

SCIENTIFIC INTELLIGENCE.

NEW DIVING BELL.—Experiments were made last week with a new Diving Bell, the invention of a Mr. Richards, a Boston mechanic. At a depth of ninety feet, newspapers could be easily read within the bell.—*Boston Transcript*.

THE VESTIGES OF CREATION.—In the geological section of the British Association, a paper by Professor E. Forbes, being a "Notice of Discoveries among British Cystidæ," excited much interest, which was increased by the application by Dr. Buckland of those discoveries to disprove the statements of the author of the "Vestiges of Creation." The sea urchins, by which name this class of animals is better understood, possess a very highly organised structure, though they are found amongst the lowest order in the series of fossils, which fact proves that the order of creation was not uniformly from simple to more complex organisations. The shark, also, Dr. Buckland observes, is more highly organised than any other fish, yet its fossil remains are found lower in the order than those of most other fishes.

Professor Lamont of Munich has rendered the electric telegraph subservient to meteorological purposes. By having the state of the barometer, thermometer, and wind, telegraphed from every part of Bavaria, he is often enabled to foretell storms and other atmospheric changes more than twenty-four hours before they occur.

Mr. Reid, of Birmingham, has applied the electric telegraph to domestic purposes, so that it can be used in hotels, taverns, public offices, and even in mines.

PROGRESS OF RAILWAYS IN GREAT BRITAIN.—The length of English, Scotch, and Welsh railways open in June 1843 were 1990 miles; at the commencement of the present year they had extended to 3597 miles; more than 5000 additional miles are in progress; and it is calculated, that in the course of five years there will be upwards of 10,000 miles of railway open.

A bed of lithographic limestone, fifteen or twenty miles broad, and of great length, has been discovered in the Deccan, East Indies. "With but one variety of character," says the *Bombay Times*, "and that peculiarly suited for printing purposes, provided plentifully everywhere with admirable penmen, ready to give their services for the most

moderate remuneration, and artificers perfectly competent to manufacture or make use of the printing press, the natives might, by means of this stone, speedily provide for themselves books at a price which, considering the smallness of their impressions, would make our cheap English editions appear extravagant."

By the application of steam power to the drainage of marshes and fen lands, 125,000 acres have been reclaimed, chiefly in Cambridgeshire and Lincolnshire, and abundant crops of grain are now produced in districts which, a few years ago, were almost entirely under water.

Messrs. Payne, of London, have obtained a patent for an invention by which wood may be rendered incombustible. Very successful experiments were exhibited, a short time since, in the presence of several Lords of the Admiralty, the Speaker of the House of Commons, and other gentlemen. Three small cottages which had been constructed for the occasion, two of them of prepared wood, and one of unprepared, were set on fire. While the last-mentioned was speedily consumed, the two cottages built with prepared wood, though exposed to a terrific heat, and partially charred, were never absolutely on fire, and resisted the utmost efforts of the flames. The wood is prepared with sulphate of iron, and with alum decomposed by muriate of lime.

THE AMERICAN LAKES.—Prof. Drake, of Cincinnati, has been making some observations upon these inland seas, and gives the result of them to the public. The chain of lakes extends over nearly eight and a half degrees of longitude in length, the extent of their surface is estimated at 93,000 square miles; and the area of country drained by them is computed at 400,000 square miles. Their relative sizes are as follows:—"Ontario, 5300 square miles; Erie, 9600; St. Clair, 360; Huron, 30,400; Superior, 22,000. The average depth of water in the different lakes is a question upon which there is no certain information. Authorities differ. Dr. Drake gives it as follows:—St. Clair, 20 feet; Erie, 94; Ontario, 500; Superior, 900; Huron and Michigan, 1000. In standard works, Lake Erie is usually stated to have a depth of 120 feet. The deepest soundings have been made in Lake Huron. Off Saginaw Bay, 1800 feet of line have been sent down without finding the bottom."