

much nearer those of the horse, which, in the full development of only a single digit of each member as well as in the suppression of some of the teeth and the remarkable development of others, must be considered one of the most specialized forms of order."

A notice, *in extenso*, of this valuable work may form the occupation and study of some future hour.

A STORM IN INDIA.—The following report from a correspondent, on whom we can rely, of an awful phenomenon, happily unknown in temperate climates, will be read with astonishment.—"At 3 p.m. of the 10th of April, while we were measuring the circumference of large hailstones that fell lightly about us, a terrific storm passed to the south-west of the station, about seven miles off. The accounts brought by natives next morning were so strange that I did not believe them, but, after some gentlemen had visited the spot and confirmed all. I, too, went to see the wreck left by the hurricane. As some days had elapsed since the occurrence, I found it impossible to approach the chaos from the putrefaction of numbers of dead bodies. An eye-witness told me that, while it was blowing pretty stiff from the south-west, a jet black mass of cloud, towering high aloft, and almost touching the ground, was seen to approach; another similar mass advancing rapidly from the opposite direction. They whirled around each other, the heat became intense, and, enveloped in the greatest darkness, houses, bamboos, trees, men, women, and cattle were hurled in the whirlwind, dashed in all directions against trees, impaled on bamboos, or buried in the ruins. On the sides of the track of the storm huge hailstones fell of the size of bricks. The track was about 800 yards broad; its length is not known, nor the extent of the devastation ascertained; 60 dead bodies were counted by gentlemen who went there; 15 persons with limbs torn and mangled, with broken arms and legs, are in hospital. Report says that 300 have been killed, besides no end of cattle. I think it very probable. As the natives build their houses, each family in little separate farms hid in clumps of bamboos with intermediate fields, the scene presented is that of numbers of undistinguishable masses of clumps of bamboos and trees torn up, crossing each other in every direction and blocked up with earth and materials that had formed houses so entirely broken up that nothing could be recognized as having formed roof or sides. In fact, boxes, beds, and things made of planks were so broken into pieces of a foot or two, and thrown about, that it was not always easy to imagine what they had belonged to. From under the masses of rubbish jackalls and vultures were pulling out the remains of human beings and cattle, in small puddles dogs, goats, &c., were drowned and rotting. The fields were covered with the skeletons of human beings, while the short thick branches of trees that stood leafless and barkless supported numbers of vultures. Vultures covered the plain, too gorged to fly at our approach, and hundreds were soaring in circles high overhead in the clear sky, marking in the heavens the course of the storm. One poor famished distracted being, with head bandaged and body scratched all over, bruised and cut, limped up to me, he had lost all his relations—father, mother, wife, and children—all had been destroyed, and he could not find where they had been carried away. It would require hundreds of men to remove the piles of uprooted bamboos, &c., that mark the homesteads of the missing; under them will probably be found those that were killed, while some, probably, had a living grave, hoping alas! in vain—that rescue would come at last, or imagining, possibly, that the whole world had been destroyed. A bungalow of a zemindar, at Duumdama, on the river, Ghoghut, was blown in smithers across the river—300 yards; in the roof two men found a flying passage, and, strange to say, survived."—*Calcutta Englishman*.

SUBMARINE TELEGRAPH WITHOUT WIRES.—The possibility of sending electric telegraph messages across, or through a body of water, without the aid of the submarine wires, has been satisfactorily tested at Portsmouth. The place selected for the experiment was the Mill-dam, at its widest part, and where it is some 500 feet across. Two portions of the apparatus were placed on the opposite sides of the water, and terminating in a plate constructed for the purpose, and several messages were actually conveyed across, or rather through, the entire width of the Mill-dam with accuracy and instantaneous rapidity. There appeared every possibility that this could be done as easily with regard to the British Channel as the Mill-dam at Portsmouth. The inventor is a gentleman of scientific attainments, residing at Edinburgh, and who has been described as the original inventor of the electric telegraph, but, who, from circumstances, was unable to turn the invention to his own advantage.

