

Science Siftings

By 'VOLT.'

Luminous Insecticide.

It is a well-known fact that insect vermin are attracted by light. A Canadian inventor has patented an insecticide in which that principle is practically applied. He has invented a luminous sticky compound or paint which does the work of the ordinary sticky flypaper in daytime, absorbs the rays of light at the same time, and becomes luminous at night to finish its work of extermination.

Petrol and Aeroplanes.

One of the great evils of the present high price of petrol, an airman explains, is the enormous cost of flying. It is estimated that the fuel and oil costs of an aeroplane of high power run into about £1 per hour of flight, and when it is realised that whereas two years ago England officially owned one aeroplane, it had fifteen last year and now has from 120 to 150; and that with this increase have also come improvements which will give about 250 hours' flying for each machine annually, the significance of high fuel costs will begin to be appreciated. It will be measured by a fuel and oil bill of about £30,000 a year at retail prices.

Gasoline Locomotive.

At the Schneider mines in France there are being made trials of a new light locomotive with a 70 horse-power internal combustion engine. A novel feature is the use of naphthaline as fuel, employing a special carburetter. It is claimed that the present locomotive is the best solution of the problem of a small locomotive for use with trains on a narrow-gauge railroad. The trials made near Havre showed excellent results as to general working as well as fuel consumption. Advantages over steam locomotives are rapid starting, no boiler upkeep, suppression of water supply along the road, ease of driving, and absence of danger, reduction of dead weight to the least amount, small bulk of fuel on board, and absence of smoke and cinders.

The Electric Furnace.

The electric furnace, through the generation of a heat so intense as to simulate some of the primal forces of nature, has produced for the first time many absolutely or commercially new products. It can make artificial diamonds and other gems; it is the only means for commercially producing carborundum (the hardest of all manufactured substances), calcium carbide (the source of a valuable illuminant and a nitrogenous fertiliser), and artificial graphite, which is finding extended use in the arts; and it has converted aluminium from a merely precious to a very useful metal, and reduced its price from more than £2 a pound to less than two shillings. It is responsible for all methods of fixing nitrogen, which, in view of the approaching exhaustion of the natural supply of Chili nitrate, obviates a possible nitrogen famine, and alone makes this agency of inestimable service to mankind. The electric furnace is radically transforming the steel industry. It produces steel of crucible quality with almost open hearth economy, and for the first time since 1740 the expensive and intricate crucible process finds a competitor. In providing rails and heavy-service steel of crucible characteristics in texture and toughness at slight increase of cost over the comparatively impure and unreliable older products a revolution of astounding proportions is going on before our very eyes.

ELECTRIC MESSAGE

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Intercolonial

Dr. J. P. Ryan, of Melbourne, has received official intimation that the National University of Ireland is about to confer upon him the degree, *honoris causa*, of doctor of medicine.

The Rev. Mother-General of the Sacred Heart Nuns, who has been visiting the branches of the Order in the Australian States, was to leave for Japan on Saturday by the German steamer Coblenz.

Several branches of the Australian Catholic Federation, situate in remote country districts, have arranged for religious instruction to be given to the Catholic children on Sundays. Such assistance has been gladly welcomed by the clergy, and it is hoped that other branches will be able to co-operate in the same direction, especially in districts where there are no Catholic schools.

Any day (remarks the *Catholic Press*) we may hear of a new Bishop being appointed in Australia. His Lordship the Right Rev. Dr. Murray, O.S.A., who will be 68 years of age next birthday, and who has ruled the Vicariate Apostolic of Cooktown since 1898, sent his resignation to Cardinal Gotti, the Prefect of Propaganda some time ago, but the resignation was not accepted, and Rome advised his Lordship that a Coadjutor, who would have the right of succession, would be given him. Already the Provincial Council of the Augustinians in Ireland has voted and sent a terna to Rome, and Bishop Murray and his people are every day expecting a cablegram from the Eternal City or Dublin announcing the name of the Coadjutor.

Catholic schools (says the *Southern Cross*) have been highly successful in the University examinations in Victoria and Queensland. As in this State and in Western Australia the Christian Brothers' schools have been particularly successful. In the Melbourne University Senior and Junior examinations St. Patrick's College, Ballarat, as in former years, holds the pride of place. This college has annexed 17 Senior Public passes, 5 Matriculation passes, and 25 Junior passes. In the senior division 12 honor passes have been gained, and in the junior division 82 distinctions. Such a record places St. Patrick's College easily first among the educational institutions of the State, if not in the entire Commonwealth.

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