

direction as the major axes of the hills; and of smotherings, scratchings, and transported boulders. Hitherto denudations of this kind have been attributed to water in its ordinary state: but it is evident that here (and elsewhere, as we can personally testify) to denude so vastly and so massively, the increased mechanical power which water derives from congelation are necessary. There is, too, a marked difference between the dilapidations effected by water and those produced by ice. Water leaves all shattered and rough, confusedly scattered, and widely devastated: ice cuts sharply through mountain sides, saws them down, as it were, with its keen-edged scimitar, or wearing and wasting by stone-gatherings, it makes clean work in opening mighty gorges. But an undoubted proof of glaciation is that blocks are carried up-hill, contrary to gravitation, lifted above their original seats, and flung sometimes, as may be seen in the Welsh Pass of Llanberis, almost toopling over aged minarets, or standing alone, like huge ice-pins, as if they had been set up by sportive giants, and needed but one Titanic bowl to hurl them down. Water-currents would never effect such transportations upward; whole cataraacts could not have moved some of those glacial blocks one yard towards their present position. —*Althænum.*

**METEORIC STONES.**—A number of the *Institut* journal supplies us with some recent cases of the fall of these mysterious visitors. At Trezzano, near Brescia, in Lombardy, there fell on the 12th of November, 1856, one which weighed 17lb. At Port Peter, in the territory of Nebraska, North America, a piece of "meteoric iron" was found in 1858, weighing 30lb.; it was sent to the Academy at St. Louis. The Museum at Austin, the capital of Texas, possesses a mass weighing 320lb., composed of 89.9 of iron and 10.1 nickel; it is an object of superstitious veneration to the Indians. The same museum has a fragment of another acrolite, weighing 2½lb., consisting of 64 parts of iron, 5½ nickel, and traces of cobalt. On the first of May 1860, there was in Ohio actually a shower of acrolites, which fell with violent detonations in the three counties of Guernsey, Harrison, and Belmont. One block weighed 103lb.; several weighed from 10lb. to 60lb., and the weight of the whole was estimated at 700lb. But the most extraordinary of these bodies is one which was found buried in the soil near Rogues River, in Oregon, by John Ross, a gold seeker. Its weight is not given; probably it is still embodied in the earth; but it is said to surpass in size the famous mass of meteoric iron discovered by Pallas in Siberia, which weighed 14,000lb. A fragment of the Oregon meteorite, sent to Boston, was found to contain 1 per cent. of nickel combined with the iron.

**WHAT IS COAL?**—What is coal in its general composition, composed of? Carbon, hydrogen,

oxygen and a small portion of saline ingredients. What is a piece of wood, or a pine, or a fern composed of? Carbon, hydrogen, oxygen, with water, and a small portion of saline ingredients. Thus, the transition from vegetable to coal appears to consist principally in the loss, in the former, of the water or juices which constitute the sap of the plant, and which no longer living, it requires no more. Borne down by the flood, buried under the coral reef it struggles through ages and ages under the continually-increasing pressure, till its juices being exhausted, its membranes are united in one solid mass, and the gradual process of emaciation has connected foliage, trunk, and roots into one homogeneous body, undistinguishable to an ordinary observer, from its brother shale, found both above and beneath it in the mine. The point at issue between the scientific arbiters of this question raises our interest and excites our curiosity to know more upon a subject so fraught with mysterious grandeur; and when the distinction between our shales and coals, and other formations of the carboniferous era are more clearly defined, there will still be eager inquirers with each succeeding generation, "What is coal?"—*Once a Week.*

**SAGACITY OF A "COLLY" DOG.**—That species of the canine, called the sheep or colly dog, is well known for its sagacity, and the following, for which we can vouch, is perhaps without a parallel. One day last week, Mr. Shaw, Auchgourish, Kincardine, Abernethy, with his favourite dog "Chance," left for the purpose of what is called "the sheep gathering"—that is, bringing them down to a convenient place to be shorn and washed. They had not proceeded far, when Mr. Shaw, from indisposition, or some other cause, did not feel inclined to go up to the glen, and he told his dog to go away and bring down all the sheep, and that he would await his return. "Chance" instantly obeyed his master's orders, went up the glen, gathered all the sheep together, and came away with them exactly in the direction of his master. We may mention that "Chance's" movements were observed from the top of Craigourie by the hill pundler. Mr. Shaw, who waited patiently the return of his faithful servant, now saw the sheep nearing him to the west of Craigourie, and at this moment observed a hare getting up amongst them, and looking very bewildered. "Chance," taking opportunity of this, left his charge for a little, and took to the chase, and after some stiff work, succeeded in catching the hare. Mr. Shaw called out to the pundler to go and take the hare from the dog. "Chance," anticipating what was to follow, surveyed with suspicion the pundler, who was fast approaching him. Yet not liking to do battle with one with whom he was on intimate terms, instantly threw the hare over his back, as being the easiest mode of carrying, brought with him the sheep with all speed, and