STABILITY OF IRON SHIPS.—The recent history of the iron screw-steamer *Sarah Sands* affords an excellent illustration of the stability of iron ships, if well and substantially built. Previously to her last sailing from the Mersey she grounded on the Woodside bank, and remained high and dry during one tide, having in her 1000 tons dead weight, until the tide flowed again, during which time she did not sustain the slightest damage. On her return passage from the St. Lawrence to Liverpool she got a-ground on the rocks of Bell Isle, where she remained four days and four nights. On her arrival in Liverpool, it was found that she was perfectly sound not even a rivet having started, nor was there the slightest bulge or unevenness perceptible. On leaving the graving-dock, the other day, she capized, owing to her ballast having been removed, but she sustained no injury. These mishaps prove not only the superior manner in which she was built, but also proves the superiority of iron ships over wooden ones; for it is difficult to suppose that a wooden vessel would have withstood all these casualties without sustaining damage. The *Sarah Sands* was built in Liverpool, by Mr. James Holson, consulting engineer, more than eight years ago.

A NEW SUBSTITUTE FOR THE POTATO.—In the garden of the Horticultural Society at Chiswick are growing two plants of a Chinese yam, which is expected to prove an excellent substitute for the potato. They have been obtained from the Jardin des Plantes at Paris, where they have been made the subjects of experiments that leave no doubt that it will become a plant of real importance in cultivation.

"If," says M. Decaisne, who has paid much attention to matters of this kind, "a new plant has a chance of becoming useful in rural economy, it must fulfil certain conditions, in the absence of which its cultivation cannot be profitable. In the first place, it must have been domesticated in some measure, and must suit the climate; moreover, it must in a few months go through all the stages of development, so as not to interfere with the ordinary and regular course of cropping; and, finally, its produce must have a market value in one form or another. If the plant is intended for the food of man, it is also indispensable that it shall not offend the tastes or the culinary habits of the persons among whom it is introduced. To this may be added that almost all the old perennial plants of the kitchen garden have been abandoned in favour of annuals, wherever the latter could be found with similar properties. Thus, *lathyrus tuberosus*, *sedi*, *v. telephium*, &c., have given way before potatoes, spinach, and the like. Now, the Chinese yam satisfies every one of these conditions. It has been domesticated from time immemorial, it is perfectly hardy in this climate (Paris), its root is bulky, rich in nutritive matter, eatable when raw, easily cooked, either by boiling or roasting, and then having no other taste than that of flour (*fecule*). It is as much a ready-made bread as the potato, and it is better than the *batatas*, or sweet potato. Horticulturists should, therefore, provide themselves with the new arrival, and try experiments with it in the different climates and soils of France. If they bring to their task, which is a great public importance, the requisite amount of perseverance and intelligence, I have a firm belief that the potato yam (*igname batatas*) will, like its predecessor the potato, make many a fortune, and more especially alleviate the distress of the lower classes of the people." Such is M. Decaisne's account of this new food-plant, which is now in actual cultivation at Chiswick; and, judging from the size of the set from which one of the plants had sprung, it is evident that the tubers have all the requisites for profitable cultivation. One has been planted under glass, the other in the open air, and at present both appear to be thriving equally well. The species has been called *dioscorea batatas*, or the potato yam. It is a climbing plant, bearing considerable resemblance to our common black bryony, and, when it is considered how nearly that plant is related to the yams, the probability of our new comer becoming naturalized among us receives support. Whether, however, it realizes all that the French say of it or not, the trial of it in this country cannot prove otherwise than interesting and worthy of the society which has had the honor of introducing it. Let us hope, however, that it may indeed prove what it is professed to be—"a good substitute for the potato," and in all respects equal to that valuable esculent.—*Evening Mail*.

ARTESIAN WELL.—The deepest Artesian well in the world is at St. Louis, where, to furnish water to a sugar refiners, a shaft has been sunk to the depth of 2200 ft., through the rock foundations on which the city rests.