CHILDREN AND YOUTH'S DEPARTMENT.

"The Traveller"—Volcanoes.

"I might," resumed the traveller, "take you up, in imagination, to the top of hundreds of other mountains, but I wish to speak of some of the volcanoes, or burning mountains, which have, at different periods of time, scattered devastation and ruin around them. Some of these are found in the coldest countries, where you would not expect to find them.

Here heat and cold extend their influence round,
And ice and fire in strange extremes are found.

Wherever you go, my young friends, keep away from a burning mountain; for, of all objects in the creation, it is one of the most fearful. Think of smoke, and ashes, and stones, and hundreds of tons of red hot cinders, being cast up into the air, and floods of burning lava flowing in different directions.

Volcanoes are very numerous, but I have only time to mention some of them.

There are three in Kamtschatka. From one of these, in the year 1739, flames issued with such violence as to consume to ashes the neighbouring forests. The whole country was darkened with the smoke which issued from the crater of the mountain, and a shower of cinders covered the ground for a space of between twenty and thirty miles round.

From another, a conflagration burst, in the year 1737, which lasted a week, when the mountain appeared like one red hot rock.

The grandest display of fireworks, which human beings ever yet made, is no more to be compared with the conflagration of a burning mountain, than a spark in a tinderbox is to a house on fire.

Mount Hecla, in Iceland, has desolated tracts of land to an amazing extent, by its floods of burning lava. Sir Joseph Banks, Dr. Solander, and others, who visited this place in 1772, travelled more than three hundred miles over beds of lava, which had been poured out from the crater of the mountain.

If we reflect on the amazing power of God, it is enough to overwhelm us, unless we call to mind the greatness of his mercy; but when, sinners as we are, we become reconciled to him through his well-beloved Son, his almighty power affrights us not, for we can say with confidence, 'This God is our own God for ever and ever.'

The largest burning mountain in Europe is Mount Etna; the height is more than 10,000 feet, and its crater sometimes nearly a mile wide. In 1669, a stream of burning lava burst from the mountain, and destroyed in its course 5000 habitations. Think a moment on this wide-spreading ruin!"

Gilbert. I should like to see Mount Etna; but I would not go within twenty miles of it, when it was on fire.

Edmund. When the hall chimney was on fire, I remember that the burning soot made such a roaring, and the fiery sparks and dark clouds at the top looked so frightful, that it must have been a little like a burning mountain seen at a distance. However, it was soon over, for when old Thomas sprinkled some water on the fire it made so much steam that the chimney was put out very soon.

Traveller. It would take almost an ocean of water to extinguish a volcano. Whenever you ascend Mount Etna, it will be well to fix on a fine day, when no fire is issuing from its top; and if you climb it before the sun rises, so much the better. Many travellers have agreed that sunrise, when surveyed from Mount Etna, is one of the most splendid spectacles in creation. "No imagination can form an idea of so glorious and magnificent a scene; neither is there, on the surface of this globe, any one point that unites so many awful and sublime subjects. The view is absolutely boundless on every side, nor is there any one object within the circle of vision to interrupt it, so that the sight is every where lost in the immensity." Sunrise is a glorious spectacle in every place, but when its golden beams are spread over a circle of hundreds of miles, gilding the heavens and the earth with glory, it is grand indeed!

O glorious sun! thy glittering beams
Are wondrous bright to me;
How much more glorious, still, must thine
Almighty Maker be;

Vesuvius is not much more than a third the height of Etna, but its frequent eruptions have rendered it famous in history. In the reign of Titus, this volcano suddenly burst into a flame: smoke, ashes, cinders, pumice stones, and lava, were cast out by it in such abundance, that three cities, Herculaneum, Stabia, and Pompeii, were completely buried. Since then its eruptions have been frequent; in one of them a fountain of liquid fire rose up into the air to the surprising height of 10,000 feet. This is nearly two miles high.

Edmund and Gilbert looked up to the sky, thinking that this stream of fire must have been almost as high as the fleecy clouds above them; and the traveller told them it probably was even higher.

Traveller. The eruption of a volcano is usually preceded by earthquakes, and when the mountain shoots out its showers of cinders and stones, and pours out its burning floods of fiery lava, the bellowing which it makes is tremendous. The roaring of the burning mountain Cotopaxi, in South America, is said to have been heard at a distance of more than five hundred miles. It is all very well to hear of volcanoes, and you will get no harm in reading of them; but let me again advise you to keep as far from them as possible.

Gilbert and Edmund told the traveller, that their father had taken them to see some iron-works, and that the blast furnace made such a terrible noise, and contained such a body of fire, that they could form some notion of a volcano. "If," said the traveller, "you can fancy ten thousand blast furnaces at work at the same time, you may imagine that you see the fiery eruption, and hear the furious bellowing of a volcano."

Gilbert, Edmund, and Leonard Lovel very unwillingly left the arbour; but their father remarked, that as his friend had given them some description of mountains, perhaps he might be prevailed on, at another opportunity, to say something about the precipices of the earth. This observation reconciled them to a little delay, and they scampered off in high good humour: Gilbert to fly his kite; Edmund to feed his rabbit; and Leonard to weed his little garden.

AGRICULTURE.

DISEASES OF GRAIN CROPS.

VEGETABLES, like animals, are exposed to sundry diseases and accidents, which affect their health and growth, and in some instances utterly destroy them. At present we shall confine our attention to the diseases affecting crops of grain, and at another opportunity, treat of those belonging to potatoes and other kinds of roots.

Wheat is subject to various disorders arising from the influence of the atmosphere, the encroachments of insects, the nature of the soil, or from other causes. One of the most serious of these diseases is called *rust*, or in botanical language *rubigo*, from the rusty brown appearance which it assumes, and which afterwards becomes black. It first attacks the leaves and then the stem of the plants, in spots of a dirty white colour, which gradually deepen until they become almost black. From the time these spots appear, which is generally when the corn is blooming, the plants evidently decline, the straw becomes quite brittle, and when broken is very disagreeable to smell. The quality of the grain on a rusty plant is not much affected, being not unwholesome; and if the grain be fully formed, it is very slightly discoloured. When this disease attacks a crop, it is thought advisable to cut it at once, as the corn will make no further progress after it is affected.

The causes of rust are supposed to be the prevalence of heavy mists, rain, or sudden changes from frost at night to the heat of the sun in the daytime. Heavy mists and rain, from their keeping the roots of the plants always wet and cold, are supposed to be the main causes of rust in this country. The nature of the soil has also considerable effect. If too highly manured, for the purpose of forcing wheat crops, it is found that the grain is more easily affected than that grown upon land in a well-balanced condition. This is supposed to arise from the straw of forced corn being softer and more porous in its nature, which renders it more easily affected by changes in the temperature. Soils which are very loose and open produce grain which seems predisposed to rust. This is supposed to arise from such soils allowing the roots to penetrate deeply into the ground, where they may meet with a stratum containing no nourishment, and thus the growth of the plants is suddenly checked. Dry, open situations, are less liable to rust than lands which lie low. Some say that spring wheat is not so easily affected as winter, but other reports place both kinds