut contains a sweet milky liquor, which, when fresh, is very pleasant.

The South Sea Islanders live much on the fruit of a tree called the bread fruit, from its supposed resemblance to a loaf of new bread.

Then we have wine from the grape, cider from the apple, and oil from the olive.

It may also be mentioned, that the soft substance which wraps up the seeds of the cotton plant, when prepared and spun by our weavers, affords us the prettiest and cheapest articles of dress. Ship loads of cotton are brought from America, Egypt, and other countries, to Liverpool, and when made, by the labour and skill of our manufacturers, into cloth—coloured and white—thick and thin—it is sent out to almost all the nations of the world in exchange for their productions.

We have now gone through the principal parts of a plant. The seed bursting from its cotyledons; the root or radicle pushing downward; the stem shooting upwards; the flower stalk, the leaf, the calyx which holds the flower; the coloured or white blossom, or corolla; the stamens, and the pistils; the fruit or seed vessels,—all essential to the growth, perfection, and re-production of the plant; yet all conveying separate gifts from Providence to man, for his health, comfort, or pleasure.

OMNIPRESENCE OF GOD.

ABOVE—below—where'er I gaze
Thy guiding finger, Lord, I view,
Traced in the midnight planet's blaze,
Or glistening in the morning dew;
Whate'er is beautiful or fair,
Is but Thine own reflection there.

I hear Thee in the stormy wind,
That turns the ocean wave to foam;
Nor less Thy wondrous power I find,
When summer airs around me roam;
The tempest and the calm declare
Thyself, for Thou art every where.

I find Thee in the depth of night,
And read Thy Name in every star
That drinks its splendour from the light
That flows from mercy's beaming car;
Thy footstool, Lord, each starry gem
Composes—not Thy diadem.

And when the radiant orb of light
Hath tipp'd the mountain tops with gold,
Smote with the blaze, my weary sight
Shrinks from the wonders I behold;
That ray of glory, bright and fair,
Is but Thy living shadow there.

Thine is the silent noon of night,
The twilight eve—the dewy morn;
Whate'er is beautiful and bright,
Thine hands have fashioned to adorn.
Thy glory walks in every sphere,
And all things whisper, "God is here!"

ANON.

PART III.—THE ANIMAL KINGDOM.

LESSON VII.

GENERAL CLASSIFICATION OF ANIMALS.

WE have seen how the earth was prepared by vegetation to be the abode of animal life; and we are now to consider it as filled with animals. These animals are called *collectively*, the ANIMAL KINGDOM; which is subject to its own peculiar laws, as the mineral and vegetable kingdoms are to theirs.

The first thing that strikes us in this busy scene is the immense numbers and variety of animals with which the earth is filled. We see that every flower and every leaf swarm with inhabitants; they lie concealed also in the ground beneath us, and they fill the air which surrounds us. Every mountain and marsh, wilderness and wood, is plentifully stocked; every sea and lake, river and pond, teems with living creatures. And every where are found the food and shelter necessary for their preservation.

A general account of birds and beasts was given in the sequel to the Second Book of Lessons in the chapters on Zoology.

It may be useful to give here a more regular view of the classification of the whole animal kingdom. It has been before stated that animals are divided into those with back bones (vertebrata), and those without them (invertebrata). The vertebrata are divided into four classes: 1st, animals which suckle their young (called mammalia); 2d, birds; 3rd, reptiles; 4th, fishes. Each of these classes is divided into orders. In the mammalia are nine orders.

			EXAMPLES.
1.	Two handed . .	(Bimana)	Man.
2.	Four handed . .	(Quadrumana)	Monkey, ape, lemur,
3.	Flesh eating . .	(Carnivora)	Lion, ferret, dog, seal, &c.
4.	Pouched	(Marsupialia)	Kangaroo, opossum, &c.
5.	Gnawers	(Rodentia)	Rat, rabit, beaver, &c.
6.	Toothles	(Edentata)	Sloth, armadillo, &c.
7.	Thick skinned .	(Pachydermata) . .	Hog, rhinoceros, elephant, horse, &c.
8.	Ruminants . . .	(Ruminantia) . . .	Camel, ox, deer, giraffe, sheep, &c.
9.	Whale like . . .	(Cetacea)	Whale, porpoise, manatee.

In the birds, according to most approved arrangement, are five orders. The second of these is often divided into two, as it is found in the Sequel to Second Book.

			EXAMPLES
1.	Birds of prey .	(Raptores)	Vulture, eagle, hawk, owl.
2.	Perchers and climbers . .	(Insessores)	Thrush, robbin, crow, cuckoo, woodpecker.
3.	Scratchers . . .	(Rasores)	Pigeon, cock, pheasant, ostrich, &c.
4.	Waders	(Grallatores)	Curlew, heron, snipe, &c.
5.	Swimmers	(Natatores) . . .	Swan, goose, gull, duck, &c.

Reptiles are divided into four orders.

			EXAMPLES.
1.	Tortoises, ...	(Chelonia)	Tortoise and turtle.
2.	Lizards, ...	(Sauria)	Lizard, chameleon, crocodile.
3.	Serpents, ...	(Ophidia)	Snake, viper, boa.
4.	Frogs, ...	(Batrachia) . . .	Toad, neut, frog, salamander.

Fishes are separated into two series; those with a bony skeleton, and those with a cartilaginous one. Of the bony, there are six orders; the perch, 1; salmon, 2; whiting, 3; eel, 4; sand eel, 5; and pipe fish, 6, may be taken as familiar examples of these orders. The cartilaginous fishes are divided into three orders, of which the sturgeon, 1; ray and shark, 2; lamprey, 3, are examples.

In the invertebrata are three principal divisions, each of which includes several orders.

	EXAMPLES.
1. Soft animals, ... (Mollusca) . . .	Cuttlefishes, snails, slugs, oysters, cockles, whelks, periwinkles, &c.
2. Jointed animals, . . (Articulata) . .	Crabs, spiders, insects, worms.
3. Rayed animals, . . (Radiata)	Star fishes, sea eggs, sea anemonics, blubbers, intestinal worms, coral animals, and animalcule.

Each order in the animal kingdom is subdivided into smaller groups called families, and each of these into still smaller, called genera, which consist of such species as agree in certain essential characters. Take, for example, the rook, raven, and jackdaw — they belong to the great division vertebrata; to its second class, birds; to the second order of this class, perchers; to the family corvidæ; and to the genus corvus, of which they form three principal species.

The limits of a lesson do not admit of the classification being shown in detail. The foregoing, it is hoped, will give a general view of the plan pursued by naturalists.

It may be well to add, that the Irish student has, in the native animals, a considerable field for study and arrangement. The following is the number of wild animals known as having been found in this country:— mammalia, 29; birds, 235; reptiles, 5; fishes, 152; mollusca, about 530; articulata, upwards of 4,000; and the radiata, not including microscopic animalcule, exceed 500. Thus have we, for the greater part within our reach, upwards of 5,451 animals, many hundreds of which are to be found in every townland in Ireland.

Anecdotes of some of the most remarkable among the birds and beasts of these divisions were given. We will now speak of the provision made by Providence for their support and defence.

LESSON VIII.

PRESERVATION OF ANIMALS.

THE covering of animals is as much to be admired as any part of their structure, both for its variety, and for its suitableness to their several natures.

We have bristles, hair, wool, furs, feathers, quills, prickles, scales; yet in this diversity, both of material and form, we cannot change one animal's coat for another, without evidently changing it for the worse. We must remark too, that these coverings are, in many cases, armour as well as clothing — intended, that is, for protection as well as for warmth.

The human animal is the only one which is naked, and the only one which can clothe itself. This is one of the properties which renders man an animal of all climates, and of all seasons. He can adapt the warmth or lightness of his covering to the temperature of his habitation. Had he been born with a fleece upon his back, like the sheep, although he might have been comforted by its warmth in cold climates, it would have oppressed him by its weight and heat in warmer regions.

What art however does for men, nature has in many instances done for those animals which are incapable of using art. Their clothing, of its own accord, changes with their necessities. This is particularly the case with that large tribe of quadrupeds which are covered with fur.

Every dealer in hair skins and rabbit skins, knows how much the fur is thickened by the approach of winter. It seems to be a part of the same design for the animal's ease that wool in hot countries passes into hair, whilst on the contrary hair, in the dog of the Polar regions, is turned into wool, or something very like it.

The covering of birds is equally worthy of admira-

tion. Its lightness, its smoothness, its warmth, the feathers all inclined backwards, the down about their stem, the overlapping of their edges, together with the variety of colour, forms altogether a dress for their bodies, so beautiful, and so well suited for the life which the animal is to lead, as I think no one could have conceived if he had not seen it.*

LESSON IX.

PROVISION MADE FOR THE PRESERVATION OF ANIMALS.

We find that every species of animal is provided with the instruments best suited for obtaining, and devouring, and digesting, the food which its nature requires, and is also furnished with the means of self-defence.

Animals such as cattle, which feed on grass and grain hence called (graminivorous animals), have broad flat teeth, with alternate ridges of bone and enamel, suited for grinding their food. Those of them which ruminate have several stomachs adapted for that purpose; but as their food lies beneath their feet, they do not require the assistance of their limbs to lay hold of it; their legs and feet are therefore formed only to support and move about their bodies, though the hoof sometimes serves as a weapon of defence, as with the horse. Some ruminant animals have horns for their defence, others butt with the head.

The claw of the beast of prey is admirably formed for seizing and holding his prey, while he has sharp and strong teeth for tearing and crushing it. If you have seen a cat (which, though it looks so meek and mild, is of the tiger and lion kind) fall on a poor little mouse, you may imagine how the tiger seizes on a deer or goat.

* Paley.

Animals, such as hares, and rabbits, and mice (the rodentia tribe) have teeth suited for nibbing, which is their mode of feeding. The snout of the pig and tapir is formed for burrowing, and digging up the roots they feed on. You all know what quick havoc a pig will make in a potato ground.

These are a few examples of the provision for the support and protection of animals, which has been made by Providence in the formation of their bodies.

But it would be all of no avail if they were not also endowed with intelligence. Cattle would in vain be provided with teeth to grind, and stomachs to digest, and food beneath their feet to eat, if they had not sense to choose the wholesome, and reject the unwholesome herbs of their pasture. Beasts of prey would in vain be supplied with claws to seize and teeth to tear, if they had not sagacity to direct them how to take their prey. This intelligence or sagacity which brutes possess is called *instinct.*

The instinct of beasts of prey, such as the lion and tiger, directs them chiefly in the capture of their food. This food being flesh, and often the flesh of animals superior in size to themselves, they do not trust altogether to their own strength, but they lie in wait for their prey in the dusk of the evening; or they crouch down in the day time near some piece of water where they know that cattle and deer come down to drink, and suddenly spring upon them, perhaps from a distance of twenty feet.

Sometimes the instinct of the lion leads him to terrify his victims by that roar which is so well known, or by a still more awful growl which he makes, putting his head on the ground, so that the sound is conveyed along the earth, and rouses up the cattle and deer who are feeding in the plain, and to whom it is so terrible that they run to and fro in their fright, and become an easy prey.

The instinct of some beasts of prey leads them to

hunt by the scent. Dogs, wolves, and jackals do this. They hunt in packs, by which means they have a great advantage over enemies much stronger than themselves.

But there is an instinct for self-defence, as well as for attack. Cattle and deer know how to protect themselves from their enemies. At any alarm they assemble, and form a band against the invader. The instinct of the horse leads him to kick with his hind legs, and he has often thus come off victorious against the lion himself. The instinct of the deer leads them to take to the water in extremity of danger, and crouch in it with their noses only above; thus their scent is lost to their pursuers.

The hare doubles and winds in a most ingenious manner when she runs from her enemies, in order to conceal her track, which they would follow by the scent. The rabbit pops his little head out of his hole, to peer for danger, before he ventures abroad.

In some of the smaller animals, their instinct leads them to lay up food for the winter store, just as a provident man would do. The squirrel and several others are examples of this.

The instinct of beavers is very remarkable. It has been mentioned before, how they form dams, and build their litle villages for mutual protection and society.

In all animals there is an instinct which leads them to protect their young from injury. The lion and lioness will defend their cubs with their lives. The tigress, like the cat, will sometimes destroy her own offspring, but she will always protect them from others.

The gentler animals, especially cattle, take great precautions, when in a wild state, for the safety of their young. The cow will conceal her calf in a thicket, while she watches with jealous care the approach of danger to her young one.

Those who know much of dogs, see in them an instinct which approaches still nearer to reason; and the same may be said of elephants—capable of strong

attachment, their instinct leads them to protect their master or his children. You will find in the course of your reading lessons stories which set forth this instinct of faithfulness.

LESSON X.

INSTINCT OF BIRDS.

We may observe that every kind of bird follows a particular plan in the construction of its nest, and that all of the same species work after the same plan.

If you hatch a crow under a hen, and never let it see any of the nests of its own species, the nest it makes will be the same, to the laying of a stick, with all the rest. It is instinct which leads them so to work; if it were reason, their buildings would differ as ours do, according to the different conveniences they would propose to themselves.

Again, we observe that the love of the parents for their offspring, though so violent while it lasts, continues no longer than is necessary for their preservation. So soon as the wants of the nestlings cease, the mother withdraws her fondness, and leaves them to provide for themselves. This fondness, therefore, is itself an instinct; and it is remarkable that this instinct may be lengthened out beyond its time, if the preservation of the young ones requires it, as we may see in birds who drive away their young as soon as they can gain their livelihood, but continue to feed them if they are tied to the nest, or confined in a cage.

There is a wide difference between reason and instinct. Take a brute out of his instinct, and you will find him often deprived of understanding. For example, with what caution does a hen provide herself a nest in a suitable place! When she has laid her eggs, what care she takes of them! When she leaves them

to take her food, how punctually she returns before they have time to cool!—often sitting till she is quite exhausted for want of food! With how much attention does she help the chicken to break its shell! How carefully does she then protect it from the weather, and teach it to pick up food! Not to mention that she will forsake the nest if the young one does not make its appearance at the proper time! But with all this seeming ingenuity, the hen, considered in other respects, is without the least glimmering of thought or common sense. She mistakes a piece of chalk for an egg, and will sit upon it in the same manner; she is insensible of any increase or diminution in the number of eggs she lays; she does not distinguish between her own young ones and those of another species, but will cherish a stranger for her own. In every thing which does not regard the preservation of herself and her species, she is a mere idiot. *

LESSON XI.

REPTILES, AND FISH, AND CETACEA.

BESIDES the bipeds and quadrupeds of the animal kingdom, there are several large tribes of animals belonging to neither of those classes, which have not yet been spoken of. Among these are *reptiles*. They are cold-blooded, and naked of hair and feathers, and so far resemble fish; but they remain torpid in cold countries in the winter, which fish do not, being protected from extreme cold by the water; and many of them have feet, which fish have not.

There are four large tribes of reptiles.

First, Serpents; second, Tortoises; third, Lizards, which includes the crocodile; fourth, Frogs.

* Addison.

Some of these, as the crocodile, frequent the water, though they do not live entirely in it.

The waters of the globe, however, swarm with inhabitants, which are chiefly, but not entirely fish.

FISH.

A fish is an animal without legs; it has a jointed back bone, and it breathes under water by means of that fringe-like substance below the head, which is called the gills. Fish have also an air-bladder (called the *sound*,) which they can swell out with air, when they wish to make themselves light, in order to rise to the surface, or compress, and so make themselves heavy, when they would sink to the bottom. It is of these *sounds* that isinglass is made.

Fish multiply very fast. Nearly four millions of eggs have been found in the roe, or cluster of eggs, of one single cod fish. There would indeed be no limit to their numbers, but that these eggs are the food of many species, and also that the larger fish prey on the smaller ones.

Fish seem to have a keen sight and hearing, but no voice; for when a shoal of cod appears, so numerous, that the sea is whitened by them for miles, not a sound comes from all this multitude, excepting the splash their bodies make when they come to the surface of the water. Fish are of all sizes, from the great shark down to the little minnow.

These animals do not appear wanting in instinct, both for self-preservation and for that of their young, while in the egg state; but having once deposited their eggs, all care for their offspring ceases in most of the species.

Some fish regularly quit the salt water, at certain seasons, to deposit their eggs in the gravelly bed of a river. The salmon will swim up rivers some hundred miles from the sea, and not only brave various enemies,

but leap up high precipices, where they happen to im
pede her progress. When she has deposited her egg
which she does with great care, she returns to the sea
if she manage to escape the snares laid for her by th
fishermen.

Fish are great travellers. Innumerable shoals o
herrings who live in the northern seas, assemble an
make a yearly voyage to our coast. The main sho
arrives in the month of June, and covers many miles o
the sea. Both Dutchmen and English engage in thi
fishery, and the herrings caught, are smoked an
pickled, and sent to all parts of Europe.

Another tribe of animals which frequent or live i
the sea, are called catacea, or animals of the whale kind

The whale, the largest of all animals, has his habita
tion entirely in the great waters. The whale suckle
its young, and has warm blood; but then it has a tai
instead of two hind feet, and its two fore feet are mad
like paddles, for swimming. There are several specie
of whales, the largest being ninety feet long. Thei
tail is their weapon of defence; with it they can cu
asunder the strongest boat, and heave it up into th
air; so that the capture of the whale is attended wit
considerable danger. The fat or blubber of the whale
is very profitable, as it yields a quantity of oil. Wha
is called whalebone, is a substance lying along th
ridges of the gums, and occupying the place of teeth
That in common use belongs to one species only.
Though this kind of whale is so large, and its mouth so
wide that several men could stand upright in it, it ha
so narrow a swallow that it cannot take down anything
larger than a herring, and lives chiefly on those jelly
like animals, called blubbers.

There are other animals of this kind which inhabi
the sea; the porpoise is one. There are some which
frequent it, but do not altogether live in it—as the sea
and the walrus. These latter belong to the class of
carnivorous animals, and not to the cetacea.

LESSON XII.

INSECTS, SPIDERS, &c.

INSECTS exceed all other living creatures in abundance. There is not a nook or corner of the world free from their incursions; not an animal that does not, however unwillingly, afford them food and shelter.

In their instincts they are more remarkable than any other race of beings; in their changes they are unlike any other; while their variety of form, and beauty of colour, bring them nearer than any other to the vegetable world.

When we think of the voracious appetites of insects, the poisons which some of them contain, their painful stings, and the irritation which they cause to man and beast, in merely walking over our bodies, or buzzing in our ears, we are apt to think them the pests of the world, and to believe that no good can be connected with such a race of beings, as far as the rest of creation is concerned.

But we must look a little further before we so pronounce upon any of the works of Providence. If insects have voracious appetites,—if they sometimes wound both man and beast to gratify them,—they also devour all that is most foul and unwholesome in nature, and thus lend their aid to keep our air pure from infection. If they often eat up our food, and worry our skin and ears, we must remember that they also themselves supply abundant food both to birds and fish, on which we ourselves partly subsist, and that to three of their tribes we owe much—to the silk-worm, our beautiful silks; our honey and wax to the bee; and that beautiful scarlet dye which distinguishes the coats of our soldiers all over the world, to the cochineal.

Insects, properly so called, have six or eight legs; the head and throat divided; two long feelers, called

antennæ, projecting like little horns from the head; and air tubes for breathing.

Insects are unlike other animals in one very remarkable respect. They undergo changes so complete as to make them totally different animals at different parts of their life. The same little creature, which at one period of its life is fitted only inhabit a stagnant pool, at another is a winged inhabitant of air; this the case with the gnat.

Some insects undergo two of these transformations—some three.

First comes from the egg, the caterpillar, grub, or worm, for people give them different names. This is properly called the *larva*. When this caterpillar has lived its appointed time, it turns into a shapeless grub, which is called the *pupa*, or chrysalis. This chrysalis is usually found buried in the earth, or under the root of a tree, or lodged in some obscure corner, wrapped up in a common cocoon of silk, or some other substance, whence in due time bursts forth the perfect animal—a fly, or beetle, or moth, or beautiful butterfly.

The instinct of the caterpillar in spinning for itself this shroud, or cocoon, before it changes into the pupa, is very remarkable. When it has completely enveloped itself, it suspends its cocoon by a single thread to the branch of a tree. All the silk we possess is woven from the silk which one species of caterpillar, called the silk-worm, spins for herself. One cocoon, it is said, will yield 300 yards of silk thread. The caterpillar which spins it, lives chiefly on mulberry leaves.

Flies, gnats, bees, and wasps, and many other insects, have only two changes.

The instinct of bees, especially in their care of the grub, or pupa, is very remarkable. You will read of it in another place.

Spiders.—There are some classes of animals which we are accustomed to call insects, but which do not

undergo these curious changes, and to which other names are given. Such are *spiders*, and those creatures which resemble them. Spiders show remarkable instinct in the management of the webs which they spread to catch their prey. The spider draws the threads of her web from her own body. If a single thread is touched by any insect she feels it vibrate, and runs out of her hiding place to seize her victim; if it prove too strong for her, she quietly lets herself down again by her thread. Some spiders wrap up their prey in the web, so as to master it more easily. The house spider, who spreads her web in some neglected corner of a room, makes also a little cell, which she connects with the web by a bridge, and to this cell she conveys, across her bridge, the unfortunate fly or gnat who has become entangled in her snare.

There is a spider in South America which is as big as a pigeon's egg. The little mite which inhabits decayed cheese belongs also to this class of animals. So does the scorpion, which is found in the warmer parts of Europe, and whose bite is very painful.

Crustacea.—The crustacea are animals with hard or crusty coverings like egg-shell, but harder. Crabs, lobsters, and shrimps are crustacea, and are wholesome food.

Mollusca.—These animals with soft bodies, which are usually found in shells, but sometimes covered over with a leathery kind of cloak, are called mollusca. Their shells are often most beautiful in colour and form. Oysters belong to this class of animals; and some species contain the pearls which are so much prized as ornaments.

Most of these animals are found in the sea, or attached to rocks washed by the sea, or in fresh water lakes. But some of them live on land, as the snails, and the slugs, so destructive to our gardens.

Worms.—Worms are cold-blooded, and naked in appearance, and seem to belong to the reptiles; but they are lower animals, they have neither head nor legs; neither do they resemble insects. The leech is one of this class.

Radiata.—We now come to a class of animals, some of which are shaped like a star; others resemble vegetables so much that they have been called animal plants, or zoophytes. So that in coming to the end of the animal kingdom, we meet with animal natures approaching in appearance very near to the vegetables which preceded them.

——————It wins my admiration
To view the structure of that little work—
A bird's nest. Mark it well within, without;
No tool had he that wrought; no knife to cut;
No nail to fix;—no bodkin to insert;
No glue to join; his little beak was all;
And yet how nicely finish'd! What nice hand,
With every implement and means of art,
And twenty years' apprenticeship to boot,
Could make me such another? HURDIS.

The sounds and seas, each creek and bay,
With fry innumerable swarm, and shoals
Of fish that, with their fins and shining scales,
Glide under the green wave, in sculls that oft
Bank the mid sea: part single or with mate
Graze the sea-weed, their pasture, and thro' groves
Of coral stray, or sporting with quick glance
Show to the sun their waved coats dropt with gold,
Or, in their pearly shells at ease, attend
Moist nourishment, or under rocks their food
In jointed armour watch; part huge of bulk
Wallowing unwieldy, enormous in their gait,
Tempest the ocean. MILTON.

STRUCTURE OF INSECTS.

'Tis sweet to muse upon his skill displayed,
(Infinite skill,) in all that he has made!
To trace in Nature's most minute design
The signature and stamp of power divine;
Contrivance intricate, expressed with ease,
Where unassisted sight no beauty sees.
The shapely limb, and lubricated joint,
Within the small dimensions of a point,
Muscle and nerve miraculously spun,
His mighty work, who speaks and it is done,
The Invisible, in things scarce seen revealed,
To whom an atom is an ample field;
To wonder at a thousand insect forms,
These hatched, and those resuscitated worms,
New life ordained, and brighter scenes to share
Once prone on earth, now buoyant upon air;
Whose shape would make them, had they bulk and size,
More hideous foes than fancy can devise;
With helmet-heads, and dragon scales adorned,
The mighty myriads, now securely scorned,
Would mock the majesty of man's high birth,
Despise his bulwarks, and unpeople earth. COWPER.

LESSON XIII.

GOD THE AUTHOR OF NATURE.

———THERE lives and works
A soul in all things, and that soul is God.
The beauties of the wilderness are His,
That make so gay the solitary place
Where no eye sees him. And the fairer forms
That cultivation glories in are His.
He sets the bright procession on its way,
And marshals all the order of the year;
He marks the bounds which winter may not pass,
And blunts its pointed fury; in its case,

Russet and rude, folds up the tender germ,
Uninjured, with inimitable art;
And, ere one flowery season fades and dies,
Designs the blooming wonders of the next.
The Lord of all, Himself through all diffused,
Sustains, and is the life of all that lives.
Nature is but a name for an effect,
Whose cause is God. One spirit—His
Who wore the plaited thorns with bleeding brows,
Rules universal Nature! Not a flower
But shows some touch, in freckle, streak, or stain,
Of His unrivalled pencil. He inspires
Their balmy odours, and imparts their hues,
And bathes their eyes with nectar, and includes,
In grains as countless as the sea-side sands,
The forms with which He sprinkles all the earth.
Happy who walks with him! whom, what he finds,
Of flavor, or of scent, in fruit, or flower,
Of what he views of beautiful or grand
In Nature, from the broad majestic oak
To the green blade that twinkles in the sun,
Prompts with remembrance of a present God!

COWPER.

A FABLE.

Two children once at even tide,
Thus prattled by their parents' side:—
"See, mother, see that stormy cloud!
What can its inky bosom shroud?
It looks so black, I do declare
I shudder quite to see it there."
"And father, father, now behold
Those others, all of pink and gold!
How beautiful and bright their hue!
I wish that I were up there too:
For, if they look so fine from here,
What must they be when one is near!"

"Children," the smiling sire replied,
"I've climbed a mountain's lofty side,
Where, lifted 'mid the clouds awhile,
Distance no longer could beguile:
And closer seen, I must confess,
The clouds are grey, nor more nor less
Differing in *shade* from one another.
But each in *colour* like his brother.
And that same cloud, so black to you,
To some may wear a golden hue.
E'en so, my children, they whom fate
Has planted in a low estate,
Viewing their rulers from afar,
Admire what prodigies they are.
'O! what a tyrant! dreadful doom!
His crimes have wrapped our land in gloom.'
'A tyrant! nay, a hero this,
The glorious source of all our bliss!'
But they who haunt the magic sphere,
Beholding then its inmates near,
Know that the men by some adored,
By others flouted and abhorred,
Nor sink so low, nor rise so high,
As seems it to the vulgar eye.
He whom his party deems a hero,
His foes, a Judas, or a Nero—
A man of superhuman worth,
Or vilest wretch that cumbers earth,
Derives his bright or murky hues
From distant and from party views;
For neither black nor gold are they,
But every one a *sober grey.*"

ON CRUELTY TO ANIMALS.

I would not enter on my list of friends
(Tho' graced with polish'd manners and fine sense
Yet wanting sensibility) the man
Who needlessly sets foot upon a worm.

An inadvertant step may crush the snail
That crawls at evening in the public path;
But he that has humanity, forewarn'd,
Will step aside, and let the reptile live.
The creeping vermin, loathsome to the sight
And charged with venom, that intrudes,
A visitor unwelcome, into scenes
Sacred to neatness and repose, the bower,
The chamber, or the hall, may die:
A necessary act incurs no blame.
Not so, when held within their proper bounds,
And guiltless of offence, they range the air,
Or take their pastime in the spacious field:
There they are privileged. And he that hurts
Or harms them is guilty of a wrong;
Disturbs th' economy of Nature's realm,
Who when she form'd, design'd them an abode
The sum is this: if man's convenience, health,
Or safety interfere, his rights and claims
Are paramount, and must extinguish theirs.
Else they are all—the meanest things that are,
As free to live, and to enjoy that life,
As God was free to form them at the first,
Who in His sov'reign wisdom made them all.
Ye, therefore, who love mercy, teach your sons
To love it too. The spring time of your years
Is so dishonour'd and defiled, in most,
By budding ills, that ask a prudent hand
To check them. But alas! none sooner shoots,
If unrestrain'd, into luxuriant growth,
Than cruelty, most devilish of them all.
Mercy to him that shows it, is the rule
And righteous limitation of its act,
By which heav'n moves, in pard'ning guilty man:
And he that shows none, being ripe in years,
And conscious of the outrage he commits,
Shall seek it—and not find it in return.

COWPER.

SECTION II. — PART I.

DESCRIPTIVE GEOGRAPHY.

LESSON I.

THE BRITISH ISLANDS.

THE British Islands are, to English and Irish people of course, the most interesting portion of the globe, and a tour through the countries of Europe, such as we propose to make, must naturally begin from home.

The Island of Great Britain, which is composed of England, Scotland, and Wales, and the Island of Ireland, form — together with the little Isle of Man, in the Irish Sea, and the numerous islands about the northern coasts — the British Empire in Europe. The people of these islands have one and the same language (all at least who are educated), one and the same Queen — the same laws; and though they differ in their religious worship, they all serve the same God, and call themselves by the name of Christ. All this is enough to make them brethren, in spite of many disagreements and faults which history tells of them in their intercourse with each other, when the strong oppressed the weak, and the weak hated the strong; but a better knowledge of their duty will give future history better things to record.

Ireland lying further in the west of Europe than any other country, excepting Iceland, is the first European coast which the Atlantic Ocean washes. And a beautiful island it is; well watered with rivers and lakes — adorned with many lofty mountains, green pastures, and good land for corn.

The climate is milder, but more rainy and windy than that of England, with fewer sunny days.

Ireland, you are aware, is divided into four Provinces, which in ancient times had each a king or chief of its own. The province of Leinster, which lies on the eastern coast, opposite to England, contains the city of Dublin, the capital of Ireland.

Dublin stands near the mouth of the Liffey, which river divides it into two parts. Along its banks are quays, full of shops; here, too, are the Courts of law, and the Custom-house, at which the affairs of commerce are settled.

Dublin contains many other fine public buildings, as well as useful ones. There is the Bank, the general Post-office, the Mansion-house, where the Lord Mayor lives. There are the three national Model-schools, where nearly a thousand children are educated. There are also the training-school for masters and mistresses, where the best professors attend to prepare and examine them.

Dublin also contains many valuable charitable institutions; especially hospitals, where the sick and those who have met with accidents are received, and where the most skilful physicians and surgeons attend. In the neighbourhood is the famous hospital for incurables — a large dwelling in the midst of a pleasant garden, where persons who have an incurable disease are taken in to live, where they are kindly and skilfully tended, and enjoy the comforts of easy circumstances and kind companions.

On the west side of Dublin is the Phœnix Park — a beautiful, well-wooded pasture ground, where the people can walk or drive. It contains zoological gardens, beautifully laid out, where birds and beasts from foreign countries are kept. Tigers and leopards may be seen in houses; bears in a pit, with a pole for them to climb; monkeys, which in fine weather are placed in little wire houses; with all sorts of curious birds. It is a treat permitted occasionally to the scholars of public schools to walk in these gardens.

At a village called Glasnevin, near Dublin, is an institution for the deaf and dumb, to teach them to talk on their fingers, read and write, and many other things. Here also is a farm to teach agriculture to the young men who have been educated at the Model-school.

Dublin has some beautiful manufactures of poplin, velvet, and glass; and there were once many more manufactories, but the workmen, not satisfied with good wages, refused to work at a lower price than they should themselves appoint, which the masters being unable to afford, the establishments were broken up, and the proprietors took their money and machinery elsewhere.

Leinster, with the exception of the county of Wicklow — celebrated for its lovely scenery — is a flat province.

In the north of Ireland is the Province of Ulster; not far from which, on the east — divided by a channel, which in its narrowest part is not more than twenty-three miles — lies the south-west part of Scotland. A large proportion of the people here are of Scotch descent, and have some of the thrifty and industrious habits of Scotland.

Belfast — the second city of Ireland for trade and manufactures — lies on the bay of the sea, called Belfast Lough. It is the great seat of the linen manufactories, and has also numerous cotton-factories, besides manufactories of glass, iron, soap, cordage, and all sorts of machinery. More than thirty-five steamers trade at the port of Belfast; and in the course of the year 1841, the number of vessels which entered it was estimated at 3,378.

Armagh and Londonderry are two other large and populous cities in the province of Ulster.

The north coast of Ireland is bold and rocky. On the shore of the county Antrim, is an immense collection of lofty columns of a rock called basalt. In one part they are placed on a narrow promontory, like a pier or causeway, of about 700 feet long. This is called the Giant's Causeway; for these columns are so large and tall, that people in old times thought they must

have been placed there by a giant. But it is now known that they must have been caused by some internal convulsion, like that which produces volcanoes.

On the west coast is the province of Connaught. It is a wild district, where Irish is a good deal spoken, especially in one beautiful but barren tract, called Connemara. The people here dress differently also from those of the other provinces. The great river Shannon passes through the south part of Connaught, separating it from the southern province of Munster, and forming in its course several fine lakes.

The province of Munster stretches from east to west, through the south of Ireland. Far in the west are the beautiful lakes of Killarney, lying among the Kerry mountains, which are visited by strangers from all parts of Europe. They contain lovely green islands, adorned with the arbutus tree, which bears towards autumn bright scarlet berries, like strawberries.

The province of Munster possesses several fine cities. There is Limerick on the Shannon, in the west; Waterford on the east, opposite to the Welsh coast; and Cork in the south, on an estuary of the sea. Cork is reckoned the second city of Ireland, and exports a quantity of live stock and butter. It has some fine public buildings and markets, and the harbour of Cork is one of the finest in the world.

The two most remarkable natural features in Ireland, are its large lakes, or inland seas, and its bogs. The peat bogs cover one-seventh part of the land. The immense bog of Allen extends through several counties. These vast blackish looking plains are very dreary. Some pains have been taken to drain parts of them, and render them fit for potatoes and grain.

The people of Ireland are a clever, lively people; formerly, very much given to drink, and very ignorant; but now it is believed that they are one of the soberest nations of Europe; and it will be their own fault if they are not also one of the best educated.

LESSON II.

ENGLAND AND WALES.

CROSSING St. George's Channel we reach the Island of Great Britain. The capital, as you know, is London, which stands on the River Thames, in Middlesex, one of the south eastern counties of England. London is the largest and richest city in the world; the villages and houses in its suburbs alone, would almost make a city of themselves.

London itself is divided into three parts: the *City*, as it is called, the place where all the trade and manufactures are carried on; *Westminster*, in which the Queen holds her court when she is in London; and *Southwark*, or the *borough*. Westminster contains the two houses of Parliament, which stands on the River Thames. These are the places where the gentlemen chosen by the people of England, Scotland, and Ireland, assemble to consult together on the concerns of the nation. Every year the Queen herself goes in great state with the chief lords of her court, to open Parliament, as it is called; that is, she takes her seat on a throne prepared for her, and reads aloud a speech written for her by her ministers. Some miles from London, in the county of Berks, is the famous Windsor Castle, where the Queen resides for a great part of the year; it is a very fine old castle, and stands in a beautiful and extensive wooded park.

The counties south of London, and bordering on the British Channel, have a soil almost entirely composed of chalk. They are crossed by various ranges of low hills, or downs, which look very curious when they are broken and laid bare, their sides being then as white as snow. Of this kind are the cliffs of Dover, the chief sea-port in Kent, from which the coast of France can be distinctly seen in clear weather. Kent is the largest of the south-eastern counties; it is famous

for the cultivation of hops. They are planted in large fields, and trained over stakes, forming a very pretty sight, especially at the time of gathering.

Hampshire was formerly in great part covered by an immense forest, called the *New Forest*. Most of this is now cut down; but enough still remains to make it a very pretty and well-wooded country. The most remarkable town in Hampshire is *Portsmouth*, the largest harbour for ships of war in England. Opposite is the Isle of Wight, an island much celebrated for its beauty and its mild climate.

The eastern counties of England, those which border on the German Ocean, such as Norfolk, Essex, and Lincolnshire, are almost all a dead flat. Their streams are dull and sluggish, and in many parts, especially in Lincolnshire, they spread themselves over the country, forming marshy swamps, or fens, as they are called. In these fens large flocks of geese are bred for the sake of their quills and feathers. They are plucked of their feathers twice a year.

Among the chief towns in the east of England are, Norwich, the capital of Norfolk, a great manufacturing town; and Cambridge, one of the two great English universities.

The centre counties of England are, generally speaking, rich and fertile, and contain many important towns. Oxford, the capital of Oxfordshire, is a fine old city, and the other chief university in England. Birmingham, in Warwickshire, is a large and very populous city; its manufactures in steel and iron are very beautiful and extensive, and supply a great part of the world.

The people in the country round Birmingham are much employed in iron foundries: that is, places where iron is melted in the fire and purified from the ore in which it is found. At night the whole country looks as if it were burning, from the brick kilns and chim-

neys bursting out with flames and smoke, which are scattered about as far as the eye can reach.

In Derbyshire the people are chiefly employed in working the copper and lead mines, of which there are many in this county. It is a rocky and hilly country, though none of its mountains are very high; the highest is called "the Peak." The hills are full of long dark winding caverns; and even several of the rivers flow under ground during part of their course.

Near the borders of Wales, the country becomes more hilly and woody than most of the midland counties. Herefordshire and Worcestershire are famous for apples and pears, which they make into a kind of wine called *cider*, when it is made from apples; and *perry*, from pears. The roads are bordered with orchards full of these trees laden with fruit in autumn, or in spring, white with blossom.

The *north* of England is very different from either the middle or the south. Lancashire and Yorkshire are chiefly celebrated for their trade and manufactures. Those of Yorkshire are woolen cloths, knives, and scissors; and the chief towns at which these are carried on, are Sheffield and Leeds. Sheffield supplies a great part of the world with cutlery. Another very important town in Yorkshire is Hull, a great seaport on the mouth of the River Humber.

In Lancashire the most remarkable towns are Liverpool and Manchester. Manchester contains the greatest cotton manufactories in England. Liverpool is well known as a famous trading seaport.

The counties of Cumberland and Westmoreland are quite covered with mountains, among which are many beautiful lakes, almost the only ones in England. The largest of these is called Windermere. In these counties are many slate quarries; and the black lead of which pencils are made is found in a mine near Kendal, in Westmoreland.

Devonshire, in the south-west part of England, is a

very hilly county, and in parts very beautiful. In the same county is Plymouth, the largest harbour for ships, next to Portsmouth, in England. Some miles out at sea stands the famous Eddystone light-house, placed there to warn vessels from that dangerous part of the English channel.

Cornwall is the most western county in England; it is surrounded by a sea on all sides but one, where it joins Devonshire. It is terminated by a promontory of granite rock, which stretches out into the Atlantic Ocean, and is call Land's End. It is the only point in England which faces the Atlantic, and is so exposed and bleak, that sea-birds alone inhabit it. Cornwall is famous for its tin mines and its fisheries. The Cornish are the same race with the Welsh, and till about a century ago the Cornish language, which was a dialect of Welsh, was spoken.

Wales. — To the west of England, along the borders of St. George's Channel, lies the Principality of Wales, so called because the eldest son of the King or Queen of England has always the title of Prince of Wales. It is divided into North and South Wales.

Although the whole country is mountainous, the north is by far the most so; its whole surface is covered with rugged sharp peaks, of which the highest is Snowdon. The valleys among these mountains are mostly full of peat bogs, like those in Ireland; they give a clear brown tint to the streams and torrents which flow down the mountain sides or leap from rock to rock. In many parts there are slate quarries, as in Westmoreland; and all the houses, even the smallest cottages, are roofed with slate, which gives them a very neat appearance. In South Wales the mountains are smooth, round, and green, more like high hills, and none of them rise to as great a height as Snowdon.

In all parts of Wales the people speak Welsh, the language which was anciently spoken by all the in-

habitants of Britain, until they were invaded by a tribe from Germany, and driven to Wales. English is understood, however, in the towns. The dress and appearance of the Welsh is very different from that of the English. The women wear a man's black beaver hat tied down with a handkerchief over their clean, nicely crimped caps, as white as snow, and generally, blue cloth jackets. They are a remarkably clean, active, industrious people — their houses and persons are very neat, and they are so careful never to lose a moment of their time, that they carry their knitting with them wherever they go; they may often be seen with baskets or bundles on their heads, and knitting needles in their hands, making woollen stockings, night-caps, or other articles of warm clothing.

The Welsh are fond of music; their favorite instrument is a large harp, and in almost every inn a harper may be found.

LESSON III.

SCOTLAND.

SCOTLAND is divided into the Lowlands and Highlands. All the south-eastern part of it is called the Lowlands, because great part of it is flat.

The Lowlands are separated from England by the Cheviot Hills, which run along the borders of Northumberland, and the Solway Frith, an arm of St. George's Channel, into which the Solway runs.

The counties skirting the Irish Channel are chiefly flat, though some parts inland are mountainous. The people are much employed in manufactures. The chief town in the west of Scotland is Glasgow, which, next to London and Manchester, is the largest city in Great Britain. It is famous for its trade and its cotton manufactures.

The southern or *border* counties, as they are called,

are hilly and barren. Roxburghshire in particular is quite mountainous. These counties are best suited for sheep pasturage; and accordingly most of the inhabitants are shepherds or sheep farmers. In the *middle* of the Lowlands the country is more fertile. In the county of Mid-Lothian stands Edinburgh, the capital of Scotland. It is a beautiful city, built on three steep ridges, and not far from the Frith of Forth, an arm of the German Ocean. Edinburgh is divided into what is called the *Old* and the *New Town*. The old town is very ancient indeed, with narrow crooked streets, and houses sometimes ten or eleven stories high. The new town is very handsomely built. The *Northern* Lowlands stretch along the north-east of Scotland, above the Frith of Forth. The largest of these counties is Aberdeenshire, whose capital, Aberdeen, is a considerable town, and one of the Scotch universities. These northern lowlands are mostly flat; near the coast they are fertile, but the interior contains much barren moorland.

The Lowland Scotch are a steady, industrious people and schools are so universal among them that it is hardly possible to find any one who cannot read, write and cast accounts. The Scotch are Protestants, of the Presbyterian form.

Across the middle of Scotland run the Grampian Hills, which separate the Lowlands from the Highlands.

The inhabitants of the Highlands are a totally different race from those of the Lowlands, both in dress, language, and race. They are supposed to have been originally of the same race as the Irish, and the language they speak, which is called Gaelic or Erse, is nearly the same as Irish. They are much poorer than the Lowlanders; but are often very intelligent and well-educated. Almost all the Highlanders are divided into clans; that is, tribes or families of people, all related to each other, and bearing the same family name. The head of a clan is called a *chieftain*, and formerly

these chieftains had great power, and were accustomed to summon their followers to help them whenever they wished to make war on their neighbours; and as they were almost constantly at war with each other, this led to a great deal of fighting and bloodshed. But all this is now quite at an end, the clans never meet together except for show or amusement, and are only distinguished by each tribe wearing a different plaid or *tartan*. Most of you have seen that kind of cloth crossed and checked with bright-coloured stripes, which is called a plaid; the men in the Highlands constantly wear it, wrapped round them like a scarf. The rest of their dress is much the same as that you have seen in Highland regiments, except that it is of coarser materials, and on their head they wear a blue bonnet, bordered with red, blue, and green. The married women wear a kind of cap called a *kirch;* the single ones tie a ribbon round their heads; but all wear a plaid, which serves the same purpose as a cloak does here.

The Highlands, as their name shows, are covered with mountains. They consist of two great districts; the west and the north. The counties of the Western Highlands, of which Argyleshire is the largest and most important, are full of beautiful lakes. Loch Lomond, one of the largest and most beautiful, lies between Argyleshire and Dumbarton. In this district of the Highlands, though farther north, rises Ben Nevis, the highest mountain in the British Islands, and the only one on the top of which a small patch of snow remains all the year round. The capital of the Western Highlands is Inverary; but the most important town in the north of Scotland is Inverness.

The *Northern* Highlands are still wilder and more barren than the west. They contain no very large or remarkable towns. The north-eastern point of Scotland is Cape Wrath, a lofty promontory in the county of Caithness, and the most northern point in the British Islands.

The Hebrides form two large groups of islands to the west of Scotland, near Argyleshire. They are mountainous and barren; the largest of them is Lewis; but the most remarkable is Staffa, which contains an immense natural grotto or cavern, called Fingal's Cave, whose walls are formed of ranges of columns or pillars of dark grey stone, and its roof of others which have been broken off. This cave is 140 feet long.

The Orkneys are a group of islands just above the northern point of Caithness. They consist of one very large one called Mainland, and about thirty small ones. These islands are in general low, bleak, boggy, and bare; and the climate so cold and ungenial, that no wheat and but little oats or other vegetable productions will grow in them. The people live chiefly on dried fish, or the salted flesh of the Gannet or Solan goose, a large bird common in these parts, and itself tasting much like fish. Most of the men either live by fishing, or become sailors in ships employed in the whale fisheries in the North Seas, which often touch at the Orkneys. The capital of the islands is Kirkwall.

The Shetland isles are still further north, and are no less bleak and rocky than those before mentioned. The inhabitants, like those of the Orkneys and Hebrides, are chiefly employed in fishing and catching the sea fowl, whose eggs they take from their nests in the cliffs, with great difficulty and danger. The pretty little ponies sometimes seen here come from Shetland; in their native islands they are suffered to run wild about the moors and plains, and when any one wishes to make use of a horse, he catches one as well as he can, and turns it loose when he has done with it.

The women and girls in Shetland are generally employed in their only manufacture — knitting stockings of the wool of the Shetland sheep, which is uncommonly fine, warm, and soft. They also make scarfs and shawls of it, so fine as to look like lace at a distance

LESSON IV.

FRANCE.

LEAVING England we cross the British Channel (called in its narrowest part the Straits of Dover) to reach *France*, the nearest part of the continent of Europe. You may remember that on the north and east it is bounded by Belgium and Germany, and on the south by Spain, the Mediterranean Sea, and a little corner of the north of Italy.

France was anciently called *Gaul;* the Romans conquered it before they got possession of Britain; and many cities founded by them still remain in the country. Till about fifty years ago, France was divided into Provinces; now it has been proportioned again into Departments, which are named after the rivers or mountains that each contains.

Some of our countrymen, you know, are gone to France to work on the railroads, or manufactories; and they will most likely come back speaking the language, and acquainted with the habits, of the country about which I am going to tell you. Perhaps you may like to know, then, how France would appear to you, or to any other stranger seeing it for the first time.

The first thing you would see on crossing the straits and landing at Calais, would be crowds of fishwomen standing about the pier or quay, all dressed in dark stuff petticoats, with gilt ear-rings, and wearing handkerchiefs over their heads, or white caps, and all chattering away in French. You would feel how strange it is at first to hear the clatter and din of tongues in a foreign language, and no one understanding English. Calais itself, too, is an odd looking town, half buried among low sand hills. It has high walls and deep ditches all round it — *fortifications*, as they are called; and instead of our roomy footsteps

and smooth flagstones, the streets are all narrow and dark, and paved with sharp stones. The lamps at night, both here and in other French towns, are not fixed on lamp-posts, but slung across the streets on ropes. Calais was for a long time part of the dominions of Great Britain; but about 300 years ago it was again taken by the French, and has belonged to them ever since.

The country about Calais, and indeed in all the most northern part of France, is quite flat, and looks even more so from their being no hedgerows or walls round the fields. A great deal of corn is cultivated here, and large fields of rape, cultivated for the oil from its seeds, are to be seen constantly at the road sides, making the whole country look quite yellow.

In one of the northern Provinces, on the river Seine, stands Paris, the capital of the country, and one of the most famous cities in Europe. It is a large, gay, and splendid town, full of fine streets and buildings, and containing also many public gardens and pleasant walks round it, in which the inhabitants take great delight, for they are a lively people, fond of all sorts of amusements, and passing a great deal of time in the open air.

Near Paris is Versailles, which is to the French what Windsor is to us — the place where the King chiefly resides. His palace and gardens are much admired.

Rouen is a large town between Paris and the sea coast, standing on the Seine. The women of this place are remarkable for wearing curious high peaked white caps, like towers.

Brest and Havre-de-Grace are the chief sea ports in the north of France. Brest is a town of Brittany, a large province on the western coast of France, and inhabited by people very different from the rest of the French. They are descendants of the ancient Britons, who fled thither from the Saxons, and they still speak a language nearly the same as Welsh.

Our island of Britain is called *Great* Britain, to distinguish it from Brittany.

Central France is in some parts flat, sandy, and bare; but the banks of most of the rivers, especially of the famous river Loire, are very rich and fertile, and the climate is warm enough to grow grapes. A vineyard is not a very pretty thing to look at; at a distance it is something like a field of green turnips; though when you come near you see that the vines are trained on short sticks. But the French cultivate them for use, and not for ornament. The middle and south of France are famous for their wines.

Tours and Orleans, both on the Loire, are two of the chief cities in the central provinces.

On the eastern side of France lies the Province of Alsace, with the fine city of Strasburg on the western bank of the Rhine. This city formerly belonged to Germany, and most of the people still speak the German language.

The *south-west* of France is divided from Spain, by the Pyrenean mountains, the highest, next to the Alps, in Europe. You will hear more about them in the description of Spain. This part of France is watered by the large river Garonne, on the mouth of which stands Bordeaux, a fine city, and the most important sea port in the south-west of France. It is also celebrated for the wine made in it.

The *south-eastern* part of France is divided from Italy by the Alps. The country among these mountains is so like Switzerland, that we shall not describe it here, because you will hear enough about the Alps when we come to speak of Switzerland itself. In this part of France stands the city of Lyons, where the French silks are chiefly made. The silkworms are fed upon the leaves of mulberry trees, which are cultivated on purpose for them; and very ugly they look, stripped of all their leaves to feed the silkworms, so that nothing

is left but bare stumps. Lyons stands on the river Rhone, one of the finest rivers in France.

The most southern provinces of France are those which touch the Mediterranean. Here the climate is warm and delightful, and the sky clear and bright, and many plants, which we keep in hot-houses, flourish in the open air. The chief seaport here is Marseilles.

Corsica is a large island in the Mediterranean Sea, which now belongs to France, but formerly to Italy. The people still speak the Italian language. It is chiefly famous as having been the place where Napoleon Buonaparte, Emperor of the French, was born.

The French are generally a darker and shorter race of men than the English. The country-people in some parts dress very gaily; but almost everywhere both men and women wear wooden shoes. The women do most of the field work; they even follow the plough.

The religion of France is the Roman Catholic, but there are many Protestants also.

The French are governed by an Emperor and Senate. Their present Emperor is Napoleon III., nephew of the former Emperor of the same name.

LESSON V.

BELGIUM.

Belgium and Holland are often mentioned together, because, though now quite separate kingdoms, they were till very recently, under the same government. They were formerly both included under the name of the Netherlands, or Low Countries. Belgium was also called Flanders, by which name it is still known. The inhabitants, indeed, are quite as often called Flemings as Belgians. Their present King, Leopold, is our Queen's uncle.

The greater part of Belgium is flat and dull, but in the south there are some pretty spots, particularly near the river Meuse. The soil is fertile, and the Belgians are considered some of the best farmers in the world; every bit of ground is cultivated, and as they have no hedges, the country looks, when viewed from a height, like one vast corn field.

Brussels, the capital of Belgium, is a very pretty, cheerful-looking town. It is surrounded by rows of trees, under the shade of which the people walk about, or sit to enjoy the air on Sundays and holidays. Near the Kings palace is a park, which is also a pleasant place of recreation for the citizens.

In Brussels (as indeed in all the north of Belgium) great part of the people talk chiefly Flemish, a language not very unlike our own in sound; but they usually understand French also. In the south, however, they speak a dialect called Walloon, which is quite distinct from Flemish. The inhabitants of South Belgium differ also from those of the North in their appearance, having dark hair and complexions, while the people of the northern provinces are usually fair and light-haired.

The character of the Belgians is very unlike that of their neighbours the Dutch, who are somewhat slow and heavy in disposition, but firm and steady. The Belgians, on the contrary, are lively, talkative, and hot-tempered.

The manufactures of Belgium are very numerous. The most remarkable is that of Brussels lace, celebrated all over the world for its beauty. This lace, which is all done by hand, affords employment to a considerable number of poor women. In Liege, which is the principal town of the south of Belgium, there are manufactures of a less delicate kind; one of the chief is that of fire arms. This city has a gloomy appearance, from the smoke of its numerous manufactories, but it is pleasantly situated, near the junction of the Meuse,

with two smaller rivers, and it is within a short distance of some of the prettiest parts of Belgium.

Liege is remarkable for the excellence of its schools. Numbers of books are printed expressly for them; among others, the "Easy Lessons on Money-matters," which you read, have been translated into French for the use of the children of Liege, and are used all over Belgium, and also in France.

The religion of the Belgians is the Roman Catholic. Their government is a limited monarchy, which has already been described in the account of France.

LESSON VI.

HOLLAND.

HOLLAND is the flattest country of Europe. It contains nothing like a mountain, or even a hill; and the soil is so damp and marshy, that it is only rendered habitable by the numerous canals which have been cut in every direction, and which drain off the water. Some parts of the land are far below the level of the sea, which is only prevented from inundating the whole country by artificial mounds, called dykes. These dykes are made by first driving into the loose sand of the sea-beach, trunks of trees (piles, as they are called), and then heaping on earth mixed with sand and clay; when the dyke is raised high enough, the side facing the sea, is covered with a sort of wicker work made of willow and straw, to prevent the earth from being washed away.

But though so much care is bestowed on the raising of the dykes, and though they are kept in constant repair, they are still liable to accidents. The sea sometimes bursts through them and overwhelms whole tracts of country, sweeping away the houses, flooding

the meadows and gardens, and drowning the cattle, and even many of the unfortunate people who have not been able to get boats in time to save themselves.

In the winter, when these floods are most to be dreaded, watchmen are posted night and day by the dykes, to give warning in case of danger. Those parts of Holland which are far from the sea coast, are not free from the danger of inundation, as the rivers often overflow their banks, and do much damage to the surrounding country.

