

Science Siftings

BY 'VOLT'

A Lofty Chimney.

The loftiest chimney in the world was recently put into service at the large smelting works at Great Falls, Mont., where it will serve to carry off the gases from the greater part of the large plant. The chimney, which is built of brick, is 506ft in height above the ground. It is 50ft in diameter at the top and increases gradually in diameter to the base.

A Big Undertaking.

The gigantic work of piercing the Andes with a railway tunnel between Argentina and Chili has been completed by British workmen. The tunnel is 3250 yards long, and is about 11,000ft above the sea. Some 1500 men have been engaged at the work for four years, laboring continuously in eight-hour shifts, without stoppages for Sundays or holidays. The tunnel runs below the Pass of Cumbre, beginning at Las Cuevas, in Argentina, and ending at Caracoles, in Chili. The railway will at once be constructed, and it will probably be possible for a train to pass through the tunnel next March.

The Flight of Birds.

The ordinary movements of the wings of a bird in flight are best understood by watching the movement of a turtle's front paddles when it is swimming in a glass-walled tank; but they are, of course, now sufficiently revealed by the series of instantaneous photographs which have been abundantly produced. Some birds—the humming birds—have habitually an action of the wings which differs from that of ordinary birds, or agrees only with that movement of the wings adopted by other small birds when 'hovering' or 'fluttering' without horizontal progress through the air. The strokes of the wing are in the case of greatly increased rapidity, and the 'flight' resembles that of most insects. Most insects—flies, bees, and beetles—fly with an immensely rapid stroke of the wings, which are relatively of small area. Their action is equivalent to that of a pair of rapidly revolving screw propellers, and the horizontal gliding movement and support by the large expanded and motionless surface seen in ordinary birds has no existence in the insect's flight.

Japan's Coal Mines.

There are not less than 1,200,000,000 tons of coal deposits in Japan. This coal is now being mined at the rate of 14,000,000 tons a year. The coal seams usually vary from 3ft to 8ft thick, and are mostly so conveniently situated that they can be worked by incline, there being very few shafts in operation yet. Some shafts are, however, being sunk to a depth of 1000ft, and two 900ft shafts have just recently started working. In the north, in the island of Hokkaido, a coal field containing thirteen seams, of which the thinnest is 3ft thick, has been discovered; in another part of the same island twenty seams have been found, five at least being workable; while in still another district there are three excellent seams, of which one is 25ft thick and of great extent. In the south, in the island of Kyushin, the coal measures are at least 30 miles long by from 8 to 16 miles wide, and are estimated to contain 600,000,000 tons, or about half the entire quantity in sight in Japan. The Japanese coal mines now employ nearly 60,000 hands, the annual per capita output being about 240 tons. The largest mine in Japan—the Manda—has a shaft 41ft by 12ft, 896ft deep, and a daily output of 1100 tons.

A Three Months' Night.

A writer in the *London Magazine* describes a visit he paid last year to the Esquimaux of Baffin's Bay:—The winter 'igloos,' or snow houses, are much more pretentious erections than the summer 'tupeks,' or tents of skins, and are made to resist the extreme cold of the Arctic winter, and to serve as a comfortable hibernating place for the months during which the sun never rises above the horizon. The foundation is usually made of stones, upon which cleverly shaped blocks of snow are built up to form a dome-shaped hut. After these have frozen together the interior is lined with skins. A long tunnel is then constructed to serve as a porch, this being built very low and narrow, necessitating an entrance being made on hands and knees, closing the first skin door before opening the second, so as to admit as little of the icy atmosphere as possible. Heat is supplied by an 'ikomar,' or oil stove, made from a kind of soapstone in the shape of an oval saucer. It is filled with seal or walrus oil, never sweet-smelling, and usually very rank. In this floats the wick, which is made of moss. This stove not only serves for heating, but also for cooking purposes, though I believe the greater part of their food is eaten raw, or, at any rate, not more than warmed through.

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Intercolonial

The Right Rev. Dr. Duhig, Bishop of Rockhampton, brings with him from Ireland a small band of postulants for admission to the Orders of the Sisters of Mercy.

The other day Archbishop O'Reilly blessed and opened the new Catholic school presented to the parish of Goodwood by Monsignor Byrne, the pastor. The cost of the building was £697, and all the parishioners had to pay for was the furnishing, which came to £48 odd.

