

Science Siftings

BY 'VOLT'

Lifting Magnets.

The advantages of lifting magnets for handling all kinds of loose material—piles of turnings and other scrap, castings of awkward shape, rails, etc., requiring to be compactly bound in order to be handled by a crane, have won rapidly increasing recognition of late. At the plant of the United States Steel Corporation at Gary, Indiana, lifting magnets are in use capable of lifting the entire top layer of a pile of sixty-foot rails, with an aggregate weight of fifteen tons.

An Interesting Experiment.

Messrs. Barclay, Currie, and Co., the Clyde shipbuilders, are constructing for a Continental line a vessel which will revolutionise shipping. It is to be a 12-knot boat of 5000 tons gross, driven by internal combustion engines of the Diesel type, hitherto only applied to trawlers and yachts. One hundred tons of crude petroleum at 34s to 40s a ton will do the work of 300 tons of coal. It will require only half the usual engine and boiler space, one-fourth the bunker space, and will dispense with from 50 to 75 of the stokers. The vessel will have no funnels. The ship will be an exceedingly interesting experiment in construction. If it is found possible to drive great vessels with petroleum safely and swiftly, the coal-owners will suffer, and Mr. Rockefeller's millions will increase faster than ever.

An Electrical Test.

Science has found a method of detection of the bogus paralytic. For example, long after a broken arm is healed, the patient may assert that he is unable to use the arm properly. It is then the duty of the physician to find whether a real paralysis exists, and where. Electrical energy may be compared to psychical energy, the battery to the brain, the wire to the nerve, and the electric bell, for example, to the member moved. A muscle contracts when a current is applied to the corresponding nerve. If the muscle on the affected side of the body reacts as strongly as the corresponding muscle on the opposite side, the partial paralysis is simulated. If the muscle on the wounded side reacts less strongly than its fellow, there is a real disease of the nerve. Finally, if the muscle on the wounded side reacts more strongly than its fellow, the seat of the paralysis is the central nervous system, the brain or the spinal cord.

In Arctic Waters.

Through investigations carried on from vessels visiting Arctic waters it has been proved that the polar water, which is protected by a thick layer of ice from the influence of light, accumulates matters which have a fertilizing effect upon the vegetable life in the open sea and which in the cold dark polar waters are not used. The polar basin is like a large tract of fallow land in which fertilizing matters accumulate without being used. The warm water of the Gulf Stream, on the contrary, when reaching the northern part of the Atlantic might be called desert water, as its vegetable life has been so exhausted that it contains only scanty means of subsistence for any animal life. The more the polar water mixes with the warm water of the Gulf Stream, the more luxuriant seems to be the growth of the higher marine life. It is the cause of colder summers in Northern Europe, but the fisheries seem to be better in proportion. The result of these investigations indicates a possibility of foretelling good or poor fishing seasons, and the explanation of many interesting and unusual things that are dependent upon the temperature of the northern section of the Gulf Stream.

Ancient Roman Pottery.

A German scientist claims to have discovered the secret of the method employed in the manufacture of the ancient Roman pottery. This, it is declared, lies not in the chemical composition of the paste, but in the treatment applied to it and to the colored glaze. The clay was prepared by ageing, followed by washing, kneading, and stamping. Before firing, the ware was exposed to the sun and air, but sheltered from rain until it appeared quite dry. The frequent changes of temperature and humidity and the alternation of sunlight and darkness which occurred during this slow process of drying insured uniform shrinkage in firing, and durability of the finished ware. When a glaze was used it was applied to the moist ware immediately after the latter was shaped, so that the glaze became intimately united with the body of the ware during the slow drying process. Firing then produced a brilliant gloss and imperishable colors. It is odd that the secrets of the ancient potters should in many cases far outclass the modern. The Zungu Indians of America can make a pottery that no modern kiln can imitate. Doubtless it is through some such secret as that learned by the German savant.

For Chronic Chest Complaints,
Woods' Great Peppermint Cure, 1s 6d, 2s 6d.

Intercolonial

The Very Rev. Father Patrick Verling, of Subiaco, W.A., who was Administrator of the diocese of Perth in the interim between Bishop Gibney's retirement and the succession of Bishop Clune, has been appointed Vicar-General of the diocese.