The inhabitants of Holland (who are called Dutch) are in spite of these disadvantages a very contented people. They have few poor among them, and their schools are very numerous and well-conducted. They cultivate the land with much care; but their damp soil is better suited for the grazing of cattle than for anything else. They have a fine breed of cows, and are very skilful in the management of dairies. Dutch cheese and butter are known all over the world, and from one of the chief articles of export from Holland. The Dutch are very fond of gardening, and are particularly famous for their beautiful hyacinths and tulips. Every Dutchman who can afford it, has a small garden, laid out with much care, and filled with choice flowers, in which he takes the greatest delight. But the care the Dutch take of their houses is still greater than that bestowed upon their gardens. The rooms and furniture are kept scrupulously clean, not a particle of dust being allowed to remain on chair or table, or a single corner to be neglected, in the sweeping and scouring which is daily repeated by the careful Dutchwoman.

Amsterdam, the capital of Holland, is a very remarkable city; the soil being composed of mud and loose sand, which would not bear the weight of houses, it is built on piles, which are driven in to a great depth as in the construction of dykes. The city is crossed in every direction by canals, which are constantly covered with boats and barges; the sound of cart-wheels is

rarely heard, there being many more canals than streets.

The largest canal in Holland, and indeed in all Europe, is the Grand Ship Canal, which extends from Amsterdam to Helder, opposite the Island of the Texel, a distance of fifty miles. This canal enables vessels to enter the port of Amsterdam with perfect safety, avoiding the dangerous sand banks of the Zuyder Zee. The King of Holland does not live at Amsterdam, but at the Hague, which, though a town of far less importance, is a pleasanter residence. The park belonging to the King's palace there contains almost the only fine trees to be found in Holland.

The climate of Holland is damp and foggy, and in winter very cold. The summer is, however, the most unhealthy part of the year; the people then suffer much from fevers. Some parts of Holland indeed are so marshy and unwholesome that they are not free from agues at any season.

The government of the Dutch is a limited monarchy; their religion is, generally speaking, Protestant.

LESSON VII.

DENMARK AND ITS DEPENDENCIES.

DENMARK consists of the peninsula of Jutland, and a number of islands at the entrance of the Baltic Sea, of which the principal are Zealand and Funen. The German province of Holstein, too, now forms a part of Denmark.

The mainland of Denmark is flat. It has an immense extent of sea coast, owing to its peculiar shape, and to its numerous sounds and bays; and no part of it is more than ten miles from the sea.

The climate is moist and foggy, but not very cold. Though Denmark cannot boast of much beauty or fer-

tility, it has an advantage over Holland in being rather more woody. The interior is far more barren and ugly than the coast, some parts of which have pretty green meadows sloping to the very water's edge, often stretching out into the sea, and sometimes agreeably wooded.

Copenhagen, the capital city of Denmark, is situated in the island of Zealand; it is enclosed, together with its harbour and docks, by a wall in a circuit of about five miles.

Elsineur is the only other town of importance in Zealand; it stands upon the narrowest part of the Sound, which is a channel of the sea, only three miles broad at that part. Every vessel which passes through this Sound lowers her top sails and pays toll at Elsineur. This is called paying the Sound dues; the custom is said to have originated in the traders of the Baltic consenting to pay a small sum, on condition that Denmark should take the charge of constructing light-houses and signals, to mark the numerous rocks and shoals of this dangerous coast.

Denmark exports corn, butter, and cheese. Its manufactures consist chiefly of coarse linen and woollen cloths for domestic use. The Danes are a quiet industrious people, and are considered as among the best educated people in Europe. In person they are usually short, with fair complexions and light hair.

The government of Denmark is despotic; but the Danish kings have generally been mild and popular rulers. The religion is Protestant. The language, which is nearly the same as that spoken in Norway, has some resemblance to German.

Iceland, is a large island belonging to Denmark, and situated in the Northern Ocean, on the borders of the arctic circle. It is everywhere intersected by chains of lofty and snow-covered mountains, which give a stern and gloomy character to the country.

Several of these mountains are volcanoes; the principal is Mount Hecla, which is one of the most celebrated volcanoes in Europe.

But by far the most remarkable sight in Iceland, is that of the boiling springs, which are usually called the geysers. An interesting description of them is given by a traveller,* in his account of Iceland. "Though surrounded," he says, "by a multitude of boiling springs we felt at no loss on which of them to fix our wondering eyes. At the northern extremity of the plain rose a large mound, formed by the sediment deposited by the fountain, which is justly distinguished by the name of the 'Great Geyser.' On ascending this mound, we saw a spacious basin at our feet, more than half filled with clear hot water, just moved by the steam, which escaped from a natural pipe or funnel, in the centre of the basin.

"The fountain being in a state of inactivity, and there being no signs of an immediate irruption, we returned to the spot where we had left our horses. Some time afterwards we were warned by a slight trembling of the ground that an explosion was about to take place. First only a few small jets of water were thrown up, but the earth still shook at intervals, and the water in the basin boiled violently. I also heard reports which resembled the distant discharge of cannon. Concluding from these circumstances that the long expected wonders were about to take place, I ran to the mound, which shook under my feet, and I had scarcely time to look into the basin, when the fountain exploded, and compelled me to retire to a distance.

"The water rushed up out of the pipe with amazing rapidity, and was projected by irregular spouts or jets into the air, surrounded by immense clouds of steam. The last of these jets, which exceeded all the rest in

* Professor Henderson.

splendour, rose at least to the height of seventy feet. The large stones, which we had previously thrown into the pipe, were projected to a great height, especially one, which was thrown much higher than the water. When the irruption ceased, the water immediately sank into the pipe, but presently rose again, to about half a foot above the opening, where it remained stationary."

Excepting for these wonders of its boiling springs, Iceland would seldom be visited by strangers, for it is not only a cold and desolate country, but is surrounded by stormy and dangerous seas. The inhabitants, who are not numerous, depend for subsistence chiefly on the fish which abound on their coasts; the land being too barren to afford anything but a precarious crop of barley. In spite of their hardships, however, the Icelanders are a contented people. They are peaceable and regular in their habits, and in general very well educated. The instruction of his children is one of the chief employments of an Icelander. During the long winter evenings, when all without is dark and cold, the father reads aloud to his family assembled round the cheerful fire.

LESSON VIII.

NORWAY, SWEDEN, AND LAPLAND.

NORWAY, which formerly belonged to Denmark, is now united, under the same king, to Sweden, though it retains its old laws. Both Sweden and Norway are very mountainous, and abound in rivers and lakes. The rivers are of no great length, because, taking their rise in the Dofrefeld mountains, which divide Sweden from Norway, they flow, for the most part, across the country (which is narrow,) and not lengthways, — those of Norway finding their way to the

North Sea, those of Sweden to the Baltic or Gulf of Bothnia. The largest river is the Dahl, which gives its name to the mountainous province of Dalecarlia in Sweden.

Stockholm, the capital of Sweden, is beautifully situated on several sandy peninsulas running into Lake Mäler, which is more properly a bay than a lake. Its banks are covered with houses, churches, and hospitals, with their green and bowery gardens stretching down to the very water's edge. In summer it is gay, from the numbers of boats which are constantly sailing about in every direction.

The Swedes are a brave and honest people, — so honest, that no one has any occasion to bolt and bar his house, lest he should lose his goods. The inhabitants of the province of Dalecarlia are in many respects different from the rest of their countrymen. They are tall and large in person, with coarse features, and dark complexions, while the other Swedes are of middle height, with fair heir and blue eyes.

Coxe, a traveller in Sweden, says — "During a journey through Sweden, I had frequent opportunities of observing the customs, manners, and food of the peasants. Upon entering a cottage, I usually found all the family employed in carding flax, in spinning thread, and in weaving coarse linen, and sometimes cloth. The peasants are excellent contrivers, and employ the coarsest materials to some useful purpose. They twist ropes from swine's bristles, horses' manes, and bark of trees; and use eel-skins for bridles. Their food principally consists of salted flesh and fish, eggs, milk, and hard bread. At Michaelmas they usually kill their cattle, and salt them for the ensuing winter and spring. Twice in the year they bake their bread in large round cakes, which are strung upon files of sticks, and suspended close to the ceilings of the cottages. They are so hard as to be occasionally broken with a hatchet, but are not unpleasant. The peasants use beer for

their common drink, and are much addicted to spirits. In the districts towards the western coasts, and at no great distance inland, tea and coffee are not unusually found in the Swedish cottages. The peasants are all well clad in strong cloth of their own weaving. Their cottages, though built of wood, and only of one story, are comfortable and commodious. The room in which the family sleep is provided with ranges of beds in tiers — if I may so express myself — one above the other. Upon the wooden testers of the beds in which the women lie, are placed others for the reception of the men, to which they ascend by means of ladders. To a person who has just quitted Germany, and been accustomed to tolerable inns, the Swedish cottages may, perhaps, appear miserable hovels. To me, who had been long used to places of far inferior accommodation, they seemed almost palaces. The traveller is able to procure many conveniences, and particularly a separate room from that inhabited by the family, which could seldom be obtained in the Polish and Russian villages. During my journey through these two countries, a bed was a phenomenon which seldom occurred, excepting in the large towns, and even then, not always completely equipped; but the poorest huts of Sweden were never deficient in this article of comfort, — an evident proof that the Swedish peasants are more civilized than those of Poland and Russia. After having witnessed the slavery of the peasants in those two countries, it was a pleasing satisfaction to find myself again among freemen, in a kingdom where there is a more equal division of property; where there is no vassalage; where the lower orders enjoy a security of their persons and property; and where the advantages resulting from this right are visible to the commonest observer."*

The Swedish language has a slight resemblance to English, but it is very like Danish.

* Coxe's Travels.

The Norwegians resemble the Swedes both in person and language, though they consider themselves a distinct race. They are great lovers of their country, and most of their national songs are in praise of "Old Norway," as they call it. The Norwegians are an agricultural people, but not a very skilful one in this respect, and their barren soil is only suited to rye and barley.

They depend in a great measure on the produce of their dairies for subsistence. In times of scarcity, which are frequent, they commonly use a kind of bread, made of the inner bark of the fir-tree, ground and mixed with a small quantity of flour. This bread is, however, so dry and bitter that nothing but necessity could oblige any one to eat it.

Sweden and Norway have no manufactures of importance, but their commerce is considerable. There are extensive fisheries on the coast of Norway, and quantities of salt cod are exported, under the name of stockfish; but their chief articles of trade are timber and iron. The iron mines of Sweden are the most productive in the world. There are also copper and lead mines of some importance; and the silver mines of Kongsberg, in Norway, are the richest in Europe. The government of Sweden and Norway is a limited monarchy. The present king is of French extraction, but he is said to be very popular among the Swedes. The constitution of Norway (as I before remarked) is in many respects different from that of Sweden. The religion of both countries is Protestant.

Lapland, which belongs to Sweden, as you know, is perhaps the most dreary country in Europe. During a great part of their long cold winter, the inhabitants have no daylight; and in their short summer hardly any darkness, — for the nearer one approaches to the north pole, the longer the days and nights become. At the pole itself there are six months' darkness, and then

six months' light; but in Lapland there is but a very short period in which there is no light at all, though during the whole summer the sun sets for a short time only.

The Laplanders, or Lapps, as they are also called, are a peculiar looking people; very short and stout in person, with coarse black hair, and small eyes, rendered weak by exposure to smoke and snow. This last is so injurious to the eyes, that a complaint prevails in northern countries, called snow blindness. The Laplanders usually live in tents, and wander about from place to place. Their only wealth consists in their flocks of reindeer. This animal (as its name implies) is a kind of deer: it supplies to the Laplanders the place of cows, horses, and sheep, none of which would live in so cold a climate. The reindeer are extremely swift, and the Laplanders train them to draw their sledges. They are able to live on the scanty herbage which they find for themselves, and in winter they subsist chiefly on a particular kind of moss, which they scratch out of the snow with their feet. The milk and flesh of these valuable animals form the chief food of the Laplanders, and their skins are used both as clothing and as covering for their tents.

The Laplanders are extremely ignorant, as might be supposed, from their wandering mode of life. They have no schools, and very few churches. In disposition they are quiet and harmless, but cowardly, indolent, and extremely dirty in their habits.

LESSON IX.

RUSSIA.

THE largest country of Europe is Russia. A great part of the Russian dominions is in Asia, but I shall now only speak of what is called Russia in Europe, which is separated from Asia by the Oural mountains and the river Volga.

Russia is governed by an Emperor, who is despotic, that is, who rules according to his own will, and is not controlled by any parliament. The religion of the Russians is that of the Greek Church.

The language of the Russians is not very different from that spoken in Poland and several other countries; but their *written* language has a distinct character, and an alphabet of its own quite unlike any other. For this reason, and for others, Russian is a very difficult language to learn, and strangers rarely attempt to acquire it unless they are living in the country.

St. Petersburgh and Moscow are, as you know, the chief cities of Russia. St. Petersburgh is situated at the mouth of the river Neva, near the gulf of Finland, and is partially built on some islands formed by the river, which are connected with each other, and with the mainland, by numerous bridges. It is important as a seaport, and carries on a considerable trade with England and many other countries. Here, also, the Emperor and his family reside.

Moscow, which stands in the centre of the country, is a much more ancient city than Petersburgh, and was formerly the only capital of Russia. A part of it, standing on a rising ground, and separated by walls from the rest of the city, is called the Kremlin. It contains a palace, of which the Russians are very proud; besides several churches, monasteries, and other public buildings. In the year 1812 this fine city was burnt by the inhabitants, to prevent it from falling into the hands of the French, who had invaded Russia under Napoleon Buonaparte. The people had removed their families and goods, so that the French army found little except the ruined walls. The Kremlin fortunately escaped the flames. The French were soon obliged to leave Moscow, and marched homewards; but they had so many hardships to endure, from travelling in the midst of winter, from scarcity of food, and above all from being constantly pursued by the

Russian army, that but few of them lived to reach France; and Buonaparte himself escaped with difficulty. Moscow has been since rebuilt; most of the houses being of wood, it did not take so long to replace them as if they had been of stone or brick.

The climate of Russia is extremely cold during the greatest part of the year; but the people do not appear to suffer from the weather so much as one might expect. They have, happily, an abundance of fuel, so that their houses are generally well warmed; and whenever they are in the open air, they wrap themselves in furs, or sheep-skins, leaving scarcely any part of the face exposed. With all this care, however, people sometimes get their fingers or noses frost-bitten, and are obliged to have them rubbed with snow, to prevent dangerous consequences.

In spite of the severity of the weather, however, the Russians have many out-door amusements. The chief of these is driving on the frozen rivers or canals, in *sledges*, which are a kind of low carriage, in shape something like a boat cut in half, without wheels, and drawn by one horse. Another of their favorite diversions is covering an artificial mound with blocks of ice, and then pouring water over it, which instantly freezes, so that a perfectly smooth surface is produced. The people then amuse themselves by sliding rapidly down the steep descent in small sledges.

Though the winter in Russia is so piercingly cold, yet the summer is hotter than ours. One can hardly say that they have any spring, for the snows are no sooner melted, than the leaves and flowers burst forth. In the most southern parts, however, the climate is not nearly so cold; and the northern coast, which is washed by the Arctic Ocean, is always covered with snow; so that what I have described relates only to a part (though by far the largest part) of Russia.

The country is in general very flat and uninteresting.

The vast plains, which extend for miles without a single object to vary the sameness of the view, are called steppes. These steppes are crossed every winter by numbers of merchants, who travel on sledges, to sell at Petersburgh and Moscow the furs and other articles which they bring from Siberia (which, you know is a part of the Russian dominions, though in Asia.)

The southern provinces of Russia are fertile and pleasant, especially the peninsula called the Crimea, which stretches into the Black Sea, and is very beautiful, abounding in fruits and flowers, and having a warm and delightful climate.

In another lesson I shall give you some account of the Emperor who founded the city of Petersburgh, and who was called Peter the Great.

LESSON X.

PETER THE GREAT.

PETER, afterwards called Peter the Great, was born in the year 1672. His father, the Emperor Alexis, died when he was only ten years old, and at the age of seventeen Peter was acknowledged as Emperor by the Russians.

At that time the Russians were a very ignorant and barbarian nation; but Peter, though wanting instruction quite as much as the people over whom he was ruler, was fortunately aware of his ignorance. When he began his reign, Russia was without trade and almost without manufactures. Peter saw the importance of introducing these into his country; but he also saw that before he could teach others he must first teach himself.

He began by learning the Dutch and German languages, for there were hardly any books in Russia.

In these studies he was assisted by a man named Le Fort, who came from Geneva in Switzerland, and who was a very clever and well-educated man.

There was nothing which Peter so anxiously desired his country to possess as ships, because he perceived that without them it was impossible for the Russians to trade with other nations. He got a Dutch ship-wright, whom he employed to build some ships; but in this, as in all his early endeavours, he found himself greatly hindered by the ignorance and want of skill of the Russian workmen. To remedy this evil as far as possible, he selected a number of young men, whom he sent into foreign countries to learn different useful arts.

But he did more than this — he determined to leave his country for some time and learn, by his own observation, whatever he wished his people to know. Accordingly he left Russia, taking but a few persons with him (among whom was his friend Le Fort,) and concealing his name and rank, that he might meet with no interruption from the curiosity of strangers.

Peter travelled through Germany into Holland, where he intended to stay for some time to learn the art of ship-building, and many other things, which could be learned there better than anywhere else. He did not stop at Amsterdam, but proceeded in a boat to Saardam, a small town on the sea coast, where most of the Dutch ships were built.

On his arrival Peter represented himself and his companions as carpenters, who had come to Saardam in search of employment. He took his place among the other workmen, and laboured as industriously as if he had had to earn his bread, for he thought that in no way could he become so thoroughly acquainted with every part of a ship as by assisting to build one himself.

He was called, by his own desire, Peter Timmerman (which means a carpenter,) or more commonly Master Peter. But the people of Saardam soon found out who Master Peter really was, and crowds went to the dock yard (as the place where ships are built is called) to see the Emperor at his work, dressed like a Dutch sailor, in a red jacket and white trowsers. But Peter

disliked such interruptions, for he did not come to Holland to surprise strangers, but to gain instruction.

When he had made himself acquainted with every thing connected with ship building, down to the making of ropes and sails, he left Saardam, and travelled all over Holland, visiting the principal towns and manufactories. After leaving Holland Peter visited England, and then returned to Russia through Germany and Austria.

Peter now began to teach his countrymen what he had taken such pains to learn for himself. He instructed them in the building and navigation of ships, and in the cultivation of land. He also founded schools, and caused many useful books to be translated into Russian from other languages. Meanwhile he was executing a plan he had long formed, for raising that great city near the shores of the Gulf of Finland, of which I have spoken, and by means of which he hoped to carry on a successful trade and useful intercourse with other nations. Till Petersburgh was built, the Russians had no seaport except Archangel, which is situated, as you know, quite on the northern extremity of Russia, and is only to be approached by sailing all round Norway.

Peter was so anxious to complete his new city, that he not only planned and directed the whole, but to encourage the workmen, he even assisted with his own hands in building the first house. Petersburgh is now one of the finest cities in Europe, and has taken the place of Moscow as capital of Russia.

When we think upon the energy and perseverance with which Peter laboured, to improve the condition of his people, we must allow that he well deserved the title of *Great*. You must not suppose, however, that Peter was without faults, he had many, but I do not tell you of them here, because, as he had none of those advantages of instruction which we possess, it is better

to be silent upon errors which were probably in a great measure the effects of his ignorance.

Before I conclude I will tell you an anecdote which shows the value he placed on early education. One day seeing two of his little daughters, Anna and Natalia, reading a French book together, he desired one of them to translate a passage into Russian. He was struck with the ease and readiness with which they complied. "Ah, my children," said he, "how happy are you who are taught in your youth, and enjoy all the advantages of instruction, which were wanting to me!"

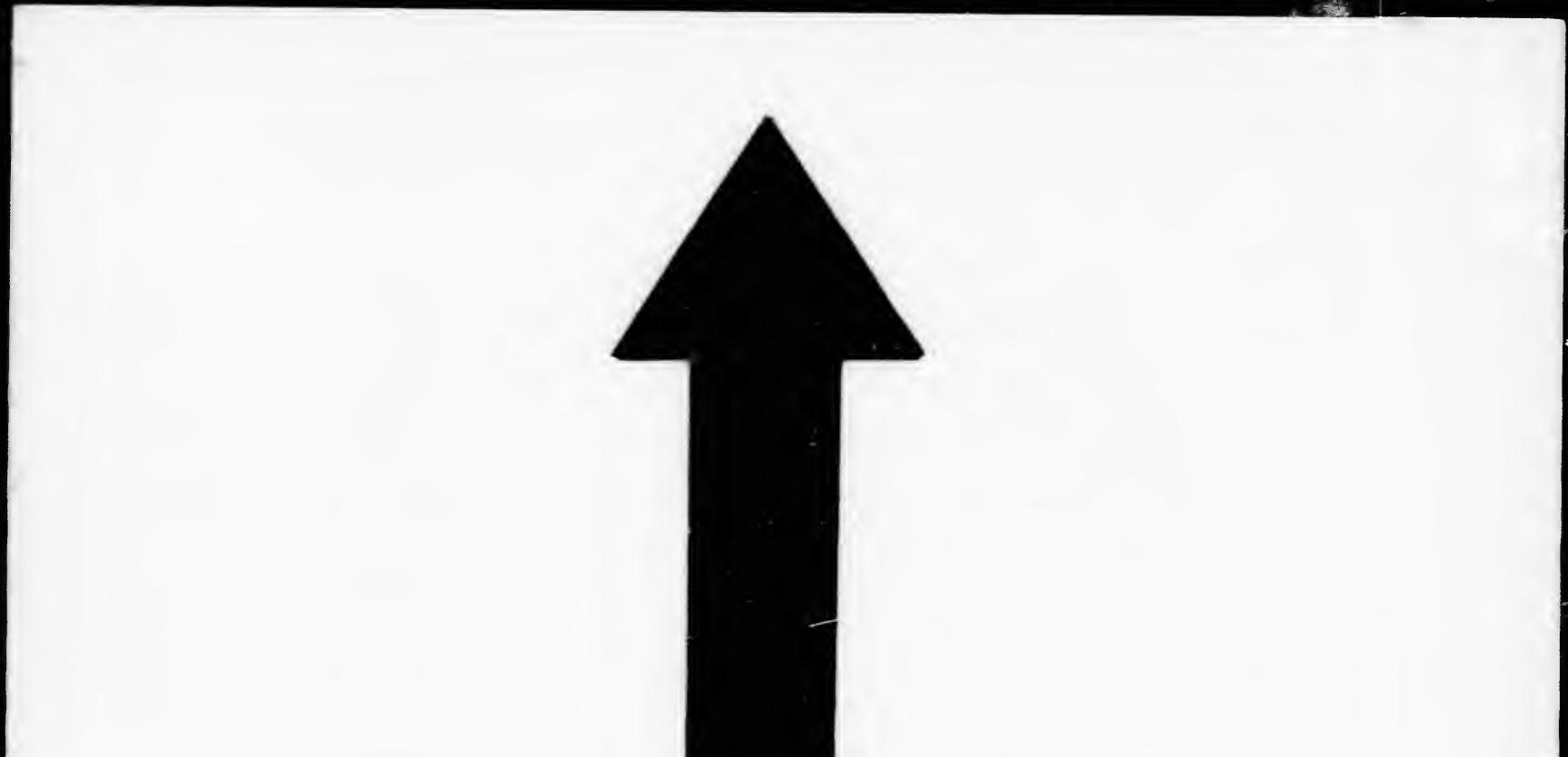
LESSON XI.

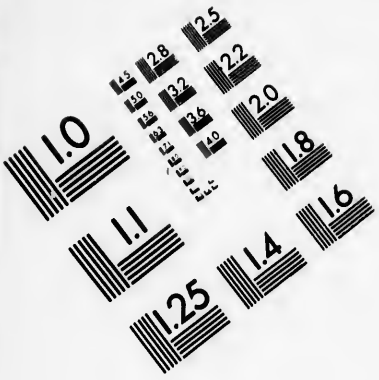
GERMANY.

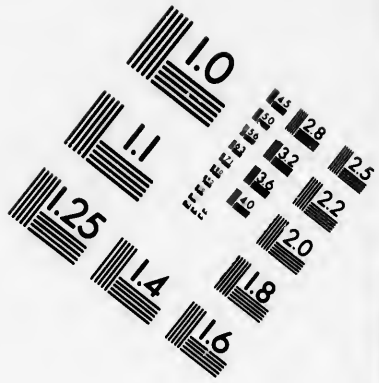
On the east of France, and stretching from the Alps to the Baltic, and from the confines of Holland and Belgium to Poland and Hungary, lies Germany. Under this name we include all those regions in which the German language is used, and this is the case even with part of the empire of Austria,

You have learned in your geography the *artificial* divisions of Germany into kingdoms and states; here, therefore, we shall only speak of its *natural* divisions, as we may call them, into mountainous and flat, barren and fertile, and so on.

The whole of the north and of the north-eastern part of Germany is almost entirely composed of an immense extent of flat country, chiefly consisting of barren sandy plains, but in some parts fertile, and producing a great deal of grain, which is exported to foreign countries. This flat district includes several states; but the largest and most important is Prussia, whose capital, *Berlin*, is one of the finest cities in Europe, though it stands in the midst of a sandy waste; and stone is so scarce in the neighbourhood, that even the public buildings are built of brick.







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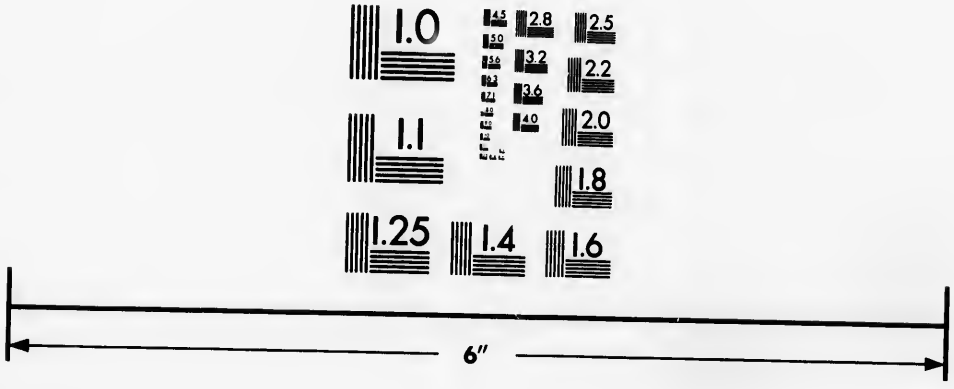

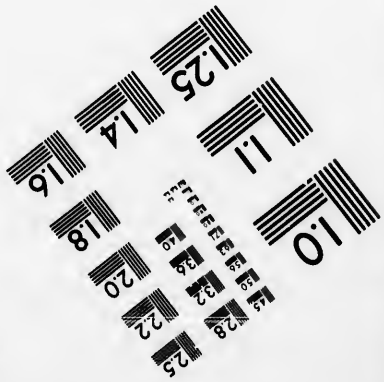

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Farther to the west is Hamburg, on the mouth of the Elbe, and one of the greatest trading seaports in Germany. Like some of the Dutch towns, it is full of canals which cut across it in all directions, and most of the streets are planted with trees. A great variety of curiously dressed people may be seen here. The women, when they go to a shop or to market, wear very gay clothes, lace caps, and a splendid shawl, generally red, on their shoulders, with which they cover their basket of provisions or other goods.

The *centre* of Germany is partly covered with vast forests, and intersected with several mountain ranges, though none very high. The most considerable are the Hartz mountains, which run between the states of Brunswick and Hanover. They are covered with thick forests, and abound in mines of coal and various metals. The largest river in the north and middle of Germany is the Elbe, which rises in Bohemia. On its banks stands Dresden, the capital of Saxony, a pleasant city, and the residence of the Saxon king and his court. Another important city of Saxony is *Leipsic*, one of the greatest trading towns in Germany. Every year three fairs are held in it, each lasting three weeks. During these times the town is full of people of all nations, wearing there various dresses, and speaking many different languages, making quite a scene of confusion. In the year 1813 a great battle was fought at Leipsic by the Russians and Germans against the French Emperor Buonaparte, who had invaded Germany. For three days this terrible conflict lasted; but the French were finally defeated and driven from the town, and Buonaparte himself escaped with great difficulty.

All along the *west* of Germany flows the famous river Rhine. This river rises among the Swiss Alps, and falls into the sea near Leyden, in Holland. One of the most beautiful and fruitful parts of Germany is the long strip of country on its banks called Rhine-

Prussia. It is famous for its vineyards, which cover the hills by the river side, and are sometimes planted in narrow clefts in the rocks, where there is no soil, so that the inhabitants are obliged to carry earth up in basketsful. The principal cities in Rhine-Prussia are Cologne and Coblentz. Cologne is the place where the sweet scent called "Eau de Cologne," or Cologne water, is made. Coblentz stands opposite what was formerly one of the most famous fortresses in Germany.

Near the upper part of the Rhines's course, that is, in the south-west of Germany, contiguous to Switzerland, is a large tract of mountainous country, thickly clothed with wood, called the Black Forest, because it is chiefly composed of pines and firs, which make it look very dark, almost black at a distance.

The forests in the neighbourhood of the Rhine are much used for timber, which is conveyed to the sea in a very curious manner. The trees are cut down in single logs, and rolled down the rocks into the streams and mountain torrents which flow through the valleys. The current carries the logs along with it to the river which receives it. The rivers near the Rhine are all *tributaries* or *feeders* of that river — that is to say, they flow into it, and swell its stream by their waters. Men are stationed on the banks of these tributary rivers, who collect the logs as they float down the mountain rivulets, bind them in bundles, and leave them to be carried down the stream into the Rhine itself. Here boatmen are in waiting, who again bind a number of these bundles together so as to form an immense floating raft: this they move with oars like a boat, and steer down to the sea. The boatmen with their wives and children live on board these rafts, and build wooden huts for themselves, so that they look like floating villages. When they reach the sea, the rafts are broken up, and the trees sold and sent to other countries.

The *south* of Germany is almost entirely taken up

by the states of Bavaria and Austria. The principal river here is the famous Danube. It rises in the Black Forest, in a well in the courtyard of a nobleman's palace. At the bottom of this well the bubbling spring can just be seen; but this little spring afterwards swells into one of the largest rivers in Europe. It receives many tributaries: and on one of these, the Iser, stands Munich, the capital of Bavaria, a large and fine city. Vienna, the capital of Austria, stands on a small tributary of the Danube. It is one of the gayest and most agreeable towns in Germany. It is surrounded by public gardens, the chief of which is the Prater, an extensive park in which the inhabitants are fond of walking, riding, and driving, and amusing themselves with dancing, music, and shows of various kinds.

The southern part of Austria (*Upper* Austria, as it is called) is the most mountainous part of Germany. It is intersected with branches of the Alps, which stretch out very far into Germany. These Austrian Alps are not so high as those of Switzerland; but the principal peaks are covered with snow all t[illegible]ear round, and in the valleys at their feet are many [illegible]uti-ful though small lakes.

The *Tyrol* is an Alpine district belonging to the Austrian empire, and situated between Upper Austria, Switzerland, and the north of Italy. It is, like Switzerland, full of rocks, torrents, thick forests of pine and fir, and mountains with perpetual snow resting on their summits. The inhabitants are called Tyrolese. They speak German in the north of the Tyrol and Italian in the south. The northern Tyrolese are much the more active and industrious; they are very ingenious in making various articles of the horn of the chamois goat. Almost all of them understand music, and there are few cottages of the better sort in which some musical instrument may not be found. The Tyrolese are famous for their dairies, and

for their boldness and activity in hunting the chamois goat; but of these things we shall speak more particularly in the description of Switzerland. Both men and women in the Tyrol wear curious high-peaked hats, either green or black, and a quantity of silver chains and rings. The capital of the Tyrol is Innspruck, a city surrounded by mountains so lofty that their tops seem to overhang the streets.

Styria is another Alpine country belonging to Austria, and is indeed a sort of continuation of the Tyrol. The face of the country and the habits of the people are much the same as in the Tyrol. The capital city is Gratz, a town pleasantly situated in a plain at the foot of the Styrian Alps.

The Germans in general are a fair, light-haired race, contented, quiet, and industrious in their habits. It was from a tribe of the German nation that England and the south of Scotland were peopled. These German settlers drove out the ancient inhabitants, who were called Britons, and who settled in Wales, Cornwall, and Brittany in France, as was mentioned in the description of England and France.

It was in Germany that clockmaking and printing were first invented. The Germans are particularly skilled in music; some of the greatest musicians in the world have belonged to their nation; and almost all the common people can sing. It is pleasant to hear a troop of labourers in an evening, returning from their work, and singing hymns in chorus.

The governments of the different states are so various that we shall not speak of them here. The inhabitants of the northern parts of Germany are chiefly Protestants; and in the south, mostly Roman Catholics.

LESSON XII.

SWITZERLAND.

SWITZERLAND is, as you may remember, exactly in the centre of Europe, and bounded by France, Italy, and Germany. Two chains of mountains almost cover it, — the *Alps*, and the *Jura*. The Alps — the highest mountains of Europe — stretch across Switzerland, from south-west to north-east; and they are not confined to that country, for many branches of them spread into Germany, the north of Italy, and the south of France. The Jura — the other chain of Swiss mountains — are smaller and lower than the Alps, and form a boundary between France and Switzerland.

Though Switzerland is a small country, it is divided into as many as twenty-four *cantons*, or provinces. The government is what is called a *republic*, that is, they have no king, but are governed by *magistrates*, who are chosen by the people; and once a year all these magistrates meet, to consult together, at *Berne*, the capital of the country. Some of the cantons are Roman Catholic, and some Protestant, and some have very nearly equal numbers of both.

Between the mountains, and at the foot of them, are wide, low valleys; and there are parts of the country in which there are no mountains at all, but which consists of broad plains and gently sloping hills. These plains and valleys are very fertile, and the climate is so hot that the inhabitants are able to cultivate grapes, of which they make wine. Almost every spot of ground in these plains is covered, too, with corn fields, gardens, orchards, and groves of fine walnut trees, from which they procure oil for lamps, for the Swiss are a very industrious nation, and make the most of their advantages. In the villages, and still more in the large towns, the people are much employed

in manufactures, particularly in clock and watch making; at this they are very skilful.

Some of the valleys in Switzerland are filled up with lakes. The largest of these is the Lake of Geneva, which is in the part of Switzerland nearest to France; but there are several others. Some have flat, fertile shores, and others have hills, or steep cliffs, close to the water's edge. But in the valleys which are high up amongst the mountains, the face of the country is quite different. There are no more vineyards to be seen; the air is fresher and colder; and on the sides of the hills, and in every cleft between the rocks, are patches of the brightest green pasture, watered by mountain streams, which come dashing and foaming down the sides of the cliffs. When the inhabitants want to have water at hand, in a part of the valley where there is no stream flowing, they make it run into wooden troughs, which are laid across from one rock to another opposite, like a bridge, and even sometimes placed slanting down the sides of the mountain. On these pastures they feed their cows and goats in the summer. Each flock has a herdsman, or sometimes a woman to take care of it. This herdsman lives in a small hut, close to the pasture, called a chalet (pronounced *shallay*,) which means a mountain dairy. Besides taking care of the cattle, he is employed in making cheeses; and when the summer is gone, and the weather begins to grow cold, he comes down to the plains again.

Higher up still, beyond these chalets and pastures, we come to a part of the mountains where there is not even grass — where the snow lies on the ground all the year round. Yet even here some few hardy plants may sometimes be found, and many of these plants bear beautiful flowers, which are seen blooming close to the snow and ice.

It is a fine sight to look down from one of these high mountains, and see a whole chain of sharp-pointed

mountain peaks, like cones, white with snow, and glittering in the sun; their sides covered with thick forests of pine and fir trees, which look almost black next to the white snow of the mountain tops; and then the green valleys beneath, with cattle grazing over them. On the highest rocks there live a kind of goats called chamois, which are wonderfully nimble, and leap from cliff to cliff, in places where no other animal could keep its footing. When one of a flock of chamois perceives the approach of a hunter coming to shoot them, he gives warning to his companions, by making a sort of whistling noise; on hearing which, they all spring away so fast, that the most active man often falls, and is dashed to pieces, or buried in the snow, in trying to follow them. So a chamois hunter's life is a very dangerous one; but yet there are many men who love the sport well enough to undergo it.

On the sides of the mountains, large masses of snow are often left, which settle in a hollow or cleft, are then frozen over, and at last are formed into solid masses of ice. These masses of ice are called *glaciers*. At a distance, a glacier looks like nothing so much as a basin of loaf sugar overturned — the lumps of ice are like the pieces of sugar; but when one looks close, these are seen to be immense blocks of ice, several of which are big enough each to fill a room — some blue, and some green, and sparkling all over, with deep caverns between them. Another remarkable thing about the Alps is the avalanches. These are masses of snow, which detach themselves from the mountains, and roll down their sides with a loud rumbling sound, like thunder. Many travellers have been overwhelmed and buried alive beneath these avalanches; and sometimes they have fallen upon houses, and even whole villages, crushing them, and killing their inhabitants.

The Swiss speak several different languages. In all the middle and north of the country, they talk German. In those parts which are next France, French is the

language used; and in one of two cantons bordering upon Italy, Italian is mostly spoken. Every canton has a different dress, and some of them are very gay and odd-looking. Almost all the women wear their hair plaited in long tails, and tied with streamers of ribbon; and in many of the cantons they wear hats of different shapes and sizes.

LESSON XIII.

ITALY.

Crossing the Alps of Switzerland and the Tyrol, we come to Italy, — a country so beautiful and fruitful, that it has been called "The Garden of Europe."

The most northern part of it — the upper part of Piedmont and Lombardy — is covered with branches of the Alps, and contains several beautiful lakes. But the Italian side of these mountains is very different from the Swiss side. The climate is far warmer, and more sunny; and instead of the green pastures and black pine forests of Switzerland and the Tyrol, there are clumps of the deep green Spanish chestnut, the fig-tree, and the olive (a greyish looking tree, something like a willow,) scattered about the road sides, and at the foot of the mountains. The roads are often bordered with poplars, or elms, over which the vines are trained, so that the branches of grapes and vine leaves hang in garlands from tree to tree. In these trees there lives a kind of grasshopper, only seen in Italy, which keeps up a constant noise, like a saw. The gardens are often planted with groves of orange and lemon trees, with the pomegranate, bearing bright scarlet blossoms, and many other curious plants. At night it is pleasant to watch the fire-flies, which are very common, not only in Italy, but in all the south of Europe. A fire-fly is an insect which, like the glow-worm, gives light

in the dark; but it flies instead of crawling, and its light is far brighter than that of the glow-worm — quite like a clear green flame, flitting about through the darkness. It is said that if two or three of them were held over a book, a person might see to read by their light.

But the chief part of Lombardy, and the south of Piedmont, the capital of which is Turin, consists of an immense wide, flat, and very fertile plain. One may go for miles without seeing any thing but roads bordered with mulberry trees (which are kept, as in France, to feed the silkworms) and wide fields of *maize*, or Indian corn, and white lupins, both of which serve as food to the people. Milan, the capital of Lombardy, stands in the midst of this plain; it is one of the finest cities in Italy.

The plain of Lombardy is bounded by the Apennines on the south, as it is by the Alps on the north. Crossing a branch of the Apennines we come to *Genoa*, a town on the Mediterranean, which belongs, as does Piedmont, to the kingdom of Sardinia. It is quite hemmed in by mountains, which only leave just room for the town between their foot and the water's edge. The sides of the hills above the town are scattered over with churches and country-houses, for the Italians are fond of building in high and steep places. The Bay of Genoa is a large and fine harbour, and formerly Genoa was famous for its navy; its sailors were among the best in Europe, and they conquered and took possession of many places on the shores of the Mediterranean, which they have now lost. Columbus, the discoverer of America, was, you may remember, a Genoese.

On the other side of Italy, on the flat shores of the Adriatic Sea, or Gulph of Venice, stands *Venice*, one of the most remarkable cities in Italy. In appearance it is something like Amsterdam, which has been already described to you in the account of Holland. Like that city, it is built on a number of small islands in the sea;

and instead of streets between the rows of houses, they have canals cut through the city in all directions. These canals are crossed by bridges in some parts; but in general the inhabitants go from place to place in *gondolas*. A gondola is an oddly shaped kind of covered boat, hung with black, which has a very gloomy appearance. No carriages, carts, or horses are to be seen in the town, and the only spot where any one can walk about is a large kind of square called St. Mark's Place. Venice was formerly one of the richest and most powerful cities in Italy; but now it is falling into decay, and many of its buildings are in ruins.

In the *centre* of Italy, on a group of low hills not far from the sea, stands *Rome*, that famous city which in ancient times was called "The Mistress of the World," because the Romans were then a most powerful nation, and by their bravery and skill in war had conquered as much of the world as was then known. You may remember that Judea belonged to the Romans in the time of the apostles, and that St. Paul was brought prisoner to Rome, where he preached the Gospel for two years. But Rome, though still a beautiful and interesting city, is not now what it was. Much of it has fallen into ruins, and the country round, which was once cheerful and highly cultivated, is now so unhealthy that no one can safely live in it in the summer time, so it is left quite a desert.

The *southern* part of Italy is intersected with chains of mountains and full of deep valleys. These valleys abound in vegetation of all kinds — forest trees, fruit trees, vines, and the most lovely flowers, such as never could be found in any but a warm climate. The villages and towns are almost always built on the side or top of some hill, or in the hollow cleft of a steep rock. The Italians do this to be out of the way of robbers, of which there are many in the centre and south of Italy, who live by plundering travellers, or carrying off the property of the country people who fall in their way.

Naples, in the south-western part of Italy stands on the bay which is called by its name. The shores of the Bay of Naples are famous for their beauty and fertility, and their delightful climate. Not many miles from Naples is the famous *volcano* or burning mountain, Vesuvius, at whose top there is a deep hole called a crater, from which smoke and flames and red-hot stones frequently burst forth.

The Italians are a dark race of men, generally with black hair and eyes. The religion of the country is Roman Catholic, and they are divided into a number of states with different governments, but all depotic. The people are in general indolent, but clever and ingenious, and remarkable for their skill in music. The art of painting, too, was formerly carried to the highest perfection among them. The Italian language is very soft and pleasing in sound. The dress of the people is various, and sometimes very pretty. In Lombardy the women wear an odd head-dress of long silver pins stuck at the back of the head, and standing out like the spokes of a wheel. In other parts they wear square pieces of white linen, muslin veils, or coloured handkerchiefs on the head, and they almost always dress in gay and bright colours.

The chief food of the common people, especially in the north, is a kind of pudding made of Indian corn, called polenta. Lupins and Spanish chesnuts, which are made into a kind of bread, are likewise much used by them; and their favourite treat on great occasions is macaroni, a preparation of wheat flour.

LESSON XIV.

SPAIN.

SPAIN and Portugal together form the most western part of the continent of Europe; and they are often spoken of as "*the Peninsula.*" because they form a

very large and remarkable peninsula, being surrounded by the sea on all sides except one, which joins the south of France. Spain consists of several provinces (formerly kingdoms,) of which the most important is Castile, in the centre of the country, which contains Madrid, the capital city. Madrid stands in a dreary barren plain, but it is a fine city, and the residence of the Queen of Spain and her court during part of the year. Not far from it is the famous palace of the Escurial, which was built by a king of Spain in honour of a great victory he had gained. It is built in the shape of a gridiron. Most of the country in the middle of Spain is flat and sandy, and the climate is variable, sometimes burning hot, and sometimes piercingly cold.

Farther north, in the province through which run the chains of the Pyrenean mountains, the climate is still colder, and none of the flowers and fruits of southern countries are to be found; but the sides of the mountains are clothed with oaks and Spanish chesnuts. Higher up, on those bare rugged rocks where nothing else would grow, are pines and fir trees, as in Switzerland. The Pyrenees are not nearly as high as the Alps; but some of the higher peaks are covered with snow all the year round.

In the south of Spain the climate is very hot, and the soil rich and fertile. It produces not only wheat and other kinds of grain in abundance, but rice and maize; and the wines most commonly used in Great Britain are made from grapes which grow in this part of Spain. There, too, the sun ripens the oranges and lemons, some of which are sent over here every year. An orange tree in fruit is a beautiful sight. It has a straight stem, smooth dark green leaves, and white blossoms which are very sweet scented, so that a grove of these trees in flower quite scents the air all round it.

Here are likewise figs, mulberries, olives (which are much used for food both by the Spaniards and Portu-

guese, and from which sweet oil is made,) and many other fruits, which make the south of Spain like a rich and beautiful garden. The chief town here is Seville, a city standing in the midst of a fertile plain scattered over with villages, churches, and vineyards, through which flows the river Guadalquivir, just under the city walls. The Spaniards are very proud of Seville; but though it has many very fine buildings in it, the streets are narrow, dark, and gloomy. They are built in this way to keep off the sun's rays.

Lower down still are the Straits of Gibraltar, which, as you have learned, divide Spain from Africa. On these straits rises the promontory of Gibraltar, a high and very steep rock, on the top of which is built a strong fortress which belongs to Great Britain. Gibraltar is the only Spanish town we possess; it has a good harbour for ships, and besides is one of the strongest and most important places in Europe. It was taken by Great Britain from the Spaniards in the year 1704, and we always keep soldiers there to prevent its being retaken.

In ancient times men used to think it was the end of the world, because they had never gone beyond it. Another curious thing about Gibraltar is, that it is the only place in Europe where monkeys are to be found wild. Amongst the shrubs and trees which grow among the steep cliffs, chiefly in places where man cannot tread, many of these animals may be seen climbing the trees, and playing their strange and diverting tricks.

The people of Spain are very different looking in different parts. In the south, about Seville, they are very dark, with black eyes and hair; in the northern parts they are fairer. The language they speak is sometimes called *Castilian*, from the province of Castile, but generally Spanish. It is a very fine-sounding tongue. In every province of Spain the common people wear a different dress, and some of them are very

pretty and tasteful, particularly at holiday times, when both men and women are very gaily clad. The ladies, whenever they walk out, wear, instead of a bonnet, a black silk scarf over their heads and shoulders, called a mantilla, and they usually carry large fans in their hands.

The Spaniards are very fond of music and dancing; even among the poor people it is quite common to meet with men who can play the *guitar*, a kind of stringed instrument played with the fingers.

The houses of the rich are built round a square, something like a court. This square has an awning spread over it in summer to keep off the sun, and the people spend much of their time in it, for the sake of coolness. In the middle of the day it is so hot that every one goes to sleep for two hours. This noonday sleep is called the *siesta*, and while it lasts the streets are all empty, and the shops shut, so that any one who visited a city during the siesta would suppose all the inhabitants had deserted it; but when the sun begins to go down, the streets are again filled with people, the windows are opened, and the noise and bustle of the town goes on as usual.

The Spaniards were formerly a very active and enterprising nation, and made many voyages of discovery to foreign countries, chiefly in the New World; and it was a king of Spain who fitted out the fleet with which Columbus discovered America, as you may remember reading in the Supplement to the Second Book of Lessons.

The religion of Spain is the Roman Catholic; its government is a limited monarchy. The Spanish parliament is called a *cortes* — and they are governed at this present time by a Queen, Isabel.

LESSON XV.

PORTUGAL.

THE river Tagus traverses Spain and Portugal, which looks in the map like a slice cut out of Spain.

A great deal of what has been mentioned about Spain might be said of Portugal also. The religion of the people is Roman Catholic, and their government a limited monarchy, like that of Spain. The language they speak is called Portuguese; it is very like Spanish.

The climate, like that of Spain, is different in different parts; but Portugal is on the whole the hotter country of the two. On the sea coast in summer it is warmer than almost any part of Europe: but some of the provinces inland are mountainous, and there it is cooler. There is one province where they have two springs. The first begins during the depth of our winter, in February. In June the crops are gathered; and then comes a burning hot summer, during which the grass and herbs are dried up, and the ground quite parched with drought. But in the beginning of October there is a second spring; the meadows are covered with new grass, spring flowers come out in the place of the autumn ones, the orange trees are full of blossom, and in short, for a month, or rather more, the people enjoy the pleasure of spring in the midst of autumn.

The fruits that grow in Portugal are much the same as those in the south of Spain. From Portugal we have most of our oranges and lemons, besides almonds, figs, raisins, and wine. In spite of the heat, the climate is thought so healthy that sick people often go there from Great Britain and other northern countries to recover their health.

The capital of the country is *Lisbon*, which stands near the mouth of the Tagus, where that river flows into the Atlantic Ocean. It is a large and important

city, and has a fine harbour for ships. About ninety years ago nearly half the town was destroyed by an earthquake. It has been since rebuilt, and the streets made much wider and handsomer than they were before. The old part of the city, which escaped the earthquake, is gloomy, dirty, and with very narrow streets.

Oporto is next in importance to Lisbon. It is pleasantly situated on two hills at the mouth of the Douro. The wine we call Port comes from its neighbourhood.

The Portuguese, like the Spaniards, are a very dark, swarthy race, with black hair and eyes. Their dresses are various. In Lisbon both men and women wear an immense cloak or great coat of heavy cloth thrown over their shoulders, even in the hottest weather. The women wear no bonnets, but a quantity of artificial flowers and other ornaments in their hair, and when they walk out, throw a white handkerchief over their heads. In other parts of the country they wear a black mantilla, like the Spaniards.

Both in Portugal and Spain mules are very much used to carry burdens, draw carts and carriages, and in short to do all that packhorses usually do with us. When they are wanted to carry baggage from one place to another, they are made to walk in a string, one behind another, secured with ropes, and at their head walks the man who guides them, who is called a muleteer.

In former times the Portuguese, like the Spaniards, were celebrated for the voyages they made to distant parts of the world, and the new countries they discovered.

The greatest Portuguese voyager was Vasco de Gama, who was the first person that ever went by sea to India, and discovered the Cape of Good Hope. His voyage was made in the year 1492, the same year in which Columbus discovered America. Brazil in South America, was colonized by the Portuguese, and formerly belonged to them, but now it has a government of its own.

LESSON XVI.

GREECE.

TURKEY and Greece are the most eastern countries in the south of Europe. They are situated on that part of the Mediterranean which is called the *Levant*, from a word which means the east or rising of the sun. In ancient times both of these countries went under the name of Greece. Greece was then a great and powerful country, and contained more wise and clever men, and more people skilled in all kinds of arts and useful works, than any other at that time in the world. The art of *sculpture*, as it is called, that is, of forming statues in marble, stone, or bronze, was one in which the Greeks particularly excelled.

In the time of the apostles Greece had been conquered by the Romans, and was subject to them. It was then that St. Paul made his journeys through it, and converted many cities to the Christian faith. In time all Greece became Christian; but they did not continue to live in the holiness and mutual peace and charity which had been taught them by the apostles. They became careless and worldly; they sank lower and lower in civilization as well as in goodness, till at last they became an ignorant and indolent people. In the year 1453 they were conquered by the Turks, a fierce and warlike tribe who came from Asia, and worshipped the false prophet Mahomet. They took Constantinople, then the capital of Greece, after a long and bloody fight; the Greek emperor (for the Greeks were governed by one at that time) was slain in battle; the Turks made themselves masters of the whole country, kept those of the Greeks who would not turn Mahometans in a state of bondage and subjection, and forced them to pay a heavy tribute.

But a few years ago the people of the southern part of the country, which now forms the kingdom of

Greece, resolved to shake off the dominion of the Turks. They rose in a body against their cruel masters, and succeeded in setting themselves free. Otho, a Bavarian prince, was chosen to be their king, and their government is now a limited monarchy.

Livadia, the mainland of Greece, is chiefly remarkable for containing the city of Athens, formerly one of the most famous in the world. It is now a poor-looking, straggling town, fallen into decay, and the stately temples and altars which its inhabitants had built to their gods, are all in ruins. Athens, as you may remember reading in the Acts of the Apostles, was one of the places at which St. Paul preached. In the province of Livadia are likewise found quarries which yielded some of the beautiful white marble used in the Greek sculpture.

The other chief province of Modern Greece is the peninsula of the Morea, or Peloponnesus, as it was anciently called. It is joined to the mainland of Greece by the Isthmus of Corinth, which is four or five miles wide, and contains the city of Corinth, which stands at the foot of a steep craggy hill overlooking the Gulf of Corinth, (also called the Gulf of Lepanto.) Corinth was a place at which St. Paul spent a year and a half. It was then a rich and great city; now, like Athens, half of it is in ruins.

The Morea is a very mountainous country; but its valleys are beautiful and fertile, and its climate warm and pleasant.

The Greeks are generally dark, and a very handsome race. Their dress is curious: the men wear a short frock and jacket of white cloth, with usually a red sash round the waist, and very full white trousers. On their head is a red cap with a long tassel behind. The women have a short vest or jacket, often embroidered with gold or silver, a loose flowing gown; and they too wear the same red cap as the men. At their marriages two rings and two garlands of flowers are

placed on the fingers and heads of the bride and bridegroom, and changed backwards and forwards several times. They then take some cake and wine together, and in the evening the bride, followed by a great crowd of her friends and relations, goes to her husband's house, where they usually have dancing, music, and feasting.

The Greeks speak a language called Romaic. Like the Russians, they are Christians of the Greek Church.

The islands of the Archipelago are much like Greece in their climate and productions. Some of them are rocky and barren; Corfu, Cephalonia, and Zante, in the Ionian Sea, abound in figs, olives, grapes, and other fruits, and flowers. Great quantities of the dried figs and raisins we use come from the Greek islands; and much of our salad oil is made from the olives cultivated there. The olives are crushed under a wheel which moves on a circular stone; they are then squeezed in bags by means of a screw. In this way two labourers can make ten or twelve jars of oil a day.

The other chief production of these islands is the fruit we call grocer's currants. These are not real currants, but a kind of a very small black grape which is cultivated with great care, especially in Zante. In September the currants are gathered, and after being carefully picked, are thrown one by one on a stone floor exposed to the sun in the open air to be dried. If the weather is bad, the drying process takes a fortnight. A thunderstorm will often spoil the fruit completely. When it is dried it is packed in barrels, sold, and sent to other countries.

Most of the inhabitants of the Ionian Islands are Greeks: but they once belonged to Italy, and have still many Italian settlers among them. They are under the protection of the British government.

LESSON XVII.

TURKEY.

TURKEY in Europa is a much larger and more important state than Greece. It is as you may see by the map, almost enclosed between the Mediterranean and the Black Sea, and its territories along the Danube touch those of Russia and Austria.

