

Science Siftings

BY 'VOLT'

A Pitch Lake.

It has been estimated that the Great Black Pitch Lake of Trinidad yields annually 80,000 to 90,000 tons of asphaltum.

Dimensions of Ocean Waves.

Dr. Vaughan Cornish recently communicated to the Royal Geographical Society his estimates of the dimensions of ocean waves. With a heavy gale blowing these reach a height of 42 feet in any position not less than 600 nautical miles from the windward shore. In his report he exonerates of any exaggeration sea captains who have reported waves of from 80 to 100 feet in height, by stating that they reported the altitude of large waves of broken water flying aft from the impact of the steamer's bow on a head sea.

Rubber from the Banana Plant.

The constantly increasing demand for rubber and the exorbitant prices now placed on this product have led to extensive experiments in regard to the extraction of rubber from the juice of the banana plant. Thus far it has been established that there is a yield of a thick and pliable rubber, which, when compounded with other rubber, has a distinct value in that it increases both the weight and the elasticity of the rubber with which it is compounded.

Petroleum and Plant Growth.

A recent study of the action of petroleum on plant growth has disclosed some very interesting results. The experiments were made with a 10 per cent. solution of the oil in plants of stramonium and plantain. No injurious effects were noticed except in cases where the petroleum was allowed to accumulate thickly about the roots, thus making it possible for the roots to absorb the oil and so drying up the soil as to prevent absorption of moisture. Nor was any direct poisonous action of petroleum detected like that which it exerts on animal organisms.

Purifying Rock Salt.

Evaporation has heretofore been the commercial method of extracting pure salt from rock salt. This cleansing required one ton of coal per ton and a-half yield of salt. A more economical process is now used, which makes it possible to manufacture fifteen tons of salt with one ton of fuel. The mine salt is placed in a furnace, where it is readily converted into a molten mass. Thence it is run into a container, through which a current of compressed air is forced. All impurities are thus blown off or precipitated. The molten salt is then moulded off and allowed to solidify.

A Remarkable Effect.

Perhaps the most striking instance to be seen in the whole world of the wonderful apparent coloring of bodies of water is the marvellously beautiful 'Blue Lake' in Switzerland. Encompassed on all sides by lofty mountains, their lower ranges luxuriantly clothed with verdure down to the edge of the water and adorned with many fine forest trees, while their higher acclivities are garbed in a mantle of eternal snow, the little lake, nestling in its deep hollow basin, and protected from winds and storms, is quite startling in its singular and strange beauty. The water, although really pure and colorless, appears to be of a most vivid and intense sky-blue. And its transparency is so remarkable that a small nickel coin dropped into the water in the centre of the lake can be seen gyrating downwards until it reaches the bottom, apparently more than a hundred feet beneath.

The Detonation of Large Guns.

A recent Italian invention offers a unique and at the same time effectual protection to gunners against possible injury to the sense of hearing consequent on the detonation of large guns. The muffler consists of a solid mass of glass of such dimensions as to fit snugly the external meatus, into which it is inserted. A perforation traverses it horizontally, the inner end of which fairly reaches the tympanum. The outer end of this passage does not quite extend to the external surface of the glass, but joins with a second bore running in the vertical and communicating above and below with the atmosphere. With every violent concussion an aspiration is caused in the horizontal passage, with a subsequent rarefaction of the small body of air cushioned between the ear-drum and the glass protector. This attenuation of the air greatly reduces the aerial vibration. The sensitiveness of the ear for lesser sounds is not diminished, as the atmospheric compressions produced are not effectual in causing rarefaction. This invention is a neat application of the well known principle of Sprengel's aspirator.

After nearly thirty years on the Maitland mission, the Rev. T. Rogers, the respected pastor of Branxton, entered upon a much needed holiday last year, which was expected to extend over the present year. The rigors of the past winter, however, drove him from Ireland in time to avert a serious attack of pneumonia. Father Rogers has just returned to Branxton.

Intercolonial

Amongst the inter-State Hibernians present at the annual Communion breakfast of the Sydney branches, held recently at St. Mary's Hall, was Bro. J. R. Snowball, a convert to the Catholic Church, and a cousin of the Victorian champion of Orangeism.

Judge Cussen, of Melbourne, who, with his wife, is now in Europe, lost by death the other day Herbert Walter, his fourth son. He was a student at Xavier College, Kew, and dux of his class. When his parents left a few weeks ago the boy was in good health. Judge Cussen is returning from England immediately.

