

Science Siftings

By 'VOLT.'

Pressure of the Sea.

Deep-sea animals, says Dr. A. E. Shipley, F.R.S., in the *Edinburgh Review*, live at a tremendous pressure. Every five fathoms we descend in the sea the pressure increases by one atmosphere, and at a depth of 3000 fathoms the pressure on each square inch of the body of an animal amounts to three tons, whereas at the surface of the waters it is about 15 pounds. So great is this pressure that unless special precautions are taken the glass of the thermometers which measure the bottom temperatures is crushed to powder.

The Dead Sea.

Many persons imagine that the Dead Sea is nothing but sea water of extreme saltiness, but that is a mistake. The name was given to the great salt lake by a writer named Jerome because nothing could live in its waters. Owing to the density of the water, fish cannot sink in it, and they could not live if they did, as some of the salts are powerful antiseptics, which means that they are fatal to any form of life. There is about three per cent. of chloride of lime in the Dead Sea. About half the salt in the Dead Sea is chloride of magnesium, whereas nearly all the salt in the ocean is just common table salt.

A Heavy Load.

The *Engineering News* has this to say of a truck load recently hauled by a motor truck over the streets of New York, probably the heaviest ever hauled in city streets: The hauling was done by a La France hydraulic transmission motor truck, and the load to be hauled consisted of a door frame for the safety deposit vaults to be installed in the basement of the new Clearing House building. The total load to be moved was 45 tons, the weight of a modern locomotive. The load per wheel on the truck carrying the door frame was 17,250 pounds. The Street Department refused to permit the load to be hauled through Wall street on account of possible injury to pavement. It therefore proceeded to its destination by way of Front street to South Ferry and then up Whitehall street and Broadway. The truck was hauled up a $4\frac{1}{2}$ per cent. grade without difficulty, and to demonstrate its starting power was stopped on this grade and started again.

Important Inventions.

One of the most important American inventions to be granted a patent was the Colt revolver. The next great American invention to receive a patent was the Morse telegraph instrument. The patent was issued June 20, 1840. The patent issued to Charles Goodyear, June 15, 1844, acknowledged his invention of the process of vulcanisation of India rubber. The basic patent of the pneumatic air brake was issued to George W. Westinghouse, April 13, 1869. In granting to Elias Howe his patent the patent office accorded to him the distinction of inventing the sewing machine. The patent is dated September 10, 1846. The 'four motion feed,' invented by A. B. Wilson and patented by him December 19, 1854, brought the sewing machine into universal use. Elias Howe made more than £800,000 out of this single idea. The next inventor to demand world-wide attention through the medium of the United States patent office was Alexander Graham Bell with his telephone. There are scores of patents covering the various parts of the telephonic instruments in the name of Bell, but the basic patents are but two—one was issued March 7, 1876, and the other June 30, 1877. Quickly following upon the heels of Prof. Bell came Thomas Alva Edison. Edison's patent to the phonograph was issued February 19, 1878. Two years later, on January 28, 1880, he patented the incandescent light.

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Intercolonial

The Rev. Father Cleary, S.J., who has been stationed at Norwood for some years, has been transferred to Seven Hills (says the *Adelaide Southern Cross*). Rev. Father Gwynne, S.J., who has been at Seven Hills for the past couple of years, fills his place at Norwood for the present.

In connection with the jubilee of the foundation of the town of Sale, numerous celebrations, both official and religious, were held. In St. Mary's Cathedral on Sunday, August 10, a *Missa Cantata* was sung, and at its conclusion an eloquent discourse was delivered by the Right Rev. Dr. Phelan, Bishop of Sale.

Among the passengers who left Adelaide by the Orama was Mr. John Fitzherbert, B.A., Double First-class Honorsman of Sydney University. Mr. Fitzherbert, in addition to the travelling scholarship awarded him, has the distinction of being the first Australian to secure a Trinity College (Cambridge) Scholarship. Before leaving Sydney a dinner party was given in Mr. Fitzherbert's honor at St. Ignatius' College, River-view, of which he is an ex-student.

The following letter has been received by Dr. N. M. O'Donnell, Melbourne, from the Irish Parliamentary leader:—'My dear Doctor O'Connell,—I have to-day (July 9) received your cable, conveying congratulations from Victoria on the second passage of the Home Rule Bill, and the information that you are mailing £400 for the Home Rule fund. I am handing your cablegram to the press for publication, and I am sure it will be read with delight by our people at home and abroad. You will be pleased to learn that the position of the Home Rule cause is now as hopeful as it possibly can be, and that, so far as one can foresee, the Home Rule Bill will become the law of the land in May of next year.'

There was a large gathering at the opening and blessing of the extension of St. Fiacre's Church and the new presbytery at Leichhardt on Sunday afternoon, August 10. The Archbishop of Sydney officiated, and he was accompanied by the Rev. Father Michael Sherin. On arrival they were met by the Rev. Father Jas. O'Reilly, who has charge of the parish of Leichhardt. In his financial statement at the ceremony Father O'Reilly said that the contract price for the additions to the church was £1998, and the seating cost £178. The presbytery cost £1545, making the total expenditure £3721. Since September last they had raised by a bazaar, by the collection at the laying of the foundation stones, by entertainments and house to house collections, the sum of £1400. That left them with a debt on their undertaking of £2321. Before they undertook the buildings they had an overdraft of £1867 at the Australian Bank of Commerce, making their present debt £4198.

The foundation stone for the enlarged building of the Church of the Holy Angels, Balaclava, was laid by the Archbishop of Melbourne a few Sundays ago. His Grace congratulated the parishioners on the fact that they were going to erect a hall for literary and social purposes, and in the near future a school, at which the youngest children would be able to receive secular and religious instruction. Religious instruction in the school—that was, the definite and dogmatic teaching of religion—the Archbishop maintained, must always be the foundation of the national as well as of individual welfare. How impressed Catholics were with the truth of this might be judged from the fact that wherever a Catholic school was opened (even though it might be in a locality where apparently there would be but comparatively few Catholic children to attend it) that school in a brief time would become well filled, in many instances over-crowded even. If anything were required to prove the depth and sincerity of the belief of Catholics in the absolute necessity of providing religious instruction during the school years of their children, it would only be necessary to point to the vast sums they had expended towards this object. A sum of nearly £600 was subscribed towards liquidating the debt that will be incurred in enlarging the building.

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