Turkey is inhabited by a race of men very unlike any of the other inhabitants of Europe. They are in fact an Asiatic tribe, and are, as we mentioned in speaking of Greece, Mahometans, that is, followers of the pretended prophet Mahomet, of whom we shall speak more particularly in the description of Arabia. Their sovereign is called a *Sultan*, which is the eastern name for a king. He is more despotic than any other monarch in Europe, for not only does he govern without any help from his people, but if any of his nobles or attendants displeases him, he instantly orders him to be put to death without trial.

The capital of Turkey, and the residence of the Sultan, is Constantinople, a fine city standing on the Bosphorus, or Straits of Constantinople, which unite the Black Sea to the Sea of Marmora, and separate Europe from Asia. Constantinople has one of the finest harbours in the world, but the Turks make very little use of it in the way of commerce, for they are a proud, indolent people, who hate trouble, and like to spend their days in lounging about, smoking long pipes, and drinking coffee, which they take so strong as to be quite thick and black, without milk or sugar. Their manners and customs are very curious. The men wear a close cap, and over it a shawl or muslin handkerchief, folded round the head in a peculiar manner, and called a turban. They have long flowing robes, very full trousers, and yellow slippers. When they come into a room, or wish to show respect to any one,

instead of uncovering the head, as we do, they put off their slippers; and instead of bowing, they lay their hands on their hearts, and say, "Peace be with you." The women dress much like the men, even wearing the same full trousers; but whenever they appear out of doors, they always wear a long veil of thick cloth or linen wrapped round them, so as quite to conceal their faces, only leaving holes for the eyes and mouth. No woman is allowed to appear out of her own house without this veil, and even when they are at home, every Turk keeps his wives (for he is allowed several) shut up in a secluded part of his house, where no strangers are permitted to see them.

The Turks never use chairs, but sit cross-legged on cushions; and they always eat with their fingers, instead of knives or forks.

The Turkish places of worship are called *mosques*. None but the men are allowed to attend them, and Christians may only enter them when they are empty. They have no bells, but instead of them, a man stands on the top of the mosque (for all their buildings are flat-roofed,) and calls the people to prayer at certain hours of the day.

Constantinople looks on the outside like a very splendid city, but inside the streets are narrow, dirty, and gloomy. At night a foot-passenger is in danger of being torn to pieces by the dogs, which are allowed to roam at large about the town without masters, and are as fierce as wild beasts. Owing to the carelessness of the people, and many of the houses being built of wood, fires are very common, and several times a portion of the city has been destroyed. But fires are not the only danger to which Constantinople is exposed. A destructive disease, called the *plague*, is very common all over Turkey, Egypt, and Asia Minor. Numbers of people are carried off every year by this terrible complaint.

The Turks possess several provinces on the Danube

—Moldavia, Wallachia, Servia, and others. These provinces are inhabited chiefly by Christians of the Greek Church. They speak a language called Sclavonian, which is something like Russian. The most remarkable town in these parts is Belgrade, the capital of Servia, the strongest fortress in the Turkish empire.

PART II.—ASIA.

LESSON XVIII.

PALESTINE AND SYRIA.

From Turkey in Europe we proceed to *Turkey in Asia*, so called because it forms part of the empire of Turkey. It includes, as you know, the whole of Asia Minor, and the districts of *Syria* and *Palestine;* and it is of these last that we shall now speak.

Along the course of the Mediterranean, and bounded on the east and south by the Arabian desert, lies *Palestine*, or the Holy Land, — that Land of Canaan which was promised to the Israelites in Egypt, as "a land flowing with milk and honey," — by which it was meant to express that it was a rich and fertile country; and a great part of it is so still, though *Judea* — that part of Palestine which contains Jerusalem — is for the most part very barren and dreary, from long neglect and want of cultivation. A chain or ridge of mountains runs through the midst of this district; and the two sides of this ridge are very different in appearance and character. On the western ridge the soil rises from the sea, towards the elevated ground, in four terraces, covered with rich verdure. But the eastern side is far less cheerful. From the top of the hill a desert stretches along to the *Dead Sea* or *Lake Asphaltites*, covered with nothing but stones and ashes, and a few thorny shrubs. The sides of the mountains be-

come larger, grander, and more barren, as we advance. By little and little the scanty vegetation fades and dies, — even the mosses disappear, and the rocks, which at first were quite white, are tinged with a red burning hue. In the middle of this dreary plain there is a dry and parched basin, or wide valley, enclosed on all sides by hills scattered over with a yellow-coloured pebble, and leaving one opening between the hills towards the east, through which the bluish waters of the Dead Sea, and the distant range of the hills of Arabia and Moab beyond, can be seen. In the midst of this country of stones we see on one side ruined building, stunted cypresses, and bushes of the aloe and prickly pear; and on the other a number of heavy square masses of building huddled together, very low, without chimneys or windows, and more like prisons or sepulchres than houses, which with their flat roofs would look like one broad level surface, if it were not for the church steeples, and the minarets, or tops of the Mahometan mosques, which rise here and there. This spot is Jerusalem, — not the Jerusalem of old times, where the Tribes of Israel went up every year to worship, for *that* was destroyed (as had been prophesied by our Lord, as well as in many parts of the Old Testament) about seventy years after Christ's birth, by the Roman Emperor Titus, so that not one stone was left upon another. But several years after this terrible destruction, another Roman emperor built the present city of Jerusalem, on the spot where the former city had stood; but the temple was never rebuilt, and it has been declared in the Scriptures that it never shall be.

Jerusalem, as it now is, is inhabited by people of many countries — Turks, Jews, Arabs, Asiatic Greeks, and some Europeans. Some of the Christians have built a church over the place which they suppose to have been that part of Mount Calvary (or Golgotha) where our Lord was crucified, and the tomb where His body was laid.

Just above the city is the overhanging brow of a hill, studded over with numerous low bushy olive trees, and from whose height the traveller can literally look down into the streets of Jerusalem. This is the Mount of Olives, where our Lord stood when he wept over Jerusalem, and where He sat with his disciples when He prophesied to them that the temple and the city should be destroyed. At the foot of the mount flows the brook Kedron, by which He prayed in the Garden of Gethsemane, on the night that He was betrayed; and in a sweet retired spot on a hill to the south, is the village of Bethany, where our Lord's friends, Lazarus and his sisters Martha and Mary, lived. The top of the Mount of Olives commands a view, not only of the whole of Jerusalem, but also of a large tract of Judea; and to the left may be seen the heights among which stands *Bethlehem*, the birthplace of our Saviour, — a village standing on a hill in the midst of vineyards and groves of olives, figs, and almond trees, and watered by running streams. It was near this beautiful spot that the shepherds were "abiding in the fields," on that night when they saw "the glory of the Lord" shining round them, and heard that a Saviour was born unto them in the "city of David," — the name by which Bethlehem was known, because David was born there.

The country from Jerusalem to the Dead Sea is bleak and stony, except the banks of the Jordan, which are almost hidden with dense thickets of trees, reeds, and bushes. The Dead Sea itself covers the ground where the wicked cities of Sodom and Gomorrah once stood. Its waters are very salt and bitter, and so buoyant that heavy weights thrown into them will rise to the surface like a cork.

Samaria and Galilee, unlike Judea, are still in many parts as fertile and smiling as Moses described them to the Israelites. Parts are dreary and stony, but other parts afford luxuriant pasture to the Arab flocks and herds Streams of water flow from the mountain sides,

and wild bees lay up in the holes of the rocks stores of honey, which are sometimes seen flowing down them; while olive and fig gardens, vineyards, and lovely wild flowers are abundant. But the inhabitants of these delightful regions are not suffered to enjoy their advantages in peace, for the country is infested with bands of Arab robbers, who overrun the fields and villages, and plunder the inhabitants.

Nazareth — the town where our Lord lived with his parents when he was a child, and from which the Christians are still called by the Jews "Nazarenes" — is in a valley surrounded with hills, and full in view of *Mount Tabor*, which has been supposed to be the mountain on which Christ so often delivered His discourses to His disciples. It overlooks a wide plain, beyond which lies stretched out a beautiful calm lake, with mountain peaks at its head, covered with perpetual snow. This is the Lake of Tiberias, the Sea of Galilee, or Lake of Gennesareth, for it has all these three names, — the lake where our Saviour first called some of His apostles from their fishing to follow Him; where he stilled the waves, and healed the man possessed by demons, and performed so many mighty works.

Of *Syria* there is less to be said than of Palestine, for it is nearly the same in its climate, soil, and productions, except that its mountains are higher and larger. The chief are those which form the chain of Libanus, or Lebanon, the mountain whose cedars are often spoken of in the Scriptures. Some of them still remain, though most are dead.

The chief *ancient* towns in Syria were *Damascus*, standing in a plain near the foot of Mount Lebanon, — the city near which St. Paul was struck down by a light from heaven, when he was on his way to persecute the Christians; and *Antioch*, once a great seaport, and the place where the disciples were first called

Christians, as you may remember reading in the Acts of the Apostles. The modern capital of Syria is Aleppo, called by the natives, Haleb.

The inhabitants of Syria and Palestine are mostly Mahometans, and their manners and customs are much like those of the Turks and other Asiatics. Their houses are almost all flat-roofed, and they often sleep, and almost live, on these roofs, for the sake of coolness. In the Scriptures this custom is often alluded to.

There are many Jews, and also Christians of different persuasions in Syria and Palestine; and there is one very singular tribe of men who inhabit the mountains, called the *Druses*. They are a race of hunters and robbers, and are very rude and barbarian. Their women wear a very curious head-dress, — a silver or gilt *horn* fastened on one side of the head, and from which their veil hangs down. The fastening on of this horn is so painful and difficult a business, that they often sleep in it, rather than undergo the trouble of taking it off.

LESSON XIX.

ARABIA.

BETWEEN the Red Sea and the Indian Ocean lies the peninsula of *Arabia*. It was in this country that, as you may remember reading in the Scriptures, the Israelites wandered for forty years, before they reached the Land of Canaan. Along the west of the peninsula is the Red Sea, which separates Egypt from Arabia; that famous sea, through which the Israelites passed on dry land, when they were led from their bondage in the Land of Egypt.

Arabia is divided into three parts, of which the largest is called Arabia Deserta, or the Desert; the smallest Yemen, or Arabia Felix, which means *Happy* Arabia; and the remaining part of Arabia Petrea, or *Stony* Arabia.

Stony Arabia — so called from its rocky soil — stretches about half way along the coast of the Red Sea. It consists of a strip of sandy and barren plain, behind which rises chains of rugged mountains. Among these mountains stand the two famous cities of Mecca and Medina. Mecca is famous as being the place where the false prophet Mahomet was born. Mahomet, as we mentioned in the account of Turkey and Greece, was an imposter, who pretended to be a prophet sent from God, and wrote a book called the Koran, which, he said, had been brought him from heaven by an angel. His religion was compounded in a great degree from the Christian and the Jewish religions. He taught that there was one God, and acknowledged Jesus Christ to be a great Prophet, though he declared that he himself was greater still. He converted not only the Arabs, his countrymen, but almost all the people of the west of Asia, to his religion; and when he was once at the head of an army, he put to the sword all who would not become followers of him.

All the Mahometans hold Mecca sacred, as the birth-place of their prophet, and many pilgrims come every year to visit it from all parts. Medina contains the tomb of Mahomet.

Happy Arabia, or Yemen, lies at the eastern corner of Arabia, between the Red Sea and the Indian Ocean. It is called *Happy* Arabia, from its being the only part of the country at all fertile; for though the coast is flat and sandy, the interior is adorned with pleasant valleys and hills richly crowned with sweet-smelling shrubs. The perfumes of Arabia, which are so often mentioned in Scripture, such as myrrh, frankincense, and balsams, all come from Yemen. The best coffee in the world is imported from Mocha, the chief town in Yemen, which stands on the Straits of Babelmandeb.

The whole of the middle and east of Arabia — *Deserta*, as it is called — is a barren sandy waste. You may remember reading a description of the Desert of

Sahara, in Africa, in the "Story of a Desert," in the supplement to the Second Book of Lessons. There is, therefore, no need for us to repeat what was said there, as all that was said of Sahara would suit the Arabian Desert equally well. They have both the same wide extent of sand, scattered over with little oases or spots of verdure. Very few trees will grow in this wilderness: one of these is the acacia, which produces the *gum-arabic*, which you may have seen in this country; another is the date palm. The palm tree, as you may have heard, is a tree with a tall, straight, smooth stem, and no branches. Its leaves, which are long and pointed, grow on leaf-stalks, which are sometimes called branches, and which grow out from the top of the tree somewhat in the shape of a fan, or of the spokes of an umbrella. This tree is common in Asia and Africa. The date palm will grow on the most barren soil, and a great blessing it is to the Arabs, for the fruit it bears, called dates (the same as those which are sometimes seen in grocers' shops dried,) are much used by them for food.

The Arabs of the desert are called Bedouins. As was mention in the "Story of a Desert," they are divided into tribes, and governed by *sheikhs*, or chiefs. Many of them live chiefly by plundering travellers. They all lead a wandering life, moving about with their families from one spot of green pasture to another; and they all dwell in tents. The animals they mostly use are camels and horses. You have read accounts of the camel, "the ship of the desert," as it is called, because it is almost as necessary in a desert as a ship at sea, from its great strength, patience, and docility, and from its being so constructed as to be able to go without water for a longer time than any other animal. The asses in Arabia are handsomer and larger than ours. But the chief pride of the Arabs consists in their horses, which are the swiftest and most beautiful in the world. An Arab treats his horse quite like a

companion; he never beats it, but guides it with his voice, and it lives in his tent with his wife and children.

The Arabs are a small, spare race of men, very agile, skillful horsemen, and capable of enduring great fatigue. Their food chiefly consists of barley-bread, camel's milk, and dates. Their dress is like that of the other Asiatics, only much simpler, — a blue cotton garment, with a girdle round the waist, and full trousers. The women's dress is much the same, except that they have no trousers, and wrap a veil round their heads whenever they go out. The rich Arabs pride themselves much on their head-dresses. They often wear as many as fifteen caps piled one upon the other. A muslin turban adorned with gold and silver fringe, is then wrapped round the whole.

They are a very hospitable people, and however poor they may be, they are always ready to share their food and tent with a stranger.

LESSON XX.

INDIA.

INDIA, or, as it is also called, Hindostan, is separated from the table-land of Thibet by the chain of the Himalays. Some of these stupendous mountains are among the highest in the world. Their summits are lost in the clouds, and covered with perpetual snow, while the plains at their feet are scorched by a burning sun. The rivers of Hindostan are not less remarkable than its mountains. The most famous is the Ganges, which takes its rise in the snow of the Himalays, and flows across the vast low plains of Bengal, receiving numerous tributaries in its course. These, during the rainy season, inundate the whole country, and convert it into a vast lake, extending for hundreds of miles in every direction. Boats are then seen sailing through

the rice fields, in which the ears of rice appear above the waters. Nearly the whole sea coast of Bengal consists of extensive salt-marshes, formed by the Ganges, which enters the sea by eight mouths. On one of these stands Calcutta, the capital of British India.

The southern part of Hindostan is very hilly; two chains of mountains, called the Eastern and Western Ghauts, extend along the opposite coasts of Malabar and Coromandel. They are not very high, but steep and rugged.

Hindostan abounds in immense forests, which contain a great variety of trees. One of the most remarkable is the teak tree, much used in building ships; its leaves are a foot and a half in length. But few Indian trees are so curious and so valuable as the palm, of which there are several species. In the southern provinces the cocoa-nut palm grows in profusion; it is more useful to the natives than any other tree. They not only use the nut as food, but of the fibrous husk which covers it they make cordage, mats, and many other articles; and the leaves are frequently used to thatch their dwellings. They also obtain, by piercing the trunk, a kind of wine which they call toddy. The palmyra, another species of palm, sometimes grows to the height of a hundred feet, and one of its leaves is large enough to shelter ten or twelve men.

The plants which are most extensively cultivated in Hindostan are indigo,* which produces a blue dye known all over the world; and rice, which is the chief article of food among the Hindoos. Both indigo and rice are largely exported to Europe.

The wild animals of Hindostan are so numerous that it would be impossible to mentioned them all. The most remarkable are the lion and tiger. This last, which,

* The stone blue used in washing linen is a preparation of indigo.

from its size and beauty, is often called the royal tiger, is so ferocious that it is an object of the greatest dread to the inhabitants. The elephant, which you know is the largest and also the most sagacious of quadrupeds, is common in India, and is greatly prized by the rich Hindoos, who use them to ride upon, and sometimes also as beasts of burden.

The Hindoos are in many respects a highly civilized nation, but they have many barbarous customs, and are, generally speaking, idolaters, with the exception of some Mahometans, and of a very few who have been converted to Christianity by missionaries.

The Hindoos are remarkable for being divided into certain classes called *castes*, which are hereditary, that is, each man belongs to the caste of his parents. Each of these has some religious rites of its own; and even some kinds of food which are allowed to one caste, are forbidden to another. Those of the higher castes look down on those of the lower, as if they were animals of a different species; and in general a Hindoo is much more attached to his caste than to his country.

The idolatry of the Hindoos is extremely barbarous and debasing. Among the various cruel rites which it enjoins, none are more dreadful than that which obliges every woman of the higher castes, who happens to survive her husband, to be burned to death with his corpse! The British government has used every endeavour to abolish this horrible custom, and it is gradually becoming less prevalent. The river Ganges is considered as sacred by the Hindoos, and it is by no means uncommon for parents to expose their children on its banks, at a time when the river is expected to overflow, so that they may be washed away and drowned. These wretched idolaters consider that they are doing a good action in thus sacrificing their innocent little ones; and sometimes even a man devotes himself voluntarily to death in this manner.

In person the Hindoos are slight and graceful, with

a complexion naturally brown, but which, in those who are much exposed to the sun, becomes almost black. They are very simple in their way of living; rice and other vegetables chiefly constitute their food, and the houses of all but the richest people are merely composed of bamboo canes and earth. Their dress usually consists of long robes of cotton or muslin. The poorer people, indeed, wear very scanty clothing, but, the women have always rings and other ornaments, either of gold or silver.

The manufactures of Hindostan are numerous; one of the most celebrated is that of muslin, which is far superior even to that produced in England. The Indian shawls are also remarkable for their beauty.

The population of India subject to, or dependent on, the British sway, amounts to nearly one hundred and twenty-five millions.

Ceylon. — The beautiful island of Ceylon lies to the east of the southern extremity of Hindostan, whence it is separated by the Straits of Manaar. The western coast of Ceylon consists of an extensive plain, beyond which ranges of wooded hills rise successively behind each other, and cover the greatest part of the island. The interior is called Candy, and has a king of its own, though subject to the British government. It is very unhealthy to Europeans, being composed chiefly of dense forests and underwood, called *jungle;* but it is fertile, and abounds in curious and beautiful plants.

On the sea-coast are several towns occupied by the British. The principal is Columbo, the seat of government, and of almost all the trade. The most peculiar product of the island is cinnamon, which is a very delicate kind of spice. It comes from a species of bay-tree, which grows wild over a great part of Ceylon; but that cultivated in gardens, near Columbo, is considered the best. The bark, which is the valuable part, is peeled off when the tree is about three

years old, and spread out to dry, which is all the preparation it requires. The inhabitants of Ceylon are called Cingalese. They are a fine race of people, somewhat resembling the Hindoos: like them, the Cingalese are gentle in disposition, and courteous in manners, but much given to deceit and dishonesty. Some of the forests in the interior of Ceylon are inhabited by a barbarous tribe called the Beddahs, who subsist by hunting, and sleep under the trees. They are so wild and savage that Europeans have little intercourse with them.

LESSON XXI.

CHINA.

THE great Empire of China is the most eastern part of Asia, and is thought to be one of the most ancient kingdoms in that quarter of the globe. For many ages it was ruled by its own inhabitants, but about 200 years ago China was conquered by a neighbouring nation called the Tartars, who have ever since been sovereigns of the country.

The ruler of China has the title of Emperor; he is despotic, but he is assisted in governing by officers under him, who are called Mandarins.

When a European first sets his foot in China, he will find the appearance of the country, the buildings, and the people, so totally different from anything he had seen before, that he might fancy himself in a new world. If he travels into the interior of the country, for many days he will see nothing but one flat wide plain, without the smallest variety; then again, for as many days he will be hemmed in between precipitous mountains, all alike, and all equally bare; and at last, perhaps, he will have a ten or twelve days' sail among lakes and swamps.

Some of the Chinese plains abound in cotton, and in all varieties of grain — others, still more fertile, are rich in all the fruits of the east; while among the mountains, to the southward, are the famous manufactures of porcelain, or *china*, as it is called, from the country where it was first made. For long before anything of the sort was made in England, the Chinese cups and plates were known and prized.

Among the lakes and morasses before mentioned, the people subsist by fishing. These lakes are full of little islands, every one crowded with villages and hovels. Here they keep tame a bird called a cormorant, which is trained to dive into the water, catch fish, and bring them to its master. Shoals of ducks also are kept in floating sheds or huts, and are so completely tamed that they will obey a whistle of their keepers. Barges moved by wheels are used to carry goods and people on these lakes.

But wherever the traveller may go in China, he will always find the country populous. Everywhere he meets with large masses of people, but no women. Thousands of men are seen in a single group, without one woman among them. The men look almost like women, with their long gowns and petticoats, odd peaked hats, and heads shaved all but one pig-tail behind. The women, on the other hand, from their short jackets and trousers, would look more like men, were it not for their braided hair, stuck full of flowers, and their little feet. The Chinese women are particularly careful to have small feet, and in order to make them so, they bind the feet of the girls, while they are babies, with tight bandages, so as to squeeze the foot out of its natural shape. This gives the poor little creatures so much suffering, that a kind-hearted father will often go from home, while his little girls are undergoing this dreadful process, that he may be spared the pain of hearing their cries. It is always wrong to attempt to force ourselves out of the shape

which Providence has given us, whether by cramping the feet, or squeezing the waist in tight stays (which is so common in our own country,) or in any other way.

Among other strange objects, the traveller will observe, at every ten or twelve miles, small military guard-houses, with a few soldiers oddly dressed in paper helmets and quilted petticoats, and, if the weather is warm, using large fans (which are constantly in the hands of every Chinese) to fan themselves, — unlike our manly soldiers, who brave both heat and cold fearlessly. These Chinese guards likewise show their respect for their officers by falling on their knees whenever they see one of them passing.

The meanest hut in China, with walls of clay, and a roof of thatch, is built exactly in the same manner and shape as the palace of the greatest lord, built with blue bricks, and a tiled roof, supported on handsome pillars. Neither the lord nor the peasant enjoys the comfort of glass windows. The rich have oil paper, horn, or gauze; the poor have nothing but holes in the roof.

Nothing is more striking than the bareness of the country. No cattle, no hedge-rows, no green meadows are to be seen; no trees, except in clumps near some *pagoda*, or temple of their gods, for the Chinese are idolaters.

The Chinese have always been very shy of receiving strangers into their country. Formerly there was only one town in the whole empire into which people of other nations were admitted, — the seaport of Canton; and even there they were guarded and watched almost like prisoners. But since our victories over the Chinese in the late war, four other seaports, besides Canton, have been thrown open to strangers, and foreign trade is carried on in all of them.

Pekin is the capital of China, and the residence of the Emperor.

A Chinese city offers a gay and curious scene. The houses are low, with curved overhanging roofs, and no chimneys. The shops are all glittering with varnish, gilding, and painting, and often bear labels assuring the passengers that they "don't cheat here."

The magistrates and officers are generally followed by a train of attendants carrying flags, umbrellas, painted lanterns, and other strange marks of office. The noise and bustle in the streets begin with daylight, and end only with sunset, after which all is quiet.

Paper printing, and gunpowder, were known in China very long before they had ever been heard of in Europe. The article of commerce for which China is most celebrated, is, as you know, tea; but so much has been said on it in the description of the "Vegetable Kingdom," that we shall not speak further of it here. The Chinese take tea at all hours of the day, and use scarcely any other drink. They pour boiling water upon some leaves in a tea-cup, out of which they then drink it without sugar. Their principal article of food is rice, which is much cultivated by them.

PART III. — AFRICA.

LESSON XXII.

EGYPT.

On the side of the Red Sea opposite to Arabia, is *Egypt*, the country where the Israelites lived in bondage for 260 years.

The present state of the Land of Egypt shows how exactly the prophecies of the Bible have been fulfilled. It was foretold by the prophet Zechariah, that "the sceptre of Egypt should depart away;" and by Ezekiel, that "there should be no more a prince in the land of Egypt;" and further, that "it should be a base king-

dom — the basest of kingdoms" — that "I should not exalt itself any more above the nations, nor rule over the nations any more." And how exactly has all this come to pass since the days of these prophets! The kingdom of Egypt was one of the most ancient and powerful kingdoms in the world. It was for ages the chief place where the arts and sciences were cultivated, and the public works and magnificent buildings which were raised by its kings, are still the wonder of the whole world. Most of these prophecies must have been fulfilled *after* the time of the Prophets Zechariah and Ezekiel, for it was not till a few years before the birth of our Lord that it was made a province under the Roman government. And since the conquest of it by the Romans, 1800 years ago, it has never been freed from a foreign yoke.

Egypt was, till very lately, governed by the Turks; but a Pasha, or governor under the Sultan, called Mahomed Ali, has rebelled against his master, and made himself an independent sovereign of the country.

Egypt consists of the valley formed by the great river Nile, which overflows its bank once a year, and covers the ground with a rich black mould, which fertilizes the soil. This fruitful tract of country, which is called the *Delta*, is surrounded on all sides by the great African deserts, except where the Red Sea divides it from Arabia.

The climate of Egypt has four distinct seasons. The first is that of the overflowing of the Nile, which takes place in July. The inhabitants make this event quite a festival: they assemble in crowds to see the dykes or dams (which are constructed on the canals) cut, so that the waters flow into channels ready made for them. But in spite of these canals, the waters flood the whole country, so that during the months of August and September it looks like one vast sea, in which the towns and villages rise like so many islands. During this season the air is moist and sometimes foggy. The secon-

season, which lasts through our winter, may be called the Egyptian spring; the days are hot, and the plants grow rapidly. The third season, which is at the same time with our spring, is unhealthy; but the fourth, which only lasts during the month of June, is very pleasant and temperate. The nights in Egypt are particularly fine. The sky is so cloudless, and the brightness of the moon so intense, that the natives who sleep in the open air, as they are much accustomed to do, usually cover up their eyes, in order to save them from being injured by the rays, as they are said to hurt the sight greatly.

The chief cities of Egypt are — Alexandria, on the Mediterranean, a great seaport; and Grand Cairo, the capital. Not far from Cairo are the famous *Pyramids*. These are the tombs in which the ancient kings of Egypt used to bury their dead. They are, as their name indicates, built in the shape of a pyramid, and are of immense size. At a distance their tops seem to reach the clouds, like high hills.

Within these pyramids many chambers have been constructed, which contain the coffins of the Egyptian kings. The dead bodies in these are curiously wrapped in many folds of linen, with sweet spices to preserve them from decay, and are called *mummies*. There are some still remaining to this day, which are at least 2,000 years old, and of these several have been brought to England.

Grand Cairo is a large and very curious city, full of people of almost every country in the world. Its inhabitants consist of Turks, Jews, and *Copts*, or native Egyptians, besides numbers of Greeks. But there are likewise travellers of every nation passing constantly through the town, and at every step in the streets the foot-passenger is in danger of being knocked down (as they have no raised footpath or flags) by a string of camels laden with merchandize, belonging to some caravan going to cross the desert; or a party of

Europeans on donkeys, which are used there much more than horses; or a troop of the Pasha's soldiers on horseback, with high saddles decked with scarlet and gold, and enormous stirrups, and clad in long flowing robes. Not many women are seen in this crowd; but when the Egyptian ladies do walk abroad, they wear a large black silk cloak, which covers them all over, from head to foot, and is brought over the forehead almost as low as the eyebrows, making them look like great bundles of clothes. In front they have a face-veil of thick white muslin, fastened to the head, close under the eyes, so as to cover the lower part of the face. On their feet they wear large yellow boots. The poorer women only wear one short blue cotton garment, though all who can afford it have some sort of veil on their faces. The men dress much like the Turks. They are a dark race of people, with olive skins and black eyes. The women often paint black lines round their eye-lashes and eye-brows, to make them still darker.

The Egyptians are mostly Mahometans, though, as was before mentioned, there are many Jews and Christians among them.

LESSON XXIII.

NOTES ON CENTRAL AND SOUTH AFRICA.

NUBIA lies to the south of Egypt, and is an equally hot country. It is called in the Scriptures Ethiopia. It has not a very fruitful soil, except where it is carefully watered, and for this purpose the water is raised by wheels, which are turned by cows.

The Nubians are mostly black. Some of them, like negroes, have flat noses and wooly hair, while others have straight features like Europeans. The dress of the common people is a loose blue cotton garment. Most of the Nubians are Mahometans, but many also are idolaters. The chief part of the country is subject to the Pasha of Egypt.

Abyssinia is a very mountainous country, and therefore has not so burning a climate as Nubia or Egypt. It contains the source of the Nile. It produces many tropical fruits and sweet perfumes. The country is much infested by wild beasts, such as lions, panthers, and leopards; but as they have been more fully spoken of in the description of India, we need not say more of them here.

The Abyssinians are governed by an Emperor, and their religion is Christian, but they are a very barbarous and ignorant people.

Barbary, or Morocco, as it is called, includes all that northern part of Africa which lies between Egypt and the Atlantic Ocean, and between the Mediterranean Sea and the Sahara or Great Desert. It is divided into a number of states, which are much alike in climate, soil, and the manners of the inhabitants. The sea coast of Barbary is fertile, but the interior is a sandy waste. The religion of the country is Mahometan, and the people, who are called *Moors*, are much like the Turks in their dress and manners. The different states of Barbary are, most of them, governed by despotic chiefs, called Deys. The most powerful was formerly the Dey of Algiers, a town on the sea coast. He was a *pirate* — that is to say, he constantly sent out ships to plunder the coasts of the Mediterranean, and to seize all the vessels they could find, and make slaves of the crew and passengers, who were compelled to work in chains, and were very cruelly treated. But in the year 1816, the British and several other nations determined to punish the Algerines. They blockaded Algiers with their fleets, and compelled the Dey to give up all his Christian prisoners, and to promise to abstain from such conduct in future. He did not, however keep his promise, and some years afterwards the French again made war on him to punish him, and took Algiers, which now, therefore, belongs to France.

The *Sahara*, or Great Desert, which lies to the south of Barbary, extends from Egypt to the Atlantic Ocean, and is in some places nearly 1000 miles broad. Almost the whole of this large tract of country is covered with loose sand, and produces scarcely anything but thorny shrubs and brambles. But so much was said of Sahara, in the "Story of the Desert," that there is no need to repeat it here.

Guinea is a large tract of country on the western coast of Africa. It is divided into Upper and Lower. Guinea is the hottest country in the world, but its inhabitants are so formed that heat which would almost kill a European, is pleasant and healthful to them. They are all negroes; and it is here that the wicked and barbarous *slave trade* is carried on. For 300 years past, European nations have sent ships every year to this coast to buy slaves, who were sold them by the negro princes, whose subjects they were, or who had taken them captive in battle. They are carried off in great numbers to America and the West Indies, where they are sold to different masters, who make them work in the coffee and sugar plantations.

But about thirty years ago, some good and benevolent men succeeded in persuading the British government to make the slave trade unlawful to its subjects. Several other nations followed the example of Great Britain, but unhappily there are still several who carry it on, and every year numbers of unhappy negroes are torn from their homes and families for ever, and made to work all their lives in foreign countries, for masters who are sometimes very harsh and cruel. Within the last ten years slavery has been abolished in the British West India dominions, and the freedom of the Negroes purchased from their masters at an expense to the British nation of twenty millions of money, as you will see in the account of America.

Guinea is extremely abundant in rice, fruits, and

sweet-smelling spices and gums. The natives are part Mahometans, and part idolaters, and all are ignorant and barbarian.

The country round the *Cape of Good Hope* is subject to Great Britain. It has a fine climate, and though in some parts bare and dreary, in others its soil is fertile, and abounding in all sorts of vegetable productions, and particularly in lovely flowers. A traveller can hardly walk a step without trampling on beds of splendid geraniums of all colours, jessamine, heaths, (not the heath that grows wild with us, but several foreign sorts which are much more beautiful, bearing delicate pink, red, or white flowers,) and many other plants which would here only grow in green-houses; besides creepers, which climb up the trees, or along the ground, and are of every colour of the rainbow. The country is equally rich in birds and butterflies of the most brilliant hues. There is one bird which inhabits the forests at the Cape, and which, though it has not a very gay plumage, is very useful; for whenever it finds a store of honey laid by the wild bees (which are very numerous) in the hollow of some tree, it gives a kind of cry, and leads the way to the spot where the honeycomb is. It is therefore called the honey-guide.

The capital of the Cape is called Capetown. It formerly belonged to the Dutch, and there are many Dutch as well as English settlers about the country; but the natives are either Caffres or Hottentots. The Caffres are a tall, fine-looking race of men, with dark-brown skins. They wander from place to place with their flocks and herds, and have no settled abode. They live chiefly on milk, and their dress consists principally of a cloak made of the skin of some wild beast.

The Hottentots, on the other hand, are short, stunted, and ugly, with yellow skins and wooly hair.

They live in villages called kraals, consisting of a number of huts in the shape of a cone, built close together. They talk an odd language which sounds like the clucking of a hen. Both Caffres and Hottentots are for the most part idolaters; but many of the Hottentots have been converted to Christianity, by the missionaries who have gone from Europe to preach the Gospel to the Heathen.

The *interior* of Africa is very little known, and the climate so bad for Europeans, that those who attempt to travel through the country generally die before they return. Most of the inhabitants are negroes.

PART IV. — AMERICA.

LESSON XXIV.

NOTES ON NORTH AMERICA.

AMERICA, as you have read in the Supplement to the Second Book of Lessons, was discovered by Columbus in the year 1492. Several European nations, following the example of Spain, sent out ships to explore the new continent, and the beautiful countries, and rich gold and silver mines they found there, disposed them to try to get possession of all they could. As the nations were some of them ignorant savages, and the rest not nearly so well skilled in war as the Europeans, they were easily overcome; and numbers of them were cruelly slaughtered by the conquerors, who made themselves masters of nearly the whole continent, and kept those of the natives who were not killed in a state of bondage. After much war and bloodshed both among the Europeans themselves and with the natives, the chief part of North America remained at last divided between the Spaniards and English, and the

South between the Spaniards and Portuguese. But in the year 1783, the descendants of the English who inhabited the centre of North America, separated themselves from Great Britain, and formed themselves into an independent republic, called the *United States.*

More recently still, a few years ago, the inhabitants of the Spanish and Portuguese colonies both north and south of the equator, followed the example of the English colonists, shook off the dominion of Spain and Portugal, and formed themselves into several independent republics.

The countries lying just above the United States still belong to Great Britain. British America consists of Canada, New Brunswick, the peninsula of Nova Scotia, and the islands lying near it.

Canada, An extensive British Territory in North America, it is divided into two parts called Upper and Lower Canada, under one Government. The entire length of both Canadas is about 1300 miles, and the average breadth about 300 miles, the area is estimated at upwards of 360,000 square miles, and the population at 2,000,000. The climate is generally healthy; the winters are long and severe, — the summers exceedingly warm. The soil generally is very fertile, and produces annually, large quantities of grain, which forms one of the chief exports.

The River St. Lawrence which may be classed among the first on the earth, passes through Canada for a distance of nearly 800 miles, — form its outlet, at Lake Ontario, to its junction with the Gulf of St. Lawrence.

The lakes of Canada are extremely numerous; the entire surface, being thickly dotted with sheets of water of various dimensions. The largest of these are Lakes Superior, Huron, Erie, and Ontario; the far famed cataract of Niagara, is situated between lakes Erie and Ontario, and forms one of the great attractions to trav-

ellers. The principal articles of export are; — Grain of all kinds, Timber, Potash, Furs, &c. The chief cities in Upper Canada are; Toronto, Hamilton, Kingston, Bytown, London and Niagara; in Lower Canada; Montreal, Quebec, &c.

New Brunswick, A British Province of North America, connected with Nova Scotia by a narrow isthmus — contains a population of about 200,000, and has an area of nearly 28,000 square miles. The general surface of the country presents a series of bold undulations; the climate for the most of the year is cold, but healthy; the principal articles of export are; Timber of all kinds, Coal, Fish, &c.

The River St. John, the great means of inland communication, is navigable for large vessels as far as Fredericton, 90 miles from the sea; but small steamers can ascend, at times, to Tobique, situated nearly 130 miles above Fredericton. The principal cities are St. John and Fredericton, the former being the most extensive shipping port of New Brunswick, situated at the mouth of the River St. John. It contains a population of 30,000, which is rapidly increasing; the city is well laid out, and contains many fine buildings, both public and private, when the proposed lines of Railway are completed connecting it with Canada, Nova Scotia, and the United States, it will probably become one of the first cities of British North America. Fredericton is of much importance, being the seat of Government and head quarters of the military.

Nova Scotia, — is another province of British North America, lying nearly parallel to the mainland of New-Brunswick and containing a population of about 223,000, and an area of nearly 16,000 square miles. The soil of Nova Scotia varies greatly in quality; in some places it is barren, in others exceedingly produc-

tive; generally the agricultural resources of this Province are great, and the climate in every respect healthy. It abounds in mineral wealth. The chief exports are, Coal, Fish, Timber, Gypsum, &c. The capital of Nova Scotia is Halifax, — with a population of about 25,000; it is the seat of Government and principal naval and military stations of the British Empire in America. The chief towns are, Pictou, Windsor, Annapolis, Yarmouth, Shelburne, Liverpool, Lunenburg, Amherst, and Truro. — Lines of Railway are now in progress, to connect Windsor, Truro, and Pictou, with Halifax.

Cape Breton — is politically considered part of the Province of Nova Scotia, it is separated from it by a narrow strait called the Strait of Canso; the population is about 55,000. The area is over 300 square miles. It is noted for its extensive coal mines. The soil is generally well suited for agricultural purposes, and the climate is very healthy. The principal exports, are, Coal, and Fish. The chief town is Sydney.

Prince Edwards Island, another British Colony, is situated on the Gulf of St. Lawrence, and separated from Nova Scotia and New Brunswick, by the Strait of Northumberland. It has a population of 90,000. The soil of this island is very fertile, and easily cultivated. The chief exports are, Oats, Barley, Potatoes, and Clover Seed. Ship building is carried on to a very large extent. The chief town is, Charlotte Town the capital of the island and seat of Government.

Newfoundland, a larger island of British America, at the mouth of the Gulf of St. Lawrence, has a population above 100,000, and an area of 57,000, square miles. The winters are very severe, and the springs are back-

ward, in consequence of the large quauntities of ice which float down from the Northern Regions. The principal exports are Fish, Oil, and Seal Skins. The chief town is St. John's, being the seat of Government and the only military station on the Island.

The *United States*, a Federal Republic, occupies about half the continent of North America. Its extreme length is 2,700 miles, and its greatest breadth 1,600 miles. A region so vast necessarily includes every variety of climate, from the long and frigid winters of the North, to the almost tropical regions of the South. The soil is equally variable. It is intersected by numerous navigable rivers, the principal of which are, the Mississippi, Ohio and Hudson. Railroads are open for traffic over most of this vast territory, and civilization is making rapid advances towards the Pacific shore. Its population is estimated at 23,000,000. Washington is the seat of Government. The chief cities are, New York, Boston, Philadelphia, Baltimore, New Orleans, with a great number of seaport and inland cities, whose population vary from 10 to 100,000. The useful Arts and Manufacturers of all kinds are everywhere fostered and protected by the government. The exports are principally, Rice, Cotton, Tobacco, Flour, Pitch, Turpentine, &c.

Mexico is a large tract of country on the gulf which is called by its name. It is covered with mountains, and almost its whole surface is very high above the level of the sea. The highest parts of the country are bleak, and produce but little vegetation; but as it slopes down to the sea the climate is pleasant and temperate, and the soil produces vast quantities of wheat, of which much is exported. The low plains along the sea coast — the *hot country*, as the natives call it, from its burning climate — is rich and luxuriant, abounding

in the most splendid flowers and fruits, and in forest trees of immense size. But this fine district is so dreadfully unhealthy that hardly any one dares to live in it, especially in summer.

Mexico, the capital of the country, stands in a beautiful valley covered with small lakes, above which rise two lofty mountains which were formerly volcanoes. The mexicans are mostly of Spanish extraction. They speak Spanish, and their manners and customs are much the same as those of Spain.

Some of the original inhabitants (called Indians, though different from those of North America) still inhabit Mexico; they speak a language of their own, and are very ignorant and barbarian.

LESSON XXV.

NORTH AMERICAN INDIANS.

THE Indians of North America consist of a great variety of tribes, all differing more or less from each other in appearance and habits, and all speaking different dialects. Most of them subsist by hunting the deer and other wild animals in which the country abounds. Many tribes use horses in their hunting expeditions, for in the plains, or prairies as they are called, numbers of wild horses are found. The horse is not a native of America; the wild horses of the prairies are, therefore, descended from such as have escaped from European settlements. They are much prized by the Indians, who catch them by means of a noose fastened to the end of a long stick.

The Indian tribes are almost always at war with each other; they are led to battle by their chiefs, whose authority is great in time of war. When dwelling at peace, all are equal, except that the bravest warriors are held in greatest estimation. Hunting and

fighting being the occupations of the men, a great deal of labour falls to the share of the women. Besides making clothes both for themselves and the men, they have to build the wigwams or huts made of boughs, in which the Indians live when stationary — to pitch the tents when travelling, and even to carry the baggage. However the Indian women do not murmur at their hard lot; and would consider a man degraded if he were to perform any menial office.

The different tribes of Indians are so numerous and so unlike each other, that it would be impossible to describe them all. Some have a copper-coloured complexion, while others are of a light brown: almost all have straight black hair, and deep set eyes; but some tribes are tall and handsome, and others on the contrary short and ill-looking. Their dress usually consists of a large mantle of buffalo-skin, embroidered in the middle and at the corners. On their feet they wear moccasins, which are a kind of boot or legging made of deer-skin, and often fancifully ornamented. When in full dress, an Indian warrior presents a most grotesque appearance: his face is painted with scarlet, green, or white stripes, according to his taste; his head is shaved in front, and the hair at the back is fastened to a plume of feathers, or a large tuft of horse's and deer's hair dyed red. Round his neck he wears chains made of carved shells, and on his fingers and arms rings of silver. The women's dress is much simpler, and is the same in all the tribes. Their glossy black hair hangs down their backs, without any ornament, but it is their pride to keep it constantly smooth and clean; and they stain the partings of their hair, and also the sides of their cheeks, with scarlet.

When their infants are quite young, the Indian women fasten them securely to a flat board, and carry them about, by means of a strap which passes round the forehead of the mother, who is thus enabled to perform her numerous tasks without much inconvenience.

In times of peace the Indians amuse themselves with various games and dances; they have also a war dance, which is always performed before going to battle. Their only music is a kind of drum, which is accompanied by a sort of humming made by the voice. Smoking is one of their principal enjoyments — they sometimes smoke tobacco, and sometimes a plant called sumach.

When one tribe wishes for peace with another, a party is sent bearing a pipe made of wood, and adorned in many ways; this is called the calumet, or pipe of peace. If, on the contrary, they desire war, they send a hatchet, with the handle painted red.

The Indians believe in one God, whom they call "the Great Spirit." They never fail to return thanks to Him for everything they enjoy; and never mention Him without a serious and respectful manner. Thus, though they have not been taught to hallow God's name as we have, they set an example which some among us might do well to follow. They have no idols, and no regular form of worship; but in some tribes it is the custom for every man to have some spot of ground, in which he goes to pray alone; and when thus engaged, not even his nearest relations venture to intrude upon him.

Some of the Indians have been converted to Christianity; but the wandering, unsettled life of the greater number is a great hindrance to their civilization.

The American Indians are sometimes described as cold and silent in disposition and almost devoid of natural affection — but this is a mistake. They are often warmly attached to their friends, and nowhere are more affectionate parents to be found. Some time ago a party of Indians of the Ioway tribe visited Dublin, and exhibited their curious dress and weapons. They were a fine set of men, with intelligent countenances and a very gentle expression. Their manners were calm and dignified, but not wanting in animation

Some of them had brought their wives, who were pleasing looking women, but not so tall and handsome as the men. Unfortunately the climate of Ireland did not agree with the health of these Indians, who were used to a drier air, and one of them did not live to return to his native country, but died soon after leaving Ireland.

LESSON XXVI.

THE WEST INDIES.

THE *West India Islands* are at the entrance of the Gulf of Mexico; and some of them close to the coast of South America. The greatest number of them belong now to great Britain; but several are the property of France, several of Spain, and a few belong to the Dutch, Danes, and Swedes.

These islands are many of them extremely beautiful; their surface is generally mountainous, and they abound in the finest fruit and the most lovely and curious flowers and trees. The *mahogany* tree, of which so many pieces of furniture is made — the pine-apple, which yields a delicious fruit, sometimes seen in hot-houses here — the tree which produces the *nutmeg*, contained in a crimson shell or husk, which is also sweet-smelling and called *mace* — the peppervine, a creeping plant from which black pepper is taken, — and many others equally remarkable, are common here. But the chief articles of cultivation are coffee and sugar. The coffee is an evergreen, its flowers are white and its berries red: these contain the seeds which are the coffee we use. It is grown in large plantations, and when the fruit is ripe it is plucked off and spread out to dry in the sun.

The account of the sugar-cane, and the boiling and preparing of the sugar, is given in the description of the Vegetable kingdom.

Formerly all the work in the West Indies was done by negro slaves; but slavery has lately been abolished

in the British dominions, and all the negroes in the islands belonging to Great Britain are free. Unhappily this is not the case with those belonging to Spain and to some other foreign nations, and in these slavery still continues. The largest of the British West India islands is Jamaica, whose capital is Kingston. The chief of the Spanish islands is Cuba: its capital is Havanna.

St. Domingo, or Hayti, formerly belonged partly to France, and partly to Spain; but about the beginning of this century the negroes shook off the government of the whites, and the country is now a free black republic.

LESSON XXVII.

PART I.

SOUTH AMERICA.

THE general features of this great peninsula are extremely simple. Through the centre, from north to south, stretches an expanse of low country, composed of marshy or sandy plains, and intersected by numerous rivers, amongst which is the celebrated Amazon, the largest river in the world. On the west of this, and parrallel to it, lies an extensive plain, elevated about 12,000 feet above the level of the sea, and upon which rises the lofty chain of the Andies. On the east of the central plain rises another extent of table land less elevated than the western one. These three natural divisions constitute the whole of the South American peninsula.

The Spaniards occupy the greater part of the western table land, and the Portugese possess the beautiful country to the east, under the name of the empire of Brazil.

The ranges of the Andes are among the highest mountains in the world. They derive their name from a Peruvian word signifying copper. They are rich in mines, not of copper only, but also of gold, silver, and

many other metals. On one of these mountains, called Pichinca, is the town of Quito, in Columbia. It is remarkable for enjoying a very agreeable and temperate climate, though situated directly under the equator, because it stands so high above the level of the sea. It is said, that of two persons meeting in the streets of Quito, one coming from the snow-capped summit of the mountain, and the other from the burning plains below, the first complains of the heat, and the second shivers with cold; the inhabitants of the town, meanwhile, find the temperature delightful — neither too hot nor too cold.

Compared with Asia and Africa, South America has but few wild animals. The largest is the lama, a beautiful creature, which is used as a beast of burden; its wool is also valuable, a delicate kind of stuff being manufactured from it. The lama approaches more nearly to the dromedary, or camel, than to any other animal; but it has no hump, and its graceful motions are very unlike the clumsy, hobbling gait of the camel.

The vegetable productions of South America are innumerable; the flowers are unequalled in beauty by those of any other quarter of the world, and a great variety of valuable medicines are obtained from Brazil, Peru, and Guiana. One of these, called Peruvian bark, was discovered in a curious way. A poor Indian, who was suffering with ague, happened to be alone in a forest, and being very thirsty he crawled to a pool of water, in which lay a tree blown down by the wind, — this tree was the cinchona or bark-tree. The Indian found the water very bitter, but he drank of it from extreme thirst, and afterwards became so much better, that he came again and again to the same pool till he was cured. The bark of this tree was thus discovered to be a cure for ague and many other complaints.

The plants chiefly cultivated in South America are maize or Indian corn, and cacao (commonly called cocoa,) from the nuts of which is obtained the pleasant nutritive drink called by the same name, and also chocolate. the natives cultivate great quan-

tities of the manoic plant, the root of which, when ground, is called cassava. The juice of this root is poisonous, and so is the root itself, till the juice is pressed out. Some tribes eat the meal dry, in the state of flour; others make it into cakes, which, though insipid, are very nourishing.

The native inhabitants of South America consist of various tribes, differing greatly from each other in habits and person. The Peruvians were formerly civilized, at least in many respects; they dwelt in cities, had a regular government, and were acquainted with many of the arts of life. They are now in a state of subjection to the Spaniards. They have been converted to Christianity, but are deplorably ignorant, and have greatly decreased in numbers since the conquest of their country by the Spaniards.

The lower parts of South America are inhabited by different races, generally becoming more and more barbarian as we approach the highest latitudes. The Patagonians, one of the most considerable of these races, are a very tall and large-boned people (so that travellers used to call them giants,) extremely ugly in person, and of a reddish copper-coloured complexion. They live partly by hunting, and partly upon wild roots. They possess horses which, having escaped from European settlements, have become wild, and are caught and tamed by the Patagonians, who not only use them in hunting, but frequently eat their flesh. At the most southern extremity of Patagonia, lies the Island of Terra del Fuego, a cold and miserable place, inhabited by a set of savages, hideous in person, and so degraded that they are said to be even below the New Hollanders in their habits of life.

PART II.

THE LLANOS, OR PLAINS OF SOUTH AMERICA.

THERE is something awful, but sad and gloomy, in

the uniform aspect of these steppes. Every thing seems motionless. Scarcely does a small cloud passing across the zenith, cast its shadow on the surface. All around us, the plains seemed to ascend towards the sky, and that vast and profound solitude appeared like an ocean covered with sea-weeds. According to the unequal mass of vapors diffused through the atmosphere, and the various temperatures of the different strata of air, the horizon was in some parts clear and distinct; in other parts, undulating, sinuous, and as if stripped. The earth was there confounded with the sky. Through the dry fog and strata of vapour, the trunks of palm-trees were discerned at a great distance. Stripped of their foliage and their verdant tops, these trunks appear like the masts of ships discovered at the horizon.

The *Llanos* and the *Pampas* of South America are real steppes. They display a beautiful verdure in the rainy season, but in the time of great drought assume the aspect of a desert. The grass is then reduced to powder, the earth cracks, the alligator and the great serpents remained buried in the dried mud, till awakened from their long letargy by the first showers of spring. These phenomena are observed on barren tracts of fifty or sixty leaugues in length, wherever the savannas are not traversed by rivers; for on the borders of rivulets, and around little pools of stagnant water, the traveller finds at certain distances, even during the period of the great droughts, thickets of mauritia — a palm, the leaves of which spread out like a fan, preserve a brilliant verdure.

The chief characteristic of the savannas, or steppes, of South America, is the absolute want of hills and inequalities — the perfect level of every part of the soil. Accordingly, the Spanish conquerors, who first penetrated from Coro to the banks of the Apure, did not call them deserts, or savannas, or meadows, but plains, *Llanos*. Often, in a space of thirty square leagues, there is not an eminence of a foot high. This resemblance to the serface of the sea strikes the imagination

most powerfully, where the plains are altogether destitute of palm-trees, and where the mountains of the shore and of the Oronoco are so distant that they cannot be seen. A person would be tempted there to take the altitude of the sun with a quadrant, if the *horizon of the land* were not constantly misty, on account of the variable display of refraction. HUMBOLDT.

Another traveller thus describes the scenery of the Oronoco: —

If we were surprised, delighted, and sometimes intimidated, by our near approach to the various creatures both by land and water; if we gazed with admiration on the beautiful plumage of the birds as we passed up the Oronoco, how much wonder, astonishment, and even terror, joined with a certain degree of pleasure, did we experience at seeing the inhabitants on the Apure increasing, as it were, an hundred fold in numerical proportion to what we had before seen or imagined? I should dread to describe what I saw and heard, were it not that all my companions could vouch for my accuracy. Crocodiles, fourteen and sixteen feet long, were basking on the sedges near the banks of the river, in groups of six or eight; every minute others were seen floating down the stream, many of which the men struck with the oars of the boat, and others were apparently wounded with ball, fired from pistols or muskets, but none materially injured. Tigers of a very large size were visible on the sands, and a larger animal once, which the men conceived to be a lion, but which was probably a variety of the leopard, as the king of the forest is unknown in this clime.

The numerous flocks of birds, flying from side to side of the river, and passing over our heads, were almost too many to count, and some of the flocks so prodigious as absolutely to shade, during the interval of their passage, the rays of the sun from our flechera. The shores of the river were lined with every sort of marine and

tropical birds, all of which, as if unconscious of the approach or power of man, suffered us to look at and pass them unheeded, from the large pelican down to the smallest genus of the crane. Here the flamingo was seen in all its stateliness and grandeur. The crown-crane was also perceptible, and a bird of the same genus as the crane, although far more elegant and beautiful in symmetry and appearance, which I had frequently seen in South Africa, where it is called the secretary. What with birds, beasts, amphibious animals, fish, and reptiles, the eye was at length tired with the everlasting succession, and the mind could wonder no longer. The mocking-bird, a native of these immense forests, gave me a most decisive proof of its powers of utterance, and its capability of articulating two or more syllables, with such clearness of sound and expression as to astonish all who heard it. To none of the parrot tribe do I yield a preference; nor did I ever hear one of them repeat words, and pronounce them so distinctly, as to create a doubt whether or not they were uttered by the voice of man.