St. Patrick's Day is every year becoming a greater success in Australia. The returns in Sydney, Melbourne, and Ballarat were handsome, and now the little town of Sale, in Victoria, publishes a balance sheet that shows a profit of £216, which goes to the Primary Schools' Maintenance Account.

Mother Mary Francis Joseph, of the Convent of Mercy, Warrnambool, Victoria, died suddenly from apoplexy a few days ago. She was a native of Portarlington, Ireland, and was 51 years of age. She was the eldest daughter of the late Mr. John Dunne, who was the agent for Lord Portarlington. When only 20 years old she left Ireland, and joined the Sisters of Mercy at Warrnambool in 1881.

His Grace the Coadjutor-Archbishop has recovered from his recent illness sufficiently to return to St. Benedict's Presbytery from St. Vincent's Hospital (says the *Catholic Press*). The condition of the Right Rev. Monsignor O'Haran, who is still at St. Vincent's Private Hospital, continues to improve. It is expected that he will be able to leave his bed in the course of a few days.

His Grace the Archbishop of Melbourne has made the following clerical changes in the archdiocese:—The Rev. J. J. Egan is transferred from Williamstown to Coburg; the Rev. D. Goldspink, from Iona to Williamstown; the Rev. F. Conlon, from Coburg to Iona; the Rev. J. M'Keon, from North Fitzroy to Mentone; the Rev. P. Cremin, from Carlton to Oakleigh; the Rev. Gavan Duffy to Carlton; the Rev. T. Walsh, from Dandenong to Castlemaine; and the Rev. C. Conlon, from Castlemaine to Dandenong.

The Rev. Father Terence Brown, who has been working in Victoria, has been appointed Rector of the Redemptorist Monastery, Waratah, in succession to the Very Rev. Father P. M. Lynch, C.S.S.R., who, with Fathers Mitchell and Gilmartin, sailed from Sydney during Easter week for the Philippine Islands to take charge of the Order's missions there. Father Brown (says the *Catholic Press*) has just concluded a series of missions in the Ballarat diocese. Until he was appointed Bishop of Perth, Dr. Clune was Rector of the Redemptorist House in the Westralian capital. Now Rev. Father Henry I. O'Donnell, C.S.S.R., of Waratah, has been appointed successor to Bishop Clune.

Missionary work, as conducted by the Marist Fathers, is progressing satisfactorily in the Solomon Islands (says the *Freeman's Journal*). Very Rev. Father Forestier, S.M., the Prefect-Apostolic of the mission in the northern portion of the group, who came to Sydney by the Moresby, speaks hopefully of the mission prospects. Ten years ago the Marist Fathers commenced to labor in the mission field of the Solomons, and now there are five mission stations, besides ten schools—five for the boys and five for the girls. The male schools are taught chiefly by the natives who have been converted to Christianity, and the girls' schools are in charge of a Sisterhood. The natives who wish to embrace Christianity undergo a course of training for three years, and at the end of that period they are baptised into the Catholic faith. There are some 400 converts already admitted to Church membership, while about 500 more are under training.

His Eminence Cardinal Moran on Sunday, May 14, blessed and laid the foundation of additions to Lewisham Hospital, which is in charge of the Nursing Sisters of the Little Company of Mary. The additions will cost about £13,000, and the amount received at the ceremony, together with contributions from other sources, totalled about £2600. It is a remarkable thing (say the *Catholic Press*) that while the managements of some of the great hospitals which are heavily subsidised by the State are crying out that they find it difficult to carry on, the Catholic hospitals, which, on the other hand, receive not a farthing by way of aid from the public funds, are not only doing the same work as they have been for years past, but are considerably expanding it. It is only a few months since considerable improvements were effected at St. Vincent's at a cost of £6000, and now the Nursing Sisters of the Little Company of Mary, who have charge of the far-famed Lewisham Hospital, are having a new wing added to that institution at an estimated expenditure of £13,000. The wards at Lewisham, which has a reputation for excellence that even extends beyond the limits of Australasia, contain never a vacant bed; as soon as one patient goes, another is ready to take his or her place, so appreciative has the medical profession become of the abilities of the nuns who minister there. Like the rest of our Catholic institutions, it is open to every class, creed, and color, and it is a fact that more than half the patients treated belong to non-Catholic denominations.