

Literary.

CURIOUS FACT IN ACOUSTICS.—A machine has been invented in France by which the undulations in the atmosphere may be counted which take place between two individuals in conversation. The wind in passing over the water causes it to ripple, and the voice, when an individual speaks, produces certain vibrations in the atmosphere by which sound is communicated. An eminent philosopher says that these *pulsations*, if they may be so called, caused by a male voice, vary from 200 to 500 in a second, while those of the female extent from 600 to 1000.—*Silliman's Journal*.

ORIGIN OF BOGS.—The origin of many bogs, from the decay of ancient forests, is strikingly illustrated by the fact that the roots of successive generations of trees have been found resting upon each other. A beautiful instance of a succession of forests upon the same spot occurs near Portmore, in the county of Antrim. The superficial stratum of bog timber in this district consists of oak, often of very great dimensions; beneath them we find another stratum of timber, consisting almost entirely of the trunks of trees. In the parliamentary reports concerning the bogs of Ireland, there is an account of a bog in which there is a succession of three layers of roots of firs, proving that three forests have flourished in succession on the same spot. In Westmeath, according to Archdeacon Vignolles, three layers of trees are to be found, alternating with as many beds of peat, from three to five feet in thickness. The trees in each layer appear to have arrived at maturity, and could not have been co-existent. These trees are of enormous size, and many of them bear the marks of fire. It may appear strange to some how fir-trees should be able to support themselves on the unstable surface of a bog, but at present there are many thriving plantations of fir-trees in such situations in several parts of the country.—*Dublin University Magazine*.

ORIGIN OF FOGS.—The very common but mistaken idea that the fog which we see of an evening hanging over low meadows, and by the sides of streams, is ascending, arises very naturally from our first observing it in low places, and as the cool of the evening advances, remarking that it ascends to higher land; the fact is, however, not that the damp is ascending, but that from the coldness of those situations they are the first places which condense the before invisible vapour, and as the cold of the evening advances, the condensation takes place at a higher level. A large portion of the vapour ascends to the upper region of the atmosphere, where it cools, and becomes visible to us in the form of clouds; and increasing in density by cooling, they gradually descend nearer the earth, until at last, becoming too condensed by the loss of heat, they fall in rain, to be again returned in endless succession.—*Scientific Phenomena of Domestic Life*.

STYLE.—Take this, reader, for a general rule, that the readiest and plainest style is the most forcible, (if the head be but properly stored;) and that in all ordinary cases the word that first presents itself is the best; even as in all matters of right and wrong, the first feeling is that which the heart owns and the conscience ratifies.—*Southey's "Doctor"*.

A CURIOUS CALCULATION.—What is a billion? The reply is very simple, a million times a million. This is quickly written, and quicker still pronounced; but no man is able to count it. You may count 160 or 170 in a minute; but let us even suppose that you may go as far as 200; then an hour will produce 12,000, a day 280,000, and a year of 365 days, 195,120,000. Let us suppose now that Adam, at the beginning of his existence, had begun to count, had continued to do so, and was counting still; he could not even now, according to the usually supposed age of our globe, have counted near enough. For to count a billion he would require 9,512 years, 34 days, 5 hours, and 39 minutes.—*N. Y. State School Journal*.

VITALITY OF ABSURDITIES.—The best example of the vitality of a fine saying, which has the advantage of being a fallacy, is in the ever hacknied piece of nonsense attributed to Archimedes—viz: "that he could move the earth if he had any place at a distance from it to fix a prop for his lever." This is one of the standard

allusions, one of the necessary stock-in-trade of all orators, poets, and newspaper writers; and persons, whenever they meet with it, take Archimedes for an extraordinary great man, and cry, "O, how wonderful!" Now, if Archimedes had found his place, his prop, his lever, and if he could have moved with the swiftness of a cannon-ball, 480 miles every hour, it would have taken him just 44,963,000,000 years to have raised the earth one inch!—*Sir E. L. Bulwer*.

THE MAGNETIC TELEGRAPH.

Along the smooth and slender wires
The sleepless heralds run,
Fast as the clear and living rays
Go streaming from the sun.
No peals or flashes, heard or seen,
Their wondrous flight betray;
And yet their words are quickly felt
In cities far away.

No summer's heat or winter's hail,
Can check their rapid course;
They meet unmoved the fierce wind's rage,
The rough wave's sweeping force.
In the long night of rain and wrath,
As in the blaze of day,
They rush with News of weal or wo,
To thousands far away.

But faster still than tidings borne
On that electric cord,
Rise the pure thoughts of him who loves,
The Christian's life and Lord,
Of him who taught in smiles and tears
With fervent lips to pray,
Maintains high converse here on earth
With bright worlds far away.

Ay! though no outward wish is breath'd,
Nor outward answer given,
The sighing of that humble breast
Is known and felt in heaven:—
Those long frail wires may bend and break,
Those viewless heralds stray,
But Faith's least word shall reach the throne
Of God, though far away.

REV. DR. GILBORNE.

THE EARTH'S DIURNAL MOTION.—If a line were carried round and round the globe, it would require to be the length of 24,850 miles; hence this is the actual space which any given point on the earth's surface travels over in the course of twenty-four hours, a rate exceeding somewhat 1,000 miles in the hour. This velocity, with which every person moves continually, is greater, by 140 times, than that with which a cannon-ball issues from the mouth of a cannon; and we do not perceive it because the earth, the air, and every thing around, is carried with us.—*Facts for the People*.

ELECTRICITY.—Why is the fireside an unsafe place in a thunder-storm?—Because the carbonaceous matter of soot with which the chimney is lined acts as a conductor for the lightning. Why is the middle of an apartment the safest place during a thunder-storm?—Because, should a flash of lightning strike a building, or enter in at any of the windows, it will take its direction along the walls, without injuring the centre of the room.—*Ibid*.

CRIME AND EDUCATION.—From statistics collected by us during the past year, it appears that at the various assizes and sessions for this county and city, held in the year, 476 prisoners have been placed on the calendar for trial. Of these, there were but two of superior education, while no less than 204 could neither read nor write! Of those who could read and write well, there were but 20, and read well, 5; whilst 121 could read but imperfectly. The remaining three did not appear. Surely these facts bear witness, far more efficiently than any laboured argument, to the necessity of educating—morally and religiously educating—the lower classes, as the only practical remedy for that fearful amount of crime which now stalks through the land—unchecked by the police or other stringencies—punished, but not prevented, by the rigours of the prison house.—*Worcester Herald*.

Trials will be uppermost, one time or other, like cork, though for a time kept down in water.—*Sir W. Temple*.