On ascending the Apure, our people had, as usual, landed to cook their suppers, and to prepare food for consumption on the following day. The night had been wholly spent on shore by both officers and men. The hammock on which I slept was suspended between two large trees, at some height from the ground, and to windward of the fires. At day-light when I awoke, having occasion to speak to one of the officers, and not seeing him near me, I called aloud on his name. I called a second time, when I was told he had gone down to our boat. In a few seconds after I heard a voice, similar to my own, repeating equally loud, "Denis! Denis! Denis! Denis!" with the usual pause between. This call Captain Denis himself distinctly heard, thought it mine, and answered that he would be with me directly; and from the constant repetition he imagined that the nature of my business must be

urgent, and hurried himself accordingly. Several of the non-commissioned officers, who also heard the call, directed others to "pass the word for Captain Denis, as the Colonel wanted him." Our eyes and ears being at length directed to the spot, we discovered that my obliging, attentive, and repeating friend was sitting in the form of a bird, on the upper branch of a small tree near me, from whence he soon took his flight, making the very woods resound with the name of Denis.

HIPPISLEY'S *Narrative.*

LESSON XXVIII.

GUIANA.

GUIANA is the only country of South America in which the British have any possessions. This name is given to the country which extends from the mouth of the Amazon to that of the Oronoco. It is politically divided into the English, French, Portuguese, and Dutch possessions, but its natural divisions are three, —the coast, the woods, and the *back country*, by which is meant the high ground lying between the Amazon and the sea.

Guiana is subject to annual inundations, which render it very unhealthy. The rivers, swollen by the heavy rains, overflow their banks; trees, shrubs, and flowers seem to float on the surface of the water, and the wild animals are obliged to retreat to higher ground, or to take refuge in the trees. The sea coast is perfectly flat and very marshy, but where the thick woods have been cut down, the climate has become less damp and unwholesome. Paramaribo, a town belonging to the Dutch, which stands on the river Surinam, is one of the most prosperous settlements in Guiana. It has a beautiful appearance, from the streets being bordered with orange and lemon trees, which are loaded with fruit and flowers at the same time. The few travellers who have explored these dense forests

of Guiana, give interesting accounts of the various trees of which they are composed, and the animals by which they are inhabited. Many valuable medicines are obtained from plants commonly found in these woods. The flowers are of extraordinary beauty, especially the creepers which hang like garlands from tree to tree, covered with blossoms of every different colour. The birds of Guiana are as curious and beautiful as the plants. None, however, are to be compared to the humming-bird, of which there are several species, some so small as hardly to exceed the size of an humble bee. Numbers of these little creatures, with plumage so brilliant that it almost dazzles the eye to look upon, are seen in the early morning, darting swiftly from flower to flower, to seize the insects upon which they live.

The quadrupeds of Guiana are not so interesting as the birds. The most formidable of them is the jaguar an animal which most resembles the leopard. The peccari, or wild pig, is found in herds of sometimes 300 or 400 together. There are several species of deer, and a great variety of monkeys. The woods of Guiana also abound in venomous serpents, and insects, which are the cause of much more annoyance to the inhabitants than the wild beasts, being more difficult to avoid. These forests are inhabited by different tribes of Indians, who however, resemble each other in their habits of life. They live in small villages, composed of a few huts thatched with palm leaves. They generally cut down about an acre or two of the trees which surround the huts, and then plant the vegetables and fruit which are most useful to them. They subsist partly by hunting, and are very skilful in shooting with their bows and arrows, and also with an instrument called the blow-pipe, which they employ to shoot birds. It is made of hollow reed, which sometimes grows to the length of ten feet. An arrow, nine or ten inches long, and poisoned at the tip, is put into this tube; the Indian then applies his mouth to the

other end, and with one puff sends off the arrow, seldom failing to bring down a bird, even from the loftiest tree. The poison into which the Indians dip their arrows is so powerful that the smallest portion of it will cause death in a very short time. It is called wourali, from a plant which is one of its chief ingredients; yet the flesh of the animals thus killed is wholesome.

LESSON XXIX.

NEW HOLLAND.

AUSTRALIA, or New Holland, that vast island between the South Pacific and Indian Oceans, is one of the most singular countries in the world. It is surrounded by a ridge of steep mountains, which extend around the coast, sometimes quite near the ocean, and sometimes at a considerable distance from it. The inland country behind these mountains is almost entirely unknown, except the territory of New South Wales, which lie on the east coast.

The climate of those parts of Australia which we know is very fine, mild, and temperate. Being in the southern hemisphere, its seasons are, of course, the opposite of ours. December, January, and February, form its summer, when the weather is hottest, and the fruits and corn ripen. July is the middle of winter, though the weather is never very cold, and snow is rather a rarity in most parts. Its autumn is our spring, and its spring our autumn.

But there is no end to the strange things which might be told about this country. From the same cause which makes the seasons opposite to ours, the north is the hot wind, and the south the cold; and the west is unhealthy just as the east is with us.

Most of the trees which are natives of Australia are ever-greens. Their leaves generally grow edge-ways on the stalk, and have neither upper side nor under.

One kind of tree, which our settlers call the grass-tree has leaves like grass growing upon it. Another has a fruit which looks very like a pear, but if the traveller attempts to taste it, he will soon find his mistake, for it is as hard as wood. There is also a fruit like a cherry, which grows with the stone outside; this is eatable, and tastes like an indifferent damson. But very few of the fruits, herbs, or roots of Australia are fit to eat; the principal ones are a sort of ground nut, the root of the fern, and the stalk of the New Holland lily, a plant which bears a beautiful crimson flower. The soil, however, is extremely fertile, and suits all kinds of European fruits and vegetables, which are grown in great quantities by the colonists.

There are also some singular animals in New Holland. The most remarkable is the kangaroo, which has its hind-legs much longer than the fore-legs, and moves along in a succession of leaps. This and most of the other beasts of New Holland are what is called marsupial, from a word signifying a pouch; because the female has a kind of pouch underneath, in which she carries her young, who creep into it when they are tired, or when alarmed.

New South Wales, on the east coast of New Holland, is an English colony. Its capital is Sydney, a city standing on a sloping hill, on the shore of the harbour of Port Jackson.

New South Wales was, till very lately, a *penal colony*, that is, a colony where persons who have committed crimes in Great Britain and Ireland are sent as a punishment, either for a certain number of years, or for life. These people, who are called convicts, are either made to work in gangs or troops, with keepers set over them to watch them, or portioned out as servants to different masters. Their sufferings are great during this period, but very often, after a certain time, they are set free, and then, if they are diligent and active, they some-

times grow rich, and live just like the other settlers. You may see from this account, that New South Wales, in spite of its fine climate and rich soil, is neither a pleasant nor a safe country to live in, for the greatest part of the settlers are men who were wicked in their own country, and became still more so here from the influence of bad examples amongst them. Nothing is so corrupting as bad company, and these convicts often lead astray the most respectable settlers, and encourage them to be as bad as themselves. The children of such parents are not likely to be brought up to any good; and the consequence is, we are told, that it is quite a rare thing to meet with an honest, well-conducted man in the colony, and that robbery, and murder, and all the most horrible crimes are constantly being committed. Surely all the beauty and fertility of the country cannot make up for such dreadful evils. It is better to live among the fiercest wild beasts than amongst wicked and hard-hearted men.

Van Diemen's Land, an island to the south-east of New Holland, is a beautiful country, with a climate and soil quite equal to that of the mainland; but it is also a penal colony, so that there are the same objections to it as there are to New South Wales.

Another English colony has more recently been planted on the west coast of Australia, near Swan river. And since this, a very few years ago, a *fourth* colony has been established in the south of Australia where a town named *Adelaide* has been built. Neither of these two last colonies is penal, and they are therefore much better places for people to emigrate to, who like to live amongst honest men.

The natives of Australia are either black or copper-coloured, very thin, with long straight hair, and extremely ugly features. They are among the lowest and most ignorant savages in the world. They wear no clothes, except a cloak of the skin of the opussum, which they throw over their shoulders in cold or wet

weather, and tie round the neck. They bore a hole through the nose, in which they stick a piece of bone, and often paint themselves with lines of white clay. They sleep in rude huts formed of the bark of trees, never remaining long in one place, but wandering about together in companies, resting wherever they find food. They have no idea af tilling the ground, or of keeping any sort of tame animal; but they live on such wild beasts or birds as they can catch, or on the few roots the country produces. These last are dug out of the ground by the women, with a sharp stick.

They are divided into tribes, and these tribes are continually at war together. Their weapons are sharp wooden spears, and a curved piece of wood, called a *bomerang*, which flies off in a half circle, and comes whizzing back with great force. In war they are very cruel and ferocious, like most savages; and they are much given to thieving. They have the same sort of gross and absurd superstitions, as are common to other savage nations, and many, if not most of the tribes, are canibals, or eaters of human flesh.

Such, then, is the condition of savages. In mind and manners they are more like brutes than men; fierce, mischievous, treacherous, never safe for a moment from the attacks of their enemies, and often half-starved from being unable to find food; and the only pleasures they know are the enjoyments of eating and drinking, and plundering and slaughtering their fellow-creatures. Now what makes the difference between any one of us Europeans and these poor savages? Evidently it is *education*. If one of you had been left alone on the coast of New Holland while an infant, and had been brought up among those savage tribes, you would have grown up just like one of them. How thankful, then, ought you to be, that God has placed you in a Christian country, and granted you the benefits of a good education, and the light of the Gospel, of which so many nations are still ignorant.

LESSON XXX.

NEW ZEALAND.

NEW ZEALAND is another place where a British colony has been formed within the last few years. It consists of two large islands in the South Pacific Ocean, about 1,200 miles from New South Wales, which are both together nearly as large as Great Britain. A chain of lofty mountains, whose summits are covered with perpetual snow, and their sides clothed with forests, intersects the whole of the southern and a great part of the northern island. The country is well watered by rivers and streams, and some parts of it are very fertile. The climate is mild, and remarkably healthy. The British settlements are chiefly on the coast.

The natives of this country are a tall, fine-looking race of men; their colour either black or olive-coloured. They are far less savage than the New Hollanders for they cultivate the ground, though in a rude way. They have no spades, but dig holes in the ground with wooden poles, and then scratch the earth over with their hands. They are not wanderers, like the New Hollanders, because they cannot live by hunting, there being no wild beasts. They, therefore, live stationary in rude huts. Their dress consists of a mat or petticoat, and an upper cloak, made of a plant called New Zealand flax, which is only found in these islands. From this flax they also manufacture their fishing nets and cordage, &c. They all *tattoo* their faces and bodies, that is, draw lines or patterns with a bone or sharp point that pierces the skin, dipped in charcoal, or the juice of a plant. This is a very painful process; it is a long time before the skin heals, and the marks made are never effaced.

The New Zealanders are fond of fighting, and in war are very cruel, actually eating the flesh of the prisoners they take in battle.

The British have formed several different settlements in different parts of these islands. The principal is that near the town of *Auckland*.

EMBLEM of eternity,
Unbeginning endless sea!
Let me launch my soul on thee.
Sail, nor keel, nor helm, nor oar,
Need I, ask I, to explore
Thine expanse from shore to shore.

Eager fancy, unconfined
In a voyage of the mind,
Sweeps along thee like the wind.
Where the billows cease to roll,
Round the silence of the pole,
Thence set out, my venturous soul!

See, by Greenland cold and wild,
Rocks of ice eternal piled;
Yet the mother loves her child.
Next on lonely Labrador,
Let me hear the snow-falls roar,
Devastating all before.

But a brighter vision breaks
O'er Canadian woods and lakes;
——These my spirit soon forsakes
Land of exiled liberty,
Where our fathers once were free,
Brave New England, hail to thee.

Pennsylvania, while thy flood
Waters fields unbought with blood,
Stand for peace as thou hast stood.
The West Indies I behold,
Like the Hesperides of old,
——Trees of life, with fruits of gold!

No — a curse is on the soil;
Bonds and scourges, tears and toil,
Man degrade, and earth despoil.
Horror-struck I turn away,
Coasting down the Mexique bay;
Slavery there hath lost the day.

South America expands,
Mountain-forests, river-lands,
And a nobler race demands;
And a nobler race arise,
Stretch their limbs, unclose their eyes,
Claim the earth, and seek the skies.

Gliding through Magellan's straits,
Where two oceans ope their gates,
What a spectacle awaits!
The immense Pacific smiles.
Round ten thousand little isles,
——Haunts of violence and wiles.

But the powers of darkness yield,
For the Cross is in the field,
And the light of life reveal'd:
Rays from rock to rock it darts,
Conquers adamantine hearts,
And immortal bliss imparts,

North and west receding far
From the evening's downward star,
Now I mount Aurora's car, —
Pale Siberia's deserts shun,
From Kamschatka's headland's run,
South and east to meet the sun.

Jealous China, strange Japan,
With bewildered thought I scan
——They are but dead seas of man.
Lo! the eastern Cyclades,
Phœnix-nests, and halcyon seas;
But I tarry not with these.

Pass we now New Holland's shoals,
Where no ample river rolls;
—— World of undiscover'd souls!
Bring them forth, — 'tis Heaven's decree;
Man, assert thy dignity;
Let not brutes look down on thee.

Either India next is seen,
With the Ganges stretch'd between;
Ah! what horrors here have been.
War, disguised as commerce, came
Britain, carrying sword and flame,
Won an empire, — lost her name.

By the gulf of Persia sail,
Where the true-love nightingale
Woos the rose in every vale.
Though Arabia charge the breeze
With the incense of her trees,
On I press o'er southern seas.

Cape of Storms, thy spectre's fled,
And the angel Hope, instead,
Lights from Heaven upon thy head.
St. Helena's dungeon keep
Scowls defiance o'er the deep;
There Napoleon's relics sleep.

Mammon's plague-ships throng the waves;
Oh! 'twere mercy to the slaves,
Were the maws of sharks their graves.
Hercules, thy pillars stand,
Sentinels of sea and land;
Cloud-capt Atlas towers at hand.

Mark the dens of caitiff Moors;
Ha! the pirates seize their oars;
—— Fly the desecrated shores.
Egypt's hieroglyphic realm,
Other floods than Nile's o'erwhelm;
—— Slaves turn'd despots hold the helm.

Judah's cities are forlorn,
Lebannon and Carmel shorn,
Zion trampled down with scorn.
Greece, thine ancient lamp is spent;
Thou art thine own monument;
But the Sepulchre is rent:

And a wind is on the wing
At whose breath new heroes spring,
Sages teach, and poets sing.
Italy, thy beauties shroud
In a gorgeous evening cloud;
Thy refulgent head is bow'd:

Yet where Roman genius reigns,
Roman blood must warm the veins;
—— Look well, tyrants, to your chains.
Feudal realm of old romance.
Spain, thy lofty front advance,
Grasp thy shield, and couch thy lance.

At the fire-flash of thine eye,
Giant bigotry shall fly;
At thy voice, oppression die.
Lusitania, from the dust
Shake thy locks; thy cause is just;
Strike for freedom, strike and trust.

France, I hurry from thy shore;
Thou art not the France of yore;
Thou art new-born France no more.
Sweep by Holland like the blast;
One quick glance at Denmark cast,
Sweden, Russia, — all is past.

Elbe nor Weser tempt my stay;
Germany, beware the day
When thy schoolmen bear the sway.
Now to thee, to thee I fly,
Fairest isle beneath the sky,
To mine heart as in mine eye!

I have seen them, one by one,
Every shore beneath the sun,
And my voyage now is done.
While I bid them all be blest;
Britain, thou'rt my home, my rest,
My own land, I love *thee* best. MONTGOMERY.

SECTION III.

HISTORY OF THE HEBREW NATION.

FROM THE DEPARTURE OUT OF EGYPT TO THE SEPARATION OF THE KINGDOMS OF JUDAH AND ISRAEL.

LESSON I.

THE JOURNEYINGS OF THE ISRAELITES.

WHEN the waters of the Red Sea closed over Pharoah and his Egyptian host, the Israelite, — timid and distrustful as they were, — must have set forth on their way full of joy and confidence. The Lord had gloriously fulfilled his promise — the land of bondage was behind them, the land of promise before them; a desert indeed lay between, but he who had led them through the waves of the Red Sea, could surely preserve them under the dangers and difficulties of a desert journey. Moses, by whose hand God had delivered them from Egypt, was their appointed guide and governor. The wisdom of eighty years was upon him, with all the vigour and energy youth, and the experience of a desert life — for he had lived forty years with his father-in-law, on the skirts of the desert in the wilderness about Mount Horeb.

So delivered — so guided — and so governed, this multitude of people set forward on their way, not directly to the promised land, but to Mount Horeb, where God had first appeared to Moses, and where, as it seems, He designed to deliver a code of laws to His people for their future use.

Three times in the course of this journey they sinned against the Lord, — once in the wilderness of Shur, where they murmured because of the bitterness of the waters, when, at Moses' entreaty, the Lord showed him a tree to cast into them, by which they became sweet; and this place was called in consequence of this event Marah — bitterness.

Again in the wilderness of Sin, when this low-minded people mourned for the flesh-pots of Egypt — the land of their slavery — and the Lord fed them with quails and manna, which continued to be their food while they remained in the desert. And

Thirdly, at Rephidim, when they murmured for want of water, and the Lord commanded Moses to strike with his rod upon the rock in Horeb, and water poured forth; and the place was called in consequence, Massah, and Meribah, meaning temptation and strife.

In Rephidim they first encountered an enemy; for the Amalekites, who possessed a fertile valley of this mountainous region, came out to fight the children of Israel. And Moses, having sent out Joshua with a band of men against them, went to the top of a hill, and he lifted up his hands, and while his hands were raised to heaven, Joshua and his men prevailed against the Amalekites — but when his hands fell, the Amalekites prevailed; this was the sign by which God taught His people that it was through His help alone that they could discomfit their enemies. So Aaron and Hur supported the arms of Moses till the Amalekites were entirely defeated.

It was three months after they left Egypt that the Israelites reached the wilderness of Sinai, one of the mountains of the Horeb chain. Here they encamped, and Jethro, the father-in-law of Moses, who lived near their encampment, brought to him his wife and two sons, and assisted him by his advice and experience.

With feelings of awe and gratitude, Moses must have found himself again on the spot where God had first appeared to him in the burning bush, and appointed him the messenger of deliverance to his people.

That deliverance was now accomplished. And to Mount Sinai Moses was once more called; where, amidst thunderings, and lightnings, and smoke, and a great quaking of the mountain, the laws designed for the Hebrew nation were delivered to him.

But a sore trial awaited Moses below. Already, even while he was receiving the commands of the Most High on the mountain, this faithless people, indignant at his absence, had prevailed on Aaron to make them a graven image (intending probably to represent the true God) to carry before them. And he consented, and made them a graven image, and said, "These be *thy Gods*,*

Moses, hearing the tumult, descended with Joshua from the mountain, and in his natural indignation and despair, broke the tables of the commandments, which he held in his hand, and which he felt that the people were not worthy to receive. Then, all who were concerned in this sin were plagued with a great plague. But Moses implored the Lord not to withdraw Himself wholly from the people whom He had chosen. And the Lord heard his prayer, and commanded him to come up again on the mountain, with two other tables of stone ready prepared to receive "the words that were on the first tables."

Moses remained forty days on the mountain, and then descended again, to lay before the people the commands and ordinances of God, and to set them to work upon the temple they were to raise in the wilderness.

Their Almighty Deliverer had now revealed Himself as the one true God, who was the creator of heaven and earth, whom they were to worship, — but not under images made with hands, by which means the knowledge of the true God had been almost lost to the inhabitants of the world. His name was to be hallowed, and the seventh day of the week kept as a Sabbath, or rest — sacred to Him in commemoration of His rest (viz., the accomplishment of His work) after the six days or periods of creation. Then came the laws between man and his neighbour, which completed what are called the ten commandments. After these, a code

*Meaning thy Great God (the plural is often so used in Hebrew).

of laws was given to Moses, by which the Hebrew nation was to be governed in the promised land.

And in order that the Jews, — an ignorant, half civilized people, among whom a sense of the great unseen Creator had been nearly lost, — might be able to think of Him as dwelling among them, Moses was commanded to build a temple, in which sacrifices might be offered to Him, and where he promised to make his presence visible by a sign.

But as a wandering people could only have a moveable temple, instructions were given to erect a tabernacle or tent which could be taken down and put up again at pleasure. This tabernacle, covered with rich skins and curious tapestry, adorned with costly workmanship, and surrounded with an outer court confined by crimson hangings, must have formed a very striking sight in the midst of the tents of Israel, and in a mountain wilderness. In this outer court the priests offered the sacrifices for the people on the altar of burnt-offering. In the fore part of the tabernacle stood the altar of incense, the golden table for the shew bread, and other sacred things.

A curtain of blue, and purple, and scarlet, concealed the most holy place of the tabernacle, into which the high priest alone entered once a year, and in which were deposited the ark or chest containing the tables of the law, and afterwards a pot of manna, preserved as a memorial, and Aaron's rod which had blossomed, and by which he and his sons had been confirmed in the priesthood, when that office had been disputed by Korah and his rebellious company at a later period.

This ark itself was made of wood overlaid with gold, and supporting figures of cherubim. Over this part of the tabernacle the cloud rested by day, and shone like fire by night. And when the cloud was taken up, then the people knew that they should go forward in their journeys.

Thus were they blessed with a constant sign of God's presence among them.

Now this constant sign of something which told them that the Lord their God was near them, must, it seems to us, have prevented their being disobedient, or ungrateful, or in any way forgetful of Him; yet we know it was not so.

Perhaps too we think, that if we likewise could always turn our eyes to some star or cloud, and say He is there — it would certainly keep us from sin, for that we could not in his very presence displease our King and Creator. But it appears that the Israelites became so accustomed to this sight, that they thought little about it — they murmured — they were disobedient — they were unholy — they even became idolatrous; and whatever we may think, so, doubtless, it would be with us.

For after all we *do know*, though we cannot *see*, that God is among us. You *know* that when you do wrong, or think wrong, — when you are passionate, sullen, unjust, untruthful, or impure, — you do displease and grieve God's Holy Spirit. And we must remember that we are answerable for what we *know*, as well as for what we *see*.

LESSON II.

JOURNEYINGS OF THE ISRAELITES — (*continued.*)

It was on the 20th day of the second month of the second year — that is, fourteen months after the Israelites had left Egypt — that the cloud was lifted up from the tabernacle. The children of Israel knew, and obeyed the sign which told them to depart out of the wilderness of Sinai, that peninsula lying between the two gulfs of the Red Sea, where they had dwelt eleven months, and where stood the awful mountain from which the laws of the most High had been delivered to them.

Each tribe marched under its own leader and its own standard, the tabernacle being borne by the Levites. When the ark set forward, Moses spoke these words,

"Rise up, O Lord, and let Thine enemies be scattered, and let them that hate Thee flee before Thee." And when it rested, he said, "Return, O Lord, to the many thousands of Israel."

And so they journeyed — a mighty host — for the number of able men alone were reckoned at more than six hundred thousand. They were accompanied by Hobab, the brother-in-law of Moses, and son of Jethro, by whose experience and knowledge of the desert country, they desired to profit.

This multitude of men, women, and children, moved through the desert and wilderness of Paran, which occupied all the portion of Arabia, extending from the peninsula of Sinai northwards to the land of Canaan, on the west into Egypt, and on the east to the mountains of Seir in the land of Edom. This desert tract is now called El Tyh.

Twice during the course of their journey towards Canaan, was the patience of Moses sorely tried by the rebellious spirit of his people. They murmured again for the fish and vegetables of Egypt; then his spirit sank within him, and he complained that the burden of ruling this people was too much for him. So the Lord appointed seventy elders from among the people to assist him. They were again fed with quails; but those who murmured, were punished by a pestilence of which they died.

The next trial which awaited Moses came from his own family — from Aaron his brother, and his sister Miriam.

Pride and envy seem to have moved them against Moses; they complained of his having married an Ethiophian woman, and they said, "Hath the Lord indeed spoken only by Moses, hath He not spoken also by us?" It was on this occasion that it was said, "Now the man Moses was very meek above all the men that were on the face of the earth." And the Lord was displeased, for His servant Moses' sake, and He smote Miriam with leprosy. Aaron, as high priest, did

not share the punishment, which would have rendered him unfit to minister in his office. Moses, in his usual spirit of forgiveness, prayed for Miriam, and her leprosy ceased.

And now the Hebrew nation at last approached the land of promise; their wanderings seemed nearly over, and they encamped at Kadesh, on the borders of Canaan, while Moses sent spies to search the land, and to make a report of its fruitfulness, and the strength and number of its inhabitants. Each tribe sent a man; the leaders being Caleb, of the tribe of Judah, and Joshua, of the tribe of Ephraim, both tried men.

At the end of forty days the messengers returned to the camp, laden with the fruit of Canaan — with pomegranates, and figs, and grapes, from a brook which they thence called Eshcol (cluster or grapes,) so large that a bunch fastened to a staff was borne between two men. The report they brought of the country was favourable — it was indeed "a land flowing with milk and honey." So far the news was joyful to these desert wanders; but the spies added fearful tidings — that the land was possessed by powerful nations — that there were walled cities — and that some of the children of Anak, a people of a giant race, dwelt there.

This part of the report dismayed the faint-hearted and faithless people. In vain Caleb and Joshua spoke better things, and urged on them the Lord's promise "to be with them." The people wept all night, and in the morning they said, "Let us choose another Captain and return to Egypt.

Now was the Lord indeed wroth with his people, and would have destroyed them, and made of Moses and his posterity a great nation, but that he again entreated for them, and prevailed. Nevertheless a sentence had gone forth against this rebellious generation; they must turn away from the land of promise, and live and die in the desert. Only their children under twenty, who had not partaken of their sin, were to enter [illegible] with Caleb and Joshua, when their fathers should [illegible] more.

Yet now, by a strange perversity, did this rebellious people resolve to go in and possess the land by their own strength, though Moses with the ark, and those faithful to their duty, remained in the camp. They were of course, defeated by the Amalekites and other nations of Canaan.

Then the nation returned to their life in the desert; and we hear little of them for thirty-eight years, excepting in an attempt made by Korah and his followers, to assume to themselves the rights of the priests, whom God had set apart to minister holy things. They were miraculously destroyed, and the Levites confirmed in their rights by a miracle. Each tribe was commanded to take a rod and mark it with the name of their chief, and the rod which should blossom was to show the tribe chosen. Then Moses laid the twelve rods before the tabernacle, and the rod which blossomed was Aaron's for the tribe of Levi, and it brought forth almonds. The people were satisfied, and the rod was laid up in the ark, as a testimony or witness, that the office of the priesthood belonged to the tribe of Levi.

At length, after thirty-eight years spent in the desert, when a new generation had sprung up, probably bolder and more hardy than their fathers, they were permitted to approach the land of Canaan, and encamp once more at Kadesh. Here Miriam died; and here Moses committed the only sin recorded of him, through impatience and presumption, in respect of the command given to him and Aaron by the Lord, to bring water out of the rock for the people. Few particulars are given, but we know, that through this sin, Moses and Aaron were excluded from entering the land of Canaan.

LESSON III.

JOURNEYINGS OF THE ISRAELITES — (*continued.*)

AARON died shortly after on Mount Hor, and was succeeded by his son Eleazer. Moses had many other trials to endure. He had purposed to lead the people through the land of Edom, so as to enter Canaan by

the eastern side. But the Edomites refused to let them pass through their country, and the Israelites, on account of the promise made by God to Esau their ancestor, were not permitted to force their way. So Moses was obliged to lead them again through the desert, to the top of the eastern gulf of the Red Sea, in order to get round the land of Edom.

The people, dismayed at this disappointment, rebelled against Moses, and were punished by serpents of the desert attacking them. On their repentence, Moses was ordered to erect a brazen serpent, and all who, trusting in God, raised their eyes to it, were healed.

When this long and weary march round the mountainous country of Edom was accomplished, the Israelites had to encounter the Amorites, and other nations, who came out to oppose their advance. But the Lord was with them, and they subdued their enemies, and took possession of the country. At length they found themselves in the plains of Moab, separated from the land of promise only by the river Jordan. Here they encamped, to the dismay of the surrounding nations, especially the Moabites, and the Midianites.

The king of Moab, however, seems to have believed that the Israelites had more than mortal strength to aid them, for he made no attempt to do battle with them while they rested in the plain, but looked about him for other means of destroying them.

He sought the assistance of the prophet Balaam, who dwelt in the eastern country, and was a worshipper of the God of Israel. To him he sent rich offers to induce him to come and curse this people, for I suppose he thought that Balaam was a favorite servant of the God of Israel, and that whomsoever he cursed, would be abandoned, and fall an easy prey.

Balaam was at first forbidden by God in a dream to go. But on his again seeking permission, he was abandoned to his own evil wishes, though he was made aware that he would only be able to speak the words which God should put into his mouth.

And so he went. And seven altars were prepared at his desire for sacrifice to the God of Israel, and Balak took him to a hill whence he could see the tents of Israel, and he opened his mouth and blessed the people, and prophesied their future greatness. Three times Balak changed his position, but again and again the prophet poured forth blessings on the camps of Israel.

Then Balak and the Elders of Midian made no further attempt against Israel, but dealt friendly with them, and invited them, by Balaam's advice, to their idol feasts. And far more fatal was their friendship to this people than could have been their enmity. They were seduced into the society of idolaters, and learned to bow their heads to Baal.

It was on this occasion that Moses received his last commission, which was to extripate the nation of the Midianites, remarkable for its wickedness and idolatries. Accordingly he commanded the people to arm themselves, and a mighty and destructive war followed, in which the nation was nearly destroyed, and the wicked prophet Balaam slain.

And now the tribes of Reuben and Gad, and half the tribe of Manesseh, sought permission from Moses to settle on the east side of Jordan, in the countries they had lately conquered; because the lands were suited for grazing cattle, and these tribes were rich in flocks and herds. Moses consented, but only on condition that the fighting men of the tribes should accompanying their brethren to assist them in conquering the land of Canaan.

And now Moses' long and anxious life was drawing to a close; the Lord had called him to his rest, and the last days of his life were spent in the service of the people he had governed for forty years. No vain jealousy of Joshua his successor, no mortification at being deprived of the privilege of leading his people into the goodly land promised to their fathers, clouded his mind, or damped his exertions. He repeated to

the people a clear and lively history of their past lives from the period at which they and their fathers left the wilderness of Sinai and the mountains of Horeb, where the law was delivered, until the day on which he stood before them on the borders of the land of promise. He reminded them of the awful way in which the law had been delivered to them, and repeated all its most solemn commands. This history is contained in a Book of the Bible called Deuteronomy.* It was written by his desire, and delivered by himself to the priests to lay up in the ark. He afterwards gave a solemn warning to the people, in the form of a poem or song which he taught them; and ended with a blessing on each tribe separately, as he departed. For Moses went up from the plains of Moab to Mount Nebo; and from Pisgah, one of its heights, the Lord showed to him the land of Canaan the land which had been promised to Abraham, and which the children of Abraham were about to possess — its rivers, its seas, its mountains, and fruitful valleys lay stretched before him. Doubtless the Lord also showed his servant a better land, a heavenly Canaan, to cheer his last moments; but this could not have been revealed to the Israelites without preaching the Gospel, which was reserved for Jesus Christ, who brought life and immortality to light.

So Moses died on Mount Nebo.

"No monument marked the place where this man of God found his last repose; so that he who had constantly been zealous against all idolatry might not even in the grave himself give occasion of it;" for the Israelites, though they were often rebellious to him in life, would have been very likely to worship his remains.

LESSON IV.

SETTLEMENT IN THE HOLY LAND.

WHEN Moses was dead, Joshua† the son of Nun, of the tribe of Ephraim, who had already been appointed

* Meaning repetition of the law. † The name is the same as Jesus.

his successor, was commanded by God to lead his people into the land of Canaan, and exhorted to that faith, courage, and obedience, which was to be rewarded by success. "As I was with Moses, so will I be with thee. I will not fail thee or forsake thee. Only be thou strong, and very courageous, that thou mayest observe to do all the law which my servant Moses commanded thee; turn not from it to the right hand, nor to the left that thou mayest prosper whithersoever thou goest."

Thus divinely appointed, Joshua received from all the people a promise of obedience. He then removed his camp to the borders of Jordan, and sent spies across to Jericho, a fortified town on the other side of the river and the first they would have to besiege.

After this he prepared to cross the river with all his people, their wives, children, and substance, in face of many hostile nations. But a miracle was vouchsafed to him, as it had been to Moses, on the opening of his mission. Forty years ago the waters of the Red Sea had been divided for Moses and the Israelites to pass over into the wilderness; and now the same divine hand made a way for Joshua to lead these children across the river Jordan into the land of promise.

It was the time of harvest, when the Jordan was at its fullest, and accustomed indeed to overflow its banks; but as soon as the priests who bore the ark touched its waters, they divided, and stood in a heap on each side, while the whole people passed over on dry ground. So easily and peacefully was it ordained, that the children of Abraham should first enter upon their inheritance — soon to be won by the sword. They encamped at Gilgal, on the other side the river, where they celebrated the passover for the first time in their new land.

A goodly and pleasant land it was. On its borders were great cities; on the western side it was cooled by the breezes of the Mediterranean Sea. The Jordan, and two inland seas, viz. the Dead Sea and the Lake of Gennesareth, formed its eastern boundary; the hills

of Lebanon shut it in on the north; and a wilderness and desert country defended it from invasion on the south. The climate was remarkably favorable; in October (with which month the Israelites began their year) is the beginning of the cold season, and rains fall (called the former rain), which prepare the land for seed. In February it begins to feel warm, and the fruit trees stand forth in full blossom. In March comes the latter rain, which continues many weeks, after which it rains seldom. In April the hot season begins, and from June to September the heat increases, which is seldom interrupted by rain or tempest; but the parched ground is refreshed during the long and cool nights by plentiful dews. Under such a climate it is no wonder that the land, when under good cultivation, abounded with oil, corn, and fruit. The olive, the fig, the almond, and pomegranate, were plentiful; many houses were supported by props, covered with grape vines,—the cedar, the palm, and the oak, shaded the lower parts of the hills, while the flowers attracted multitudes of bees.

Such was the land promised to Abraham, which the children of Israel had come in to possess, and, as Joshua declared just before his death, they could bear witness "that none of the good things had failed which the Lord their God had promised them."

But the Israelites were not to take quiet possession of this goodly land. Many nations, abominable for their wickedness, must be rooted out. The first Canaanitish city which fell into their hands was Jericho. A miracle, and not the strength of their own arms, gave them possession of it.

They were commanded to compass the city once every day for six days—the men of war were to march first round it, the priests following with the ark, and all preserving perfect silence. On the seventh day they were to compass it seven times, and on the seventh time, at a blast from the trumpets, all the people were

to shout with a great shout, on which it was promised that the walls of the city should fall down. And the people did so for six days, and on the seventh at the blast of the trumpets, Joshua called aloud and said, "Shout! for the Lord hath given you the city!" And they shouted, and the walls of Jericho fell, and they entered and took possession. But the city was pulled down, and it was commanded that no man should afterwards rebuild it.

Thus was the first great frontier town delivered into the hands of Joshua; the second, Ai, was taken by force. Gideon, another great city, was saved by the craft of the inhabitants, who, under a false account of themselves, obtained a league or promise of safety from the Israelites; but they were reduced to a servile condition, for the Israelites had been expressly forbidden by the Lord to make peace with any of the Canaanites. They were utterly to extirpate them, on account of their enormous wickedness, lest they should learn their idolatry and corruption,—as in fact they did, from the remnant of those nations which (against the divine command) they allowed to remain in the land. But these nations were free to go away and settle in other countries, and the Israelites were not to pursue them. And there is reason to believe that some of them did thus save themselves by flight. But the greater part of them were puffed up with vain confidence in their false gods, and set the Lord at defiance, and accordingly perished.

Thus it was with the five kings of the Amorites, in the south, who, having heard of the mighty conquests of this favoured people, united against them. They were cut off, however, and one of the engagements near the city of Gideon was distinguished by a divine interposition. Joshua implored the Lord, and he said, "Sun, stand thou still upon Gideon, and thou moon on the valley of Ajalon." Meaning that time should be given to the Israelites before sunset to finish the battle and defeat their enemies.

With the destruction of these five kings, the whole of the south part of the land fell into the hands of Joshua. But the northern part still remained unconquered. At length an immense army was collected by divers nations, under the command of Hazor, king of Jabin; and the Israelites defeated them at the waters of Merom* a small lake of the Jordan, beyond the Sea of Galilee. And Joshua also cut off some of that giant race, the Anakims, whom the people had so greatly feared. Thus the land was possessed by the children of Israel (for those Canaanites who still remained in the land became subject to them,) excepting that portion near the Mediterranean, which they unwisely left in possession of the Philistines, who afterwards sorely troubled them. But they were desirous, no doubt, to sit down in peace on their new lands. Joshua, too, who was advanced in years, must have, been anxious to rest from his labours and settle the tribes. He removed his camp into the land allotted to his tribe — the tribe of Ephraim, one of the sons of Joseph; and he set up the tabernacle there, as was natural — at a place called Shiloh, where it continued till the days of David. The bones of Joseph, which his descendents had carried with them in all their wanderings, were now buried at Schechem, in the parcel of ground which Jacob had formerly bought of the sons of Hamor, and which had now come into possession of his children.

Having set up the tabernacle, Joshua set himself to finish the division of the land. And Caleb, who had been his companion when the twelve spies were sent to search out the land, came to remind him of the promise of Moses, who said — "Surely the land whereon thy feet have trodden, shall be thine inheritance and thy children's for ever, because thou hath wholly followed the Lord thy God." "And now," said Caleb, "behold the Lord hath kept me alive, as he

*Now called Lake Semichonitis.

said, these forty and five years, even since the Lord spake this word to Moses: and so I am this day four-score and four years, and yet am I as strong as I was in the day that Moses sent me." He then asks of Joshua Mount Hebron for an inheritance, promising to drive out a remnant of the Anakims, by whom it was in part possessed; and Joshua blessed Caleb and gave him Hebron.

Then the tribes of Reuben and Gad, and half Manasseh, who had come along with their brethren, and faithfully helped them during five years to possess the land, were dismissed honourably by Joshua, and exhorted to be true to the Lord their God. So the Israelites rested, and the land had peace many years. At length Joshua, finding that his end was approaching — in his own words, "that he was going the way of all the earth" — assembled the elders of all the people, and after reminding them of God's past mercies to them, and of His performance of all his promises, earnestly exhorted the people to put away idolatry from among them, and to be obedient to the Lord their God.

And so this faithful servant of God died, at the age of one hundred and ten years, and was buried among the people of his tribe.

LESSON V.

HISTORY OF THE HEBREW NATION FROM THE DEATH OF JOSHUA TO THE ESTABLISHMENT OF THE MONARCHY.

PART I. — *Some account of their Festivals and Ordinances.*

AFTER the death of Joshua, during the lives of the Elders whom he had appointed, the people seem to have gone on well, for it is said in Scripture, that "Israel served the Lord all the days of the elders that overlived Joshua, and had known the works of the Lord, and what he had done for Israel."

We may, therefore, suppose that during this period the laws were obeyed, and the great festivals and ordi-

nances of their religion, which Moses had appointed, were faithfully observed.

The land had been equally divided among the tribes, under the direction of Joshua, Eleazer the high priest, and the twelve princes or chiefs of tribes. Each tribe had its own separate division or province; and each family had its own lot of land, which could not be sold, as it must always return into the family of the original possessor after fifty years.

In every tribe there was a chief, called the Prince of the Tribe, or Head of Thousands, and under him were the Princes of Families, or Commanders of Hundreds; and each tribe seems to have been held bound to furnish a band of soldiers for the common defence, commanded by its own chiefs, while the whole army was led by some one of these heads of tribes, — often divinely appointed.

Festivals and Ordinances. — In order to unite the people in common [illegible] bringing to remembrance certain great events, which had marked God's dealings with them; and also to remind them of their constant dependence on Him for all their blessings, Moses appointed, by divine command, certain festivals or ordinances to be kept sacred, and in the way he directed.

First, then, was the weekly sabbath, or rest, which began at sunset on Friday evening, and ended at sunset on Saturday evening; and which was appointed to remind them of God as the Creator of all things, in commemorating the day which the Almighty, — having completed his work, — called the day of his rest. No labour was to disturb this day of solemn rejoicing among the people; no fire was to be lit in their houses, — no food cooked by them; so that their servants, and even their cattle, might partake of the general rest.

There were four great feasts, at three of which, all the males of the nation were commanded to appear before the Lord, "at the place which he should choose to put His Name there." The manifestation of God's

presence by some sign, is often spoken of in Scripture as His name; and as it was to the ark of the covenant, that the sign of God's presence was annexed, the place where that ark was set up was considered as the place where "the Lord had set His Name." That place now was Shiloh, — Joshua having set up the ark in the tabernacle there; and as sacrifices could be offered there alone, the three great festivals were held there. The first of these was the Passover, which commemorated the departure of the Israelites from Egypt, and which was held on the fourteenth evening of the month Abib, which, in honour of that great event, they were to call the beginning of months. A lamb was slain and eaten in haste, in a travelling habit, and upright posture, to remind them of the night on which they first partook of it, after having sprinkled their door-posts with its blood, according to divine command, that the destroying angel, which smote the first-born of Egypt, might pass over their dwellings. This feast included and was followed by the Feast of Unleavened Bread, which lasted a week, and reminded them of their hurried journey, when they could not wait to leaven their bread.

The second was the Feast of Pentecost, which *celebrated* the ingathering of the corn harvest. It took place fifty days after the Passover, and hence its name, which means fifty. It was also called the feast of Weeks, because it took place seven weeks after the first sickle was put into the corn; but it *commemorated* a far more important event, the delivery of the Law from Mount Sinai. It is commonly celebrated by Christians under the name of Whitsunday; and for them it commemorates a still more important event, the outpouring of the Holy Ghost, on the day of Pentecost, under the sign of tongues of fire.

The third festival was that of Tabernacles, — a joyous thanksgiving at the ingathering of the vintage and other fruits of the land; and commemorative to the Israelites of their life in the wilderness for forty years,

when they dwelt in tents or tabernacles. No festival was solemnized so joyfully as this. While it lasted, which was seven days, the people dwelt in tents wreathed with leaves, or booths made of boughs of trees. It was a festival suited to their delightful climate and lovely land, at the most genial season of the year.

Lastly, came the Feast of Trumpets. It was the custom among the Jews to announce each new moon by blowing of trumpets. At the first day of the new moon in September (the first month of their civil year,) a solemn festival was held, and announced by trumpets, — whence it was called the Feast of Trumpets. But this did not require the males of the nation to go up before the Lord.

At the three other festivals, when all the males being withdrawn, no one was left to defend their property, it was promised that no nation which was at war with them, should invade their land (as it would have been natural, humanly speaking, that they would,) and we accordingly find no record of their having done so.

Besides these festivals, were two remarkable ordinances. Every seventh year was a sabbath of rest, during which the land was to lie fallow. And to avoid the natural inconveniences which would follow from this ordinance, the sixth year brought forth fruit for three — that is, for its own year, for the seventh or Sabbath year, and the eight or sowing year.

The Jubilee, or year of rejoicing, was another most beneficent ordinance. It took place every fiftieth year, when any man who from misfortune had been obliged to part with his liberty, received it again; and all who had been obliged to part with their land, received it again.

Another beneficial regulation was, the setting apart the tribe of Levi to minister to sacred things, and to be teachers and expounders of the law. Having no separate possession, they were provided for out of each tribe, and were therefore distributed over the whole nation, and must have contributed very much to prevent its falling into barbarism.

LESSON V.

HISTORY OF THE HEBREW NATION.— *continued.*

PART II.— *Government by Judges.*

In the history of the Twelve Tribes of Israel, or Hebrew nation, and their government, it must be remembered that God was pleased to allow them to look to Him as their supreme Ruler or King, whom they might consult in all their difficulties, through His high priest, at "the place where he had chosen to place His Name" — viz., where the tabernacle was set up. Thus their government has been called a Theocracy (divine government.) When they fell, as they so often did, into idolatry, they were then punished by being left to themselves, which always ended by their falling into the hands of their enemies, — either of those Canaanites whom, contrary to God's commands, they had suffered to remain in the land, or of the Midianites, or Moabites, or Philistines, or some other neighboring nation. Suffering and oppression usually brought them at last to a sense of their sin; then they sought once more their God and King, and He, unwilling wholly to abandon His people, raised up deliverers for them. Some of these deliverers of Israel were not only warriors, but wise and just judges, who put down idolatry, restored obedience, and during their lives preserved the people free and happy. Such was Othniel, the son of Caleb's younger brother, who was the first judge raised up after Joshua's elders. He delivered Israel from the king of Mesopotamia, and judged the land in peace for forty years.

Sometimes God raised up judges who were not themselves warriors, but who excited and directed some military leader to deliver the people from their enemies. Such was Deborah, the wife of Lapidoth, who judged Israel after Ehud. And when the Israelites had fallen into the hands of Jabin, king of one of the Canaanite cities, she was commissioned to call on

Barak, the son of Abinoam, of the tribe of Napthali, to raise an army and deliver his nation. He refused to go unless she went with him. Deborah consented, but she warned him that the journey would not tend to his honour, for that in consequence of his faint-heartedness, the Lord would deliver up Sisera, the enemy's genera., into the hands of a women, not of herself, but the wife of Heber the Kenite. Accordingly, though the Canaanites were defeated, Sisera was slain by the hand of a woman.

The song of Deborah on this occasion ends thus: —

> "So let all thine enemies perish, O Lord,
> But let them that love Him be as the sun,
> When he goeth forth in his might."

Again, some of these deliverers were simply men of great valour, unusual strength, and skill in war, which qualities were of course increased by the elevating thought, that they were called by God to deliver their nation. Such was *Ehud*, who delivered the children of Israel out of the hands of the Moabites, and who lived before Deborah's time. Such was *Gideon*, whom God commanded first to destroy the altar of Baal in his native city, and then to deliver his people out of the hands of the Midianites, whose idolatries they had followed. His commission was confirmed to him by a miracle. *Jephtha* the Gileadite, who saved Israel from the Ammonites, was another of these warlike deliverers. And *Sampson*, the son of Manoah, of the tribe of Dan, was another also, to whom God gave vast strength, but who performed no great act of deliverence, because his own obedience was very imperfect. He was permitted to show forth the divine power, indeed, against the Philistines, when he pulled down the pillars of their idol hall, but he involved himself in their destruction, after having judged Israel in an irregular manner for twenty years. After the death of Sampson, we hear of no Judge or deliverer in Israel for many years. The people occasionly inquired of the Lord, through the

high priest. But they sunk into a lawless state, and "every man did what was right in his own eyes."

The state of things was not much better while Eli the high priest judged Israel for forty years. He was not himself wicked, but he knew that his sons disobeyed God's laws, and "he restrained them not." Therefore was the Lord displeased against Eli and his sons, for they caused Israel to sin. And the people went out against the Philistines, and were smitten by the Philistines; then, in their presumption, thinking they should be victorious if the ark of God were among them, the elders of Israel sent to Shiloh, and brought the ark into the camp, and the two sons of Eli came with it. And a great shout of joy was raised in the camp, but vain was the shout and the confidence, — the ark indeed was there, but the Lord was not present with the ark. And the Philistines came upon them with great slaughter, and carried it off.

Old Eli sat by the roadside watching (for he trembled for the ark,) when one who had fled from the field of battle arrived and told the dreadful news — "Israel has fled before the Philistines; thy two sons, Hophni and Phineas are slain, and the ark of the Lord is taken." And when mention was made of the ark of God, Eli fell backward from his seat, and died.

The ark, indeed, was taken by the idolatrous Philistines, but it proved a terrible evil to them. Wherever they carried it during the seven months it remained with them, there the people were smitten with a sore disease: so they sent it back to Israel with peace offerings. And it was brought at last to a place called Kirjath-jearim, where it remained twenty years.

But the Lord had not been all this time without a witness; for Samuel the prophet lived, and was a faithful teacher of righteousness, and reprover of sin. He was the son of Elkanak and Hannah, both faithful worshippers of God, and had been granted to their prayers. In pious gratitude they devoted him to the

service of the Lord from his childhood, and he was brought up by Eli in the tabernacle. When still very young the Lord made him the bearer of a solemn warning to Eli of the ruin which was coming on his house. This was before the ark was removed from Shiloh. After that event, and the death of Eli, Samuel, who had long been established as a prophet in Israel, judged the people for many years. He endeavored to reform them, and persuaded them to put away their idols, and turn with sorrow and repentence to the Lord; then they implored him to pray for them. So the Lord was again favourable to them through the prayer of Samuel.

But when Samuel was old, his sons became judges, and they walked not in their father's way: they were unjust, and the people grew tired of their government, and desired a king, — forgetting that the Lord their God was their King, and that their prosperity did not depend on their judges so much as on their own obedience.

Samuel consulted the Lord, and was commanded to make them a king.

LESSON VI.

PART I. — HISTORY OF THE ISRAELITES, FROM THE ESTABLISHMENT OF THE MONARCHY TILL THE REVOLT OF THE TEN TRIBES.

After Israel had been under the government of judges — such as those spoken of in the last chapter — for more than 400 years, they demanded a king; and though reproved for that low state of feeling which made them dissatisfied with the government which God had appointed for them, they were indulged in their desire. Samuel the prophet was directed to choose Saul, the son of Kish, of the tribe of Benjamin, a young man of unusual strength and stature, and to annoint him king over Israel. This annointing, or pouring oil on the head, was a solemn rite among the Jews; it marked a man chosen by God, and was used for the

high priest as well as for the king. Hence the king was called the *Lord's annointed*, and Christ was afterwards so called, though he did not use this rite, because his kingdom was not of this world. But God, though he had permitted his people to choose his supreme governor, did not leave them to their kings; and Saul, though a brave warrior, soon showed how little he was able to set before his people the example of obedience to God, and self-command.

From this time the nation was never left without a prophet or inspired teacher, who should reprove both kings and people when they sinned, and should keep them up to their duty towards their great invisible Ruler. For as the priests confined themselves chiefly to the outward ceremonies of their religion, it was the prophets who kept alive the true spirit and practice of it. So thence a king, high priest, and prophet, were the three most important offices in the Hebrew nation.

Samuel then ceased to be a judge, but he continued to exercise the higher office of prophet all his life. And when Saul committed an act of disobedience and falsehood towards God, Samuel was sent to reprove him, and to declare that the kingdom was rent from him, that is, from his family (for Saul reigned nearly forty years.) Then the king was very sorry, and endeavoured to detain the prophet by laying hold of the skirt of his robe; but Samuel rent it from him, saying, "The Lord hath rent from thee the kingdom of Israel this day, and given it to a neighbour of thine that is better than thou." So he departed. Now Samuel was sorry for Saul, and he mourned for him, but he went no more to see him, because his advice and warnings had been in vain.

The person whom Samuel was commissioned to choose as Saul's successor was David, then a very young man, who belonged to the tribe of Judah. He was the youngest son of Jesse, and the great grandson of Boaz and Ruth. Ruth, his great grandmother was

a Gentile Moabitish woman, who having married an Israelite, became a worshipper of the one true God. It is important to notice king David's family because our Lord Jesus Christ was (according to the flesh) descended from him. And we should observe, that Christ, who was to be the Saviour of both Jew and Gentile, was descended from a Jew and a Gentile, from Boaz and Ruth.

The choice of David was a step in the completion of God's promises, and of prophecy. It was promised to Abraham, that "in his seed all the families of the earth should be blessed." By Isaac this promise was limited to Jacob's family — by Jacob to the tribe of Judah; and now Samuel was desired to fix on the person in that tribe from whom the Messiah was to spring.

David was very young when Samuel annointed him, and he did not become king till many years after. These were years of danger and distress to him, during which he showed remarkable prudence and humility, as well as faith and obedience to God. He made no attempt to obtain Saul's crown, but waited year after year, often in great danger of his life, till God should see fitting to fulfil his promise. Many of his beautiful psalms appear to have been composed under these trials.

Some of David's greatest afflictions arose from Saul's jealousy. The king had heard of the young shepherd's skill in music, and he sent for him and promoted him to be his armour-bearer, that he might be always at hand, to soothe, with his sweet strains on the harp, the melancholy with which the king was devoured. But Saul soon grew jealous of his favorite, whom he knew to have been chosen by God as his successor, and he repeatedly sought to kill him, though he had given him his daughter in marriage as a reward for some gallant deeds, and though he was the bosom friend of Jonathan his son.

David led for some time the life of an independent chief, at the head of a small band, but often in want

of the necessaries of life; during this time he had Saul's life twice in his power, but would do no evil "to the Lord's annointed," and he afterwards took refuge among strangers.

Saul reigned forty years, when having been defeated in a battle with the Philistines, and his son Jonathan slain, he threw himself on his own sword and died.

The tribe of Judah, to which David belonged, immediately acknowledged him as king, and he reigned in Hebron, one of the cities of Judah, for seven years and three months — the rest of the tribes having chosen Ishbosheth, the son of Saul; but after his death David became king over all Israel.

David began his reign by taking the stronghold of Zion from the Jebusites, and making Jerusalem (to which it belonged) the capital of his kingdom. On Mount Zion he built his palace, and here he placed the ark within its tabernacle, when he brought it from Kirjath-jearim, where it had remained ever since the Philistines had sent it back to Israel. David celebrated the bringing up of the ark with great rejoicings, and greatly desired to build a suitable temple for it, but Nathan the prophet was commanded to tell him that this honor was reserved for the son who should reign after him — for Solomon.

David's reign was long and glorious, though troubled by the rebellion of his son Absalom. It was prosperous, because king David believed and trusted in God, and obeyed his will in the government of his nation — or if he did forget his duty, was deeply penitent. But God's moral law or the practice of virtue, was very little known on the earth, even among the Israelites, to whom it had been taught by Moses more than 400 years before. And it does not seem to have been as teachers of righteousness, that kings were raised up, but as examples of obedience to their Divine ruler, and guardians of His worship. It was the prophets who were employed to teach righteous actions,

and to be examples of good living. Of these, there seem from this time never to have been wanting a supply; and they probably underwent a course of instruction for their office, as we read of the schools of the prophets. They seem indeed to have increased in number and importance, until after the captivity of the Jews, when it pleased God to withdraw from them this mode of supernatural instruction, and leave them to their sacred writings.

David employed the last years of his life in making preparations for the building of the temple. He appointed his son Solomon king over Israel, and his beautiful thanksgiving on this occasion, as well as his prayer for his son and people, that they might keep God's commandments, are recorded. He died full of years and honour

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PART II. — REIGN OF SOLOMON.