The results achieved by the Christian Brothers, St. Kilda, at the recent University examinations (says the *Tribune*) constitute a record for that college. Of the candidates presented, 93.3 were successful, securing 18 distinction and an average of nearly 7 subjects per candidate.

The Rev. M. J. O'Flynn, a young and devoted priest of the diocese of Port Augusta, S.A., collapsed after celebrating Mass on the Sunday following Christmas Day, and died the next day, at the age of 33 years. His constitution was never of a robust nature. He suffered from heart disease, and was permitted on that account, at the end of 1906, to return to Ireland for a year for the benefit of his health. He had been serving in the Port Augusta district, then at Pekina, and later at Port Pirie, before being sent to Carrieton.

Archpriest Sheehy, O.S.B., who has just had a severe illness, was visited recently at his home at Bondi Junction by the Cardinal, who found the Archpriest very cheerful, and on a fair way to the recovery of his health and strength. There is not a better known priest in Australia (says the *Catholic Press*) than the Archpriest, who retired from active work in 1906, after 54 years of strenuous labor on the Australian mission. He is a native of Cork, has been 71 years in Australia, and was ordained priest in old St. Mary's 57 years ago.

At the funeral obsequies of the late Hon. C. O'Reilly, M.L.C., K.S.G., at Launceston, Monsignor Beechinor, in the course of an eloquent panegyric, described the deceased, whom he had known for 40 years, as gentle, humble, and retiring in social life, honest and trustworthy in politics, courteous to everyone, and a practical Catholic. It was most edifying to see him, when a Minister of the Crown, accompanying the Governor, the late Sir F. A. Weld, through the bush of Tasmania on a Sunday morning to the humble little bush church, and both kneeling down in their turn by the humble bush priest in the tribunal of mercy, and later on at the altar rails receiving the Bread of Angels. Christopher O'Reilly was not merely following the lead of the Governor. It was his practice before that Governor came to Tasmania, and after he left it, and to the end. 'May,' the Monsignor continued, 'such bright example be contagious among the boys and men of Tasmania.'

The magnificent peal of bells for St. Carthage's Cathedral, procured by the late Bishop Doyle during his visit to Ireland, has reached Lismore. The bells were accompanied by all the necessary timber for the erection of the huge frame, 47ft in height, on which they will be hung. A solid foundation of concrete 16ft square will be laid down, and a tower will be erected (says the *Catholic Press*). The bells, 12 in number, cost £1200 landed, the freight running into £81, and were manufactured by Matthew O'Byrne, of the Fountain Head Bell Foundry, James street, Dublin. 'Big Ben,' weighing 43cwt, towered above his brethren on the wharf, and stood up in his massive bulk to a height of 4ft 6in or so. Each bell has a distinctive name, and the giant of the group, which covers an octave and a half in tone-range, has on his bulging sides the coat-of-arms of the late Bishop, with the motto, 'Fortitudine Vincit,' sub-inscribed with the words, 'Sigillum. J. J. Doyle, Episcopi Lismorensis, 1909.' On the other side of the bell appears an Irish emblem, which comprises the harp of Erin, the round tower, oak tree, and wolf dog, and it has a wreath of Irish shamrock encircling it.

By the will of the late Mr. John James Lee, K.C.S.G., of Sydney, who died on September 16, 1907, he directed his trustees (Mr. John L. Watkins, M.A., Parliamentary draftsman, and the Hon. Thomas Hughes, M.L.C., late Lord Mayor) to provide for his sister, Miss Margaret Lee, during her life, and after her death to distribute the bulk of his estate among charities in New South Wales. The recent death of Miss Lee has enabled the trustees to wind up the estate, and to distribute over £22,000 in terms of the will. In the disposal of his Irish estate Mr. Lee made provision for a legacy to the Home for Convalescents at Blackrock, of which another sister, the late Miss Mary Lee, was formerly in charge. As to his estate in Australia, he directed his trustees to divide the sum of £5000 among such public institutions or institutions engaged in work of a charitable nature in Sydney, and which were not in any way connected with the Catholic Church, in such shares and proportions as his trustees should in their absolute discretion think fit. The residue of his estate, which realised between £16,000 and £17,000, he directed to be divided between such charitable institutions connected with the Catholic Church in New South Wales or managed by religious Orders belonging to that Church, in such shares and proportions as his trustees should in their absolute discretion think fit.

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