On the Feast of St. Joseph, March 19, a ceremony of reception took place at St. Joseph's Convent, North Sydney. His Grace Archbishop Kelly officiated. Among the young ladies received were Miss Elizabeth Stack (in religion Sister M. Chrysostom), New Zealand; Miss Margaret Brosnahan (Sister M. Rita), New Zealand.

The Very Rev. Father Field, consultant to the Father-General of the Missionaries of the Sacred Heart, is at present in Sydney. Father Field is an Irishman, but his headquarters are in Rome, where he is associated with the Very Rev. Father Meyer, General of the Order, who himself visited Sydney a few years ago.

By the R.M.S. Otway on March 29 Mr. Tighe Ryan, editor of the Sydney *Catholic Press*, sailed on a six-months' holiday in Europe. He was seen off by a large number of priests and laymen. During Mr. Ryan's absence Mr. H. A. Conant will be acting-editor of the paper. On the previous Monday at the Catholic Club Mr. Ryan, who has filled the editorial chair for fourteen years, was given a send-off by a number of his friends, who presented him with an illuminated address and a purse containing two hundred sovereigns.

Immediately after Mass on Sunday, March 27, the congregation of St. Augustine's Church, Yass, met in the new school-hall for the purpose of making Father Leonard a presentation of a purse of sovereigns prior to his departure to his native land on an extended holiday. Mr. Cusack, M.L.A., occupied the chair and made the presentation, while Mr. Sheehy read the address on behalf of the parishioners of St. Augustine's.

After attending Mass at St. Mary's Cathedral, Sydney, the delegates to the 31st annual meeting of the New South Wales District of the H.A.C.B. Society gathered in the Chapter Hall, where the conference was inaugurated. District President W. M. Fox was in the chair, and his Grace Archbishop Kelly opened the proceedings with prayer. The District President in his address said that the society had at no previous period shown such progress in a spiritual and material way as during the past twelve months. When the present executive took office a year ago its members set before themselves two goals—one to reach the 10,000 mark in membership, and the other to raise £1000 for St. Mary's Cathedral. That day he was happy to be able to tell them both tasks had been completed. He opened a new branch at Merriwa on Sunday last, 73 members joined, and there was a prospect of a ladies' branch being established in that centre during the next few days. The spirit of Hibernianism was very strong in the northern districts and the indications were that it would become still stronger. Archbishop Kelly in the course of his address said the delegates assembled represented more than 100 male and over 30 female branches. They had to make a great stride during the past year to reach a membership of 10,000, and, though there were some secessions, the net aggregate gain for the period reviewed in the report was over 1400. They were to be congratulated. The society was as a tree planted by the running waters, flourishing and bearing good fruit in season.

At Adelaide last week his Eminence Cardinal Moran passed some interesting observations upon international affairs. Referring to the Anglo-American Arbitration treaty, his Eminence remarked: 'I have always advocated that it would be splendid to have a strong arbitration tribunal, which would have all the power of England and America behind it, and with Germany at their back to enforce the claims of peace, this would be a grand development of our Christian civilisation and its crowning work. I am confident that all the Powers would agree that the time has come to put an end to war. England, Germany, and the United States have nothing further to gain by warfare. It is often said that Germany's fleet is being built up against England. I do not believe that. There may be war in the Mediterranean should the Emperor of Austria die; there would be trouble with regard to Italy's position. The desire of Italy is to proclaim a Socialist Republic. If there were a revolution in Italy, of course Germany would step in; but I don't think there is any desire to attack England. Germany would have nothing to gain from war with Great Britain. When statesmen have a certain end in view, they often distract attention by making people think they are aiming at something else. The present year is a very ominous one for Italy. All the revolutionaries of Europe are focussing their attention there, owing to the celebrations in connection with the fiftieth anniversary of the Unity of Italy. Now, with a Socialist Ministry, the outlook is gloomy, indeed. Remembering the unrest existing in other countries, I think we have reason to rejoice that Australia always enjoys peace and perfect freedom and is bent on maintaining the laws of equity and justice for all.'

For Children's Hacking Cough at night,
Woods' Great Peppermint Cure, 1s 6d, 2s 6d.