Solomon seems to have begun his reign full of high hopes and pious intentions. Immediately on his becoming king, he went up to the tabernacle to offer burnt offerings in token of his obedience. God was pleased to accept them, and to appear to him in a dream, saying, "Ask what shall I give thee," and Solomon asked wisdom and knowledge, that he might be able to govern his great nation. The Lord granted his request, and promised to add to it riches and honour.

Solomon's reign was indeed crowned with riches and honour, and he was celebrated for his wisdom and knowledge, not only in his own land but among foreign nations. His one great work, however, was the building of the temple at Jerusalem, which occupied the first seven years of his reign.

This temple was built on Mount Moriah, as David had appointed, in the very spot where the angel of the Lord had stayed the plague (when Israel was punished for his sin,) and had accepted his offering. Mount

Moriah was also close to Mount Zion, where the king resided, and both mounts were within the city.

The temple must have occupied a large platform on the mountain, for it included two vast courts. The outer court was called the court of the people, and in later times the court of the Gentiles; it had a gate on each of its four sides, large enough to admit the crowds who came up to worship at the great festivals of their nation. This court surrounded a smaller one, called the court of the priests, in which was the altar for burnt offerings, where the daily sacrifice was offered — the brazen sea, and other vessels for the priests ablutions. In the midst of this second court, and a little raised above it, stood the temple, or house of God itself. In the first room, or sanctuary, which was without windows, was the altar for burning incense, the tables with shewbread — that is, cakes of fine flour for the priests — and the candlesticks by which it was lighted. Out of this sanctuary was a door-way over which hung a veil or curtain, leading into the Holy of Holies, that sacred place into which the high priest alone might enter, and that only once in the year, and where was placed the ark of the covenant, containing the two tables of the law.

The whole building was richly ornamented with gold and carved work, and from its size and lofty situation it must have been seen from afar; while from its courts being always uncovered, the smoke of the daily sacrifice would be visible to the pious worshipper from a distance as he turned towards the holy place in prayer.

Such was the temple that Solomon dedicated to God, amidst a vast concourse of people; and the day which he chose for the purpose was the first of the feast of the tabernacles, so that they might be reminded of the time of their wanderings and dwelling in tents, when God guided them by the ark, and the cloud which accompanied it, through the perils of the wilderness.

The ark was brought to its holy place by the

Levites, with instruments of music and trumpets, and a chorus of singers, singing, "The Lord is great, for his mercy endureth for ever." And now the people looked for the desired sign of God's presence in this his new dwelling. And as soon as the priests had put down the ark and come out of the holy place, it was given. "The house of the Lord was filled with a cloud" — "The glory of the Lord had filled the house of God."

King Solomon, who stood before the altar, in the midst of the congregation, now stretched forth his hands to heaven in solemn thanksgiving to the Lord God of Israel for all his mercies to his people; and then kneeling on his knees, he offered up that beautiful prayer called the prayer of the dedication. It contained these among other passages, or verses:—

"27. Will God indeed dwell on the earth? behold the heaven and heaven of heavens cannot contain Thee, how much less this house which I have builded?

"28. Yet have thou respect unto the prayer of Thy servant, and to his supplication, O Lord my God, to hearken unto the cry and to the prayer which Thy servant prayeth before Thee to-day:

"29. That Thine eyes may open towards this house night and day, even towards the place of which Thou hast said, My Name shall be there: that Thou mayest hearken unto the prayer which Thy servant shall make towards this place.

"30. And hearken Thou to the supplication of Thy servant, and of thy people Israel, when they shall pray towards this place: and hear Thou in heaven Thy dwelling-place; and when Thou hearest, forgive."

It were well if we could end Solomon's life here. The remainder of it was indeed great and prosperous, for God had promised His servant knowledge and wisdom, wealth and greatness — and the Most High is ever faithful to His promises. But even God's gifts are not always blessings, for we may misuse them.

Solomon, distinguished by his wisdom and knowledge, was unable to guide and govern himself. He married idolatrous wives in spite of the warning which God had given by Moses, and was persuaded by them to allow the worship of their idols.

Then the Lord was angry with Solomon, and said to him, "Forasmuch as this is done of thee, and thou hast not kept my covenant and my statutes which I have commanded thee, I will surely rend thy kingdom from thee, and give it to thy servant." But for his servant David's sake, the Lord did not do this in Solomon's lifetime, neither was the whole kingdom taken away. Ten tribes were permitted to follow Jeroboam, the son of Nebat, one of Solomon's household, after Solomon's death, but Judah and Benjamin were to remain under the dominion of his son Rehoboam.

So disgracefully ended the reign of this great monarch — a reign which had begun so gloriously; and with him ended the kingdom of the twelve tribes.

SNPPLEMENTARY LESSON.

THE CHRISTIAN SALVATION.

SALVATION means deliverance from something that is feared or suffered, and it is therefore a term of very general application; but in reference to our spiritual condition it means deliverance from those evils with which we are afflicted in consequence of our departure from God.

It implies deliverance from *ignorance*, — not ignorance of human science, but from ignorance of God, the first and the last, the greatest and the wisest, the holiest and the best of beings, the maker of all things, the centre of all perfection, the fountain of all happiness. Ignorant of God, we cannot give him acceptable worship, we cannot rightly obey his will, we cannot hold communion with him here, we cannot be prepared for

the enjoyment of his presence hereafter. But from this ignorance we are rescued by the salvation of the gospel, which reveals God to us, which makes us acquainted with his nature, his attributes, his character, his government, and which especially unfolds to us that scheme of mercy in which he has most clearly manifested his own glory.

Salvation implies deliverance from *guilt*. The law denounces a penalty against those who break it. That penalty is exclusion from heaven, and deprivation of God's favour, and consignment to the place of misery. But from this penalty there is deliverance provided. Christ has expiated guilt. He has "made reconciliation for iniquity." He has purchased eternal life. And "to those who are in him there is now no condemnation." Their sins are forgiven. They are at "peace with God." And there is nothing to prevent him from pouring out upon them the riches of his mercy, and making them happy for ever.

This salvation implies delivance from the *power of sin*. We are naturally the slaves of this power. Sins reign in us as the descendants of Apostate Adam. We cannot throw off its yoke by any virtue or efforts of our own. And so long as it maintains its ascendancy, we are degraded, and polluted, and miserable. But provision is made in the gospel for our emancipation. Christ "gave himself for us, that he might redeem us from all our iniquities," and that sin might have no "more dominion over us." And all who believe in him are made free to serve that God whose service is the sweetest liberty and the highest honour.

The salvation of the gospel implies deliverance from the *ills and calamities of life*. It does not imply this literally; for, under the dispensation of the Gospel, there is, strictly speaking, no exemption from bodily disease, from outward misfortune, or from the thousand distresses that flesh is heir to. But Christ has given such views of the providence of God,—he has brought

life and immortality so clearly to light, and has so modified and subdued the operations of sin, which is the cause of all our sufferings, that these are no longer real evils to them that believe. When we are brought into a filial relation to God, the afflictions that he sends form a part of that discipline which he employs to improve our graces, and to prepare us for his presence. He supports us under them, he overrules and sanctifies them for our spiritual advantage, and he thus divests them of all that is frightful, and converts them into blessings.

This salvation implies deliverance from *the power and the fear of death*. It is, indeed, an awful thing to die. Nature recoils from the agonies of dissolution, and from the corruption of the grave. But Christ has "vanquished death, and him that had the power of it." He has plucked out its sting, he has secured its final triumph over it, and has thus taught us to dismiss all our alarms. Our bodies must return to our kindred earth; but they shall be raised again, spiritual, incorruptible, and glorious. They shall be reunited to their never-dying and sainted partners, and shall enter into the region of immortality.

And while the salvation of the gospel implies our deliverance from all these evils, it also implies our admission into the heavenly state. It is in order to bring us there at last that all the benefits just enumerated are conferred upon us, and it is there accordingly that they shall be consummated. We are delivered from ignorance; and in heaven no cloud shall obscure our view,—no veil of prejudice shall cover our hearts. We are delivered from guilt; and in heaven, at its very threshold, our acquittal and justification shall be proclaimed before an assembled world, and God's reconciled countenance shall shine upon us for ever. We are delivered from the power of sin; and in heaven there shall be found no tempter and no temptation,—nothing that defileth and nothing that is de-

filed. We are delivered from the ills and calamities of life; and in heaven all tears shall be wiped from the eye, and all sorrow banished from the heart,—there shall be undecaying health, and there shall be unbroken rest, and there shall be songs of unmingled gladness. We are delivered from the power and fear of death; and in heaven there shall be no more death,—the saints shall dwell in that sinless and unsuffering land as the redeemed of him who "was dead, and is alive again, and liveth for evermore." All things are theirs; theirs is the unfading crown, theirs is the incorruptible inheritance, theirs is the kingdom that cannot be moved, theirs is the blessedness and the glories of eternity. THOMSON.

THE SAVIOUR.

HAIL to the Lord's anointed,
Great David's greater Son;
Hail, in the time appointed,
His reign on earth begun.

He comes to break oppression,
To set the captive free;
To take away transgression,
And rule in equity.

He comes with succour speedy
To those who suffer wrong,
To help the poor and needy,
And bid the weak be strong;

To give them songs for sighing;
Their darkness turn to light;
Whose souls, condemn'd and dying
Were precious in his sight.

By such he shall be fear'd
While sun and moon endure,
Beloved, obey'd, revered,
For he shall judge the poor.

Through changing generation,
With justice, mercy, truth,
While stars maintain their stations,
Or moons renew their youth.

He shall come down like showers
Upon the fruitful earth,
And love, joy, hope, like flowers,
Spring in his path to birth.

Before him on the mountains
Shall peace the herald go,
And righteousness in fountains
From hill to valley flow.

Arabia's desert ranger
To him shall bow the knee;
The Ethiopian stranger
His glory come to see.

With off'rings of devotion,
Ships from the isles shall meet,
To pour the wealth of ocean
In tribute at his feet.

Kings shall fall down before him,
And gold and incense bring;
All nations shall adore him
His praise all nations sing:

For he shall have dominion
On river, sea, and shore;
Far as the eagle's pinion,
Or dove's light wing can soar.

For him shall prayers unceasing,
And daily vows ascend;
His kingdom still increasing,
A kingdom without end.

The mountain dews shall nourish
A seed in weakness sown,
Whose fruit shall spread and flourish,
And shake like Lebanon.

O'er every foe victorious,
He on his throne shall rest;
From age to age more glorious,
All blessing and all blest.

The tide of time shall never
The covenant remove;
His name shall stand for ever;
That name to us is love. MONTGOMERY.

THE HEAVENLY REST.

THERE is an hour of peaceful rest,
To mourning wanderers given;
There is a tear for souls distrest,
A balm for every wounded breast—
'Tis found above — in heaven!

There is a soft, a downy bed,
'Tis sweet as breath of even;
A couch for weary mortals spread,
Where they may rest the aching head,
And find repose in heaven!

There is a home for weary souls,
By sin and sorrow driven;
When tost on life's tempestuous shoals,
Where storms arise, and ocean rolls,
And all is drear — but heaven!

There faith lifts up the tearful eye,
The heart with anguish riven;
And views the tempest passing by,
The evening shadows quickly fly,
And all serene in heaven!

There fragrant flowers immortal bloom,
And joys supreme are given;
There rays divine disperse the gloom:
Beyond the confines of the tomb
Appears the dawn of heaven! ANON.

CHRIST'S SECOND COMING.

THE Lord shall come! The earth shall quake,
The mountains to their centre shake;
And, withering from the vault of night,
The stars shall pale their feeble light.
The Lord shall come! a dreadful form,
With rainbow wreath, and robes of storm;
On cherub wings, and wings of wind,
Appointed Judge of all mankind.

Can this be He, who wont to stray
A pilgrim on the world's highway,
Oppressed by power, and mocked by pride,
The Nazarene, — the crucified?
While sinners in despair shall call,
"Rocks, hide us; mountains, on us fall!"
The saints, ascending from the tomb,
Shall joyful sing, "The Lord has come!"

SECTION IV.

POLITICAL ECONOMY.

LESSON I.

ON VALUE.

GOLD and silver are the most convenient metals to use as money, because they take up but little room in proportion to their value. Hence they are called the precious metals.

But why should gold and silver be of so much more value than iron? For they are not nearly so useful. We should be very ill off without knives, and scissors, and spades, and hatchets; and these could not be made so well from any thing as from iron; and silver and gold would make very bad tools indeed.

To understand this, you must remember that it is not the most useful things that are of the most value. Nothing is more useful than air and water, without

which we could not live. Yet these are, in most places, of no value, in the proper sense of the word; that is, no one will give anything in exchange for them, because he can have them without.

In some places, indeed, water is scarce; and then people are glad to buy it. You may read in Scripture of many quarrels that arose about wells of water; because in some of the eastern countries water is so scarce that a well is a very important possession. But water is not more *useful* in those places where people are glad to buy it, than it is here, where, by the bounty of Providence, it is plentiful. It is the *scarcity* that gives it value; and where iron is scarce it is of great value.

Some islands which our ships have visited produce no iron; and the people there are glad to get a few nails in exchange for a hog. But, in most countries, iron, which is the most useful of all metals, is also, through the goodness of Providence, the most plentiful. But still it is of some value; because it must be dug from the mines, and smelted in furnaces, and wrought into tools, before we can make use of it. If knives and nails were produced by nature ready made, and could be picked up every where like pebbles, they would be of no value, because every one might get them for nothing. But they would be just as useful as they are now.

Scarcity alone, however, would not make a thing valuable, if there were no reason why any one should *desire* to possess it. There are some kinds of stones which are scarce, but of no value, because they have neither use nor beauty. You would not give anything in exchange for such a stone; not because you cannot easily get it, but because you have no wish for it.

But a stone which is scarce and very *beautiful*, may be of great value, though it is of no *use* but to make an ornament for the person. Such are diamonds, and rubies, and many others. Many people will work hard to earn money enough to buy, not only food and ne-

cessary clothing, but also lace, and jewels, and other articles of finery.

And they desire these things the more, because, besides being beautiful to the eye, they are reckoned a sign of wealth in the person who wears them. A bunch of wild flowers will often be a prettier ornament than a fine ribbon, or a jewel; but a woman likes better to wear these last, to show that she can afford the cost of them; whereas the wild flowers may be had for picking.

There is no harm in people's desiring to be well dressed according to their station in life; but it is a pity that so many should be fond of expensive finery above their station, which often brings them to poverty. And often they spend money on ornaments, which would be better laid out in buying good useful clothes and furniture, and in keeping them clean. A mixture of finery with rags and dirt is a most disgusting sight.

You understand now, I hope, that whatever is of value must not only be *desirable* for its use or beauty, or some pleasure it affords, but also *scarce;* that is, so *limited* in supply that it is not to be had for nothing. And of all things which are desirable, those are the *most* valuable which are the most limited in supply; that is, the hardest to be got.

This is the reason why silver and gold are of more value than iron. If they had been of no use or beauty at all, no one would ever have desired them; but being desirable, they are of greater value than iron, because they are so much scarcer and harder to be got. They are found in but few places, and in small quantities. Gold, in particular is obtained chiefly in the form of dust, by laborious washing of the sand of certain streams. It costs only as much in labour and other expenses to obtain fifteen pounds of silver, as to obtain one pound of gold; and this is the cause that one pound of gold will exchange for about fifteen pounds of silver.

But besides being desirable and being scarce, there is one point more required for a thing to have value,

or, in other words, to be such, that something else may be had in exchange for it. It must be something that you can *part with* to another person. For instance, *health* is very desirable, and is what every one cannot obtain; and hence, we sometimes do speak of health as being of value; but this is not the strict use of the word value; for no one can give his health to another in exchange for something else. Many a rich man would be glad to give a thousand pounds, or perhaps ten thousand pounds, in exchange for the healthy constitution and strong limbs of a poor labourer; and, perhaps, the labourer would be glad to make such a bargain; but though he might cut off his limbs, he could not make them another man's: he may throw away his health, as many do, by intemperance; but he cannot *transfer* it — that is, part with it to another person.

LESSON II.

ON VALUE — (*continued.*)

On these elementary points such questions as the following may be usefully put to themselves by those to whom the subject is new: —

1. Why is air not an article of value? — Because, though it be very useful, it is to be *had for nothing.*

2. Why is some scarce kind of stone, that is of no use or beauty, not an article of value? — Because, though it be not a thing that every one can get, no one *desires* to get it.

3. Why is a healthy constitution not an article of value? — Because, though it be very desirable, and is not what every one can get, it is not *transferable;* that is, cannot be transferred or parted with by one person to another.

4. Why is a spade an article of value? — Because it is, 1st, desirable, as being of use; 2dly, limited in supply — that is, it is not what every one can have for

nothing; and 3dly, transferable — that is, one person can part with it to another.

5. Why is a silver spoon of more value than a spade? — Because, though it be not more useful, it is more limited in supply, or harder to be got, on account of the difficulty of working the mines of silver.

When anything that is desirable is to be had by labour, and is not to be had without labour, of course we find men labouring to obtain it; and things that are of very great value will usually be found to have cost very great labour. This has led some persons to suppose that it is the labour which has been bestowed on anything that *gives* it value; but this is quite a mistake. It is not the labour which anything has cost that causes it to sell for a higher price; but on the contrary, it is its selling for a higher price that causes men to labour in procuring it. For instance, fishermen go out to sea, and toil hard in the wet and cold to catch fish, because they can get a good price for them; but if a fisherman should work hard all night and catch but one small fish, while another had perhaps caught a thousand, by falling in with a shoal, the first would not be able to sell his one fish for the same price as the other man's thousand, though it would have cost him the same labour. It has now and then happened that a salmon has leaped into a boat by chance; but though this has cost no labour, it is not for that reason the less valuable. And if a man, in eating an oyster, should chance to meet with a fine pearl, it would not sell for less than if he had been diving for it all day.

It is not, therefore, labour that makes things valuable, but their being valuable that makes them worth labouring for. And God, having judged in His wisdom that it is not good for men to be idle, has so appointed things by His Providence, that few of the things that are most desirable can be obtained without labour. It is ordained for man to eat bread in the sweat of his face; and almost all the necessaries, comforts, and luxuries of life, are obtained by labour.

LESSON III.

ON WAGES.

SOME labourers are paid highed than others. A carpenter earns more than a ploughman, and a watchmaker more than either; and yet this is not from the one working harder than the other.

And it is the same with the labour of the mind as with that of the body. A banker's clerk, who has to work hard at keeping accounts, is not paid so high as a lawyer or a physician.

You see from this that the rate of wages does not depend on the hardness of the labour, but on the *value* of the work done.

But on what does the value of the work depend?

The value of each kind of work is like the value of anything else; it is greater or less, according to the *limitation of its supply* — that is, the *difficulty* of procuring it. If there were no more expense, time and trouble, in procuring a pound of gold than a pound of copper, then gold would be of no more value than copper.

But why should the supply of watchmakers and surgeons be more limited than of carpenters and ploughmen? That is, why is it more difficult to make a man a watchmaker than a ploughman? The chief reason is, that the education required costs a great deal more. A long time must be spent in learning the business of a watchmaker or a surgeon before a man can acquire enough skill to practice: so that unless you have enough to support you all this time, and also to pay your master for teaching you the art, you cannot become a watchmaker or a surgeon, and no father would go to the expense of breeding up a son a surgeon or watchmaker, even though he could well afford it, if he did not expect him to earn more than a carpenter, whose education costs much less. But sometimes a father is disappointed in his expectation. If the son should turn out stupid or idle, he would not acquire

skill enough to maintain himself by his business; and then the expense of his education would be lost: for it is not the expensive education of a surgeon that causes him to be paid more for setting a man's leg, than a carpenter is for mending the leg of a table; but the expensive education causes few people to become surgeons. It causes the supply of surgeons to be more *limited* — that is, confined to a few; and it is this limitation that is the cause of their being better paid.

So that you see the value of each kind of labour is higher or lower, like that of all other things, according as the supply is limited.

Natural genius will often have the same effect as the expensiveness of education, in causing one man to be better paid than another. For instance, one who has a natural genius for painting may become a very fine painter, though his education may not have cost more than that of an ordinary painter; and he will then earn, perhaps, ten times as much, without working any harder at his pictures than the other. But the cause why a man of natural genius is higher paid for his work than another is still the same. Men of genius are *scarce*: and their work, therefore, is of the more value, from being more limited in supply.

Some kinds of labour, again, are higher paid, from the supply of them being limited by other causes, and not by the cost of learning them, or the natural genius they require. Any occupation that is unhealthy, dangerous, or disagreeable, is paid the more on that account; because people would not otherwise engage in it. There is this kind of limitation in the supply of house-painters, miners, gunpowder makers, and several others.

Some people fancy that it is unjust that one man should not earn as much as another who works no harder than himself. And there certainly would be a hardship, if one man could *force* another to work for him at whatever wages he chose to give. This is the case with those slaves, who are forced to work, and are

only supplied by their masters with food and other necessaries, like horses. So, also, it would be a hardship, if I were to force any one to sell me anything, whether his labour, or his cloth, or cattle, or corn, at any price I might choose to fix. But there is no hardship in leaving all buyers and sellers free — the one to ask whatever price they may think fit; the other to offer what he thinks the article worth. A labourer is a seller of labour — his employer is a buyer of labour; and both ought to be left free.

If a man choose to ask ever so high a price for his potatoes, or his cows, he is free to do so; but then it would be very hard that he should be allowed to force others to buy them at that price, whether they would or no. In the same manner, an ordinary labourer may *ask* as high wages as he likes; but it would be very hard to *oblige* others to employ him at that rate, whether they would or not. And so the labourer himself would think, if the same rule were applied to him; that is, if a tailor, and a carpenter, and a shoemaker, could oblige him to employ them, whether he wanted their articles or not, at whatever price they choose to fix.

In former times, laws used to be often made to fix the wages of labour. It was forbidden, under a penalty, that higher or lower wages should be asked or offered, for each kind of labour, than what the law fixed. But laws of this kind were found never to do any good; for when the rate fixed by law for farm-labourers, for instance, happened to be higher than it was worth a farmer's while to give for ordinary labourers, he turned off all his workmen, except a few of the best hands, and employed these on the best land only; so that less corn was raised, and many persons were out of work, who would have been glad to have had it at a lower rate, rather than earning nothing. Then, again, when the fixed rate was lower than it would answer to a farmer to give to the best workmen, some farmers would naturally try to get these into their ser-

vice, by paying them privately at a higher rate. And this they could easily do, so as to escape the law, by agreeing to supply them with corn at a reduced price, or in some such way; and then the other farmers were driven to do the same thing that they might not lose all their best workmen; so that laws of this kind come to nothing.

The best way is to leave all labourers and employers, as well as all other sellers and buyers, free to ask and to offer what they think fit; and to make their own bargain together if they can agree, or to break it off, if they cannot.

But labourers often suffer great hardships, from which they might save themselves by looking forward beyond the present day. They are apt to complain of others, when they ought rather to blame their own imprudence. If, when a man is earning good wages, he spends all as fast as he gets it in thoughtless intemperance, instead of laying by something against hard times, he may afterwards have to suffer great want when he is out of work, or when wages are lower; but then he must not blame others for this, but his own improvidence. So thought the bees in the following fable.

"A grasshopper, half starved with cold and hunger at the approach of winter, came to a well-stored beehive, and humbly begged the bees to relieve his wants with a few drops of honey. One of the bees asked him how he had spent his time all the summer, and why he had not laid up a store of food like them? 'Truly,' said he, 'I spent my time very merrily, in drinking, dancing, and singing, and never once thought of winter.' 'Our plan is very different,' said the bee; 'we work hard in the summer, to lay by a store of food against the season when we foresee we shall want it; but those who do nothing but drink, and dance, and sing, in the summer, must expect to starve in the winter.'"

LESSON IV.

RICH AND POOR.

BESIDES those who work for their living, some at a higher rate and some at a lower, there are others who do not live by their labour at all, but are rich enough to subsist on what they or their fathers have laid up. There are many of these rich men, indeed, who do hold labourious offices, as magistrates and members of parliament. But this is at their own choice. They do not labour for their subsistence, but live on their property.

There can be but few of such persons, compared with those who are obliged to work for their living. But though there can be no country where all, or the greater part, are rich enough to live without labour, there are several countries where all are poor; and in those countries where all are forced to live by their labour, the people are much worse off than most of the labourers are in this country. In savage nations almost every one is half starved at times, and generally half naked. But in any country in which property is secure, and the people industrious, the wealth of that country will increase; and those who are the most industrious and frugal will gain more than such as are idle and extravagant, and will lay by something for their children, who will thus be born to a good property.

Young people who make good use of their time, are quick at learning, and grow up industrious and steady, may, perhaps, be able to earn more than enough for their support, and so have the satisfaction of leaving some property to their children; and if they, again, should, instead of spending this property, increase it by honest diligence, prudence, and frugality, they may, in time, raise themselves to wealth. Several of the richest families in the country have risen in this manner from a low station. It is, of course, not to be expected that *many* poor men should become rich, nor ought any man to set his heart on being so; but it

is an allowable and a cheering thought, that no one is shut out from the hope of bettering his condition, and providing for his children.

And would you not think it hard that a man should not be allowed to lay by his savings for his children? But this is the case in some countries, where property is so ill secured that a man is liable to have all his savings forced from him, or seized upon at his death; and there all the people are miserably poor, because no one thinks it worth his while to attempt saving anything.

There are some countries which were formerly very productive and populous, but which now, under the tyrannical government of the Turks, or other such people, have become almost deserts. In former times Barbary produced silk, but now most of the mulberry trees (on whose leaves the silk-worms are fed) are decayed; and no one thinks of planting fresh trees, because he has no security that he shall be allowed to enjoy the produce.

Can it be supposed that the poor would be better off if all the property of the rich were taken away and divided among them, and no one allowed to become rich for the future? The poor would then be much worse off than they are now; they would still have to work for their living as they do now, for food and clothes cannot be had without *somebody's* labour. But they would not work near so profitably as they do now, because no one would be able to keep up a large manufactory or farm well stocked, and to advance wages to workman, as is done now, for work which does not bring in any return for, perhaps, a year or two. Every man would live, as the saying is, "from hand to mouth," just tilling his own little patch of ground, enough to keep him alive, and not daring to lay by anything, because if he were supposed to be rich, he would be in danger of having his property taken away and divided.

And if a bad crop, or a sickly family, brought any one into distress, which would soon be the case with many, what would he do after he had spent his little

property? He would be willing to work for hire, but no one could afford to employ him, except in something that would bring in a very speedy return; for even those few who might have saved a little money would be afraid to have it known, for fear of being forced to part with it. They would hide it somewhere in a hole in the ground, which used formerly to be a common practice in this country, and still is in some others, where property is very scarce. Under such a state of things the whole country would become poorer and poorer every year: for each man would labour no more than just enough for his immediate supply, and would also employ his labour less profitably than now, for want of a proper division of labour; and no one would attempt to lay by anything, because he would not be sure of being allowed to keep it. In consequence of all this, the whole produce of the land and the labour of the country would become much less than it is now; and we should soon be reduced to the same general wretchedness and distress which prevails in many half savage countries. The rich, indeed, would have become poor; but the poor, instead of improving their condition, would be much worse off than before. All would soon be as miserably poor as the most destitute beggars are now: indeed, so far worse, that *there would be nobody to beg of.*

It is best for all parties, the rich, the poor, the middling, that property should be secure, and that every one should be allowed to possess what is his own, to gain whatever he can by honest means, and to keep it or spend it as he thinks fit,—provided he does no one any injury. Some rich men, indeed, make a much better use of their fortunes than others: but one who is ever so selfish in his disposition can hardly help spending it on his neighbours. If a man has an income of £5,000 a year, some people might think, at first sight, that if his estate were divided among the hundred poor families, which would give each of them £50 a year, there would thus be, by such a division, one hundred poor families the more

enabled to subsist in the country. But this is quite a mistake. Such would, indeed, be the case, if the rich man had been used to eat as much food as one hundred poor families, and to wear out as much clothes as all of them. But we know this is not the case. He pays away his income to servants, and labourers, and tradesmen, and manufacturers of different articles, who lay out the money in food and clothing for their families: so that in reality the same sort of division of it is made as if it had been taken away from him. He may, perhaps, if he be a selfish man, care nothing for the maintaining of all these families, but still he does maintain them; for if he should choose to spend £1,000 a year in fine pictures, the painters who are employed in those pictures are as well maintained as if he had made them a present of the money, and left them to sit idle. The only difference is, that they feel they are honestly earning their living, instead of subsisting on charity; but the total quantity of food and clothing in the country is neither the greater nor the less in the one case than in the other. But if a rich man, instead of spending all his income, saves a great part of it, this saving will almost always be the means of maintaining a still greater number of industrious people: for a man who saves, hardly ever, in these days at least, hoards up gold and silver in a box, but lends it out on good security, that he may receive interest upon it. Suppose, instead of spending £1,000 a-year on paintings, he saves that sum every year. Then this money is generally borrowed by farmers, or manufacturers, or merchants, who can make a profit by it in the way of their business, over and above the interest they pay for the use of it. And in order to do this, they lay it out in employing labourers to till the ground, or to manufacture cloth and other articles, or to import foreign goods: by which means the corn, and cloth, and other commodities of the country, are increased.

The rich man, therefore, though he appears to have so much larger a share allotted to him, does not really

consume it, but is only the channel through which it flows to others. And it is by this means much better distributed than it could have been otherwise.

The mistake of which I have been speaking, of supposing that the rich cause the poor to be the worse off, was exposed long ago in the fable of the stomach and the limbs:—

"Once on a time," says the fable, "all the other members of the body began to murmur against the stomach, for employing the labours of all the rest, and consuming all they had helped to provide, without doing anything in return. So they all agreed to strike work, and refused to wait upon this idle stomach any longer. The feet refused to carry it about; the hands resolved to put no food into the mouth for it; the nose refused to smell for it, and the eyes to look out in its service; and the ears declared they would not even listen to the dinner-bell; and so of all the rest. But after the stomach had been left empty for some time, all the members began to suffer. The legs and arms grew feeble; the eyes became dim, and all the body languid and exhausted.

"'Oh, foolish members,' said the stomach, 'you now perceive that what you used to supply to me, was in reality supplied to yourselves. I did not consume for myself the food that was put into me, but digested it, and prepared it for being changed into blood, which was sent through various channels as a supply for each of you. If you are occupied in feeding me, it is by me in turn, that the blood-vessels which nourish you are fed.'"

You see then, that a rich man, even though he may care for no one but himself, can hardly avoid benefiting his neighbours. But this is no merit of his, if he himself has no desire or wish to benefit them. On the other hand, a rich man who seeks for deserving objects to relieve and assist, and is, as the apostle expresses it, "ready to give, and glad to distribute, is laying up in store for himself a good foundation for the time to come, that he may lay hold on eternal life." It is plain from this, and from many other such injunctions of the apos-

tles, that they did not intend to destroy the security of property among Christians, which leads to the distinction between the rich and the poor; for their exhortations to the rich to be kind and charitable to the poor, would have been absurd if they had not allowed that any of their people should be rich; and there could be no such thing as charity in giving anything to the poor, if it were not left to each man's free choice to give or spend what is his own. Indeed, nothing can be called your own which you are not left free to dispose of as you will. The very nature of charity implies that it must be voluntary: for no one can be properly said to *give* anything that he has no power to withhold. The Apostle Paul, indeed, goes yet farther, when he desires each man "to *give* according as he is disposed in his heart, and not grudgingly," because "God loveth the cheerful giver."

When men are thus left to their own inclinations to make use of their money, each as he is disposed in his heart, we must expect to find that some will choose to spend it merely on their own selfish enjoyments. Such men, although, as you have seen, they do contribute to maintain many industrious families without intending it, yet are themselves not the less selfish and odious. But still we are not the less forbidden to rob, or defraud, or annoy them. Scripture forbids us to "covet our neighbours goods," not because he does not make a right use of them, but because they are *his*.

When you see a rich man who is proud and selfish, perhaps you are tempted to think how much better a use you would make of wealth if you were as rich as he. I hope you would: but the best *proof* that you can give that you would behave well if you were in *another's* place, is by behaving well *in your own*. God has appointed to each his own trials, and his own duties; and He will judge you, not according to what you think you would have done in some different station, but according to what you *have* done, in that station in which he has placed you.

LESSON V.

ON CAPITAL.

We have seen that a rich man who spends on himself his income of £1,000 or £10,000 a year, does not diminish the wealth of the whole country by so much, but only by what he actually eats and wears, or otherwise consumes, himself. The rest he hands over to those who work for him or wait on him; paying them either in food or clothes, or, what comes to the same thing, in money to buy what they want. And if he were to *give* to the same persons what he now pays, leaving them to continue idle, there would not be the more food or clothes in the country; only, these people would sit still, or lounge about and do nothing, instead of earning their bread.

But they are the happier and the better for being employed instead of being idle, even though their labour should be only in planting flowers, or building a palace to please their employer's fancy.

Most of the money that is spent, however, is laid out in employing labourers on some work that is *profitable;* that is, in doing something which brings back more than is spent on it, and thus goes to increase the whole wealth of the country. Thus, if, instead of employing labourers to cultivate a flower-garden or build me a summer-house for my pleasure, I employed them in raising corn, or building a mill to grind it, the price of that corn, or the price paid for grinding by those who bring corn to the mill, will be more (if I have conducted the business prudently) than what I had spent on those works. So that instead of having parted with my money for ever, as when it is spent on a pleasure-garden or summer-house, it comes back to me with addition. This addition is called profit; and the money so laid out is called capital.

A man who lays out his money in this manner may do the same over again, as soon as it comes back to him; so that he may go on supporting labourers year after year. And if he saves each year a part of his profit,

and adds it to his capital, as a thriving farmer or manufacturer generally does, he will be continually employing more and more labourers, and increasing the wealth of the country. He himself, indeed, is, perhaps, not thinking of his country, but is only seeking to enrich himself: but this is the best and surest way he could take for enriching his country; for, every man in the nation who adds to his own wealth, without lessening the wealth of others, must, it is plain, be adding just so much to the wealth of the nation. Sometimes, indeed, one man gains by another's loss; and then, of course, nothing is added to the wealth of the country. If a man gets rich by gambling, or begging, or robbery, others lose at least as much as he gains; but if he gets rich by his skill in farming, or manufacturers, or mining, all that he gains is so much added to the wealth of the whole country, since it is not lost by any one else.

Many persons dispose of their property in this way, though they are not themselves engaged in business, but lend their money to others, who are. Suppose you were a labouring man, and had £100 left you as a legacy; or had saved up that sum from your earnings: you might not know how to trade with the money to advantage; and if you keep it in a strong box, for the use of your children, you would not be the better for it all your life; and at the end of twenty or thirty years, your children would find just the same sum that you first put in. Or if you took out £5 every year to spend, at the end of twenty years it would be all gone. But you might lend it to some person engaged in business, who would give you security for the repayment of the principal, as it is called, that is, the sum borrowed, and would pay you £4 or £5 every year for the use of it; which is called interest. This he would be glad to do, if he knew that he could employ this £100 in buying materials, and paying workmen, to weave cloth, for instance, or make tables and chairs, which would bring in, by the end of the year £110; for out of this increase of £10 after

paying you £5 for the use of your money, he would have gained £5 for himself.

In this way great part of the capital that is engaged in trades and manufactures, is employed by persons who are not themselves the owners of it.

The more capital there is in a country, the better for the labourers; for the poorer the master is, the fewer labourers he can afford to employ, and the less sure he can be of being able to pay them.

Suppose you were a poor man, in a newly-settled country, and ask your neighbour to help you to dig a piece of fertile ground, promising him a share of the produce for his pains; he might say — "I have nothing to live on in the meantime; if you want me to dig for you, you must pay me daily wages." But if you have nothing before hand, except bare necessaries for yourself — that is, if you have no capital — you cannot pay him till harvest. Your land, therefore, will remain half-tilled; and he will be forced to go into the woods to seek for wild berries, or to hunt and fish, to provide himself food. Indeed, *all* would be forced to *begin* in this manner, if you suppose a number of men left to themselves, even on the most fertile land, without any property to set out with — that is, without capital. They would have great difficulties to struggle against for a long time; but when they had advanced some way in acquiring wealth, they would find it easier to obtain more.

For, as it is, you may observe that wealth is always obtained by means of wealth — that is, it is gained by the help of capital; without which, labour can hardly be carried on. Corn is raised by labour; but a previous stock of corn is needed, both to sow the ground, and to maintain the labourer till the harvest is ripe. The tools with which he works are made with tools. The handle of the axe with which he cuts wood is made of wood; the iron of it was dug from the mine with iron instruments: and it is the same with almost every kind of labour. You may judge, therefore, how difficult and slow men's first advances must have been, when they had

to work with their bare hands, or with stakes or sharp stones for their tools.

Accordingly, in countries that are ill provided with capital, though the inhabitants are few in number, and all of them are forced to labour for the necessaries of life, they are worse fed, clothed, and lodged than even the poorest are in a richer country, though that be much more thickly peopled, and though many of the inhabitants of it are not obliged to labour with their hands at all.

The money, food, and other things which a farmer spends on the labourers and on the horses which cultivate his land, or a clothier on his weavers, is called *circulating* capital; because he parts with it, from time to time, and it returns to him as in a circle, in the shape of corn or cloth. The farmer's barns, ploughs, carts, and horses, and the clothier's looms and ware-houses, are called *fixed* capital; because they bring in a profit, not by being parted with, but by being kept as long as they are fit for use.

Any new kind of tool or machine, by enabling a few men to do the work of many, is likely, when first introduced, to throw several men out of employment; but, in the end, it almost always finds employment for many more. Thus, for instance, when the art of printing was first introduced, many who used to gain their living by copying, were thrown out of employment, because a very few printers could produce as many copies of a book as several hundred writers. But, in a short time books, being thus rendered so much cheaper, many more were enabled to buy them; and many hundred times as many printers were employed as there were copyists before. And the same thing takes place in almost every kind of machinery.

There is one way of employing capital, which people are apt to murmur at, as if it did them an injury, though there is none that does more important service to the public. A man who deals in corn or other provisions, is, of course, watchful to buy them up when they are cheap, and to keep them till they are dearer, that he may sell them at a profit. Now, an unthinking person is apt to com-

plain of corn-dealers when bread is dear, as if they were the cause of scarcity; but, in truth, it is they that preserve us from being absolutely starved whenever there happens to be a scanty harvest. Not that a corn-dealer is thinking of benefiting the public; he is only thinking of gaining for himself a profit on his capital, like any other tradesman; but the way he takes to secure this, profit which is by buying up corn when it is cheap, and selling it when dear, is exactly the way in which the plentiful crop of one year may supply the defect of another, so that there may not be first waste and then famine, and in which a short supply may be made to hold out.

When the captain of a ship finds his provisions run short, so that there is not, suppose, about three weeks' provisions on board, and his voyage is likely to last four, he puts the crew on short allowance; and thus, by each man's submitting to eat only three-fourths of his usual quantity, the provisions hold out. But if the crew should mutiny when they felt hungry, and insist on having their full allowance, then, by the end of the three weeks, all would be consumed, and they would perish with hunger. Now it is plain that the same would be the case with the whole nation, if, when the harvest fell short, all were to go on at the ordinary rate of consumption.

Suppose such a failure in the crops that all the corn in the country was only enough for three-quarters of a year, according to the common rate of consumption, it is plain that if all men went on eating the usual quantity, there would be nothing left for the last three months, and the most dreadful famine would prevail.

How is this to be prevented, as there is no captain to put people on short allowance; and it is not to be expected that all should agree, each to stint himself for the public good? If corn remained at the usual price, all would continue to eat the usual quantity till there was none left. But the prospect of a scarcity causes farmers, and millers, and others, who have capital, to keep what corn they have by them, in expectation of a higher price, and to buy

up what they can, at home and from abroad; and, as they refuse to sell it except at an advanced price in proportion to the scarcity, the dearness of food forces people to be more saving. In this way the store of provisions is husbanded in the whole country, just as on board a ship, and is made to last till next harvest; and thus by suffering a certain degree of hardship, the people are saved from perishing by famine.

It is curious to observe, how, through the wise and beneficient arrangement of Providence, men thus do the greatest service to the public when they are thinking of nothing but their own gain. And this happens not only in the case of corn-dealers, but generally. When men are left quite free to employ their capital as each thinks best for his own advantage, he will almost always benefit the public, though he may have no such design or thought.

LESSON VI.

ON TAXES.

We read in Scripture (Nehemiah iv. 17), that when the Jews returned from the captivity, and began to rebuild the walls of their city, they were so beset by enemies that they were forced to be constantly armed and on their guard; and, for fear of a sudden attack, each man worked with one hand only, and the other hand held a weapon ready. In this way it would take at least two men to do the work of one. But the danger they were in obliged them to put up with this inconvenience.

Many countries in the East are at this day nearly in the same condition. They are so infested by robbers, chiefly Arabs, always roaming about in search of plunder, that no man can hope to escape being robbed unless he is well armed and on his guard. Travellers tell us, that when a husbandman goes to sow his fields, he takes with him a companion with a sword or spear, to protect him from being robbed of his seed-corn. This must make the cultivation of the ground very costly, because the work which might be done by one man requires two;

one to labour, and the other to fight: and both must have a share of the crop which would otherwise belong to one. And after all, the protection of property must be very imperfect, for you may suppose the robbers will often come in such force as to overpower the defenders, and plunder the industrious of all the fruits of their labours. Accordingly, in these countries, there is very little land cultivated. Most of it lies waste; the inhabitants are few — not one-twentieth of what the land could maintain; and these are miserably poor. And all this is owing to the insecurity of property.

And the same is the case in all countries where the people are savages or nearly savages. Most of the time, and labour, and care of a savage, is taken up in providing for his defence. He is occupied in providing arms for his protection, against those whom he is able to fight; or in seeking hiding places from those who are too strong for him. In the islands of New Zealand, several families are obliged to join together, and build their little cabins on the top of a steep rock, which they fenced round with a trench and sharp stakes to protect them against their neighbours of the next village; and after all, they are often taken by surprise, or overpowered. In such countries as that there are a hundred times as many people killed every year, in proportion to their numbers, as in any part of Europe. It is true that there is not so much property lost, because there is very little to lose; for people must be always exceedingly poor in such countries. In the first place, above half their time and labour is taken up in providing for their safety; and in the next place, this is so imperfectly done after all, that they can never be secure of the fruits of their industry.

The remedy of this miserable state of things is to be found in settled government. The office of a government is to afford protection; that is, to secure the persons and property of the people from violence and fraud. For this purpose it provides ships of war, and bodies of

soldiers, to guard against foreign enemies, and against pirates, bands of robbers, or rebels; and also provides watchmen, constables, and other officers, to apprehend criminals; judges and courts of justice for trials; and prisons for confining offenders; and, in short, everything that is necessary for the peace and security of the people.

The expenses of the army and navy, and of everything that government provides, are paid by the people; and it is but fair that we should pay for all these things, since they are for our benefit. We pay taxes and government duties for these purposes. Taxes are the price people pay for being governed and protected. They correspond to the hire which the husbandman, in eastern countries, must pay to his companion who carries the spear or sword to guard him from robbers.

Some people do not understand this, or do not recollect it. Many are apt to think taxes quite a different kind of expense from all others; and either do not know, or else forget, that they receive anything in *exchange* for the taxes. But, in reality, this payment is as much an exchange as any other. You pay money to the baker and butcher for feeding you, and to the tailor for clothing you; and you pay the king and parliment for protecting you from being plundered, murdered, or cheated. Were it not for this, you could be employed scarcely half your time in providing food and clothing, and the other half would be taken up in guarding against being robbed of them; or in working for some other man whom you would hire to keep watch and to fight for you. This would cost you much more than you pay in taxes; and yet you may see, by the example of savage nations, how very imperfect that protection would be. Even the very worst government that ever was, is both much better and much cheaper than no government at all. Some of the Roman emperors were most detestable tyrants, who plundered and murdered great numbers of innocent men: yet even under their reigns there were not so many of their subjects (in proportion to their numbers)

plundered or murdered, in ten years, as there are among the New Zealanders, and other savage tribes, in one year.

LESSON VII.

ON TAXES.—(*continued.*)

You understand, now, that taxes are the hire or price paid to government in exchange for protection; just as any other payment is made in exchange for anything we want.

There is, however, one important difference: that other payments are left to each man's choice, but every one is *obliged* to pay the taxes. If I do not choose to buy shoes of a shoemaker, but to make shoes for myself at home, or to go without them, I am at liberty to do so; and the same with other such payments. But it is not so with the payments to government. If any one should say, "I choose to protect my own person and property myself without any assistance from soldiers, or sailors, or constables, or judges, and therefore I will not pay taxes;" the answer would be: "Then go and live by yourself in the wilds of America, or in some such country; or join some tribe of wild Indians and live as they do: but, while you live with *us*, in a country which has a goverment, you cannot, even if you wish it, avoid partaking of the protection of government. The fleets and armies which keep off the foreign enemies from plundering the country, are a defence to you, as well as to us; you are protected, as well as we, by the laws and officers of justice, from the thieves and murderers, who would otherwise be let loose on society. Since, therefore, the government must, whether it will or no, afford you a share of its protection, it is fair that you should be obliged, whether you will or no, to pay your share of its expenses. But if you are so foolish as not to like this bargain, you must leave the country, and go and live somewhere else in the wilderness."

It is quite fair, then, that as long as a man lives in any country, he should be obliged to submit to the gov-

ernment, and to pay the taxes: and how much each shall pay is determined by the government. There is one great difference between this exchange and all others; when you hire a man to work for you, you make your own bargain with him; and if you and he cannot agree as to the rate of payment, you will employ some one else instead. But the government of any country, whether it be a King, or a President, or a Senate, or a Parliament, or, in short, whatever kind of government it is, must always have *power* to make all the people submit; since, otherwise, it could not perform the office of protecting them. It is not left to each person's choice, therefore, how much he shall pay for his protection, but government fixes the taxes, and enforces the payment of them.

Many governments have made a bad use of this power, and have forced their subjects to pay much more than the reasonable expenses of protecting and governing the country. In some countries, and in this among others, the people are secured against this kind of ill-usage by choosing their own governor; that is, the Members of Parliment, without whom no laws can be made, or taxes laid on.

It is very right to require that the public money should not be wastefully spent, and that we should not be called on to pay more than is necessary. But many person are not so thankful as they ought to be for the benefit which they enjoy, in living under the protection of a government, because they do not know, or do not consider, the wretched condition of those who are without any regular government. Of all the commodities we pay for, there is none so cheap, compared with what it would cost us to provide ourselves with it, as the protection which is afforded us by government. If we all made clothes and shoes for ourselves, instead of buying them of the tailor and shoemaker, our clothes and shoes would, indeed, be much worse than they are, and would cost us much more. But we should be far worse off still, if each of us had to provide by himself for the defence

of his own person and property. Such protection as he would be thus able to obtain, would cost a great deal and be worth very little.

LESSON VIII.

ON TAXES.—(*continued.*)

MUCH the greatest part, however, of the taxes that are paid goes to the expenses, not of the present year, but of past years; that is, to pay the interests on the National Debt. During our long and costly wars, much more was spent in each year than could be raised by taxes. Government, therefore, borrowed money of rich merchants and others, engaging to pay interest on this till it should be repaid, which most of it has not been, and perhaps never will be. The lenders, therefore, received in exchange for their money, annuities; that is, a right to receive so much a year out of the taxes raised by goverment; and these annuities, which we call government securities, or property in the funds, may be sold by one person to another, or divided among several others, just like any other property. When a poor man has saved up a little money, he generally puts it into the funds, as it is called, or deposits it in a savings' bank, which does this for him; he is then one of the government creditors, and receives his share of the taxes. You see, therefore, that if the National Debt were abolished by law, without payment, many, even of the labouring classes, would lose their all; and the nation would not be relieved of the burden; since it would be only robbing one set of our countrymen for the benefit of another set.

We may be sorry that so much money was formerly spent on gunpowder, which was fired off, and on soldiers' coats, and ships, which were worn out, but nothing we can now do can recall this, any more than last year's snow. The expense is over and past, and the taxes raised to pay the interest of the money, borrowed, are not so much lost to the country, but only so much

shifted from one to another. All of us contribute to pay this in taxes; and all government creditors, that is all who have money in the funds, or in the savings' banks, receive a share of it as a just debt. Thus the taxes find their way back into many a poor man's cottage who never suspects it.

I have said that far the greater part of the taxes are raised for this purpose; that is, for paying the interests of the National Debt. The following calculation will make this clear to you; every twenty shillings paid in taxes, are disposed of in about these proportions:

		s.	d.
Expenses of the Army, Navy, &c.		7	2
King, Judges, Ministers of State, and other public officers -	Civil List		
Pensions and Sinecure Places, *i. e.*, those who have no duties belonging to them - -	Civil List	0	10
Interest of the National Debt		12	0

LESSON IX.

LETTING AND HIRING.

WHEN one man parts *entirely* with anything that belongs to him, to another person, and receives payment for it, this transaction is called, as you know, *selling* and *buying*. When he parts with it *for a time* only, that is, *lends it*, to another, and receives payment for this, the transaction is commonly called *letting* and *hireing*.

But there are various words used to express this kind of dealing. When any one allows me, for a certain price, the use of his coach, ship, or horse, this price is called *hire*. And so also if he lets me *himself*, that is, his labour, to wait on me or work for me, I am said to hire him; and the payment he receives is sometimes called hire, though more commonly, *wages*. But if, instead of a carriage or a horse, he lets me a house, or garden, the price I pay him is called *rent*. And if he allows me the use of his money, the price I pay for the loan of it is called *interest*. Now, though these different words are thus employed, you are not to suppose

that they signify so many different kinds of transactions. If you consider attentively what is meant by the words Rent, Hire, and Interest, you will perceive that all in reality signify the same sort of payment. It is only the fashion of the language to employ these different words according to the different kinds of articles that are lent.

The Israelites were forbidden, in the law of Moses, to lend to their brethren on usury, that is, interest. As they were not designed to be a trading people, but to live chiefly on the produce of their own land, they were not likely to have any considerable money transactions together, and would seldom have occasion to borrow, except when one of them happend to fall into distress; and then his brother Israelites were expected to assist him freely, out of brotherly kindness and friendship; as is becoming in members of the same family. For they were all decended from twelve brothers, the sons of Jacob, who was also called Israel, and from whom they took their name; and they were commanded to consider each other as brethren.

But they were allowed by God's law to receive interest on the loan of money, or anything else lent to a stranger, that is, any one besides the Israelites. And this shows that there can be nothing wrong in receiving interest, or any other kind of hire; for the law expressly charges them not to oppress or wrong the strangers, but to treat them not only justly, but kindly and charitably.

I have said that there is no real difference between paying for the loan of money, and for the loan of anything else. For suppose I have £100 laying by me, you will easily see that it comes to the same thing, whether I buy a house or a piece of land with the money, and let it to my neighbour at so much a year, or whether I lend him the money to buy the house or the land for himself, on condition of his paying me so much a year for the use of my money. But in the one case his yearly payment will be called rent, and in the other case it gets the name of interest.

LESSON X.

LETTING AND HIRING.—(*continued.*)

EVERY man ought to be at liberty to sell, let, or use in any way he likes best, his house, or land, or anything that is his property. There are some countries in the world, indeed, inhabited by half-savage tribes, such as the Tartars, where land is not private property, but is all one great common on which every man turns out his cattle to feed. These people of course, lead a wandering life, dwelling in tents, and removing from place to place, in search of fresh pasture; and the land, as you may suppose, is never cultivated, as no one would think of sowing seed, when another might reap the harvest.

There are other countries, again, where any man may keep possession of a piece of ground which he has ploughed and sown, till he has gathered in the crop; but as soon as ever it is out of his occupation, any one else is free to take possession of it. This is the case in many parts of Arabia at this day; and such seems to have been the state of many parts of the land of Canaan while Abraham and Isaac dwelt there. (See Gen. xxvi. 12, and Acts vii. 5.)

But it is plain that, in such a state of things, it would not be worth any one's while to spend money in fencing, draining, and manuring the land; because he would know that if he were disabled by sickness from continuing to cultivate it, or if he died leaving young children, it would pass into other hands, and all he had spent would be lost to him.

In order, therefore, that the land should be properly cultivated, it must be private property; and if a piece of land is your property, you ought to be at liberty to dispose of it like any other property; either to sell it, or to cultivate it yourself, or to employ a bailiff and labourers to cultivate it for you, or to let it to a farmer.

When land is scarce in proportion to the number of people, in any country, the hire, or rent, as it is called, which the farmer pays for the use of it, will be the

greater. The reason of this is very simple, and easy to be understood. The price of land, either to buy or to hire, increases, like the price of everything else, in proportion to the scarcity of it, compared with the number of those who want it, and can afford to pay for it. When horses are scarce, in proportion to those who want them, and can afford to pay for them, the price or the hire of a horse increases; and so it is with every thing else, and with land among the rest. A farmer *desires* land, because he hopes to make a profit by raising corn and other crops from it; and he consents to *pay* rent for it, because he cannot obtain land without. And so it is with everything that we buy or hire. We consent to pay for it as much as we think if worth to us, when we desire to have it, and cannot obtain it *without* that payment. Land is *desired*, therefore, on account of the crops, that may be raised from it; and rent is *paid* for it, because it cannot be had without rent. You may have land for nothing in the Arabian desert; but no one desires it there, because it will produce nothing. But, again, in many of the uncleared parts of America, land may be had for nothing, though the soil is good and will bear plentiful crops. But there the land is so abundant, and the people so few, that any one may have as much as he chooses to clear. In this country, therefore, land that will produce any crop is of *value*, because the supply of it is limited. In the wilds of America it is of no value; not because (like the Arabian deserts) it will produce nothing, but because, though it is very fertile, there is enough, and much more than enough, for every one who wants it. But even in the newly-settled parts of America the land becomes of some value, as soon as it is cleared of wood, and has roads made through or near it. And many persons are willing to buy, or to pay rent for, such land, even when they might have land for nothing in the debth of the forests. But then they would have to clear the ground of trees, and would be obliged to send perhaps some hundreds of miles to a market, to sell the corn, and to buy what they wanted.

But as land grows scarcer in proportion to the number of people, that is, as the people multiply, the owners of it find that they can obtain a higher and higher rent. This, as I have explained, is because everything that is useful becomes an article of *value*, that is, will fetch a *price*, when it is limited in quantity.

Some persons fancy that the reason why land fetches a rent, is because the food, and other things, produced by land, afford the necessary support of man's life. But they do not consider that air, which we do not pay for, is as necessary to life as food; and that no one would pay for anything which he might have without payment. If good land were as abundant in this country, in proportion to the people, as it is in some of the wilds of America, every one might take as much as he pleased for nothing. It would produce corn and other necessaries, as it does now; yet he would pay nothing but the labour of cultivation. Here, on the contrary, the only kind of land for which no one would pay rent is that which will produce nothing, and is of no use at all; like the shingles of the beach on many parts of the coast. However *scarce* land (or any other article) may be, no one will pay for that which is *useless;* and, however *useful* it may be, he will not pay for that which is so *plentiful* as to be had for nothing. As was explained in a former Lesson, the value of anything is not caused by its *scarcity alone*, or by its *usefulness alone*, but by both together.

Some, again, fancy that the rent is paid on account of the expense which the owner of the soil (or landlord, as he is called) has laid out in enclosing the land, manuring it, and bringing it into cultivation. And some of our land certainly has in this way costs the landlord a great expense, which he would not have bestowed, if he had not expected to be repaid by the rent. But it is not this expense that is the cause of the rent's being paid; for if he had laid out ever so much in trying to improve the land, still, if he did not bring it to produce the more, he would not obtain the higher rent. And,

on the other hand, though your land may have cost you nothing, still, if it will produce anything, and there is not enough of it for everybody, you may always obtain a rent for it. There are pastures of great extent, in some parts of this country, which have never had any expense laid out on them. But they naturally produce grass for sheep; and farmers accordingly pay rent for them.

Again, there are on some parts of the coast, rocks which are bare only at low water, and are covered by the sea at every side. On these there grows naturally a kind of sea-weed called kali, or kelp; which is regularly cut and carried away to be dried and burned, for the sake of the ashes, used in making soap and glass. These rocks are let by the owners of them to those who make a trade of gathering this kelp for sale. Now, you see by this, that rent cannot depend on the land's producing food for man, or on the expenses laid out in bringing it into cultivation; for there is rent paid for these rocks, though they produce no food, and though they never have been or can be cultivated.

Sometimes, again, rent is paid for a piece of ground on account of its *situation*, even though nothing grows on it. A fisherman, for instance, may be glad to rent a piece of the sea-beach, in a spot where it is convenient for him to draw up his boat, and spread his nets to dry, and build his cottage and storehouses.

LESSON XI.

LETTING AND HIRING.—(*continued.*)

Some persons are apt to think that a high price of corn, and other provisions is caused by high rents; but this is quite a mistake. It is not the high rent of land that causes the high price of corn; but, on the contrary, the high rent of land is the effect of the high price of the corn and other things produced by the land. It is plain that rents do not lessen the supply of corn, and the price of corn depends on the supply brought to mar-

ket, compared with the number of people who want to buy. Suppose all landlords were to agree to lower their rents one-half, the number of acres of land, and the quantity of corn raised, would remain the same, and so would the number of mouths that want corn. The farmer therefore, would get the same price for his corn as he does now; the only difference would be, that he would be so much the richer, and the landlord so much the poorer: the labourers, and the rest of the people, would be no better off than before.

But some persons say, that if rents were lower, the farmers could afford to pay higher wages to their labourers; but those who talk so, confound together a *payment* and a *gift*. Wages are a payment for the use of a man's labour for a certain time; and as long as the price of corn remains the same, the day's work of the thresher would not be *worth more* to the farmer who employs him, on account of the farmer's having become a richer man than formerly. No doubt, the richer any one is, the better he can afford to bestow a *gift*, if he is disposed to do so, either on his labourers, or on the tradesmen he deals with, or on any of his neighbours. But a pair of shoes is not worth the more to him on account of his being rich; Though he can afford, if he thinks fit, out of kindness and charity, to make the shoemaker a present of double the price of them; and so, also, a day's work in threshing or ploughing, is not worth the more to him on account of his being the richer, though he may choose to bestow a gift on the thresher or ploughman. It is plain, therefore, that making farmers richer and landlords poorer, would make no change in what is *paid* as wages. The farmer would have more to *give*, if he were disposed to give away his money, and the landlord would have less; but there is no reason to suppose that more would be given away altogether than there is now.

And if all rents were to be entirely abolished, and every farmer were to keep the land he now occupies, without paying anything for it, this would only be taking

away the land from one man and giving it to another—the one would be robbed and the other enriched; but the supply of corn, and the price of it, would not be altered by such a robbery. Or, again, if you were to make a law for lowering rents, so that the land should still remain the property of those to whom it now belongs, but that they should not be allowed to receive more than so much an acre for it; the only effect of this would be, that the landlord would no longer let his land to a farmer, but would take it into his own hands, and employ a bailiff to look after it for him.

This is a very common practice in some countries abroad; but the land is seldom so well cultivated on that plan as when it is let to a farmer who has been bred to the business, and whose livelihood depends on his making the most of his farm.

LESSON XII.

DIVISION OF LABOUR.

OBSERVE the accommodation of the most common artificer or day-labourer, in a civilized and thriving country, and you will perceive, that the number of people, of whose industry a part, though but a small part, has been employed in procuring him this accommodation, exceeds all computation. The woollen coat, for example, which covers the day labourer, course and rough as it may appear, is the produce of the joint labour of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder, the dyer, the spinner, the weaver, the fuller, the dresser, with many others, must all join their different arts, in order to complete even this homely production. How many merchants and carriers besides, must have been employed, in transporting the materials from some of those workmen to others, who often live in a very distant part of the country! How much commerce and navigation in particular; how many ship-builders, sailors, sail-makers, rope-makers, must have been employed, in order to bring

together the different drugs made use of by the dyer, which often come from the remotest corners of the world! What a variety of labour, too, is necessary, in order to produce the tools of the meanest of those workmen! To say nothing of such complicated machines as the ship of the sailor, the mill of the fuller, or even the loom of the weaver, let us consider only what a variety of labour is requisite in order to form that very simple machine, the shears, with which the shepherd clips the wool. The miner, the builder of the furnace for smelting the ore, the feller of the timber, the burner of the charcoal to be made use of in the smelting house, the brick-maker, the layer, the workmen who attend the furnace, the millwright, the forger, the smith, must, all of them, join their different arts in order to produce one pair of shears. Were we to examine, in the same manner, all the different parts of his dress and household furniture, the coarse linnen shirt which he wears next his skin, the shoes which cover his feet, the bed which he lies on, and all the different parts which compose it, the kitchen-grate at which he prepares his victuals, the coals which he makes use of for that purpose, dug from the bowels of the earth, and brought to him, perhaps, by a long sea and a long land carriage, all the other utensils of his kitchen, all the furniture of his table, the knives and forks, the earthan or pewter plates upon which he serves up and divides his victuals, the different hands employed in preparing his bread and his beer, the glass window which lets in the heat and the light, and keeps out the wind and the rain, with all the knowledge and art requisite for preparing that beautiful and happy invention, without which these northern parts of the world could scarce have afforded a very comfortable habitation, together with the tools of all the different workmen employed in producing these different conveniences: if we examine, I say, all these things, and consider what a variety of labour is employed about each of them, we shall be sensible, that without the assistance and co-opera-

tion of many thousands, the very meanest person in a civilized country could not be provided, even according to what we very falsely imagine the easy and simple manner in which he is commonly accommodated. Compared, indeed, with the more extravagant luxury of the great, his accommodation must, no doubt, appear extremely simple and easy; and yet it may be true, perhaps, that the accommodation of a European prince does not always so much exceed that of an industrious and frugal peasant, as the accommodation of the latter exceeds that of many an African king, the absolute masters of the lives and liberties of ten thousand naked savages.—SMITH.

All these advantages arise from the *divisions of labour*. For if each man were to make his own clothes, and build his own house, and construct his own tools and household utensiles, he would not be able to do any one of these things so well as if he had devoted his whole time and attention to one of them. Each trade requires more study and practice than he would be able to bestow upon it: so he would probably be clumsy and awkward at all.

But there is another benefit of the divisions of labour, apart from the superior skill acquired by each man's pursuing one trade. It is this. In a great variety of cases, nearly the same time and labour are required to perform the same operation on a *larger* or on a *smaller* scale—to produce many things, or one, of the same kind.

For instance, suppose a number of travellers proceeding through some nearly desert country, such as many parts of America, and journeying together in a large party for the sake of mutual security: when they came to a resting-place for the night, they would be likely to agree among themselves, that some should unlade and fodder the cattle, while others should fetch firewood from the nearest thicket, and others water from the spring; some in the meantime would be occupied in pitching the tents, or erecting sheds of boughs; others in preparing food for the whole party; while some again, with their

arms in readiness, would be posted as sentinals in suitable spots, to watch that the rest might not be supprised by bands of robbers. Now, but for such an arrangement, each man would have to go both to the spring for water, and to the wood for fuel — would have to prepare his own meal with almost as much trouble as it costs to dress food for the whole — and would have to encumber himself with arms while performing all these tasks, lest he should be suddenly attacked by an enemy.

There is, perhaps, no one instance that displays this particular benefit of the division of labour more than the establishment of the post-office for the conveyance of letters. It makes very little difference of trouble, and none of time, to the postman, whether he carries one letter, or a whole parcel of letters, from one town to another; and yet, but for this contrivance, each person would have to send a message on purpose whenever he wanted to write to a friend at a distance.

LESSON XIII.

THE THREE GIANTS.

As Hopkins was sitting one evening at his cottage door smoking his pipe, and his children gamboling around him, an old pedler came up, and offered his little wares for sale: their purchases were small, for small were their means; but as the poor man seemed much tired, they offered him a seat and some refreshment. "It is a weary length of way I am come," said the old man: "and where can I get a night's lodging?"—"I wish I had one to give you," replied Hopkins, "but we are overcrowded with a family already; however, there's a bit of an outhouse behind, where I could make you up a bed of clean straw, with a warm coverlid, if that would serve your turn?" — "Ay, and a blessing to you for it," replied the pedlar; "and if it will please these young ones, I can tell them a story in return, to while away the evening." Upon this all the children crowded round him, crying out, "A story! a story!" — "I

hope it will be a wonderful one," said Tom, "about giants or fairies, and such like." — "Pooh, pooh, nonesence," cried Jenny; "I like a true story better by half." — "True or false," said Hopkins, "I care not, so as there be but some sense in it, that one may learn somewhat by it." — "Oh pray," cried little Betsy, "tell us a pretty story like those in my book of fables; but none of the moral at the end, if you please, that is so stupid." — "I fear I shall have a hard matter to satisfy you all," said the old man: "one is for the marvellous, another for truth, and another good sense, and this little one," said he, patting her head, "likes a fable. Well," said he, "I will do my best to suit your tastes." So, after clearing his throat, he began thus: —

"A long while ago, when the the times were no better than they are now (and perhaps worse, for aught I know,) a poor labouring man, encumbered with a large family of young children, resolved to go and seek his fortune beyond seas. Several of his neighbours, who felt the same distress, had joined together to sell what little they had in order to fit themselves out and pay their passage to one of the foreign colonies, where they were told they might have farms of their own just for a mere nothing; and our good man Jobson thought he could not do better than take his wife and family thither. So off they all set for Liverpool, where they embarked for ———, I cannot recollect the name of the place, but it matters not, for the poor folks never reached it! When they had been at sea some weeks, far away from land, and nothing but wide waters all around them, there arose a great storm, which drove the ship out beyond all reckoning; and the sailors, do what they would, could never manage her; so she drifted before the wind for several days and nights, and at last struck upon a rocky shore, and was wrecked. The poor folks had much ado to save their lives; they did so, however; and were somewhat comforted when they saw that the land to which they had escaped was a pleasant, fruitful country. They found no inhabitants. So much the better, thought they: we

shall have it all to ourselves; and we may live as happily here as we could do in the colony, if we can but get our farming tools from the wreck, and a few clothes.' 'And some of the pots and pans for cooking,' cried the woman. 'Oh, pray remember the poor hens in the coop,' hallowed out one of the children, as the men were trudging off to the wreck to see what they could save. They brought ashore much more than they expected; and, to make short of my story, they settled themselves pretty comfortably: in the course of a year each of the families had a neat log-house and a little garden of vegetables; fruit they found in abundance growing wild; and as it was a hot climate, there were grapes, and figs, and cocoa nuts, and a number of fruits, the names of which they did not know. They had sown corn, and had got in a fine crop, enough for them all; but the difficulty was to turn it into flour or bread. They had no other means than by bruising it between two stones, for it could hardly be called grinding; and it took up so much time and labour, that Jobson, who had a large family to feed, found it a hard matter to make all ends meet."

"Well, but there's nothing wonderful in this story," said Tom: "I hope you will come to a ghost, or a giant, or a fairy soon."

"All in good time, my lad," replied the pedlar; "you must have patience with old age; we cannot scamper on so fast as you do; but it's coming." Upon hearing this the children all crowded still closer around him. —"Well, one day as Jobson was taking a stroll over the new country, and thinking how he wished his boys were big enough to assist him in his work (for he felt well nigh worn out himself,) he came to a valley where he had never been before; a river wound through it, overshaded with trees; and it was so beautiful, that he could not find in his heart to turn back; so he went on and on, till at last he came within sight of an object that made him start back and shudder."

"Oh, here it's coming!" cried Tom, clapping his hands: "what was it? it could not be a fairy, for that would never have frightened him."

"It was as little like a fairy," said the pedlar, "as any thing well could be. It was an enormous giant, stretched at his whole length upon the ground. Jobson would have fled; but the giant's eyes were shut, so that he appeared to be asleep; and he looked so harmless and good-humoured, that Jobson stood gazing on him till his fear was nearly over. He was clad in a robe of dazzling brightness where the sun shown upon it, but the greater part was shaded by the trees; and it reflected all their different colours, which made it look like a green changing silk. As Jobson stood, lost in amazement, the giant opened his eyes, and turned towards him with a good-humoured smile."

"Then he was not a wicked giant?" said Betsy.

"Far from it," replied the old man. "Still, when Jobson saw that he was awake, and stretching himself as if he was going to rise, he took to his heels; but the giant remained quietly stretched on the grass, and called after him in a tone of voice so gentle, that Jobson was tempted to stop. 'Fear me not, good man, because I am strong and powerful; I am not cruel, and will do you no harm.' Jobson hesitated; but the giant looked so kind-hearted, that he felt inclined to trust to his words, and, step by step, he approached. 'Why should you fear me because of my size?' said the giant: 'you are not afraid of yonder hill, which is bigger than I am.'—'Ay, but you are alive,' replied Jobson, 'and I have read of giants being very wicked. It is true I never saw one before. Indeed, till now, I thought they were only idle stories made to amuse children.'—'The wicked giants you have read of are so,' replied he; 'but there are real giants in nature, who, far from being inclined to evil, are willing to do all the good to mankind that lies in their power; and I am one of these.'—'Then a deal of good you can do,' replied Jobson: 'for you must be as strong as Samson.' He

then began to cast over in his mind what good the giant might do him, seeing he was so ready; for, thought he, if he is willing to work, he can do more in a day than I can in a month; so I'll e'en make bold to ask him the question. 'I am ready to do any work you will set me; but I must tell you, that, not having been in the habit of working in this desert island, I shall require some teaching in order to know how to set about it.'—'If that is all,' said Jobson, 'I can teach you any work you would like to do.' But a difficulty occurred to him; he concluded that the giant would require to be paid in proportion to the work he did; and he asked, with some anxiety, what wages he would expect. 'Wages!' replied the giant, smiling: 'I cannot expect any; I do not even know what wages mean.' Jobson was ready to leap for joy at the idea of getting a labourer who could do the work of a hundred men without wages; and he was hurrying away to tell his wife the good news, when the giant said, 'If you will let me carry you home, it will save you the trouble of walking, and you will be there much sooner.' Jobson rather hung back; yet, not liking to show any distrust of one who was willing to do him so much good, he consented. 'You may think it strange,' said the giant; but as I never carried any one before, you must show me how to do it.—'He seems rather stupid,' thought Jobson: 'however, it is well he takes so little upon himself, and is so ready to be taught.'—'Will you mount upon my back? or shall I carry you in my arms?' continued the giant. Jobson was very glad to have the option, for he had much rather mount him like a horse, than be carried in his arms like a baby. Besides, if the truth must be told, he was still rather fearful of seeing the giant stand upright, and of being folded in his arms: having, therefore, first saddled him with some planks of wood, to make a comfortable seat, and having cut himself a long pole, which might serve to hasten his pace in case of need, he de-

sired him to take the road homewards. The giant obeyed: he neither walked nor trotted, but glided on so smoothly, that, though he went at a pretty brisk pace, Jobson felt scarcely any motion. In a short time they reached the cottage. But you may imagine the fright of Dame Jobson, and all her little crew, when they beheld him mounted on such an enormous animal: the children ran screaming away, as if they had seen a wild beast, and the poor woman wrung her hands in despair, and fell a crying; then she threw herself at the feet of the giant, begging him to set her dear husband at liberty. 'He is quite free,' said the giant; 'I only brought him home to save him the fatigue of walking; — and now, good woman, if there is anything I can do for you, you need but tell me; for I ask no better than to be busy.' The dame courtsied, and trembled, and wiped her eyes, and tried to smile; but she was so astounded with wonder at the sight of this monstrous giant, and so surprised at his good nature, that she began to doubt whether she was in her right senses. And when her husband talked to her, and told her all that had passed between them, and how much the giant had promised to do for them, she lifted up her hands and eyes, and said she would try to believe it, but she thought it was only to good to be true. In the mean while the children, who had scampered away, when they saw their father and mother in friendly talk with the giant, ventured gently to return. 'Look at his legs,' cried little Jack; 'I am sure I could not reach round the calf.' — 'If he stood upright, he might gather the cocoa-nuts without climbing,' said Will. As they drew near, they crowded together, as if for defence: but when they saw the giant smile upon them, and heard their father and mother say there was nothing to fear, their terror ceased; for neither father nor mother had ever deceived them, so they had full belief in all they said. Their fright was no sooner over than they gave way to their cu-

riosity. The giant was still stretched upon the grass; and in a few minutes the little ones were crawling and climbing all over his huge body, and making a playfellow of him.

"In the meantime the father and mother were consulting together how they should manage to lodge and board the giant. 'Why, he will want a room bigger than all our house,' said the dame, 'and I'm sure no one can build it but himself: then, as for his food.' continued she, 'he will eat us out of house and home; he will devour a plantation of cabbages and a flitch of bacon at a meal.' This Jobson had never considered; and he began to doubt whether, after all, he had made so good a bargain as he had supposed. 'We had best go and speak to the giant, wife,' said he; and accordingly they went to inquire what sort of fare he would want. 'Nothing more than a draught of fresh water,' replied he; — 'Well, that is very moderate, indeed,' exclaimed Jobson; 'neither spirits, nor even malt liquor!' —'Ay, but for your eating, friend,' quoth the wife, who began to tremble for her kitchen. —'I never eat,' returned the giant: 'strong as I am, I require no food, so do not disturb yourselves about that; and as for housework or bedding, I always lie on the grass when I am not employed.' You would have thought that Jobson and his wife would have gone wild with joy, when they heard that their powerful labourer worked without board, food, or wages! 'Why, we shall no longer want for anything,' cried they, 'provided he always keeps in this good temper, and ready to work.' — 'We must not overshoot the mark,' said his wife, 'but do what we can to make things agreeable to him.' So they went and told him they should not think of asking him to do what would fatigue him, and begged he would work only just when he liked. 'That depends upon you, my good friends; I am ready to work whenever you have work to give me; as for fatigue, I do not know what it means.' — 'Indeed?' exclaimed Job-

son and his wife: 'more and more wonderful! So, then, you want no further rest than your night's sleep?' — 'I never sleep,' replied the giant; 'and can as easily work the four and twenty hours round as I can a single minute,' Jobson was lost in astonishment, and overjoyed at his good luck. They now put their heads together to settle what work they should set the giant to do first, 'He shall begin by brusing the corn that I am so tired of working at,' cried Jobson; so he showed him how he used the stones for that purpose. But this proved mere child's play to the giant; and Jobson thought if he could but get two large flat stones, such as were used in a mill, the giant would be able to get through much more work. But then the quarry was a long way off, and when they were cut how could they ever be got home? 'They will be no burden to me to carry,' said the giant; 'let us be off.' Jobson only stayed to fetch his tools, which he placed in a sort of large shallow box, upon the giant's shoulders. 'This served him also for a seat: and carrying the long staff in his hand, away they went to the quarry, where they soon cut stones, which were placed in the box on the giant's back, and brought home. When the stones were properly arranged, the giant went to work as steadily as if he had done nothing else all his life. At nightfall the happy couple begged him to leave off and take some rest; but they could not persuade him to do so. They went to bed themselves; but not without first returning thanks to God in their prayers for having sent them so great a blessing as a labourer who worked both day and night without wanting food or lodging." — "And pray, what was the name of this wonderful giant?" said Tom, interrupting the pedlar.

"*Aquafluens*," replied he.

"Oh, what a long hard name!" exclaimed little Betsy; "I never heard such a name before." — "Giants have not the same sort of names as we men have," replied the pedlar; "but I assure you it is a very significant one. However, now let me go on with my story,

"The children were awakened in the night by the noise of the giant grinding the corn; and, frightened at the unusual sound, they called to their mother, who told them what it was. And when she saw her husband quietly sleeping by her side, and thought what a world of labour he was spared, she ejaculated a blessing on her new friend before she again fell asleep. The next morning, Aquafluens having ground all the corn, asked for more work; and whilst Jobson was thinking what he could set him to, he began to wash the house, and carried away all the dirt and filth in a trice. He then took the children down to the water side, played with them for some time, and began teaching them to swim: this delighted them beyond measure; and when they returned home to breakfast, clean and fresh, and with rosy cheeks and good appetites, they were full of the praises of their playfellow, Aquafluens. In the meantime, Jobson had settled on a task for him; he had long wished to bring home a large tree which had been blown down in the forest, for the purpose of cutting it into planks, in order to floor his cottage, which got damp and muddy in wet weather; but it was impossible for him either to carry so heavy a burden, or to cut it into planks. Now nothing was more easy; he slung the tree across the giant's shoulders, who brought it home without difficulty. Then Jobson showed him how to use the saw: he soon took to it; and, after some little time, proved a much more exact and regular sawyer than his master. Jobson thought he got on prodigiously with his work; yet he said to himself, 'If I could fasten eight or ten together, parallel to each other, with handles at each end, I am sure he would be strong enough to pull them backwards and forwards, and to cut eight or ten planks at once. The difficulty was to obtain such a number of saws. Jobson applied to his neighbours, and agreed to provide them with a stipulated quantity of planks in return for the use of their saws. The

fame of the laborious giant had spread throughout the colony, and every one was eager to furnish a saw, in order to partake of the benefit of his work. One of the men, who had been bred a carpenter, undertook to arrange the saws in a kind of frame-work; others dug out a large saw-pit. This took some time; but when it was accomplished, and the giant fairly set to work, the whole tree was cut into neat planks in the course of an hour.

"After Jobson had paid for the use of the saws, there remained planks enough not only to floor his cottage, but to make a door, a set of shelves, and a good-sized table. The carpenter offered to make these things for Jobson, on condition that he would allow Aquafluens to grind his corn. This was a bargain advantageous to both parties, and therefore soon agreed upon; and when the rest of the colony saw how comfortable and tidy Jobson's cottage was become, they set to felling trees in the forest for the same purpose. Then it was necessary to pay Jobson for Aquafluen's labour to bring them home and saw them into planks; for it was not to be expected that Jobson should part with the services of such a workman without compensation. Each brought him what he could best spare, or what he thought Jobson most wanted. One came laden with a basket of fish, being part of a draught he had just caught; another brought half of a young kid he had lately shot; another, some wild ducks he had snared; and so they went on, till Jobson's cottage was so well stored that it might have been taken for the larder of some great inn. One man brought Jobson a purse of money, which he had saved from the wreck, and offered to pay him in cash for the use of the giant's labour. 'Why, my good fellow, what should I do with your money? It would be of no use to me here; and a guinea would not be half so valuable as these good things which your neighbours have brought me: however, as I have more food than we shall be able to consume for many a day, I will take your money for

once; mayhap, some day or other, it may turn to some use.' Last of all came a poor widow, who had lost her husband since they were wrecked: she wished much for a floor of planks to keep her children dry and clean; but she had nothing to offer in exchange for the giant's labour but a basket of potatoes from her little garden. 'I shall not take your potatoes, Martha,' cried Jobson, 'so carry them back again.'—'Alas!' said the poor widow, 'I have nothing else to offer; you know how destitute I am. Jackson has kindly promised to cut me down a tree, if I can obtain the giant's services to bring it home and saw it into planks: and I dare say the carpenter would lend me a hand, some leisure day, to lay down the floor.'—'And do you think I am the only one who will not give a turn to a poor neighbour without reward?' muttered Jobson, half sulkily. 'Go your ways, my good woman, bid Jackson cut down your tree; and, as soon as that is done, Aquafluens shall take it in hand.' The poor woman thanked him with tears in her eyes; and away she trudged with her load of potatoes, which, to her, felt lighter than if she had carried back the basket empty, so pleased was she to have them to dress for her children's dinner.

"There were two men still loitering about the door of Jobson's cottage, who would gladly have got the use of the giant's services; but, having always been idle fellows, who had done no more than scrape together the bare necessaries of life, they had not a single thing to offer in return. 'If so, you had as well be gone,' said Jobson; 'the giant does not work to encourage idleness, I promise you.'—'What can we do?' replied one of them; 'if we have got nothing, we can give nothing.'—'You have, both of you, got a good pair of arms; and if you had made a right use of them, you would not have come empty-handed now.' Jobson's wife, knowing they had each of them a wife and children, could not but have a fellow-feeling towards them. 'You have still got your arms,' said she; 'and if you

will use them for us for a time, I'll venture to say my good man will lend you the giant's services.' — 'But,' said Jobson, 'whilst we have the giant to work for us, what need have we of the help of others?' — 'There is a power of things Aquafluens cannot do, you well know, Jobson; and have not I many a time heard you say that he does his work so fast, that it's more than you can do to get it ready for him; now, why should not you, husband, take your ease a bit, and let others prepare the work for him?' — 'That's true enough,' replied he; 'seeing we are so well to do in the world there's no manner of reason why I should slave myself. But then,' added he, 'I doubt whether I can trust these idle fellows.' — 'You may give an eye to them, and see that they mind what they are set about; besides,' added she, 'I sadly want a set of large baskets to keep the store of good things our neighbours bring us.' So it was agreed that the giant was to grind the corn of these two men, on condition that they should do such work in return as Jobson and his wife required. Then one of them was sent to strip off the bark from the trunk of a tree, and place it in the pit ready for the giant to saw; whilst the other was despatched to gather slips of willow, and make them into baskets.

"It would be endless to relate all the advantages which the colony reaped from the giant's labour; but, though the benefit was general, Jobson being master of his services, was by far the greatest gainer by them. This led his neighbours, when they had a leisure day, to stroll about the unknown parts of the country, in hopes of meeting with some other giant, whom they might engage in their services. Many were the inquiries made of Aquafluens whether there were any other giants in the island. 'I have a brother,' replied he; 'but we seldom meet: I love to repose in the valleys; and he, for the most part, frequents the hills.' — 'And can he do as much work as you do?' — 'Yes,' replied Aquafluens, 'when he is in the humour; but he is more

variable in his temper, and now and then is over boisterous. He sometimes disturbes the natural calmness of my temper, and works me up into a rage.'

"The search of the colonists was long fruitless; at length, one day, Jackson, climbing a high rock in pursuit of a wild goat, saw a magnificent figure seated upon the summit. He could scarcely distinguish the shape, for his eyes were dazzled by its brightness; but what struck him most were two enormous wings, as large as the sails of a ship, but thin and transparent as the wings of a gnat. Jackson doubted not but that this was the brother of Aquafluens. Alarmed at the account he had heard of the uncertainty of his temper, he hesitated whether to approach; the hope of gain, however, tempted him: and as he drew nearer, he observed that he also had a smiling countenance; so, mustering up courage, he ventured to accost him, and inquire whether he was the person they had so long been in search of; and whether he would engage in his service. 'My name is Ventosus,' cried the winged giant; 'and I am ready to work for you, if you will let me have my one way. I am not of the low grovelling disposition of my brother, who plods on with the same uniform pace. I cannot help sometimes laughing at his slow motion; and I amuse myself with ruffling his placid temper, in order to make him jog on a little faster. I frequently lend him a helping hand when he is laden with a heavy burden. I perch upon his bossom, and, stretching out my wings, I move with such rapidity as almost to lift him from the ground.' Jackson was astonished to hear Aquafluens accused of sluggishness; he told Ventosus what a prodigious quantity of work he had done for the colony. 'He is a snail compared to me, for all that,' hollowed out Ventosus, who had sometimes a very loud voice; and to show his rapidity, he spread his wings, and was out of sight in a moment. Jackson was sadly frightened, lest he should be gone for ever; but he soon returned,

and consented to accompany Jackson home, on condition that he would settle him in an elevated spot of ground. 'My house is built on the brow of a hill,' said Jackson, 'and I shall place yours on the summit.' — 'Well,' said the giant, 'if you will get me a couple of millstones, I will grind you as much corn in one hour as Aquafluens can in two: like my brother, I work without food or wages; but then I have an independent spirit; I cannot bear confinement; I work only when I have a mind to it, and I follow no will but my own.' — 'This is not such a tractable giant as Aquafluens,' thought Jackson; 'but he is still more powerful; so I must try to manage his temper as well as I can.' His wonderful form and the lightness of his wings excited great admiration. Jackson immediately set about building a house for him on the hill, to grind corn in; and, in the meantime, Ventosus took a flight into the valley, to see his brother. He found him carrying a heavy load of planks, which he had lately sawed, to their proprietor: they embraced each other; and Ventosus, being in a good humour, said, 'Come, brother, let me help you forward with your load; you will never get on at this lazy pace.' 'Lazy pace!' exclaimed one of the children, who was seated on the load of wood on the giant's back; 'why, there is no man who can walk half a quarter as fast.' — 'True,' replied Ventosus; 'but we are not such pigmies as you.' So he seated himself beside the child, stretched out his wings, and off they flew with a rapidity which at first terrified the boy; but when he found he was quite safe, he was delighted to sail through the air almost as quickly as a bird flies. When they arrived, and the wood had been unloaded, — 'Now, brother,' said Aquafluens, 'you may help me back again.' — 'Not I,' replied Ventosus; 'I am going on, straight forward: if you choose to go along with me, well and good: if not you may make your way home as you please. Aquafluens thought this very unkind, and he

began to argue with his brother; but this only led to a dispute: Aquafluens's temper was at length ruffled: Ventosus flew into a passion; he struggled with his brother, and roared louder than any wild beast. Aquafluens then lost all self-command, and actually foamed with rage. The poor child stood trembling with fear at a distance; he hardly knew the face of his old friend, so much was his countenance distorted by wrath: he looked as if he could almost have swallowed him up. At length, Ventosus disengaged himself from his brother, and flew out of his sight; but his sighs and moans were still heard afar off. Aquafluens also murmured loudly at the ill treatment he had received; but he composed himself by degrees; and, taking the boy on his back, slowly returned home. Jackson inquired eagerly after Ventosus; and when the child told him all that had happened, he was much alarmed for fear Ventosus should never return; and he was the more disappointed, as he had prepared everything for him to go to work. Ventosus, however, came back in the night; and when Jackson went to set him to work in the morning, he found that nearly half the corn was already ground. This was a wonderful performance; yet, upon the whole, Ventosus did not prove of such use to the colony as his brother. He would carry with astonishing quickness; but then, he would always carry his own way; so that it was necessary to know what direction he intended to take, before you could confide any goods to his charge; and then, when you thought them sure to arrive on account of the rapidity with which they were conveyed, Ventosus would sometimes suddenly change his mind, and veer about with the fickleness of a weathercock; so that the goods, instead of reaching their place of destination, were carried to some other place, or brought back to the spot whence they set out. This inconvenience could not happen with regard to grinding corn; but one, of no less importance, often did occur. Ventosus, when not inclined to work, disappeared, and was nowhere to be found.

"The benefit derived from the labour of these two giants had so much improved the state of the colony, that, not only, were the cottages well floored, and had good doors and window-shutters, but there was abundance of comfortable furniture — bedsteads, tables, chairs, chests, and cupboards, as many as could be wished; and the men and women, now that they were relieved from the most laborous work, could employ themselves in making a number of things which before they had not time for. It was no wonder, therefore, that the desire to discover more giants was uppermost in men's minds. In reply to their numerous inquiries, Aquafluens one day said, with a sigh, — 'I know but of one more of our species to be met with in this island, and that is a truant son of my own. It is many years ago since he left me; and from that day to this I have never beheld him. His mother was of the tribe of Salamanders, and he always took to her relations more kindly than to mine; and one sultry day, as he was basking in the sunbeams, he rose up of a sudden and disappeared from my sight.' — 'Then there is little chance that any of us should find him,' cried the colonists; 'he has probably left the island.'

"Watson, one of the most enterprising among them, was not wholly discouraged by this account; he returned alone to talk to Aquafluens about his runaway son, and learned that there was reason to believe he had not wholly abandoned the island, as he was known to amuse himself occasionally with bathing in a hot spring which flowed from a rock in a distant valley, where none of the inhabitants had ever been. 'The fact is,' said his father, 'he takes so much after his mother that he cannot live but in a very high temperature. These waters are boiling hot, but this only increases his vigour.' Watson inquired if he was a powerful workman. 'I can only speak by report,' replied the father; 'and from that I should judge that he can do more than I and Ventosus together: the

difficulty, however, is to catch him and confine him, for he is just the reverse of Ventosus, he will only work when imprisoned; then, he differs from both of us by being a great feeder.' — 'Oh!' exclaimed Watson, 'if so, he looses one of his principal merits: for, if he is near the size of either of you, it will be difficult to satisfy his appetite, and it may cost me as much to procure him food as I should gain by his labour.' — 'Never fear,' returned the giant, 'the only food he takes is coals or wood, which he devours burning hot, and the more you give him the better he will work, provided, as I said before, he is imprisoned.' — 'But where can we meet with a prison large enough to enclose a giant? — 'Why, in regard to his size,' replied Aquafluens; 'though he sometimes reaches up to the skies, he can, at others, be squeezed into a small compass, and the smaller the space in which you confine him, the harder he will work.' — 'Surely he cannot take a pleasure in being imprisoned,' said Watson. — 'Oh, no!' replied Aquafluens; 'he works only with a view to get free; for he is as fond of his liberty as Ventosus.' — 'Well,' said Watson, 'if you will help me, perhaps we might manage to get hold of him.' Accordingly, the next morning they set out together, Watson having purchased the services of Aquafluens by a fine ham which he took to Jobson. As they were on the road, Watson quietly seated on the back of the giant, he inquired of him by what means he thought they could confine his son, if they should be so fortunate as to meet with him? 'I have brought a vessel for that purpose,' said the giant, and showed him a bottle; upon which Watson fell a laughing, and declared 'that he believed Aquafluens was making game of him.' In a short time they arrived at the hot spring. As they drew near they observed a great body of vapour rising from the pool. 'Look, look!' cried Aquafluens, 'there he is.' Watson looked with great eagerness: he saw nothing but a cloud of steam. In

a few moments, however, this cloud took the form of an enormous giant, whose head reached almost to the clouds: the figure, as it continued slowly rising, became more and more indistinct, till at length it wholly disappeared. 'There he was indeed!' exclaimed Watson; 'but he is gone, perhaps fled for ever!' — 'No, no!' replied Aquafluens; 'since we know the spot he haunts, we may be more fortunate another time.' Another time they came, but no giant was to be seen. 'So much the better,' said Aquafluens, 'we must prepare to catch him when he rises;' so he drew out his bottle, which he held with the mouth downwards over the pool, and he gave the cork to Watson, charging him to thrust it into the bottle as soon as he saw it filled with vapour. Watson had much to do to refrain from laughing at the idea of squeezing a giant into a bottle; however, he was too intent on an object of such importance to venture to give way to his mirth. In a short time the vapour began to arise; Aquafluens held the bottle inverted over it where it appeared thickest: it was soon filled, and well corked; but Watson could not be persuaded that they really were in possession of the long-sought treasure. 'Well, if he is within the bottle,' said he, 'he submits to his confinement with a very good grace; he is as quiet as a lamb.' — 'Never trust to that,' replied Aquafluens; 'he is cool now, but you will see the difference by and by.' When they got home, Aquafluens told him to place him in the chimney-corner as near the fire as possible. 'Heat is his element,' said he; 'and unless you contrive to keep him scalding hot, you will do nothing with him.' Watson, in order to give his new host complete satisfaction, placed him in a pot of boiling water over the fire, when, to his utter consternation, the cork flew out, and he saw the figure of the giant, of a diminished size, come out of the bottle, and, increasing in dimensions as it arose, make its escape through the chimney. Watson, quite discomforted,

went to relate the disaster to Aquafluens. 'What a trick the lad has played you!' said he; 'but we will catch him again, depend upon it.' — 'What's the use of catching, if we can't keep him?' retorted Watson. 'I advise you,' said Aquafluens, 'to see if amongst the things saved from the wreck there is not an iron or a copper vessels which would be strong enough to hold him, when he is alive and active, and fit for work.' Watson inquired throughout the colony, and at last found a man who had a brass vessel of a cylindrical form, which Watson purchased with a pair of old shoes. 'I defy him to burst this,' cried Watson, 'it is so thick and strong.' — 'I have known him crack stouter vessels,' replied the giant, 'when he is much heated by passion;' but, on examining it, he said he thought it would serve their purpose; for he observed that there was a small opening closed with a little door. 'He will make nothing of lifting this door,' cried he, 'when he is violent; but it is too small for him to escape by. However, it will serve him to vent his wrath, and keep him more temperate.' The next day off they posted; succeeded in enclosing Vaporifer (for that was his name,) as he arose from the boiling pool, and carried him home in triumph.

"When Vaporifer was fairly captured, he was ready to come to terms with his master, and offered to do almost any sort of work he chose to set him to. 'But,' said he, 'it would be beneath my talents to grind corn or saw planks. I can work a manufacture of cotton or woolen, or raise coals or water out of a mine.' — 'As for coals,' said Watson, 'we have such abundance of wood that we need give ourselves no trouble to get coals; and in regard to mining of any sort, that is quite beyond our reach. But if it were possible to manufacture the cotton that grows in such quantities in this country, it would be a great blessing; for we are all short of shirts, and our women and children are half naked. So I must consult with the rest of them, and

see if it would be possible to build some mills to spin the cotton and weave it.' This was so desirable, that every one was ready to give his assistance to the best of his ability The carpenter, the smith, and the wheelwright were of essential service; and, after much toil and trouble, the mill was erected. A manufacturer from Manchester would have laughed at it; but it proved a most valuable treasure to the little colony; which, by the by," continued the pedlar, "I ought to have told you, had increased considerably in population, as well as in wealth." — "Wealth!" interrupted Tom: "I thought you said they made no use of money, and did not care about it." — "True," replied the pedlar, "the wealth I speak of was the corn, and cattle, and vegetables, and furniture, and better houses, and boats with which they caught plenty of fish, and other things without number. After a few years had passed over their heads, no one would have known the colony again, so much was it increased and improved. Thanks to Aquafluens, Ventosus, and, above all, to Vaporifer: not that the people were idle: they had enough to do to prepare work for the giants, and finish it up after they had performed their part. Thus, the men had to build houses, and to make furniture, and boats, and carts, out of the boards which Aquafluens sawed. Then they were obliged to raise the corn for Ventosus to grind, and afterwards make it into bread." — "And the woman must have had plenty of work too," said little Betsy, "after they made cotton, to sew it up into gowns and petticoats for the little girls." — "Very true, my dear," said the old man; "and the little girls helped them at this work; for there was a school set up to teach the children to sew, and to read and write; and the poor widow was the mistress of it. Then there was a church built; it was neither very large nor very handsome; but they prayed to God in it as piously and as sincerely as if it had been finer and richer; and never failed to return thanks for the

wonderful assistance He had sent them." — "But pray, what did the men do for coats?" asked Tom: "for theirs must have been worn out in time as well as the women's petticoats?" — "Oh!" said the pedlar, "when once the manufacture of cotton was found to answer, another for wool was set on foot; and after that they raised flax, and manufactured linen; and, built as many mills as they would, Vaporifer worked them all. At last they undertook to build a ship; and then the three giants began to dispute which should take charge of it. 'it cannot move without my assistance,' said Aquafluens. — 'Nay,' said Ventosus, 'you may support it, but a pretty snail's pace it will move at unless I perch upon the deck, and stretch out my wings; and then it will fly upon the surface of the waters.' — 'Ay, but it must fly the way you happen to go,' cried Vaporifer, 'whilst I can take it in any direction; ay, even against the combined efforts of you both.' Aquafluens was obliged to give up the point; for though he could have carried a vessel as far as the mouth of a river, he had no power to walk on the sea. The other two determined to divide the charge amicably between them. When Ventosus was in a humour to conduct the vessel towards the place of its destination, he was to be captain; but if he grew refractory, the command was to be taken by Vaporifer. The colony had now an opportunity of either returning to England, or seeking the spot where it had at first been their intention to settle; but, during the course of twenty years that they had been established in this desert island, they had improved it so much, and become so attached to it, that they had not the least desire to leave it. Besides, those who were young when they were wrecked were now growing old; but those who had been born in the island, or had arrived there at a very early age, were curious to visit England, of which they had heard so much from their parents. They carried thither a cargo of goods, the produce of the island, which they

thought would fetch a good price in England, and brought in return such commodities as the colony required. Thus, manufacturers and commerce were established in the country, and from that time they went on in an almost uninterrupted course of prosperity. And so now, I am come to the end of my story," cried the old man, who began to be out of breath with so long a narritive — "And a very pretty story it is," cried Tom, "with giants in plenty!" — "But I should be glad to know where the sense lies?" said Hopkins, with a shrug of his shoulders; "for as it has not pleased God to give us such helps as you describe, I see no good that can come of setting us a longing for what we can't get, and so making us discontented with what we have."

"Are you sure that you have no such helps?" said the old man with an arch smile. "I could give you an explanation of my tale, but little Betsy would say it was the stupid moral at the end; so I think the children had better go to bed before I proceed." Betsy and little Jem, who were beginning to yawn, agreed to this; but the other children all begged leave to stay and hear the explanation.

"Well, then," cried the old man, "nature has, in reality, given these gigantic powers to assist the labours of men." The children looked around in astonishment, as if doubting whether they should not behold one of the giants. "Tell me," continued he, addressing Hopkins, "who is it turns the mill that saws the wood yonder?" — "No one," cried Hopkins; "it is turned by a stream of water." — "And does not that stream of water work, without requiring either food, lodging, or wages?" — "That is true, indeed," replied Hopkins, scratching his head, as if to make the meaning enter into it the easier. — "It is strange that never struck me before." — "Aquafluens," continued the pedlar, "means no other than a stream of running water." "Oh, that is the reason," cried Jenny, "that he cleaned the house and washed the children, and taught them

to swim; but I do not understand how running water can fetch and carry cargoes of wood and other things, as Aquafluens did." — "Why, in a boat," said Tom, "no doubt: don't you remember they placed a large shallow box on his back, to hold things in: what was that but a boat?" — "Ay, true," replied Jenny; "And the long pole or staff to make the giant go on, must have been an oar." — "Well, it must be confessed," said Hopkins, "there is as much truth as fiction in your tale."

"Then Ventosus," continued the pedlar . . . . "Oh, stop," cried Tom, interrupting him; "let me try to guess what Ventosus means." After thinking awhile, he exclaimed, "I do think Ventosus must be the wind; because, when he quarrels with his brother, Aquafluens, he makes the waves rage, and swell, and foam. Oh, it is certainly the wind which turns the mill to grind the corn." — "True," said Hopkins thoughtfully; "the wind is another gigantic power in nature, for which we have never thought of being thankful. Well, my good friend," continued he, "your story has taught me that we possess blessings I little thought of; and I hope it will teach us to be grateful for them. But what is the third power, which is more powerful than the other two?" — "It is one you know less of, — it is steam; which, confined in the cylinder of the steam engine, sets all our manufacturers in motion. As it rises from boiling water, I have called it the son of water and of fire or heat. It is now, you know, applied to vessels at sea, acting always steadily and regularly, whilst the wind is not under our command. "But observe," said the pedlar, "though these powers do so much for men, they do not take the work out of their hands: on the contrary, when the mills or manufacturers thrive, they give them more to do. It was the giant Vaporifer that introduced into this village the cotton mills, which gave so much work to all the folks in the neighborhood; and if Ventosus

did not grind the corn, depend upon it there would not be half so much raised; no, nor near so many bakers: for, when men were obliged to bruise their corn themselves, it would take up the time which they can now give to sowing and reaping it." — "Nor would there be so many floored cottages, and doors, and window-shutters, and tables, and chairs," said Tom (proud to show that he had not forgotten the number of articles mentioned in the tale,) "if Aquafluens had not been such a capital sawyer of wood." — "Well, but," said Dame Hopkins, who hitherto had made no remark, for, being busied about her household affairs, she had not heard above half the story, "if these giants do but make men work the more, I can't see what good they do them." — "Why, wife," answered Hopkins, "we don't want to be idle; but we want to earn a comfortable livelihood by our work; and I see now, that, if it were not for the help of these powers which nature has given us (and we must have been as blind as buzzards not to have observed them before,) our cottage might have been unfloored; we might have had neither bedstead to lie on, chair to sit on, nor table to eat off; and, what is worse still, a sad scarcity of bread to set on the table at meals. We have now the produce of our own work, and of theirs also; and, as they do a hundred times more work than we can, why, we get a hundred times more food and clothing, and comforts of one kind or other."

"Ay," said Jenny; "where should we have got our cotton gowns and petticoats, or your shirt, Tom, if Vaporifer had not set the cotton mills a going?" — "Well," said Hopkins, snuffing up the air, "I smell the smell of supper. I see my good woman has been busy to some purpose." — "Ay, and it's all the work of my own hands," said she: "none of your giants have had anything to do with it." But the pedlar, who stood up for the credit of his giants, replied. "By your leave, mistress, I think you are mistaken. These

potatoes could never have been so well boiled without the help of steam; nor would the iron, of which the pot is made, have so easily got out of the mine, without the use of a steam-engine." — "I think that truant young giant is the greatest favorite of yours," said Hopkins, "of the three." — "Not when he was running wild about the country," replied the pedlar; "But after he was reclaimed, and took to working, he certainly did more than the other two." — "And, mother, who ground the corn that made this bread?" cried Tom, archly. — "And I doubt whether Ventosus had not some hand in bringing this sugar over the seas from foreign parts," said Hopkins." — "Well, well, come in and eat," cried the good dame, a little angry that she did but half understand the meaning of the story, which seemed to be more attended to than her supper. So they all went in laughing and joking, and sat down to a comfortable meal; which, in spite of all the credit the good dame claimed for her cooking, they declared she could not have brought to table without the help of Aquafluens, Ventosus, and Vaporifer.

MRS. MARCET.

SECTION V.

MISCELLANEOUS LESSONS.

LESSON I.

PRINTING.

THE art of printing, in all its numerous departments, is essentially an art of copying. Under its two great divisions, viz., printing from hollow lines, as in copperplate, and printing from surface, as in block-printing, are comprised numerous arts.

Copperplate Printing. — In this instance the copies are made by transferring to paper, by means of pressure a thick ink, from the hollows and lines cut in the copper.

Engraving on Steel. — This is an art in most respects similar to engraving on copper, except that the number of copies is far less limited. A bank-note engraved on a copperplate, will not give above three thousand impressions without a sensible deterioration. Two impressions of a bank-note engraved on steel were examined, and it was found difficult to pronounce with any confidence, which was the earlier impression. One of these was a proof from among the first thousand; the other was taken after between seventy and eighty thousand had been printed off.

Music Printing. — Music is usually printed from pewter plates, on which the characters have been impressed by steel punches. The metal being much softer than copper, is liable to scratches, which detain a small portion of the ink. This is the reason of the dirty appearance of printed music. Sometimes, also, it is printed with moveable type; and occasionally the musical characters are printed on the paper and the lines printed afterwards.

Calico Printing from Cylinders. — Many of the patterns on printed calicoes are copies by printing from copper cylinders about four or five inches in diameter, on which the desired pattern has been previously engraved. One portion of the cylinders is exposed to the ink, whilst an elastic scraper of stuffed leather, by being pressed forcibly against another part, removes all superfluous ink from the surface previously to its reaching the cloth. A piece of calico twenty-eight yards in length rolls through this press, and is printed in four or five minutes.

Printing from Perforated Sheets of Metal, or Stencilling. — Very thin brass is sometimes perforated in the form of letters; this is placed on any substance which it is required to mark, and a brush dipped in some paint is passed over the brass. This method, which affords rather a coarse copy, is sometimes used for paper with which rooms are covered, and more especially for the borders.

The beautiful red cotton handkerchiefs, dyed at Glasgow have their pattern given to them by a process similar to this, except that instead of *printing* from a pattern, the reverse operation — that of *discharging* a part of the colour from a cloth already dyed — is performed. A number of handkerchiefs are pressed with very great force between two plates of metal, which are similarly perforated with round or lozenge-shaped holes. The upper plate of metal is surrounded by a rim, and a fluid which has the property of discharging the dye, is poured upon that plate. This liquid passes through the holes in the metal, and also through the calico; but owing to the great pressure opposite all the parts of the plates not cut away, it does not spread itself beyond the pattern.

LESSON II.

PRINTING — (*continued.*)

PRINTING from surface is of more frequent application in the arts than that which has just been described.

Printing from Wooden Blocks. — A block of boxwood is, in this instance, the substance out of which the pattern is formed. The designs being sketched upon it, the workman cuts away with sharp tools every part except the lines to be represented in the impression. This is exactly the reverse of the process of engraving on copper, in which every line to be represented is cut away. The ink, instead of filling the cavities cut in the wood, is spread upon the surface which remains, and is thence transferred to the paper.

Printing from Moveable Types. — This is the most important in its influence of all the arts of copying. It possesses a singular peculiarity, in the immense subdivision of the parts that form the pattern. After that pattern has furnished thousands of copies, the same individual elements may be arranged again and again in

other forms, and thus supply multitudes of originals, from each of which thousands of their copied impressions may flow.

Printing from Stereotype. — This mode of producing copies is very similar to the preceding; but as the original pattern is incapable of change, it is only applied to cases where an extraordinary number of copies are demanded, or where the work consists of figures, and it is of great importance to ensure accuracy.

Calico Printing from Blocks. — This is a mode of copying, by surface-printing, from the ends of small pieces of copper wire, of various forms, fixed into a block of wood. They are all of one uniform height, about the eight part of an inch above the surface of the wood, and are arranged by the maker into any required pattern. If the block be placed upon a piece of fine woolen cloth, on which ink of any colour has been uniformly spread, the projecting copperwires receive a portion, which they give up when applied to the calico to be printed. By this plan, after the flower of a rose, for example, has been printed with one set of blocks, the leaves may be printed of another colour by a different set.

Printing Oil-cloth. — After the canvass, which forms the basis of oil-cloth, has been covered with paint of one uniform tint, the remainder of the process which it passes through, are a series of copyings from surface printing, from patterns formed upon wooden blocks, very similar to those employed by the calico printer. Each colour requires a distinct set of blocks, and thus those oil-cloths with the greatest variety of colours are most expensive.

Lithographic Printing. — This is another mode of producing copies in almost unlimited number. The original which supplies the copies is a drawing made on a stone of a slightly porus nature; the ink employed for tracing it is made of such greasy materials that when water is poured over the stone shall not wet

the lines of the drawing. When a roller covered with printing ink, which is of an oily nature, is passed over the stone previously wetted, the water prevents this ink from adhering to the uncovered portions; whilst the ink used in the drawing is of such a nature that the printing ink adheres to it. In this state, if a sheet of paper be placed upon the stone, and then passed under a press, the printing ink will be transferred to the paper, leaving the ink used in the drawing still adhering to the stone.

Register Printing — It is sometimes thought necessary to print from a wooden block, or stereotype plate, the same pattern reversed upon the opposite side of the paper. The effect of this, which is technically called *register printing*, is to make it appear as if the ink had penetrated through the paper, and rendered the pattern visible on the other side. If the subject chosen contains many fine lines, it seems at first sight very difficult to effect so exact a super-position of the two patterns, on opposite sides of the same piece of paper, that it shall be impossible to detect the slightest deviation; yet the process is extremely simple. The block which gives the impression is always accurately brought down to the same place by means of a hinge; this spot is covered by a piece of thin leather stretched over it; the block is now inked, and being brought down to its place, gives an impression of the pattern to the leather: it is then turned back, and being inked a second time, the paper intended to be printed is placed upon the leather, when the block again descending, the upper surface of the paper is printed from the block, and its under surface takes up the impression from the leather.

BABBAGE.

LESSON III.

MISCELLANEOUS EXTRACTS.

THE accumulation of skill and science which have been directed to diminish the difficulty of procuring

manufactured goods, has not been beneficial to that country alone in which it is concentrated; distant kingdoms have participated in its advantages. The luxurious natives of the East, and the ruder inhabitants of the African desert, are alike indebted to our looms. The produce of our factories has preceded even our most enterprising travellers. The cotton of India is conveyed by British ships round half our planet, to be woven by British skill in the factories of Lancashire; it is again set in motion by British capital, and transported to the very plains whereon it grew, is re-purchased by the lords of the soil which gave it birth, at a cheaper price than that at which the coarser machinery enables them to manufacture it themselves.

Various operations occur in the arts, in which the assistance of an additional hand would be a great convenience to the workman, and in these cases tools or machines of the simplest structure come to our aid; vices of different forms, in which the material to be wrought is firmly grasped by screws, are of this kind, and are used in almost every work shop; but a more striking example may be found in the trade of a nail-maker.

Some kinds of nails, such as those used for defending the soles of coarse shoes, called hob-nails, require a particular form of the head, which is made by the stroke of a die; the workman holds the red-hot rod of iron out of which he forms them in his left hand, with his right hand he hammers the end of it into a point, and cutting the proper length almost off, bends it nearly at right angles. He puts this into a hole in a small stake iron immediately under a hammer connected with a treadle, which has a die sunk in its surface, corresponding to the intended form of the head; and having given one part of the form to the head by the small hammer in his hand, he moves the treadle with his foot, which disengages the other hammer and completes the figure of the head; the returning stroke produced by the government of the treadle striking the

finished nail out of the hole in which it was retained. Without this substitution of his foot for another hand, the workman would probably be obliged to heat the nails twice over.

In the manufacture of scythes, the length of the blade renders it necessary that the workmen should move readily, so as to bring every part on the anvil in quick succession; this is affected by placing him in a seat suspened by ropes from the ceiling, so that he is enabled, with little bodily exertion, by pressing his feet against the block which supports the anvil to vary his distance to any required extent. In the manufacture of anchors, an art in which this contrivance is of still greater importance, it has only been recently applied.

In riveting together the iron plates out of which steam engine boilers are made, it is necessary to produce as close a joint as possible; this is accomplished by using the rivets red hot: while they are in that state the two plates of iron are riveted together, and the contraction which the rivet undergoes in cooling, draws them togeth r with a force which is only limited by the tenacity of the metal of which the rivet itself is made.

The process of engraving upon gems is one requiring considerable time and skill. The seals thus produced can, therefore, never become common; imitations, however, have been made of various degrees of resemblance. The colour which is given to glass is, perhaps, the most successful part of the imitation. A small cylindrical rod of coloured glass is heated in the flame of a blow-pipe, until the extremity becomes soft. The operator then pinches it between the ends of a pair of nippers, which are formed of brass, and on one side of which has been carved in relief the device intended for the seal. By this system of copying they are so multiplied, that at Birmingham the more ordinary kinds are to be purchased at three pence a dozen.

Engraving by pressure is one of the most beautiful

instances of the art of copying carried to an almost unlimited extent; and the delicacy with which it can be executed, and the precision with which the finest traces of the engraving tool can be transferred from steel to copper, or even from hard steel to soft steel, are most unexpected. An engraving is first made upon soft steel, which is hardened by a peculiar process, without in the least injuring its delicacy. A cylinder of soft steel, pressed with great force against the hardened steel engraving, is now made to roll slowly backward and forward over it, thus receiving the design, but in relief. This is in its turn hardened without injury; and if it be rolled slowly to and fro with strong pressure on successive plates of copper, it will imprint on a thousand of them a perfect *fac-simile* of the original steel engraving from which it resulted. Thus the number of copies producible from the same design is multiplied a thousand fold. But even this is very far short of the limits to which this process may be extended. The hardened steel roller, bearing the design upon it in relief, may be employed to make a few of its first impressions upon the plates of *soft steel*, and these being hardened, become the representatives of the original engraving, and may, in their turn, be made the parents of other rollers, each generating copper-plates like their prototype.

The metal to be converted into wire is made of a cylindrical form, and drawn forcibly through circular holes in plates of steel; at each passage it becomes smaller, and when finished, its section at any point is a precise copy of the last hole through which it passed. For many purposes of the arts, wire, the section of which is square, or half round, is required: the same method of making it is pursued, except that the holes through which it is drawn are in such cases themselves square or half round, or of whatever other form the wire is required to be. A species of wire is made, the section of which resembles a star, with from six to twelve rays; this is called pinion-wire, and is used by clock-makers.

LESSON IV.

EMPLOYMENT OF MATERIALS OF LITTLE VALUE.

AMONG the causes which tend to the cheap production of any article, and which require additional capital, may be mentioned, the care which is taken to allow no part of the raw produce out of which it is formed, to be absolutely wasted. An attention to this circumstance sometimes causes the union of two trades in one factory, which otherwise would have been separated. An enumeration of the arts to which the horns of cattle are applicable, furnishes a striking example of this kind of economy.

The tanner who has purchased the hides separates the horns, and sells them to the makers of combs and lanterns. The horn consists of two parts, an outward horny case, and the inward conical-shaped substance, somewhat between hardened hair and bone. The first process consists of separating these two parts by means of a blow against a block of wood. The horny outside is then cut into three portions.

The lowest of these, next the root of the horn, after being rendered flat, is made into combs.

The middle of the horn, after being flattened by heat, and its transparency improved by oil, is split into thin layers, and forms a substitute for glass in lanterns of the commonest kinds.

The tip of the horn is used by the makers of knife-handles, and for the tops of whips and similar purposes.

The interior or cone of the horn is boiled down in water. A large quantity of fat rises to the surface; this is put aside, and sold to the makers of yellow soap.

The liquid itself is used as a kind of glue, and is purchased by the cloth-dressers for stiffening.

The bony substance which remains behind is ground down and sold to the farmers for manure.

The shavings, which form the refuse of the lantern-maker, are cut into various figures, and painted and

used as toys, which curl up when placed on the palm of a warm hand.

The skins used by the gold-beater are produced from the offal of animals. The hoofs of horses and cattle, and other horny refuse, are employed in the production of the prussiate of potash, that beautiful, yellow, crystallized salt, which is exhibited in the shops of some of our chemists.

The worn-out saucepans and tin-ware of our kitchens, when beyond the reach of the tinker's art, are not utterly worthless. We sometimes meet carts loaded with old tin kettles and worn-out iron coal scuttles traversing our streets. These have not yet completed their useful course: the less corroded parts are cut into strips, punched with small holes, and varnished with a coarse black varnish, for the use of the trunkmaker, who protects the edges and angles of his boxes with them; the remainder are conveyed to the manufacturing chemists in the outskirts of the town, who employ them, in conjunction with pyroligneous acid, in making a black dye for the use of calico printers.

Economy of Manufacturers. — BABBAGE.

LESSON V.

COMPLAINT OF THE DYING YEAR.

"I AM," said he "the son of old father *Time*, and the last of a numerous progeny; for he has had no less than several thousands of us; but it has ever been his fate to see one child expire before another was born. It is the opinion of some, that his own constitution is beginning to break up, and that when he has given birth to a hundred or two more of us, his family will be complete, and then he himself will be no more."

Here the Old Year called for his account book, and turned over the pages with a sorrowful eye. He has kept, it appears, an accurate account of the moments, minutes, hours, and months, which he has issued, and

subjoined in some places memorandums of the uses to which they have been applied, and of the loss he has sustained. These particulars it would be tedious to detail, but we must notice one circumstance; upon turning to a certain page in his accounts, the old man was much affected, and the tears streamed down his furrowed cheeks as he examined it. This was the register of the fifty-two Sundays which he had issued; and which, of all the wealth he had to dispose of, has been, it appears, the most scandulously wasted. "These," said he, "were my most precious gifts. I feel, however," said he, "more pity than indignation towards these offenders, since they were far greater enemies to themselves than to me. But there are a few outrageous ones, by whom I have been defrauded of so much of my substance, that it is difficult to think of them with patience, particularly that notorious thief *Procrastination*, of whom every body has heard, and who is well known to have wronged my venerable father of so much of his property. They also are three noted ruffians, *Sleep*, *Sloth*, and *Pleasure*, from whom I have suffered much; besides a certain busybody called *Dress*, who, under the pretence of making the most of me, and taking great care of me, steals away more of my gifts than any two of them.

"As for me, all must acknowledge that I have performed my part towards my friends and foes. I have fulfilled my utmost promise, and been more bountiful than many of my predecessors. My twelve fair children, have each in their turn aided my exertions; and their various tastes and dispositions have all conduced to the general good. Mild *February*, who sprinkled the naked boughs with delicate buds, and brought her wonted offerings of early flowers, was not of more essential service than that rude blustering boy, *March*, who though violent in his temper, was well-intentioned and useful. *April*, a gentle, tender-hearted girl, wept for his loss, yet cheered me with many a smile. *June*

came, crowned with roses and sparkling in sunbeams, and laid up a store of costly ornaments for her luxuriant successors. But I cannot stop to enumerate the good qualities and graces of all my children. You, my poor *December* dark in your complexion, and cold in your temper, greatly resemble my first-born, *January*, with this difference, that he was most prone to anticipation, and you to reflection.

"It is very likely that, at least after my decease, many may reflect upon themselves for their misconduct towards me. To such I would leave it as my dying injunction, not to waste time in unvaling regret; all their wishes and repentance will not recall me to life. I shall never, never return! I would rather earnestly recommend to their regard, my youthful successor, whose appearance is shortly expected. I cannot hope to live long enough to introduce him: but I would fain hope that he would meet with a favorable reception; and that, in addition to the flattering honours which greeted my birth, and the fair promises which deceived my hopes, more diligent exertion and more preserving efforts may be expected. Let it be remembered, that one honest endeavour is worth ten fair promises."

HENDERSON.

WHAT IS TIME?

I ASK'D an aged man, a man of cares,
Wrinkled and curved, and white with hoary hairs;
"Time is the warp of life," he said; "Oh, tell
The young, the fair, the gay, to weave it well!"
I ask'd the ancient, venerable dead,
Sages who wrote, the warriors who bled;
From the cold grave a hollow murmur flow'd,
"Time sow'd the seed we reap in this abode!"
I ask'd a dying sinner, ere the tide
Of life had left his veins. — "Time!" he replied;
"I've lost it! Ah, the treasure!" — and he died.
I ask'd the golden sun and silver spheres,

Those bright chronometers of days and years
They answered, "Time is but a meteor glare,"
And bade us for eternity prepare.
I ask'd the seasons, in their annual round,
Which beautify or desolate the ground;
And they replied (no oracle more wise,)
"'Tis Folly's blank and Wisdom's highest prize!"
I ask'd a spirit, lost, but, oh! the shriek
That pierc'd my soul! I shudder while I speak!
It cried, "A particle! a speck! a mite
Of endless years, duration infinite!"
Of things inanimate, my dial I
Consulted, and it made me this reply —
"Time is the season fair of living well,
The path of glory, or the path of hell."
I ask'd my Bible, and methinks it said,
"Time is the present hour, the past is fled;
Live! live to-day! to-morrow never yet
On any human being rose or set."
I ask'd old Father Time himself at last;
But in a moment he flew swiftly past! —
His chariot was a cloud, the viewless wind
His noiseless steeds, which left no trace behind,
I ask'd the mighty Angel, who shall stand
One foot on sea and one on solid land;
"By Heaven!" he cried, "I swear the mystery's o'er;
Time was," he cried, "but Time shall be no more!"

MARSDEN.

THE DAY OF REST.

How still the morning of the hallow'd day! —
Mute is the voice of rural labour, hush'd
The ploughboy's whistle and the milk-maid's song.
The scythe lies glittering in the dewy wreath
Of tedded grass, mingled with faded flowers
That yester-morn bloom'd weaving in the breeze.
Sounds the most faint attract the ear; — the hum
Of early bee, the trickling of the dew,
The distant bleating, midway up the hill.
Calmness sits throned on yon unmoving cloud,

To him who wanders o'er the upland lea.
The blackbird's note comes mellower from the dale,
And sweeter from the sky the gladsome lark
Warbles his heaven-tuned song; the lulling brook
Murmurs more gently down the deep-worn glen;
While from yon lowly roof, whose curling smoke
O'ermounts the mist, is heard at intervals
The voice of psalms, the simple song of praise.
With dove-like wings, Peace o'er yon village broods
The dizzying mill-wheel rests; the anvil's din
Hath ceased; all, all around is quiteness.
Less fearful on this day, the limping hare
Stops, and looks back, and stops, and looks on man,
Her deadliest foe. The toil-worn horse, set free,
Unheedful of the pasture, roams at large;
And, as his stiff unwieldy bulk he rolls,
His iron-armed hoofs gleam in the morning ray.
But chiefly man the day of rest enjoys;
Hail, *Sabbath!** thee I hail, the poor man's day!
On other days the man of toil is doom'd
To eat his joyless bread, lonely; the ground
Both seat and board; screened from the winter's cold,
And summer's heat, by neighbouring hedge or tree:
But on this day, embosom'd in his home,
He shares the frugal meal with those he loves;
With those he loves, he shares the heartfelt joy
Of giving thanks to God — not thanks of form,
A word and a grimance, but reverently,
With cover'd face, and upward, earnest eye.
Hail, Sabbath! thee I hail, the poor man's day.
The pale mechanic now has leave to breathe
The morning air, pure from the city's smoke;
While, wandering slowly up the rivers's side,
He meditates on Him, whose power he marks
In each green tree that proudly spreads the bough
As in the tiny dew-bent flowers that bloom
Around its root: and while he thus surveys.
With elevated joy, each rural charm,
He hopes, yet fears presumption in the hope,
That Heaven may be one Sabbath without end. GRAHAME.

*Sabbath means r... and is here applied to the Lord's day.

DETACHED PIECES.

The bell strikes one. We take no note of time
But from its loss: to give it then a tongue
Is wise in man. As if an Angel spoke,
I feel the solemn sound. If heard aright,
It is the knell of my departed hours.
Where are they? With the years beyond the flood
It is the signal that demands despatch:
How much is to be done? My hopes and fears
Start up alarm'd, and o'er life's narrow verge
Look down — on what? A fathomless abyss!
A dread eternity! How surely mine!
And can eternity belong to me,
Poor pensioner on the bounties of an hour? YOUNG.

PROVIDENCE.

GOD moves in a mysterious way,
His wonders to perform,
He plants his footsteps in the sea,
And rides upon the storm.

Deep in unfathomable mines
Of never-failing skill,
He treasures up his bright designs,
And works his sovereign will.

Ye fearful saints, fresh courage take,
The clouds ye so much dread
Are big with mercy, and shall break
In blessings on your head.

Judge not the Lord by feeble sense,
But trust him for his grace;
Behind a frowning Providence
He hides a smiling face.

His purposes will ripen fast,
Unfolding every hour;
The bud may have a bitter taste,
But sweet will be the flower.

Blind unbelief is sure to err,
And scan his work in vain;
God is his own interpreter,
And he will make it plain. COWPER.

AUBURN.

SWEET Auburn, loveliest village of the plain,
Where health and plenty cheer'd the lamb'ring swain;
Where smiling spring its earliest visit paid;
And parting summer's ling'ring blooms delay'd.
Dear lovely bowers of innocence and ease,
Seats of my youth, where ev'ry sport could please,
How often have I loiter'd o'er thy green,
Where humble happiness endear'd each scene;
How often have I paused on every charm,
The shelter'd cot, the cultivated farm,
The never-failing brook, the busy mill,
The decent church that topt the neighb'ring hill,
The hawthorn bush, with seats beneath the shade,
For talking age and whisp'ring lovers made.

Sweet was the sound, when oft, at evening's close,
Up yonder hill the village murmur rose;
There, as I passed, with careless steps and slow,
The mingling notes came soften'd from below;
The swain, responsive, as the milk-maid sung;
The sober herd that low'd to meet their young;
The noisy geese, that gabble o'er the pool;
The playful children, just let loose from school;
The watch-dog's voice that bay'd the whisp'ring wind,
And the loud laugh that spoke the vacant mind;
These all in sweet confusion sought the shade,
And fill'd each pause the nightingale had made.

GOLDSMITH.

LESSON VI.

WHY AN APPLE FALLS.

PAPA (said Lucy), I have been reading to-day, that Sir Isaac Newton was led to make some of his great discoveries by seeing an apple fall from a tree. What was their extraordinary in that?

P. — There was nothing extraordinary; but it happened to catch his attention, and set him a thinking.

L. — And what did he think about?

P. — He thought by what means the apple was brought to the ground.

L. — Why, I could have told him that — because the stalk gave way, and there was nothing to support it.

P. — And what then?

L. —Why then — it must fall, you know.

P. — But why must it fall? — that is the point.

L. — Because it could not help it.

P. — But why could it not help it?

L. — I don't know — that is an odd question. Because there was nothing to keep it up.

P. — Suppose there was not — does it follow that it must come to the ground?

L. — Yes, surely!

P. — Is an apple animate or inanimate?

L. — Inanimate to be sure!

P. — And can inanimate things move of themselves?

L. — No, I think not — but the apple falls because it is forced to fall.

P. — Right! some force out of itself acts upon it, otherwise it would remain for ever where it was, notwithstanding it were loosened from the tree.

L. — Would it?

P. — Undoubtedly, for there are only two ways in which it could be moved; by its own power of motion, or the power of something else moving it. Now the first you acknowledge it has not; the cause of its motion must, therefore, be the second. And what that is was the subject of the philosopher's inquiry.

L. — But everything falls to the ground as well as an apple, when there is nothing to keep it up.

P. — True — there must therefore be a universal cause of this tendency to fall.

L. — And what is it?

P. — Why, if things out of the earth cannot move

themselves to it, there can be no other cause of their coming together than that the earth pulls them.

L. — But the earth is no more animate than they are; so how can it pull?

P. — Well objected! — this will bring us to the point. Sir Isaac Newton, after deep meditation, discovered that there was a law in nature called *attraction*, by virtue of which every particle of matter, that is, everything of which the world is composed, draws towards it every other particle of matter, with a force proportioned to its size and distance. Lay two marbles on the table. They have a tendency to come together, and if there was nothing else in the world, they would come together, but they are also attracted by the table, by the ground, and by everything besides in the room, and these different attractions pull against each other. Now, the globe of the earth is a prodigious mass of matter, to which nothing near it can bear any comparison. It draws, therefore, with mighty force, everything within its reach, which is the cause of their falling; and this is called the *gravitation* of bodies, or what gives them *weight*. When I lift up anything, I act contrary to this force, for which reason it seems *heavy* to me, and the heavier, the more matter it contains, since that increases the attraction of the earth for it. Do you understand this?

L. — I think I do. It is like a loadstone drawing a needle.

P — Yes — that is an attraction but of a peculiar kind, only taking place between the magnet and the iron. But gravitation, or the attraction of the earth, acts upon everything alike.

L. — Then it is pulling you and me at this moment?

P. — It is.

L. — But why do we not stick to the ground then?

P. — Because we are alive; we have a power of self-motion, which can, to a certain degree, overcome the attraction of the earth. But the reason you cannot jump

a mile high as well as a foot, is this attraction, which brings you down again after the force of your jump is spent.

L. — I think then I begin to understand what I have heard of people living on the other side of the world. I believe they are called *Antipodes*, who have their feet turned towards ours, and their heads in the air. I used to wonder how it could be that they did not fall off; but I suppose the earth pulls them to it.

P. — Very true. And whither should they fall? What have they over their heads?

L. — I don't know — sky, I suppose.

P. — They have. The earth is a vast ball, hung in the air, and continually spinning round, and that is the cause why the sun and stars seem to rise and set. At noon we have the sun over our heads, when the Antipodes have the stars over theirs; and at midnight the stars are over our heads, and the sun over theirs. So whither should they fall to more than we? — to the stars or the sun?

L. — But we are up and they are down.

P. — What is up, but *from* the earth and *toward* the sky? Their feet touch the earth, and their heads point to the sky as well as ours. If a hole were dug quite through the earth, what would you see through it?

L. — Sky, with the sun or stars; and now I see the whole matter plainly. But pray what supports the earth in the air.

P. — Why, where should it go?

L. — I don't know — I suppose where there was most to draw it. I have heard that the sun is a great many times bigger than the earth. Would it not go to that?

P. — You would have thought very justly on the matter, I perceive. But I shall take another opportunity of showing you how this is, and why the earth does not fall into the sun, of which, I confess, there seems to be some danger. Meanwhile, think how far the falling of an apple has carried us.

L. — To the Antipodes, and I know not where.

P. — You may see thence what use may be made of the commonest fact by a thinking mind.

Evenings at Home.

LESSON VII.

ON THE MICROSCOPE.

MICROSCOPES are instruments for viewing small objects, and they apparently magnify objects, because they enable us to see them nearer than with the naked eye, without affecting the distinctness of visions. By making a pin-hole through a piece of brown paper, then bringing the eye close to the hole, and the paper within two or three inches of any small object, the object will apparently be much magnified, though without the paper it would at that distance have been imperceptible. *Single microscopes*, of the greatest power, are very small globules of glass, which are made by melting the ends of fine threads of glass in the flame of a candle; or by taking a little fine powdered glass on the point of a very small needle, and melting it into a globule. With such microscopes as these, Lewenhoek made all his wonderful discoveries. The most wonderful single microscopes are those lately made of diamond. The *compound microscope* consists of at least two lenses, by one of which an image is formed, and this image is viewed through the other lens, called the eye-glass, instead of the object itself, as in the single microscope. The *solar microscope* is a kind of camera obscura, which, in a darkened chamber, throws the image on a wall or screen. It consists of two lenses fixed opposite a hole in a board or window-shutter.

The wonderful works of God are seen in the minutest as well as in the largest objects.

As our senses are not sufficiently acute, the organization of very small objects often escapes observation, unless we have resource to foreign assistance. The

microscope has opened to us a new world of insects and vegetables; it has taught us that objects, invisible to the naked eye, exist, having figure, extension, and different parts. One of the most wonderful displays of nature is a drop of putrid water, as exhibited by a powerful microscope: it is full of living creatures of strange shapes, and the rapidity with which they appear to move is perfectly astonishing. In the mould of vegetables we see a thick forest of trees and plants, bearing leaves, branches, flowers, and fruits. Little as we should have expected to find these in such a bed, as little should we have supposed the dust upon the wings of a butterfly to be minute feathers, or the bloom of a peach to be a collection of insects, had not the microscope furnished us with this intelligence.

Upon examining the edge of a very keen razor with a microscope, it will appear as broad as the back of a thick knife; rough, uneven, full of notches and furrows. An exceedingly small needle, resembles a rough iron bar. But the sting of a bee, seen through the same instrument, exhibits everywhere a polish most amazingly beautiful, without the least flaw, blemish, or inequality, and it ends in a point too fine to be discerned. A small piece of exceedingly fine lawn appears, through a microscope, like a hurdle or lattice, and the threads themselves seem coarser than the yarn with which ropes are made for anchors. But a silkworm's web, appears perfectly smooth and shining, and everywhere equal. — The smallest dot that can be made with a pen, appears, when viewed by the microscope, an irregular spot, rough, jagged, and uneven. But the little specks on the wings or bodies of insects are found to be most accurately circular. The finest miniature paintings appear before this instrument as mere daubings, plastered on with a trowel, entirely void of beauty, either in the drawing or the colouring. The most even and beautiful varnishes and polishings will be found to be mere roughness full of gaps and flaws.

Thus sink the works of art before the microscopic eye. But the nearer we examine the works of God, even in the least of his productions, the more sensible shall we be of His wisdom and power. Apply the microscope to any, the most minute of His works, nothing is to be found but beauty and perfection. If we examine the numberless species of insects that swim, creep, or fly around us, what proportion, exactness, uniformity, and symmetry, shall we perceive in all their organs! what a profusion of colouring! azure, green, and vermillion, gold, silver, pearls, rubies, and diamonds; fringe and embroidery on their bodies, wings, heads, and every other part! how high the finishing! how inimitable the polish we everywhere behold! The most perfect works of man betray a meanness, a poverty, an inability in the workman; but the works of nature plainly prove, that the hand which formed them was Divine. PLATT'S *Class Book.*

LESSON VIII.

WHY THE EARTH MOVES ROUND THE SUN.

YOU remember (said her Papa to Lucy,) that I explained to you some time ago what was the cause that things fell to the ground.

L. — O, yes! it was because the ground drew them to it.

P. — True. That is a consequence of the univarsal law in nature, that bodies attract each other in proportion to their mass. So small a quantity of matter, in the neighbourhood of a large quantity, always tends to go to it, if not prevented by some other power. Well — You know I told you that the sun was a ball a vast many times bigger than the ball we inhabit, called the earth; upon which you properly asked, how then it happened that the earth did not fall into the sun.

L. — And why does it not?

P. — That I am going to explain to you. You have

seen your brother twirl round an ivory ball tied to the end of a string which he held in his hand.

L. — Yes — and I have done it myself too.

P. — Well then — you felt that the ball was continually pulling, as if it tried to make its escape.

L. — Yes; and one my brother was swinging *did* make its escape, and flew through the sash.

P. — It did so. That was a lesson in the *centrifugal* motion, or that power by which a body thus whirled continually endeavors to fly off from the centre round which it moves. This is owing to the force or impulse you give it in setting out, as if you are going to throw it away from you. The string by which you hold it, on the contrary, is the power which keeps the ball towards the centre, called the *centripetal* power. Thus, you see there are two powers acting upon the ball at the same time; one to make it fly off, the other to hold it in; and the consequence is, that it moves directly according to neither, but between both; that is, round and round. This it continues to do while you swing it properly; but if the string breaks or slips off, away flies the ball; on the other hand, if you cease to give it the whirling force, it falls towards your hand.

L. — I understand all this.

P. — I will give you another instance of this double force acting at the same time. Do not you remember seeing some curious feats of horsemanship?

L. — Yes.

P. — One of them was, that a man standing with one leg upon the saddle, and riding full speed, threw up balls into the air, and caught them as they fell.

L. — I remember it very well.

P. — Perhaps you would have expected these balls to have fallen behind him, as he was going at such a rate.

L. — So I did.

P. — But you saw that they fell into his hands as directly as if he had been standing quite still. That was because, being carried along with him, they had, when

they were thrown upwards, the motion of the horses straight forwards, as well as the upright motion that he gave them; so that they made a slanting line through the air, and came down in the same place which they would have reached if he had held them in his hand all the while.

L. — That is very curious indeed!

P. — In the same manner, you may have observed, in riding in a carriage, that if you throw anything out of the window, it falls directly opposite, just as if the carriage was standing still, and is not left behind you.

L. — I will try that the next time I ride in one.

P. — You are then to imagine the sun to be a mighty mass of matter, many thousand times bigger than our earth. You are to conceive our earth, as soon as created, launched with great force in a straight line, as if it were a bowl on a green. It would have flown off in this line for ever, through the boundless regions of space, had it not at the same instant received a pull from the sun by its attraction. By the wonderful skill of the Creator, these two forces were made exactly to counterbalance each other; so that just as much as the earth, from the original motion given it, tends to fly forwards, just so much the sun draws it to the centre; and the consequence is, that it takes a course between the two, which is a circle round and round the sun.

L. — But if the earth was set a rolling like a bowl upon a green, I should think it would stop of itself, as the bowl does.

P. — The bowl stops because it is continually rubbing against the ground, which checks its motion; but the ball of the earth moves in empty space, where there is nothing to stop it.

L. — But if I throw a ball through the air, it will not go on for ever, but it will come down to the ground.

P. — That is because the force with which you can throw it is less than the force by which it is drawn to the earth. But there is another reason too, which in

the resistance of the air. This space all around us and over us is not in empty space; it is quite full of a thin transparent fluid called air.

L. — Is it?

P. — Yes. If you move your hand quickly through it, you will find something resisting you, though in a slight degree. And the wind, you well know, is capable of pressing against anything with almost irresistible force; and yet wind is but a quantity of air put into a violent motion. Everything then that moves through the air is continually obliged to push some of this fluid out of the way, by which means it is constantly losing part of its motion.

L. — Then the earth would do the same.

P. — No; it moves in *empty space.*

L. — What! does not it move through the air.

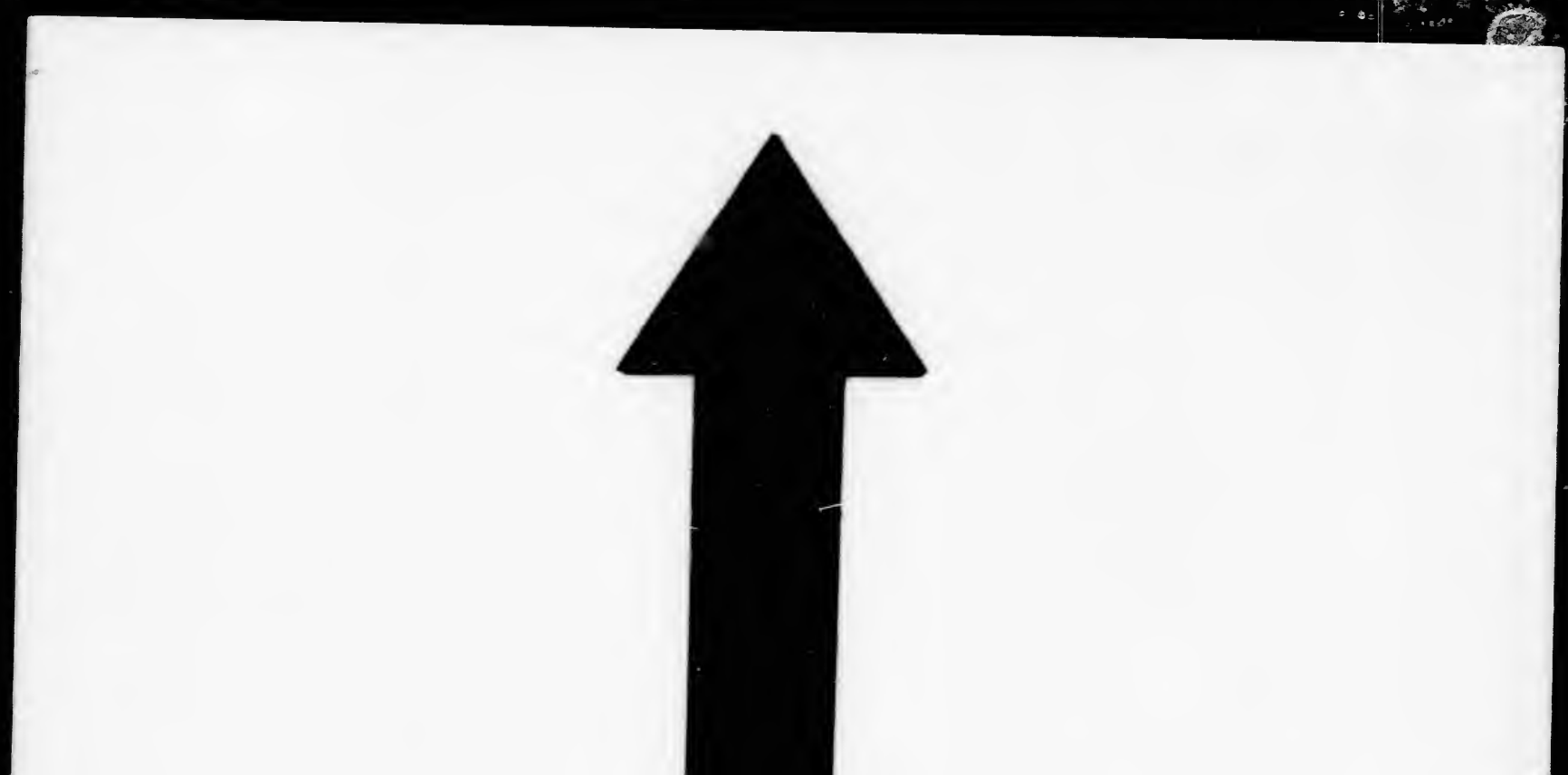
P. — The earth does not move *through* the air, but hurries the air along with it. All the air is contained within the space called the *atmosphere*, which you may compare to a kind of mist or fog clinging all round to the ball of the earth, and reaching a certain distance above it, which has been calculated at about forty-five miles.

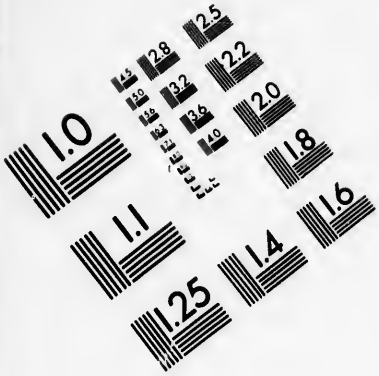
L. — That is above the clouds then?

P. — Yes: all clouds are within the atmosphere, for they are supported by the air. Well — this atmosphere rolls about along with the earth, as if it were a part of it, and moves with it through what we call the heavens. In this immense space, are all the stars and planets, which have all their several motions. There is nothing to stop them, but they continually go on by means of the force which the Creator has originally impressed upon them.

L. — Do not some of the stars move round the sun, as well as our earth.

P. — Yes: those that are called *planets.* These are all subject to the same laws of motion with our earth. They are attracted by the sun as their centre, and





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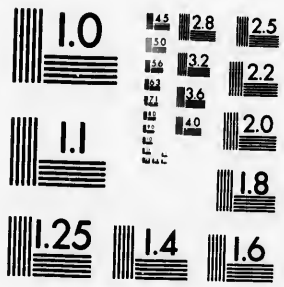

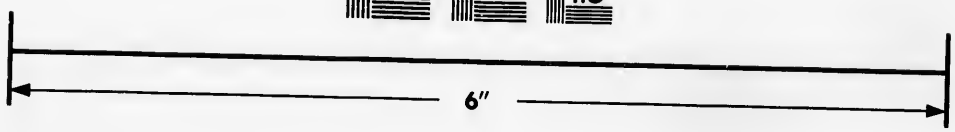

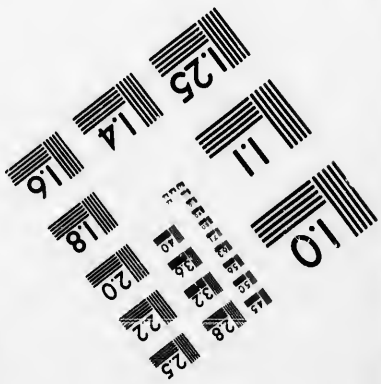

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form, along with the earth, that assemblage of worlds, which is called the *solar system.*

L. — Is the moon one of them?

P. — The moon is called a *secondary* planet, because its immediate connexion is with our earth, round which it rolls, as we do round the sun. It however accompanies our earth in its journey round the sun. But I will tell you more about its motion, and about the other planets and stars another time. It is enough at present, if you thoroughly understand what I have been describing.

L. — I think I do. *Evenings at Home.*

LESSON IX.

PART I.

CATHERINE OF LIVERPOOL.

AMONG the many females in humble life who have been exemplary for their extraordinary perseverance under difficulties, their ingenious industry, and their benevolence, a poor woman now living in an obscure situation in Liverpool is deserving of being placed in the foremost rank. Catherine or Kitty, by which name she is usually known to her friends, was born in a populous village in Lancashire, about the year 1786. Her parents, who were in poor circumstances, happened to become favorably known to an infirm and venerable lady, who kindly took Catherine home to stay with her as a humble companion and servant. By this humane lady she was taught to read, and trained not only to early habits of neatness and order, but to the knowledge as well as the practice of Christian dispositions and duties.

Although this lady had only a moderate income, she spent not a little on the poor, whom she likewise encouraged with her advice in cases of difficulty, and cheered with her presence in distress. When she became too feeble to walk to the houses of her neigh-

bours, she was occasionally carried out in a sedan chair, her little servant walking by her side. Catherine afterwards used to describe these visits to her friends: —"The old lady would say to me, Catherine, I am going out; and then she would be carried out in her sedan. She was too lame to walk, and could not easily get into a coach. I used to take a little basket and go by her side. We would soon stop at a cellar, into which she sent me to see how the poor woman was; and when I had come out again, she would say, How does she look? Is there any fire in the grate? Is there any coal in the house? Then she would send me for anything that was wanted. And when we had come home, she would say, Go, put your feet upon the fender, and dry them, and tell me what you think of what you have seen. Then she would say, Catherine, poverty will probably be your portion; but you have one talent which you may use for the good of others. You may sometimes read half an hour to a poor sick neighbour. You may read a chapter of the Bible or some other good book to her when she could not read it herself; or you may run errands for those who have no one else to go for them. Promise me, then, my child, that you will try to do what you can for others, and I hope we may meet in another world. Ah! there were few like my dear mistress."

This lady having died, her household was broken up, and Catherine returned to her family. She could not, however, be kept at home; and as no suitable place in domestic service could be obtained for her, she was sent with her brother to work at a cotton mill in a village at some distance. This was in the year 1798, when she was only twelve years of age. The mill to which our young Catherine and her brother were committed was one of the better regulated class. The hours were not long, and were precisely fixed. All had their appointed duty, which, if they attended to, no complaint was made. There was an open air-

ing ground for recreation in good weather, and a library from which books were given freely out to those who chose to read. Great care was likewise taken to prevent any impropriety of behaviour. In short, nothing was wanting to render the attendance agreeable, or to encourage the diligent and orderly. In this mill Catherine passed a few years, improving in health and intelligence, though without distinguishing herself from the mass of her companions. Perhaps, however, she excelled in the propriety of her deportment, from the instructions she had received from her old mistress: and her good feelings prompted her to be grateful for the care taken of her, as well as others, at the mill. She has often been heard to say, "If ever there was a heaven upon earth, it was that apprentice-house, where we were brought up in such ignorance of evil; and where Mr. Norton, the manager of the mill, was a father to us all." It is to be wished that every one who takes the charge of a child, whether as a pupil, an apprentice, or a servant, should feel it a duty to do what may be done early, to establish the principles and practice of virtue, and to deserve such grateful recollections as those of Catherine.

Mr. Norton did not see Catherine after she quitted his establishment, and never probably was aware of the beneficial influence he had exerted on her mind; yet it was by the course of discipline and instruction in the cotton factory that her character was formed during the most susceptible and dangerous season of her life.

Catherine left the cotton mill to go to service in a family. The lady of the house was a very good manager, and a good mistress; knew what a servant's duty was, and took care that it was well done. In her family Catherine's habits of diligence, order, and fidelity were strengthened. Everything she saw there tended to advance her education; for education comprehends all the daily and hourly influences, small as

well as great, of the circumstances by which we are surrounded, and which are constantly acting upon us; bearing upon thought, and feeling, and every spring of action within us. And it is constantly going on with every individual, old and young, from the first to the last hour of life, because every individual is, in every hour and every moment, acted upon by the circumstances amidst which he is placed for good or for evil.

Catherine was one of the most cheerful and faithful of servants. The pleasure with which she was accustomed to render any assistence to her fellow-servants was ever a matter of remark; and through this disposition, joined with a habit of accurate observation, she laid up a large stock of knowledge, which has since been invaluable to herself and others.

We have now to view Catherine in quite a new sphere of life. She was married to a person deserving of her affection, but not till she had received a promise that she should be permitted to take her mother home to live with her, for she was now old and infirm. A small house was taken and furnished, and the marriage promised every prospect of happiness. This might be called a bright gleam in Catherine's existence. When she had become the mother of two children, her husband died, and, to add to her troubles, her mother became blind and insane.

Catherine's case may now be considered to have been deplorable — a widow, the mother of two children, one a new-born infant, no means of subsistence, and with a superanuated and blind parent depending upon her, Some women, in such circumstances, would have sat down and wept, pined in sorrow, or gone to the workhouse. Catherine had a soul above all this. She acutely felt the blow, but she also knew that it was a dispensation of Providence which ought to be borne. When the first emotions of distress were past, she courageously set herself to the task of supporting her dependent family. Catherine disdained to eat the bread of idleness.

Worth never wants friends. Catherine's case excited pity among her neighbours, and her good character secured her a respectable wet-nursing. She refused

to leave home for this purpose, and the baby was committed to her charge. By this means, and a trifle of wages owing to her husband, she contrived to live over a year. Now she behoved to face the world. The difficulty of obtaining work was at this time very great. There was much suffering among the operatives throughout the country, and among all who depended upon their daily labour for subsistence. The only employment of which Catherine could procure an offer was work at a nail factory, for which she was not well fitted. However, she gladly availed herself of it, because the work was paid according to the number of nails made, and she could absent herself to give a brief attendance on her mother and children. The employment was hard, and poorly paid. She generally wrought at large nails, of which she was able to make about 800 daily; but of the same kind some men can make double that number. Her earnings were, on an average, fifteen pence per day; yet, though small they were still precious to her, because they were her own earnings. No one knew better than herself how to receive a favour, or how to confer one; but she would not willingly accept the means of support from an other, when she could obtain them by her own industry. She has been known to work in this factory till her fingers were blistered, and she could do no more; she would then remain at home, and poultice them till they were sufficiently recovered to enable her to resume her work. She and her mother at that time often suffered from hunger. Her necessities were known to a kind friend, whose own means were small, but who yet contrived occasionally to furnish her with a good meal. Through this friend she sometimes obtained a supply of flowers, by the sale of which she provided for her wants when she had no other means of obtaining subsistence.

In expedients like these she passed some years, during which the insanity of her mother was at times so outrageous as greatly to endanger any one who had the charge of her. Yet this charge she could not re-

linquish. She would not hear of the removal of her parent to a place of confinement. No labours and no sufferings could weaken her filial reverence and affection. At length, however, it became necessary for her mother's own safety that she should be in the charge of those most competent to the task of restraining her, and she was removed to the workhouse. But the heart of the devoted daughter was still with her; and from week to week Catherine strained every nerve, and straitened herself in every way, that she might regularly carry to her mother all the comforts she could procure. Nor were her trials those only of the early death of her husband, and the long insanity of her mother. Her eldest son was a severe sufferer from his birth till the age of twenty, when he died. It is hardly to be conceived how much she did and endure for this boy. For weeks together, after a hard day's work, she was up through the whole night, kneeling by him, that he might have his arms around her neck for support, because he was unable to lie down. Her patience and love seemed to be inexhaustible, and the strength which she exerted through her affections almost miraculous.

The lad was a dutiful and affectionate child. He had a heart like his mother, strong both to love and to endure. For a time Catherine seemed hardly able to sustain his loss. She could not sleep, and with difficulty could take even the smallest portion of food. Her inability to sleep awakened the desire to pass her nights with the sick; but she found this recalled the memory of her son too strongly, and she did not persist in it. Desirous to fill the vacant place in her house, she now, to use her own expression, "inquired for some family who wanted a person to take care of some *tedious* children." Her surviving child often gave her great pain. He exhibited strong indications of inheriting the insanity of his grandmother, having at times an ungovernable wildness of manner; yet, when not under excitement. he was an amiable, kind, and obedient boy.

PART II.

CATHERINE OF LIVERPOOL. — (*continued.*)

WHEN Catherine worked in the nail factory, she formed a friendship with another woman who also worked there. This poor creature afterwards became blind and helpless. She had for some time previously been greatly disabled, and Catherine had never failed to do what she could for her. But now she took her to her own house, and for seven years supported her entirely. She carried her up stairs at night, and brought her down in the morning. At length, when her son became so ill that she could not leave him, and her means of support were wholly unequal to the increased expense, she sent her blind friend to the workhouse; yet her interest in the poor sufferer never declined. Her care for her was like that of a mother for a child. She never omitted once a week to send her a little tea and sugar, that she might not be made uncomfortable by the want of these accustomed gratifications. It happened that this poor blind woman had a son in the workhouse, who was a cripple and nearly an idiot. The child was dear to his mother; and when she took her tea, she gave him part of it. This became one of his highest gratifications; and after the death of his mother, he was greatly distressed by the loss of this indulgence. Catherine, therefore, promised him that while she lived she would bring him tea and sugar, as she had brought them to his mother; and she kept her word. On one occasion a friend called upon Catherine, and found an old woman with her who had a number of small parcels in her hand. On noticing these parcels, she informed the visitor that they contained a little tea, sugar, and snuff, and that they were for a woman in the workhouse nearly a hundred years old. "She knew my parents," said Catherine; "and I dare say assisted my mother when she needed; so it is just a little acknowledgment. There are other old persons there to whom I would be glad to send something, if I had the means."

After Catherine left the nail factory, she supported

her family by mangling, a benevolent gentleman in the neighbourhood, who was struck with her character, having assisted her to purchase a mangle at a sale of effects. By means of it and a little charring work she lived for seven years, till her mother died, when she had no longer an inducement to remain in the place; and she removed with her only surviving son to Liverpool, where she was fortunate in getting him some small employment suited to his infirmities. She took her mangle with her, and therefore we have now to follow her to one of the humblest dwellings in a back street of that large town. Here she laboured, struggled to keep up a good name, and to do all the good she could within her sphere. On one occasion a poor woman, a Mrs. O'Brien came into the neighbourhood to look for lodgings, but could nowhere obtain a room. "She must not die in the street," said Catherine. Yet what was to be done? Catherine lost no time in answering this question. The door of her house was opened, and Mrs. O'Brien and her children at once found a home there. In a fortnight this woman died; but poor as she had been, her heart was bound up in her children, and her great solicitude in death was for them. With the full sympathies of a mother, Catherine promised to do for these children as if they were her own; and this promise she has faithfully fulfilled.

Another Irishwoman, Bridget M'Ann, was a common beggar. Her appearance indicated extreme distress, and no inconsiderable disease. Yet she was unwilling to go into the infirmary, because she would there be separated from her children. Catherine visited this woman, gained her confidence, pursuaded her to allow her eldest boy to be put into the workhouse, and took the youngest about two years old, under her own charge. She nursed this child carefully, sent some of her own clothes to the mother, and took a change of clothes to her every week. Yet for all these kind offices she had scarcely any other return than reproaches and complaints. The clothes, it was said, were not well washed, nor was anything done for her as it

should be done. But Catherine was neither to be fatigued by service nor discouraged by ingratitude. She felt the claims of weakness, ignorance and suffering in this poor beggar far more strongly than she felt any injury to herself. She kept the child for some months, till the mother reclaimed it; and then gave up her charge, only because she was allowed to hold it no longer. It is only from such facts that one knows how much the poor can do for each other.

After a few years' residence in Liverpool, Catherine's son died which was a sore grief to her, for she was now alone in the world, and had no longer any one of her own family to love. To fill up the vacancy, she gladly took charge of the three children from a widower, a respectable man in the neighbourhood, who engaged to pay her twelve shillings per week for their board. She, however, had not long had the children under her roof, when the health of the man failed, and he was unable to earn the amount he had agreed to pay her. So anxious, however, was he to do what he could in payment for the relief and comfort he had received, that he was actually at his work on the week in which he died. Catherine kindly waited upon him on his deathbed, and although he professed a different form of religious belief from her own, brought him, unasked, a clergyman of his own persuasion. On his dying bed, this poor man besought her to retain the charge of his children. She gave him her word that she would, and she admirably performed her promise. After a time the youngest boy was placed in a charity school, where she maintained a faithful supervision of him; and when he left it, she fitted him out for sea, and has still the care of him whenever he returns from a voyage. The girl she kept two or three years, till she found a good place for her. And the eldest boy, owing to the failure of the master to whom he was apprinticed, has for several years been, and still is, a considerable expense to her. He is now indeed at a trade, but he has so small wages that he is obliged to look to Catherine for much of his means of living. A fellow-apprentice

carned only four shilling a-week. His own father refused to keep him for so small a sum. The anxiety and grief of his mother were extreme, and she applied to Kitty upon the subject, who told the mother that, on condition of the good conduct of the boy, she would receive him into her family.

At the first appearance of cholera in England, great anxiety was manifested to guard against it, and cleanliness was especially enjoined. The habits of the very poor, and their few conveniences, made the washing and drying of clothing and bedding very difficult. Catherine's house at this time consisted of a small kitchen, a little parlour, two or three chambers, and a small yard at the back of the house. In the kitchen she had a copper. She fastened ropes across the yard, and offered her poor neighbours the free use of them and her kitchen for washing and drying their clothes. She also took charge of clothes and bedding, which were lent for the use of the poor. So apparent was the benefit derived by the families who availed themselves of Catherine's kindness, that a benevolent society was led to provide a common cellar where families might wash every week.

The cholera principally attacked the heads of families, especially those who were in a state of exhaustion from fatigue or want of food. It frequently happened that the sufferers had neither food nor fuel, while the fear of infection led to a dearth of employment. Catherine divided her own stores as far as she could with the sufferers around her. A supply of oatmeal was given her, and with this she made porridge every morning for a number who would otherwise probably have had no breakfast; and at one time she thus supplied sixty with daily food. A neighbour every evening went three miles into the country for the milk for this porridge.

Wherever the disease appeared among those who knew Catherine, her presence and aid were felt to be of high importance. The physicians were quite unable too meet the calls that were made upon them. She therefore went to them for advice, administered the remedies.

which were prescribed, and carried back accounts of her patients. It seemed impossible that she should obtain rest either night or day. She found a vacant room, on the floor of which she could spread some bedding, and there she provided a lodging for families in which death had occurred, and whose rooms, it was thought, should be vacated for a time, that they might be purified.

The deaths and sickness of so many parents by cholera left a large number of destitute children, too young to go to school, and who were therefore running about the streets. Catherine collected about twenty of them into her house, and a neighbour who lived on the opposite side of the street, offered to assist her in the care of them. This neighbour amused the children by singing to them, by telling them stories, and by teaching them to repeat hymns. The number of the children soon became too large to be comfortably accommodated in Catherine's little dwelling. It was resolved, therefore, to form them into a school. The infant school thus begun was adopted by the managers of one for older children in the same street: the neighbour who aided Catherine became the mistress, and obtained a comfortable maintenance from the employment she had begun in benevolence.

A being with such a universal spirit of charity and love, and with such self-imposed claims and duties, required to increase her means as far as possible. To make the most of her house, small as it was, she received lodgers, and to make their evenings pass agreeably, she borrowed books and newspapers, and proposed that one should read aloud for the general entertainment. She provided a good fire in the winter, well knowing this comfort often tempts even a sober man to an ale-house. She permitted her lodgers to invite their acquaintance; and during the winter of 1835, as many as ten met and subscribed to the Mechanic's Library. As some of the party were carpenters' apprentices, an older workman gave them instruction in their business before the reading began. One of these young men begged Catherine to speak to four of their fellow-

workmen, who spent idly the money which they earned by working over-hours. She did so, telling them if they would come every night to her house they should have the use of a good fire and a newspaper, and for sixpence a-week she would provide a supper.

This poor woman seems to have had an eye to everything. One day, in passing a shop, she saw a great boxful of waste paper, including many damaged and used bibles. These she was allowed to pick out and buy for a mere trifle. When she brought her parcel of bibles home, she fastened the leaves, patched up the covers, and then lent them to sailors who were going to sea. It was afterwards ascertained that by this act the characters of several were improved. It may be matter for surprise how Catherine earned enough to accomplish so many good deeds. But cheerful and persevering labour, with rigorous economy, will do wonders. She still lives, and is a credit to her station, showing, in all her undertaking, a remarkable power of making much of slender means. Her economy with regard to both food and clothing is admirable. Nothing is wasted. She has been known to stew fish bones into broth for the sick poor, and from the refuse of fruit to make a pleasant drink for fever patients. Time is also, in her estimation, a thing not to be thrown away, and therefore every moment of her waking existence is devoted to the execution of some useful object.

The owner of the house in which Catherine lives, is a single lady, and a cripple, with a very small income. Catherine's consideration of these circumstances is beyond all praise. She expresses her unwillingness to apply to her poor landlady even for necessary repairs, and as far as possible has made those repairs herself. She buys paint, and paints her rooms with her own hand. She receives payment from her lodgers on Friday, and the sum, though only a few shillings altogether, she lends to some poor women, who purchase certain goods, which they sell in the market on Saturday, and make their returns to her on Saturday night. It does not appear that she has ever thus lost anything, while

the gain has been of considerable importance to those who have made it. She has mixed but little with her neighbours, except for such offices of kindness as she could render to them, having no time for idle chat.

We must, however draw our account of this poor widow, to a conclusion. She is not without faults, as, for instance, hastiness of temper; but her anger is soon appeased, and no ill usage can check her kindness. She has experienced injustice; and though she has felt it strongly, has acknowledged that it was a duty to forgive others, when there is so much to be forgiven in ourselves. She was ever most careful not to incur a debt. Had she been embarrassed by debt, she could have carried through few of her benevolent intentions. To a pious reliance on God, she unites a vigilant sense of practical duty, an indifference to all selfish considerations, and a strong faith in her fellow-creatures, in herself, in good principles, and in TRUTH.

Chamber's Miscellany.

LESSON X.

VOLNEY BECKNER.

VOLNEY BECKNER, an Irish sailor boy, was born at Londonderry, in 1748; his father had been a fisherman of that place, and was so poor that he did not possess the means of giving his son a regular school education. What young Volney lost in this respect was in some measure compensated by his father's instructions at home. These instructions chiefly referred to a seafaring life, in which generosity of disposition, courage in encountering difficulties, and readiness on all occasions are the most important qualities. While yet a mere baby, his father taught him to move and guide himself in the middle of the waves, even when they were most agitated. He used to throw him from the stern of his boat into the sea, and encourage him to sustain himself by swimming, and only when he appeared to be sinking did he plunge in to his aid. In this way young Volney Beckner, from his very cradle, was taught to

brave the dangers of the sea, in which, in time, he moved with the greatest ease and confidence. At four years of age he was able to swim a distance of three or four miles after his father's vessel, which he would not enter till completely fatigued: he would then catch a rope which was thrown to him, and clinging to it, mount safely to the deck.

When Volney was about nine years of age, he was placed apprentice, in a merchant ship, in which his father appears to have sometimes sailed, and in this situation he rendered himself exceedingly useful. In tempestuous weather, when the wind blew with violence, tore the sails, and made the timbers creak, and while the rain fell in torrents, he was not idle at his post. The squirrel does not clamber with more agility over the loftiest trees than did Volney along the stays and sail-yards. When he was at the top of the highest mast, even in the fiercest storm, he appeared as little agitated as a passenger stretched on a hammock. The little fellow also was regardless of ordinary toils and privations. To be fed with buiscuit broken with a hatchet, sparingly moistened with muddy water full of worms, to be half covered with a garment of coarse cloth, to take some hours of repose stretched on a plank, and to be suddenly wakened at the moment when his sleep was the soundest, such was the life of Volney, and yet he enjoyed a robust constitution.

Such was the cleverness, the good-temper, and the trust-worthiness of Volney Beckner, that, at his twelfth year, he was judged worthy of promotion in the vessel, and of receiving double his former pay. The captain of the ship on board which he served, cited him as a model to the other boys. He did not even fear to say once, in the presence of his whole crew, "If this little man continues to conduct himself with so much valour and prudence, I have no doubt of his obtaining a place much above that which I occupy." Little Volney was very sensible to the praises that he so well deserved. Although deprived of the advantages of a liberal education, the general instructions he had received, and his

own experience, had opened his mind, and he aspired, by his conduct, to win the esteem and affection of those about him. He was always ready and willing to assist his fellow-sailors, and by his extraordinary activity, saved them in many dangers. An occasion at length arrived, in which the young sailor had an opportunity of performing one of the most gallant actions on record.

The vessel to which Volney belonged was bound to Port-au-Prince, in France, and during this voyage his father was on board. Among the passengers was a little girl, daughter of a rich American merchant; she had slipped away from her nurse, who was ill and taking some repose in the cabin, and ran upon deck. There, while she gazed on the wide world of waters around, a sudden heaving of the ship caused her to become dizzy, and she fell over the side of the vessel into the sea. The father of Volney perceiving the accident, darted after her, and in five or six strokes he caught her by the frock. Whilst he swam with one hand to regain the vessel, and with the other held the child close to his breast, Beckner perceived at a distance, a shark advancing directly towards him. He called out for assistance. The danger was pressing. Every one ran on deck, but no one dared to go farther; they contented themselves with firing off several muskets with little effect; and the animal, lashing the sea with his tail, and opening his frightful jaws, was just about to seize his prey. In this terrible extremity, what strong men would not venture to attempt, filial piety excited a child to execute. Little Volney armed himself with a broad and pointed sabre; he threw himself into the sea; then diving with the velocity of a fish, he slipped under the animal, and stabbed his sword in his body up to the hilt. Thus suddenly assailed, and deeply wounded, the shark quitted the track of his prey, and turned against his assailant, who attacked him with repeated lounges of his weapon. It was a heart-rending spectacle. On one side, the American trembling for his little girl, who seemed devoted to destruction; on the other, a generous mariner exposing his life for a

child not his own; and hear the whole crew, full of breathless anxiety as to the result of an encounter in which their young shipmate exposed himself to almost inevitable death to divert it from his father!

The combat was too unequal, and no refuge remained but in a speedy retreat. A number of ropes were quickly thrown out to the father and the son, and they each succeeded in seizing one. Already they were several feet above the surface of the water. Already cries of joy heard — "Here they are, here they are — they are saved!" Alas! no — they were not saved: at least one victim was to be sacrificed to the rest. Enraged at seeing his prey about to escape, the shark plunged to make a vigorous spring; then issuing from the sea with impetuosity, and darting forward like lighting, with the sharp teeth of his capacious mouth he tore asunder the body of the intrepid and unfortunate boy while suspended in the air.

Thus perished, at the age of twelve years and some months, this hopeful young sailor, who so well deserved a better fate. When we reflect on the generous action which he performed in saving the life of his father, and of a girl who was a stranger to him, at the expense of his own, we are surely entitled to place his name in the very first rank of heroes. But the deed was not alone glorious from its immediate consequences. As an example, it survives to the most distant ages. When pressed by emergencies let us cast aside all selfish considerations, and think on the heroism of the Irish sailor boy —Volney Beckner. — *Chamber's Miscellany.*

LESSON XI.

TERRIFIC INCIDENT ON A MISSIONARY* VOYAGE IN THE SUNDERBUNDS.

THE Sunderbunds is an extensive tract of country to the south-east of Calcutta, stretching along the coast of the Bay of Bengal. It is composed of a number of creeks, all of which are salt, except those which com-

* A missionary is one who is sent to preach the Gospel to heathen nations.

municate with the principal arm of the Ganges: these natural canals form a complete inland navigation. The passages through the Sunderbunds for large vessels are said to present a grand and curious spectacle — a navigation of more than 200 miles through a thick forest, divided into numberless islands by a multitude of channels, so various in width that a vessel has at one time her masts entangled among the branches of trees, and at another sails on a capacious river, beautifully skirted with woods. The waters (with the exception above mentioned) are everywhere salt; and the whole extent of forest is abandoned to wild beasts, so that they are seldom visited but in cases of necessity, except by wood-cutters and salt-makers, whose "dreadful trade" is exercised at the peril of their lives; for the tigers not only appear on the margin in quest of prey, but often in the night-time swim to the boats that lie at anchor in the middle of the stream.

Of these dangers the missionaries (Messrs. Gogerly and Lacroix) witnessed a fearful instance on occasion of their last visit. This is their own account:—

"About eleven o'clock in the forenoon we cast anchor in the Barchurra Nuddee, with an extensive forest on both sides. An hour had just elapsed when, at about 100 yards from us, an alligator came up out of the river to enjoy his noon-tide sleep in the rays of the sun. After remaining there about half an hour, and being apparently in a sound sleep, we observed an immense tiger emerging from the jungle, and bending his steps toward the place where the alligator lay. In size the tiger had exceeded the largest that we had ever seen; and his broad round face, when turned toward us, striped with white, his fierce eyes, together with the amazing apparent strength of his limbs, made the stoutest heart on board to tremble at the thought of encountering such a dreadful foe. With the most cautious pace imaginable the tiger approached the alligator; his raised foot remained some seconds before he replaced it on the ground; and so he proceeded till he came within the power of his leap, when, exerting all his strength, and bounding from the earth, he de-

scended immediately upon the alligator's back, and seized it by the throat. The monster of the deep, roused from its slumber, opened its tremendous jaws, and lashed its terrific tail; and, while the conflict lasted, each seemed to exert its utmost strength. The tiger, however, had the advantage, for he had grasped the alligator in a part of the neck which entirely prevented him from turning his head sufficiently round to seize his antagonist; and though many severe blows were inflicted on the body of the tiger by its saw-like tail, the noble beast of the forest, when the battle was concluded, shook his brawny sides, and seemed unconscious of any pain. Having overcome the alligator, he dragged it a little further on the shore, and sat over it exactly in the attitude of a cat sitting over a captive mouse. He then took the creature in his mouth, and gently walked off with it to the jungles. About ten minutes afterward we saw the tiger emerge from the forest; and, after gazing at us for a few minutes, and perhaps imagining that we were almost too far from the shore to allow him to attack us, he slowly pursued his course in a different direction to where he had left his prey, and we saw him no more. In less than an hour afterward the alligator, who had been stunned but not killed, crept out of the jungle, and though evidently much injured, yet with some difficulty reached the river, and escaped the power of his sanguinary foe: he, however, was too much wounded to remain long in the water, and soon came again to land; but he took the precaution of exposing but a part of his body, and keeping his face toward the shore. He continued but a very short time, and again launched into the deep, repeating his visits to the beach almost every quarter of an hour whilst we remained. The sight was certainly dreadfully magnificent, and one we believe which is very seldom witnessed. It taught us and our people a very important lesson, viz., not to go heedlessly on shore in such a place. Immediately before this circumstance occurred one of our native christians had expressed a wish to his friends, as he had hitherto seen nothing to alarm

him, to go and examine the nature of the country. What followed completely satisfied his curiosity.

The next day we passed the Thakooran, and arrived at night at the Mutwal, both immense rivers, about five miles broad. During the whole of this day we did not see a single human being, nor hear a sound, except the howling of the winds through the forest trees, the splashing of the waters, and the occasional screaming of the seagull. At night we passed through a very narrow channel, and the boat frequently was brushed by the leaves and branches of the trees on shore. The moon was at its full, and enabled the boatman to perceive a huge tiger stealing from behind the bushes, and following the boat, waiting an opportunity of springing on board, and seizing one of us as his prey. The poor people, dreadfully alarmed, pulled with all their might; and, with the blessing of God, after some considerable time, we entered the large river, and thus escaped the danger with which we were threatened.

Having come to anchor the following evening in a place so exceedingly wild that we imagined no human being, in his right senses, would attempt to put his foot on shore, we were astonished at perceiving two men running with all their might along the beach, occasionally entering the jungles for a few minutes, then emerging again, and pursuing their course with the greatest possible speed. They were armed merely with thick sticks. We were afterwards informed that they were going to present the evening sacrifice of their party; and in order to prevent being seized by a tiger they kept constantly on the run, the habits of that animal, as they supposed, not allowing him to seize on his prey while it continues in rapid motion. There is no doubt, however, but that several of these poor infatuated creatures in this way are destroyed. The conduct of these people, when compared with that of thousands of professing Christians, afforded us matter for painful reflection. They, to obtain the favor and protection of the god of their tribe, consider no danger or fatigue too great, but boldly traversing paths untrod by human

feet, except their own, every evening, with their lives in their hands, go forth to present their sacrifices and offer up their prayers; while thousands of those who are called by the name of Christ, and who are invited to enjoy, Sunday after Sunday, and time after time, the ordinances of religion, remain indifferent to its concern; and, rather than go to the house of God, continue in idleness at home, or spend their time in the service of Satan abroad."

LESSON XII.

AN ACCOUNT OF THE SUFFERINGS OF THE PERSONS WHO SURVIVED THE SHIPWRECK OF THE DODDINGTON SHIP.

On the 23rd of April, 1755, the Doddington, a ship belonging to the East India Company, sailed from the Downs, and on the 17th of July following, about one in the morning, struck on a rock, distant east from the Cape of Good Hope about 250 leagues. Of 270 souls that were on board when the ship struck, twenty-three only escaped to the shore, which was a barren, uninhabited rock, apparently capable of affording them but a temporary succour. Their first care was to search among the things which the violence of the sea had thrown upon the rocks, for something to cover them, and in this they succeeded beyond their hopes. They next felt the want of fire, which was not so easily supplied. Some attempted to kindle two pieces of wood, by rubbing them together; while others were searching among the rocks, in hopes of picking up something to serve for a flint and steel. After a long search, a box containing two gun-flints, and a broken file, were found; this was a joyful acquisition, but still, till something like tinder could be procured, the flints and steel were useless. A further search was, therefore, undertaken, with inexpressible anxiety, and at last a cask of gunpowder was discovered; but this, to their great disappointment, proved to be wet. A small quantity, however, that had suffered no damage, was, upon a close examination, found at the bottom of the

cask. Some of this they bruised on a linen rag, which served very well for tinder, and a fire was soon made. The wounded gathered around it, and the rest went in search of other necessaries, without which, the rock could afford them but a short respite from destruction. In the afternoon (for the ship struck about three in the morning), a box of wax candles, and a cask of brandy, were brought in, and shortly after, some others of the party returned with an account, that they had discovered a cask almost full of fresh water, which was even more welcome than the brandy. The chief mate brought in some pieces of salt pork, and soon after others arrived, driving before them seven hogs, which had come on shore alive. The approach of night made it necessary to provide some shelter; all hands were, therefore, employed, and a tent was at last made of some canvas that had been thrown ashore, though it was so small, for want of more sail cloth, that it would not hold them all. They were obliged to erect their tent upon the highest part of the island for fear of being overflowed, and this was covered with the dung of a large kind of water-fowl, called a gannet, by which the island was much frequented. As they had passed the day without food, they passed the night without rest, being sunk a foot in the fowl's dung, and the fire being extinguished as often as it was kindled, by the tempestuousness of the night.

The next day the company were called together to eat their first meal; and some rashers of pork were broiled upon the coals for dinner. The sitting, thus disconsolate and forlorn, down to a repast which they had been used to share in convival cheerfulness, struck them with such a sense of their condition, that they burst into lamentations, wringing their hands and looking round them with all the wildness of despair. In such a tumult of mind, the thoughts naturally hurry from one subject to another, to fix, if possible, upon something that may afford comfort. One of the company recollected that the carpenter was among them, and suggested to the rest, as a subject of hope, that, with

his assistance, it might be possible to build a strong sloop, if tools and materials could be procured.

Every one's attention was immediately turned upon the carpenter, who declared he had no doubt but that he should be able to build a sloop, that would carry them to some port of safety, if tools and materials could be found.

At that time they had no rational prospect of procuring either; yet they had no sooner placed their deliverance one remove beyond total impossibility, than they seemed to think it neither improbable nor difficult. They began to eat without further repining, and from that moment the boat engrossed their whole conversation. As soon as they had finished their repast, some went in search of tools, which were, however, not that day to be found, and others set about mending the tent. The next day they secured four butts of water, a cask of flour, a hogshead of brandy, and one of their little boats, which had been thrown up by the tide, in a shattered condition.

Hitherto they had found no tools, excepting a scraper; but the day after, they had the good fortune to find a hamper, in which were files, sail-needles, gimlets, and an azimuth compass-card. They also found two quadrants, a carpenter's adze, a chisel, three sword-blades, some timber, planks, canvass, and cordage. These they secured with great joy, though they were in want of many implements, without which it was impossible for the carpenter to work. He had just found a saw, but had neither hammer nor nails.

In this exigency, it happened that one of the seamen, a Swede by birth, picked up an old pair of bellows, and bringing them to his companions, told them he had been by profession a smith, and that, with these bellows, and a forge, which he hoped, by his direction, they would be able to build, he could furnish the carpenter with all the tools he should want, nails included, as plenty of iron might be obtained, by burning the timber which had come on shore from the wreck. This account was received with a transport of joy; the smith immediately applied himself to the

mending of the bellows, and the three following days were spent in building a tent, and a forge, and in bringing together the timber for the use of the carpenter, who was, in the mean time, busy in getting ready the few tools he had, that he might begin the boat as soon as possible; this, assisted by the quartermaster, he did the next day. The smith also finished his forge, laid in a quantity of fir for fuel, and from this day they both continued to work with indefatigable diligence, except when prevented by the weather.

The smith, having fortunately found the ring and nut of a bower anchor, which served him for an anvil, supplied chisels, axes, hammers, and nails, as they were wanted; and the carpenter used them with great dexterity and despatch, till the 31st, when he fell sick. As the lives of the whole company depended upon his recovery, we may judge with what anxiety they awaited it, and with what unspeakable joy they beheld him, in a few days, so far restored, as to be able to return to work.

In the mean time the stores which had been saved from the wreck were so nearly exhausted, that they came to an allowance of two ounces of bread a man per day, and had no salt pork but what they determined to keep to victual the boat; for their escape scarcely depended less upon sea-stores than on the sails themselves. Their water also ran short. In this distress, they had recourse to several expedients; they dug a well, in hopes of finding a spring, but were disappointed; they attempted to knock down some of the gannets that settled upon the top of the rock, and in this they succeeded better; but they found the flesh very rank, and perfectly black.

They also made a raft, or float, called a catamaran, on which they proposed to go out and fish with such hooks and lines as had come on shore; and on this they had some success, till they were intimidated by an accident from the further use of it. Mr. Colet, the second mate, and Mr. Yets, the midshipman, had been out one afternoon till four o'clock, when they endeavored

to make to land, but the wind suddenly blowing to the west, they found that instead of approaching the shore they were driven very fast out to sea. The people on shore perceived their distress, and sent out another float to their assistance, but the surf was so great that it overset three times, and the men were obliged to swim back.

In the mean time they saw their friends driving out to sea at a great rate, and were just giving them up to destruction, when the carpenter revived their hopes, by sending them word that he would make the little boat (which the reader may recollect had been thrown on shore in a shattered condition), so tight that it should not take in water faster than one man could heave it out. This he despatched in a quarter of an hour, and every one being willing to venture out for the deliverance of his friends, they soon overtook the float, received the mate and his companion on board, and returned safe to shore.

It was now thought dangerous to venture out any more on the float: the carpenter, therefore, again went to work on the little boat, and put it into complete repair. In this they frequently took great quantities of fish.

Three of the company also having discovered a great smoke on the main land, embarked in the boat, hoping to make some discovery favourable to their situation; but, having been out forty-eight hours, lost one of their companions by the oversetting of the boat, and incurred many dangers from the Indians, who came down upon them, they returned, giving thanks to God for having permitted them to return safe to a place, which, however barren and desolate, they now considered as an asylum from a situation of greater distress.

In the interim the whole company were thrown into the utmost consternation and alarm, by an accident that happened to the carpenter, who cut his leg in such a manner that he was in great danger of bleeding to death. What anxiety, what alarm did not this occasion! They had no surgeon among them, nor anything proper to apply to the wound; yet, under God, their existence depended upon the life of the carpenter!

With much difficulty the blood was at length stanched, and the wound healed without any bad symptom.

Soon after this, they found a fowling-piece, which was a great treasure, for though the barrel was much bent, by the assistance of the carpenter it was soon made serviceable, and used with great success in shooting the birds, which they had before no way of taking, but by knocking them down with a stick.

About this time also they perceived the gannets, which had of late forsaken them, hover about the rock, on which they settled to lay their eggs, to the great joy of the company, who were for some time constantly supplied with them in great plenty.

The carpenter and smith in the mean while continued to work upon the boat, and the people were busied in collecting what was, from time to time, thrown up from the wreck, especially cordage and canvas, which were necessary to rig the boat, and some casks of fresh water. They had also fortunately some rainy weather, which proved very acceptable, as they contrived to save some of the water for sea stores; but they were still in want of bread, having lived many days on short allowance.

As a last resource, they thought of building an oven, as they had some barrels of flour, and succeeding beyond their expectations they converted the flour into a tolerable kind of biscuit. This was, however, at length so nearly exhausted, that they were forced to live upon a few ounces a day, without brandy, of which there remained only a small quantity for the use of the carpenter. Water was also short. In this condition, however, they preserved in a great degree their health and strength, till on the 16th of February, they launched their little bark, calling her the "Happy Deliverance." On the 17th they got their stores on board, and on the 18th set sail from the rock, on which they had lived seven months, and to which they had given the name of Bird Island.

They had a favourable voyage, and arrived without [illegible] to the place for which they sailed, grateful, [illegible] to Providence, who had made the smith and [illegible] the happy instruments of their escape.

APPENDIX.

PREFIXES, AFFIXES, AND PRINCIPAL LATIN AND GREEK ROOTS,

OCCURRING IN THE FOURTH BOOK OF LESSONS.

I. PREFIXES.

1. ENGLISH.

A, *on*
Be, *about, before, to make*
En, *make*
Fore, *before*
Mis, *error or defect*
Out, *beyond*
Over, *over* or *above*
Un, *not*
With, *from* or *against*

2. LATIN.

A, ab, abs, *from*
Ad, (a, ac, af, ag, al, an, ap, ar, as, at,) *to*
Am, (amb,) *round, about*
Ante, *before*
Circum, (circu,) *about*
Con, (co, cog, col, com, cor,) *together*
Contra, *against*
De, *down, from*
Di, dis, (dif,) *asunder, not*
E, ex, (ec, ef,) *out of*
Extra, *beyond*
In, (ig, il, em, im, ir,) *in, into*, before a verb; *not*, before an adjective
Inter, *between* or *among*
Intro, *within*
Juxta, *nigh to*
Ob, (oc, of, op, os,) *in the way of, against*
Per, (pel,) *through*
Post, *after*
Pre, *before*
Preter, *beyond*
Pro, (pur,) *forward*
Re, *back*, or *again*
Retro, *backwards*
Se, *aside*, or *apart*
Sine, *without*
Sub, (sue, suf, sug, sup, sus,) *under*
Subter, *beneath*
Super, (sur,) *above*
Trans, (tra,) *beyond*
Ultra, *beyond*

3. GREEK.

A, (an,) *without, not*
Amphi, *both, round about*
Ana, *through, again*
Anti, (ant,) *against, in opposition to*
Apo, (aph,) *from*
Cata, (cat, cate, cath,) *from side to side, down*
Dia, *through*
Epi, (eph,) *upon*
Hyper, *over, too*
Hypo, *under*
Meta, (meth,) *beyond*
Para, (par,) *beside, near*
Peri, *round*
Syn, (sy syl, sym,) *together*

II. AFFIXES.

1. TO NOUNS.

An, ant, ar, ard, ary, eer, ent, er, ist, ite, or, ster, } *an agent, or one who does*

acy, age, hood, ism, ment, mony, ness, nce, ry, ship, tude, ude, ure, ty, y, } *state of being or quality.*

ary, ory, *the place where*
dom, *state, rank,* or *property*
ele, et, let, ling, kin, ock, *little, young*
tion, sion, *the act of doing,* or *the thing done*

2. TO ADJECTIVES.

Al, an, ar, ary, ic, ile, ine, ish, ory, } *of, or belonging to*

ful, ose, ous, some, y, } *full*
ant, ent, *being*
ate, *having, being*
ble, *may, or can be*
en, *made of*
ish, *little*
less, *without*
ly, ish, like, *like*
ward, *towards*

aceous, *of,* or *consisting of*

3. TO VERBS.

Ate, en, fy, ish, ize, } *to make*

4. TO ADVERBS.

Ly, *like*
ward, *towards*

III. LATIN AND GREEK ROOTS.

SECTION 1

LESSON I.

Anim-a, *life*; as *in*anim*ate*

Aug-eo, *to increase*; auct-us, *increased*; as aug*ment*, auction, auth*or*

Duc-o, *to lead*; duct-us, *led*; as reduce, *reduction*

Ject-us, *thrown*; (ject-us when compounded,) as *reject*

Nat-us, *born*; as *native*

Nect-o, *to tie*; nex-us, *tied*; as connect, *annex*

Vid-eo, *to see*; vis-us, *seen*; as provide, *visible*

LESSON II.

Acid-us, *sour*; as acid

Æstim-o, *to value*; as estim*ate*, esteem

Cav-us, *hollow*; as cav*ern*, *excavate*

Crep-o, *to make a noise*; *to break*; as *discrepant*, crevice

Cur-a, *care*; as pro*cure*

Faci-es, *form*; *appearance*; as *superficies*, surface

Foss-us, *dug*, as foss*il*

Fum-us, *smoke*; as fume, *perfume*

Manu-s, *the hand*; as manu*facture*

Man-eo, *to stay*; as remain, *permanent*.

Petr-a, *a stone*; as petr*ify*, *salt*petre

Pol-is, (Gr.) *a city*; as polish, *political*

Pon-o, *to place*; posit-us, *placed*; as depone, *exposition*

Quant-us, *how much*; as quant*ity*

Sal, *salt*; as sal*ine*, sal*tpetre*

Scrib-o, *to write*; script-us, *written*; describe, *subscription*

Semi, hemi, (Gr.) demi, (Fr.) *half*; as semi*circle*, hemi*sphere*, demi*god*

Solv-o, *to loose*; solut-us, *loosed*; as dissolve, solution

Stern-o, *to throw down*; stratus, *thrown down*, strat-um, *a bed*; as con*stern*ation, prostrate, strat*ify*

Tend-o, *to stretch*; tens-us or tent-us, *stretched*; as extend, *extension attentive*

Ten-eo, *to hold*; tent-us, *held*; as tenacious, contain, detention

Tex-o, *to weave*; text-us, *woven*; as texture, *context*

Un-us, *one*; as un*ite*

Ut-or, *to use*; us-us, *having used*; as util*ity*, use*ful*

Vapor, *steam*; as evapor*ate*

Vis, *force*; as violent

LESSON III.

Arsen, (Gr.) *masculine*, *strong*; as arsen*ic*

Bin-us, *two by two*; as combine

Ced-o, *to yield*, *to go*; cess-us, *yielded*, *gone*; as concede, *procession*

Curr-o; *to run*; curs-us, *a running*; as recur, course

Fibr-a, *a thread*; as fibre

Flect-o, *to bend*, flex-us, *bent*; as reflect, flex*ible*

Flu-o, *to flow*; as fluid

Frang-o, *to break*; fract-us, *broken*; as fragment, *in*fringe, fracture

Fund-o, *to pour out*; fus-us, *poured out*; as refund, *profuse*, fus*ible*

Glob-us, *a ball*; as glob*ule*

Gran-um, *a grain of corn*; as grain, gran*ite*

Hær-eo, *to stitch*; hæs-us, *stuck*; as adhere, cohesion

Lim-es, limit-is, *a boundary*; as limit

Lustr-o, *to shine*; as *illustrious*

Lux, luc-is, *light*; as luci*fer*

Malle-us, *a hammer*; as malle*able*

Medic-o, *to heal*; as medic*ine*

Meti-or, *to measure*; mens-us, *measured*; as mete, *immense*

Mov-eo, *to move*; mot-us, *moved*; as move*ment*, *motion*

Pend-o, *to pay*; pens-us, *paid*; as *expend*, *expense*

Ple-o, *to fill*; plet-us, *filled*; as supply, *complete*

Preti-um, *a price*; as *precious*

Pur-us, *pure*; as puri*fy*

Quær-o, *to ask*; quæsit-us, *asked*; (quir-o and quisit-us when compounded,) as inquire, *requisition*

Rub-er, *red*; as ruby

Serv-o, *to keep*; as *preserve*

Simil-is, *like*; as similar, resemble (through the French)

Sist-o, *to stop*; as resist

Son-o, *to sound*; as sonor*ous*

Sum-o, *to take*; sumpt-us, *taken*; as assume, *presumption*

Temper-o, *to mix*, *to moderate*; as temper, temperature

Typ-os, (Gr.) *a pattern or figure*; as *prototype*

Ust-us, *burned*; as *combustible*

Vari-o, *to change*; as variable

Vast-o, *to lay waste*; as vast, devastate

Vige-o, *to grow*; as vegetable

Vireo, *to be green*; as verdigris, verdure

LESSON IV.

Ampl-us, *large* ; as ample

Bolbos, (Gr.) *an onion* ; as bulb, bulbous

Cap-io, *to take* ; capt-us, *taken* ; (cip-io and cept-us when compounded,) as capable, captive, recipient, receive (through the French)

Cotyle, (Gr.) *a cavity*, as cotyledon

Esse, *to be* ; ens, entis, *being* ; as essential, nonentity

Fac-io, *to make* ; fact-us, *made* ; (fic-io and fect-us when compounded,) as factor, beneficent, perfect

Germ-en, germin-is, a *bud or branch* ; as germ, germinate

Grat-us, *agreeable* ; as gratify

Hor-os, (Gr.) *a boundary* ; as horizon

Mus-a, *a song* ; as amuse

Nutri-o, *to nourish*; as nutriment, nurse

Orn-o, *to deck* ; as adorn, ornament

Plum-a, *a feather* ; as plumage

Propàg-o, *a stock or shoot*; as propagate

Radix, radic-is, *the root* ; as eradicate

Sol-us, *alone* ; as sole, solitude

Termin-us, *a boundary* ; as terminate

Tuber, *a swelling* ; as protuberant

LESSON V.

Arct-os, (Gr.) *a bear; the north*; as arctic

Arc-us, *a bow* ; as arch

Cand-eo, *to shine, to burn* ; as candle, incendiary

Centr-um, *the centre* ; as central

Col-o, *to cultivate* ; cult-us, *cultivated* ; as colony, culture

Column-a, *a pillar* ; as column

Cresc-o, *to grow* ; cret-us, *grown* ; as crescent, increase, concrete

Dict-us, *said* ; as predict

Dom-us, *a house* ; as domestic

Eid-os, (Gr.) *form* ; as kaleidoscope, idol

Fer-o, *to carry* ; as different

Fin-is, *an end* ; as fine, infinite

Foli-um, *a leaf* ; as foliage

Ingeni-um, *wit* ; as ingenuity

Liqu-eo, *to melt* ; as liquid

Merx, merc-is, *merchandize* ; as commerce

Ministr-o, *to serve* , as administer

Par-eo, *to appear* ; as apparent

Par-io, *to beget, to bring forth*; as parent

Par-o, *to make ready* ; as prepare

Port-o, *to carry* ; as support

Scand-o, *to climb* ; (scend-o, when compounded,) as descend

Sci-o, *to know* ; as science

Sign-um, *a mark* ; as insignificant

Sit-os, (Gr.) *corn* ; as parasite

Soci-us, *a companion* ; as society

Sol-um, *the ground* ; as soil

Speci-o, *to see* ; spect-us, *seen* ; as especial, respect

Trop-os, (Gr.) *a turning*; as trope, tropic

Val-eo, *to be strong* ; as prevail

LESSON VI.

Arm-a, *arms* ; as armour

Atmos, (Gr.) *vapour, breath* ; as atmosphere

Cad-o, *to fall*; (cid-o when compounded,) cas-us, *fallen* ; as cadence, accident, casual

Jus, jur-is, *right, law* ; as justice, injury

Minuo, *to lessen* ; minut-us, *lessened* ; as diminish, minute

Priv-o, *to take away* ; as deprive

St-o, stat-um, *to stand* ; stans, *standing* ; as station, distance

Vigor, *strength* ; as vigorous

LESSON VI.—*continued.*

Claud-o, *to shut* ; clausus, *shut* ; (clud-o and clus-us when compounded,) as clause, exclude, exclusive, enclose

Omni-s, *all* ; as omnipresence

Papilio, papilion-is, *a butterfly* ; as papilionaceous, pavilion

Plan-ao, (Gr.) *to wander* ; as planet

Prim-us, *first* ; as primitive, principal

Radi-us, *a ray* ; as radiant

Regul-a, *a rule* ; as regular

Splend-eo, *to shine* ; as splendour

Umbr-a, *a shade* ; as umbrella

Veh-o, *to carry* ; as vehicle, convey

LESSON VII.

Dot-os, (Gr.) *given* ; as anecdote

Genus, gener-is *a kind or race* ; as general

Leg-o, *to read, to gather* ; lect-us, *read, gathered* ; as legible, college, lecture, collect

Mamm-a, *a breast* ; as mammalia, mammiferous

Micr-os, (Gr.) *small* ; as microscope

Peculi-um, *private property* ; (from pecus, *cattle* ;) as peculiar

Plen-us, *full* ; as plenitude, plenty

Prob-o, *to prove* ; as probable, approve

Scop-eo, (Gr.) *to see* ; as telescope

Sequ-or, *to follow* ; secut-us, *having followed* ; as sequel, persecute, pursue (through the French)

Zoo-n, (Gr.) *an animal* ; as zoology

LESSON VIII.

Æqu-us, *equal*; as equal*ity*

Clin-o, *to bend*; as *in*cline

Hab-eo, *to have*; habit-us, *had*; (hib-eo and habit-us when compounded,) as *in*habit, *ex*hibit

Hom-o, *a man*; as homi*cide*, human

Mir-or, *to wonder*; as admire

Press-us, *pressed*; as *op*press

Reg-o, *to rule*; as regi*on*, *regent*

Vert-o, *to turn*; vers-us, *turned*; as *con*vert, *diversity*

LESSON IX.

Alter-nus, *the other of two*; as alter*nate*

Apt-o, *to fit*; as *adapt*

Cel-o, *to hide*; as *con*ceal

Exter, *outward*; extrem-us, *the last*; as extern*al*, extrem*ity*

Ger-o, *to carry*; gest-us, *carried*; as *belligerent*, *digest*

Gramen, gramin-is, *grass*; as gramini*vorous*

Past-us, *fed*; as pas*ture*

Rect-us, *right*, *straight*; as direct

Rumen, rumin-is, *the cud*; as rumi*nate*

Sagus, sagax, sagac-is, *wise*; as sage, sagac*ity*

Stru-o, *to build*; struct-us, *built*; as *de*stroy, *structure*

Teg-o, *to cover*; tect-us, *covered*; as tegu*ment*, *protect*

Terr-eo, *to frighten*; as terr*ify*

Vad-o, *to go*; vas-us, *gone*; as wade, *in*vade, *in*vasion

Vinc-o, *to conquer*; vict-us, *conquered*; as *in*vinc*ible*, victim

Vor-o, *to devour*; as vora*cious*

LESSON X.

Car-us, *dear*; as care*ss*, cher*ish*, (through the French)

Caut-us, *wary*; as *pre*caution

Haust-us, *drawn*, as *ex*haust

Idi-os, (Gr.) *private*, *peculiar*; as idiot

Pung-o, *to sting*; punct-um, *a point*; as pung*ent*, punct*ual*

Senti-o, *to feel*; sens-us, *felt*; as *dis*sent, sen*sible*

Ven-io, *to come*; vent-us, *come*; as *con*vene, *ad*vent

LESSON XI.

Bi-s, *twice*; as bi*ped*

Caput, capit-is, *the head*; (ciput and cipit-is, when compounded,) as capi*tal*, *precipice*

Caro, carn-is, *flesh*; as carni*vorous*, car*nation*

Grad-ior, *to go*; grad-us, *a step*; gress-us, *having gone*; as de*grade*, gradu*al*, *progress*

Mult-us, *many*; as multi*tude*

Numer-us, *number*; as in*numerable*

Pes, ped-is, *the foot*; as pe*destrian*, *impede*

Plic-o, *to fold*; as *implicate*, *multiply*

Quatuor, *four*; as quarter, quadru*ped*

Rep-o, *to creep*; as rep*tile*

Torp-eo, *to be benumbed*; as torp*id*

LESSON XII.

Cern-o, *to sift*, *to judge*; cret-us, *sifted*, *judged*; as *dis*cern, *con*cern, *discretion*

Form-a, *a form or shape*; as *trans*form

Hod-os, (Gr.) *a way*; as *peri*od

Ir-a, *anger*; as *ir*ascible, *ir*ritate

Nunci-o, *to tell*; as *pro*nounce

Obscur-us, *dark*; as obscure

Pend-eo, *to hang*; pens-us, *hung*; as de*pend*, *suspense*

Pest-is, *a plague*; as pesti*lence*

Pet-o, *to seek*; petit-us, *sought*; as *ap*peti*te*, petition

Phyt-on, (Gr.) *a plant*; as *zoo*phyte

Prad-a, *plunder*; as depre*dation*, prey

Propri-us, *one's own*; as appropri*ate* property

Quies, quiet-is, *rest*; as quiet

Sec-o, *to cut*; sect-us, *cut*; as sec*ant*, *insect*

Tot-us, *the whole*; as to*tal*

Und-a, *a wave*; as abu*ndance*, undu*late*

Myri-os, (Gr.) *numberless*; as myri*ad*

Odor, *smell*; as odour, odori*ferous*

Tom-ē, (Gr.) *a cutting*; as atom, epito*me*

Tric-æ, *an impediment*; as extri*cate*

Vulg-us, *the common people*; as vulga*r*, di*vulge*

SECTION II.—PART I.

Æstu-s, *heat*, *the tide*; as estu*ary*

Ager, *a field*; as agri*culture* [*tion*

Ag-o, *to do*; act-us, *done*; as a*gent*, ac-

Alpha, Beta, *the first two Greek letters*; as alphabet.

Ang-o, anxi, *to vex*; as angu*ish*, anxi*ous*

Arch-ē, (Gr.) *government*; arch-on, *a ruler*; as mon*archy*, *architect*

Ars, art-is, *art*; as art*ificial*, *inert*

Barbar-us, *savage*; as barbar*ian*

Cels-us, *high* ; as *excellence*
Cent-um, *a hundred* ; as century
Char-is, (Gr.) *love* ; as charity
Cheir, (Gr.) *the hand* ; as chirurgeon, whence surgeon
Civ-is, *a citizen* ; as civilize
Corn-u, *a horn* ; as corn, cornet
Damn-um, *loss* ; as *damage*, *indemnify*
Delici-æ, *delight* ; as *delicate*
Despot-es, (Gr.) *a master* ; as despotic
Domo, *to subdue* ; dominus, *a master* ; as *dominion*, *domain*
Dur-us, *hard* ; as endure
Equ-us, *a horse* ; as *equestrian*, *equip*
Erg-on, (Gr.), *a work* ; as *energy*
Err-o, *to wander* ; as error, *aberration*
Facil-is, *easy* ; as facility, *difficult*
Fate-or, *to own* ; fass-us, *having owned*, (fite-or and fess-us when compounded,) as *confess*, *professor*
Fertil-is, *fruitful* ; as fertilize
Fil-um, *a thread* ; as file, filament
Flict-us, *dashed or struck* ; as conflict
Flos, flor-is, *a flower* ; as floral, flourish
Fort-is, *strong* ; as fortify
Gē, (Gr.) *the earth* ; as geology
Glaci-es, *ice* ; as glacier
Graph-o, (Gr.) *to write* ; graph-ē, *a description* ; as geography
Hospes, hospit-is, *a guest* ; as hospit*able*, hospital [circuit
Iens, *going* ; itum, *to go* ; as *transient*,
Imper-o, *to command* ; as imperial, em-
Infra, *beneath* ; as *inferior* [peror
Insul-a, *an island* ; as peninsula
Intra, *within* ; as internal
Junct-us, *joined* ; as junction
Lat-us, *carried* ; as *translate*, relation
Leo, *a lion* ; as leopard
Lev-o, *to raise* ; as elevate, lever
Lig-o, *to bind* ; as oblige, religion
Lingu-a, *a tongue* ; lingu*ist*, language
Log-os, (Gr.) *a word*, *discription* ; as *zoology*
Mechan-ē, (Gr.) *a contrivance* ; as machine, mechanic
Magister, *a master* ; as magistrate
Mede-or, *to heal*, *to cure* ; as remedy
Medi-us, *middle* ; as Mediterranean, *immediate*
Miser, *wretched* ; as miserable [mission
Mitt-o, *to send* ; miss-us, *sent* ; as remit,
Mod-us, *a manner*, *a measure* ; as model, moderate
Mon-os, (Gr.) *alone* ; as monarch
Mons, mont-is, *a mountain* ; as promontory

Nav-is, *a ship* ; as navy, navigate
Origo, origin-is, *the beginning*; as origin
Pelag-us, *the sea* ; as *Archi*pelago
Pell-o, *to drive* ; puls-us, *driven* ; as *compel*, *impulse*
Phainomai, (Gr.) *to appear* ; as phenomenon
Phemi, (Gr.) to *speak* ; as prophet, *emphasis*
Phys-is, (Gr.) *nature* ; as physician
Plaud-o, *to clap the hands*, *to praise* ; plaus-us, *praised* ; as applaud, *applause*, *explosion*
Plex-us, *twisted*, *woven*; as *complexion*
Popul-us, *the people* ; as populous
Port-us, *a harbour* ; as *sea*-port
Poss-um, *to be able* ; as *possible* [cate
Prec-or, *to pray* ; as *precarious*, depre-
Presbys, (Gr.) *old* ; presbyter-os, *elder* ; as presbyter*ian* [publish
Public-o, *to make known* ; as public,
Pyr, (Gr.) *fire* ; as pyramid, empyrean
Rap-io, *to carry off* ; rapt-us, *carried off*, as rapid, rapture [lic
Re-s, *a thing*, *the state* ; as real, *republ-*
Rupt-us, *broken* ; as irruption
Sali-o, *to leap* ; salt-us, *leaped* ; (sili-o and sult-us when compounded,) as *salient*, assault, *resilient*, *insult*
Satis, *enough* ; as satisfy
Scind-o, *to cut* ; sciss-us, *cut*; as rescind, scissors
Sculpt-us, *carved* ; as sculpture
Sed-eo, *to sit* ; (sid-eo, when compounded,) sess-us, *sat* ; as sedentary, reside, session
Ser-o, *to knit or join* ; sert-us *joined* ; as insert, desert
Spati-um, *space* ; as spacious
Statu-o, *to set up*, *to appoint* ; (stitu-o when compounded,) as statue, *institution*
Stell-o, (Gr.) *to send* ; as apostle
String-o, *to bind* ; strict-us, *bound* ; as astringent, district
Summ-us, *the highest* ; as summit
Terr-a, *the earth* ; as territory, inter
Toler-o, *to bear* ; as tolerable
Torr-eo, *to parch* ; tost-us, *parched* ; as torrid, torrent, toast
Trah-o, *to draw* ; tract-us, *drawn* ; as *subtrahend*, extract
Tribu-o, *to bestow* ; as distribute, tribut-
Urb-s, *a city* ; as *suburbs*, urbane [ary
Vall-um, *a trench* ; as *interval*
Vuls-us, *pulled* ; as convulsion
Vi-a, *a way* , as previous, viaduct
Vulcan-us, *the god of smiths*; as volcano

SECTION II.—PART II.

Agil-is, *nimble*, as agility

Angel-os, (Gr.) *a messenger*; as angel, evangelist

Asphalt-os, (Gr.) *bitumen, pitch*; as Asphaltites [base

Bas-is, (Gr.) *the foot*; as basement, de-

Corp-us, corpor-is, *the body*; as corpse, corporeal

Curv-us; *crooked*, as curvature [ble

Crux, cruc-is, *a cross*; as crucify, cruci-

Daimon, (Gr.) *a spirit*; as demoniac

Dens-us, *thick*; as condense

Disc-o, *to learn*; as disciple

Doc-eo, *to teach*; doct-us, *taught*; as docile, doctrine

Fatig-o, *to tire*; as indefatigable

Ferox, feroc-is, *cruel*; as ferocious, fierce

Hæres, hæred-is, *an heir*; as hereditary

Horr-eo, *to dread*; as horrible

Liber, *free*; as liberty, deliver

Liter-a, *a letter*; as literal

Luxu-s, *excess*; as luxuriant

Miles, milit-is, *a soldier*; as military

Noc-eo, *to hurt*; nocu-us, *hurtful*; as innocent, noxious [factory

Ol-eo, *to grow, to smell*; as abolish, ol-

Pati-or, *to suffer*; pass-us, *having suffered*; as patience, compassion

Ru-o, *to rush*; as ruin

Sacer, *sacred*; as sacrifice, consecrate

Sepult-us, *buried*; as sepulchre

Stup-eo, *to be benumbed, amazed*; as stupid, stupendous

Suad-eo, *to advise*; suas-us, *advised*; as dissuade, persuasive

Tent-o, *to try*; as attempt

Viv-o, *to live*; vict-us, *food*; as survive, victuals

Vol-o, *to will, to wish*; as voluntary

Vot-us, *having vowed*; as votary, devote

SECTION II.—PART III.

Alt-us, *high*; as exalt

Bell-um, *war*; as rebel

Bene, *well*; as benevolent

Bibl-os, (Gr.) *a book*; as Bible

Fest-us, *joyful*; as feast, festival

Lin-um, *flax*; as linen

Magn-us, *great*, as magnify

Niger, *black*; as negro

Norm-a, *a rule*; as enormous

Septem, *seven*; as September, septennial

SECTION II.—PART IV.

Adelph-os, (Gr) *a brother*; as Philadelphia

Allel-on, (Gr.) *one another*; as parallel

Ann-us, *a year*; as annual

Arg-os, (Gr.) *lazy, idle*; as lethargy

Articul-us, *a little joint*; as articulate

Auster, *the south*; as Australia

Bi-os, (Gr.) *life*; as amphibious

Decem, *ten*; as December, decima

Dign-us, *worthy*; as dignify, condign

Experi-or, *to try*; expert-us, *tried*; as experience, expert.

Fugi-o, *to fly*; as fugitive, refuge

Fulg-eo, *to shine*; as refulgent

Grand-is, *great*; as grandeur

Glyph-o, (Gr.) *to carve*; as hieroglyphic

Hier-os, (Gr.) *sacred*; as hierarchy

Lect-os, (Gr.) *spoken*, as dialect

Leth-ē, (Gr.) *forgetfulness*; as lethargy

Mar-e, *the sea*; as marine

Mert-on, (Gr.) *a measure*; as metre, symmetry

Migr-o, *to remove from one place to another*; as emigrate

Narr-o, *to tell*; as narrative

Ordo, ordin-is, *order, law*; extraordinary, ordain

Pand-o, *to spread*; pans-us or pass-us, *spread*; as expand, expanse, compass

Pax, pac-is, *peace*; as pacific

Penetr-o, *to pierce*; as penetrate

Plor-o, *to bewail*; as deplore, explore

Pœn-a, *punishment*; as penalty

Prodigi-um, *a wonder*; as prodigious

Rar-us, *thin, scarce*; as rarefy, rarity

Sap-io, *to taste, to be wise*; as sap, insipid, savoury, sapient

Serp-o, *to creep*; as serpent [sinuous

Sinu-s, *the bosom, a bay*; as insinuate,

Sylv-a, *a wood*; as sylvan, Pennsylvania

Tim-eo, *to fear*; as timid

Trud-o, *to thrust*; trus-us, *thrust*; as intrude, obtrusion

Urg-eo, *to press on*; as urgent

Venēn-um, *poison*; as venomous

SECTION III.

Agon, (Gr.) *a contest*; as agony, *an-*
Camp-us, *a plain*; as encamp [*tagonist*
Chol-e, (Gr.) *bile, anger*; as *melan*choly, choleric
Cit-o, *to rouse, to summon*; as excite, *citation*
Clam-o, *to cry out, to call*; as *pro*claim, reclaim
Clar-us, *clear*; as *clarify*, declare
Coqu-o, *to boil*; coct-us, *boiled*; as cook, *decoction*
Cor, cord-is, *the heart*; as cordial, record
Crat-os, (Gr.) *strength, government*; as *theo*cracy, *aut*ocrat
Deuter-os, (Gr.) *second*; as Deuter*onomy*
Em-o, *to buy*; empt-us, *bought*; as *re*deem, *ex*empt
Fat-um, *a decree, death*; as fate, *fatal*
Fid-o, *to trust*; as *con*fide
Fili-us, *a son*; as fili*al*
Firm-us, *strong*; as *con*firm
Fors, fort-is, *chance*; as *mis*fortune, *fortuitous*
Frons, front-is, *the forehead*; as frontier, *frontispiece*
Gign-o, *to beget*; genit-us, *begotten*; as *pro*geny, genial
Grex, greg-is, *a flock*; as *gregarious, con*gregation
Hort-or, *to advise*; as *ex*hort
Host-is, *an enemy*; as host, *hostile*
Humi-is, *low*; as humil*ity*, humble
Jubilo, *to shout*; as jubilee
Lu-o, *to wash*; as *ablution*
Mand-o, *to bid*; as *com*mand
Melan, (Gr.) *black*; as melan*choly*
Memor, *mindful*; as *com*memor*ate*
Mes-os, (Gr.) *the middle*; as *Mesopotamia*
Mon-eo, *to warn*; monit-us, *warned*; as *monument, admonition*
Mors, mort-is, *death*; as *immortal*
Mos, mor-is, *a manner*; as moral
Octo, *eight*; as *October*
Opus, oper-is, *a work*; as *operation*
Pi-o, *to appease by sacrifice*; as *expiate*
Pi-us, *devout, godly*; as pi*ety*, *impious*
Pœnit-et, *to repent*; as penit*ent*, *repent*
Poi-eo, (Gr.) *to do, to make*; as poem
Polino, *to defile*; poliut-us, *defiled*; as pollute
Poster-us, *coming after*; as *posterity*
Potam-os, (Gr.) *a river*; as *Mesopotamia, hippopotamus*
Pract-os, (Gr.) *done*; as *impracticable*
Puni-o, *to punish*; as *impunity*, punish
Put-o, *to prune, to think*; as *amputate dispute*
Salv-us, *safe*; as sal*vation*
Sanct-us, *holy*; as sanct*uary*, saint
Sparg-o, *to scatter*; spars-us, *scattered*; as spray, *disperse*
Sper-o, *to hope*; as *desperate, despair*
Spir-o, *to breathe*; as *inspire, spirit*
Stirps, *the trunk of a tree*; as *extirpate*
Tabern-a, *a tent*; as tabern*acle*, tavern
Test-is, *a witness*; as testi*mony, protest*
Trem-o, *to shake with fear*; as trem*ulous*, trem*ble*
Turba, *a crowd*; as *disturb*
Van-us, *empty, futile*; as vain, *vanish*
Vest-is, *a garment*; as vest*ment, invest*
Volv-o, *to roll*; volût-us, *rolled*; as *in*volve, *revolution*

SECTION IV.

Amic-us, *a friend*; as amic*able*
Aqu-a, *water*; as aquat*ic* [*ment*
Argu-o, *to reason, to prove*; as argu-
Bon-us, *good*; as boun*ty*
Bull-a, *a bubble of water*; as boil, *ebull-*
Calcul-us, *a pebble*; as calculate [*ition*
Cred-o, *to believe, to trust*; creditus, *trusted*; as creed, *creditor*
Crimen, crimin-is, *a charge or accusation*; as *criminal*
C(k)ylind-o, *to roll*; as cylinder [debt
Deb-eo, *to owe*; debit-us, *due*; as debit,
Do, *to give*; dat-us, *given*; (dit-us when compounded,) as do, dat*ive*, *addition*
Fall-o, *to deceive*; falsus, *deceitful*; as falli*ble*, false*hood*
Fam-es, *hunger*; as famine
Fing-o, *to feign*; fict-us, *feigned*; as feign, fiction
Fraus, fraud-is, *deceit*; as defraud
Frug-es, *grain*; as frug*al*
Gigas, gigant-is, *a giant*; as gigantic
Gust-o, *to taste*; as *disgust*
Misc-eo, *to mingle*; mixt-us, *mingled*; as *promiscuous*, mixture
Monstr-o, *to show*; as *demonstrate*, monstrous
Odi-um, *hatred*; as odious
Oik-os, (Gr.) *a house*; as economy
Opt-o, *to wish, to choose*; as option,
Par, *equal*; as parity, pair [adopt
Pauper, *poor*; as pauperism, poverty
Ping-o, *to paint*; pict-us, *painted*; as pigment, picture

Place-o, *to please*; as *placid*
Prehend-o, *to seize*; prehens-us, *seized*; as *apprehend*, *comprehension*
Sen-ex, *old*; senior, *older*; as *senate*, *seniority*
Sors, sort-is, *a lot*; as sort, *assort*
Spond-eo, *to promise*; spons-us, *promised*; as *correspond*, *response*
Stipul-a, *a blade of corn*; as *stipulate*
Tax-is, (Gr.) *an order, regulation*; as tax, *syntax*
Tort-us, *twisted*; as *distort*
Vag-or, *to wander*; as vague, *extravagant*
Vent-us, *the wind*; as vent, *ventilate*
Vid-uo, *to bereave*; as void, widow

SECTION V.

Acu-o, *to sharpen*; acut-us, *sharpened*; as acute
Agit-o, *to drive, to stimulate*; as agitate, *cogitate*
Am-o, *to love*; as *amiable*
Angul-us, *a corner*; as *tri*angle
Arc-eo, (erc-eo, when compounded,) *to drive*, as coerce, *exercise*
Brev-is, *short*; as brief, *brevity*
Byss-os, (Gr.) *bottom, depth*; as abyss
Cannabis, *hemp*; as canvass
Chron-os, (Gr.) *time*; as *chronometer*
Cras, *to-morrow*; as *procrastinate*
Cumul-us, *a heap*; as *accumulate*
Deterior, *worse*; as *deteriorate*
Dexter, *right-handed*; as *dexterous*
Dicat-us, *assigned*; as *dedicate*, *indicate*
Di-es, *a day*; as *dial*, *diary*
Eg-eo, *to need*; as *exigence*
Ela-o, (Gr.) *to drive*; as *elastic*
Ethn-os, (Gr.) *a nation*; as *ethnarch*, heathen
Fatu-us, *foolish*; as *infatuated*
For-o, *to pierce*; as *perforate*
Grav-is, *heavy*; as *gravity*
Impetu-s, *an assault*; as impetuous
Laps-us, *having slidden*; as relapse
Liber, *a book*; as *library*
Ligu-um, *wood*; as *ligneous*
Linqu-o, *to leave*; lict-us, *left*; as *relinquish*, relict
Lith-os, *a stone*; as *lithography*, (Gr.)
Marg-o, margin-is, *a border, or brink*; as margin
Merg-o, *to plunge*; mers-us, *plunged*; as emerge, *immersion*
Mini-um, *red earth*; as *miniature*
Nerv-us, *a sinew*; as nerve, *enervate*
Nom-os, (Gr.) *a law*; as *economy*
Not-us, *known*; as *notorious*
Organ-on, (Gr.) *an instrument*; as organize
Pars, part-is, *a part, or party*; as *participate*, partial
Path-os, (Gr.) *feeling*; as *sympathy*
Pericul-um, *danger, trial*; as peril
Philos, (Gr.) *a friend*; as *philosopher*
Pous, pod-os, (Gr.) *the foot*; as *polypus*, *antipodes*
Prompt-us, *ready*; as prompt
Prot-os, (Gr.) *first*; as *prototype*
Putr-is, *rotten*; as *putrid*
Rad-o, *to scrape*; ras-us, *scraped*; as *abrade*, rasor
Ranc-eo, *to be stale*; as *rancid*, rank
Ratio, *reason*; as *rational*
Rig-eo, *to be stiff*; as *rigid*, *rigorous*
Rob-ur, robor-is, *strength*; as *robust*, *corroborate*
Rod-o, *to gnaw*; ros-us, *gnawed*; as *corrode*, *corrosion*
Rus, rur-is, *the country*; as *rustic*, *rural*
Sanguis, *blood*; as *sanguinary*
San-us, *sound*; as *insane*
Servi-o, *to serve*, as *servile*, *service*
Sol, *the sun*; as solar
Sol-or, *to comfort*; as solace, *disconsolate*
Soph-os, (Gr.) *wise*; as *philosophy*
Stem-a, (Gr.) *a placing*; as *system*
Stere-os, (Gr.) *solid, firm*; as *stereotype*
Stingu-o, *to quench*; stinct-us, *quenched*; as *extinguish*, *extinct*
Surg-o, *to rise*; surrect-us, *risen*; as surge, *resurrection*, *resource*
Syl-ē, (Gr.) *plunder*; as *asylum*
Techn-ē, (Gr.) *art*; as *technical*
Tempus, tempor-is, *time*; as *temporary*
Ting-o, *to dip, to stain*; tinct-us, *stained*; as tinge, *tincture*, tint
Trepid-us, *fearful*; as *intrepid*
Vac-o, *to be empty*; as *vacant*, *vacation*
Velox, veloc-is, *swift*; as *velocity*
Vermis, *a worm*; as *vermin*, *vermilion*
Vigil, *watchful*; as *vigilant*
Vit-o, *to shun*; as *inevitable*

THE END.

OTS.

ade of corn; as stipul*ate*
in order, regulation; as

ed; as *dis*tort
ander; as vague, *extrav-*

vind; as vent, vent*ilate*
reave; as void, widow

a part, or party; as par-
rtial
feeling; as *sym*pathy
anger, trial; as peril
friend; as philo*sopher*
(Gr.) *the foot*; as *poly-*
dies
ady; as prompt
first; as proto*type*
n; as putr*id*
rape; ras-us, *scraped*; as
or
e stale; as rancid, rank
; as ration*al*
stiff; as rigid, rigorous
r-is, *strength*; as robust,
gnaw; ros-us, *gnawed*; as
rrosion [*rural*
the country; as rus*tic*,
d; as sanguin*ary*
d; as *in*sane
rve, as serv*ile*, service
as solar [sol*ate*
mfort; as solace, *discon-*
) *wise*; as *philo*sophy
a placing; as *sy*stem
) *solid, firm*; as stereo*type*
uench; stinct-us, *quench-*
ingu*ish*, *ex*tinct
ise; surrect-us, *risen*; as
rrection, *re*source
under; as asylum
) *art*; as technic*al*
por-is, *time*; as tempor*ary*
dip, to stain; tinct-us,
s tinge, tinct*ure*, tint
arful; as *in*trepid
empty; as vac*ant*, vac*ation*
s, swift; as velocity
orm; as vermin, vermil*ion*
ful; as vigil*ant*
n; as *in*evit*able*