

Science Siftings

By 'Volt'

How Snakes Move and Climb.

The vertebrae of a snake are fitted together by a kind of ball and socket articulation, which, however, is capable of only lateral or side to side motion. A snake moves by propelling himself on the points of his scales, which, to it, answer the purpose of ribs. A snake does not climb a tree or a bush by coiling around it, as most people who have not investigated the matter believe, but by balancing himself very evenly and holding on with the points and edges of his scales. A snake on a pane of glass or other polished surface where the scales cannot take hold is almost perfectly helpless.

A Motor Bicycle.

A new motor bicycle, propelled by a fan, has been invented by Mr. Ernest Archdeacon, the well-known Franco-Irishman of the Aero Club of Paris. In trial trips, a speed of 50 miles an hour has been obtained. M. Archdeacon is now at work experimenting, and hopes before long to have his new contrivance perfected. The bicycle is propelled by a large fan, similar to those used on warships, mounted in front of the machine and driven by a horizontal shaft from a motor. The trials were made with Anzani, the famous motorcyclist, in the saddle. At first the machine went slowly, but as the propeller increased its revolutions until its blades could no longer be seen, it bounded forward at a speed of from 45 to 50 miles an hour.

Lapis Lazuli.

Lapis lazuli, a peculiar stone, varying in shades from sky blue or dark blue, comes from various parts of Asia and has usually specks of yellow or white iron pyrites, which some believe to be gold or silver. The fine blue color for painting called ultramarine is made from lapis lazuli by grinding it into powder and purifying it from pyrites and other substances which are mixed with it in its natural state. As painters know well, this color is now difficult to obtain genuine, since a mode of making it artificially has been discovered by chemists. The difference in price is great. The artificial cannot be distinguished from the real by even the most careful chemical tests, the only means of detecting the former being by the microscope, which shows the absence of the sparkling particles of the broken stone from which the real ultramarine is never free.

The Soap Bubble's Colors.

When light impinges on the soap bubble part of it is reflected from the exterior surface and part enters the film and is reflected from the interior surface. This latter portion traverses the water medium between the two surfaces twice and is therefore kept behind the first reflected ray. The two sets of waves interfere with each other and produce a colored light instead of a white light. Other waves again may destroy each other and extinguish the light. Some of the constituent colors of the impinging white light—formed by their passage through the film—interfere so as to destroy each other, while others remain unaffected. As the film diminishes in thickness the colors necessarily vary. In this way is accounted for the marvellous variety of beauty of colors in the soap bubbles, the iridescence of oil upon water, the changing color of steel when being tempered and the gaudiness of some insects' wings.

A Freak of Nature.

Perhaps the strangest freak that Mother Nature ever played upon a miner was at Lodi, twenty miles south of the city of Indianapolis. So long ago as 1829 a man named Norbourn Thomas bored there for salt, and found at a depth of 250 feet brine from which he could make thirty bushels of salt a day. Later he bored to 500 feet, and was able to make fifty bushels a day. Some years passed, and he took a brother in partnership and deepened the well still further. They then got 200 bushels of salt daily, and the enterprising Thomas made a large fortune. In the seventies came the oil boom, and the Thomas salt well was rebores in the hope of finding petroleum. A depth of 1135 feet was reached when suddenly the drill was blown out by a terrific rush of water, and the company was forced to abandon work. Five years ago it was discovered quite by chance that the still flowing well was producing water charged with mineral salts of the very greatest value, and to-day Lodi is a rapidly growing and flourishing health resort.

Intercolonial

The Most Rev. Dr. Murray, Bishop of Maitland, celebrated the 79th anniversary of his birth on March 25.

The Bishop of Port Augusta, the Most Rev. Dr. J. H. Norton, has appointed from his clergy three to be diocesan consultors in the terms of the Plenary Councils of Sydney. They are the Very Rev. Thomas O'Connor (Pekina), the Rev. William Doyle (James-town), and the Rev. E. A. Mulcahy (Carrieton). Father O'Connor was originally selected for the office by the late Bishop Maher, but Fathers Mulcahy and Doyle are new to the responsibility. The duties of the consultors are to assist the Bishop in the government of the diocese.

The silver jubilee of the ordination of his Lordship the Right Rev. Dr. P. V. Dwyer, Coadjutor-Bishop of Maitland, and Titular Bishop of Zoara, to the priesthood, was celebrated on Sunday afternoon, March 10, by a pleasant gathering in St. Joseph's School-room, East Maitland, when his Lordship Dr. Murray, the venerable Bishop of Maitland, the Very Rev. Father O'Farrell, C.S.S.R. (Waratah), Fathers W. O'Sullivan (East Maitland), M'Auliffe (Hamilton), and a large number of parishioners and friends assembled to witness presentations to Dr. Dwyer. The presentations were preceded by a bright little musical programme, arranged by the Sisters of Mercy, and admirably carried out by the pupils of St. Joseph's School. The gifts were a pair of solid silver altar cruets and tray, bearing the following inscription in Latin:—Presented to the Right Rev. P. V. Dwyer, D.D., as a souvenir of the 25th year of his priesthood, by the Sodality of the Children of Mary, East Maitland, March 4, 1907.

Speaking at the Communion breakfast of the Hibernian Society prior to the general elections in Victoria, his Grace the Archbishop of Melbourne said: Amongst other charges laid against them as Catholics was that they all voted as one man, and by virtue of some secret mysterious organisation to the bottom of which no one had ever been able to penetrate. The best proof of that was said to be that all Catholics voted in exactly the same way. Word was sent out secretly, he supposed, from Eastern Hill somewhere, and by means of some secret post-office a post-card was sent to every voter, telling him exactly how, when and where he had to vote. He appealed to them as men, and asked them did any word ever go out from Eastern Hill as to how they were to vote? (Loud cries of 'No.') That was the case, and notwithstanding the fact, for party and political purposes, and for the purpose of creating prejudice against Catholics and Catholic candidates, it was repeated over and over again so often and so emphatically they found a number of well-meaning men outside the Catholic Church who believed it. They know well enough that Catholics were just as much divided, politically, as the members of any other denomination; they voted in every possible way, and he was glad of it.

Of the many important celebrations which, from time to time, have marked the annals of Church history in Victoria (says the 'Advocate'), perhaps the most important took place on Thursday, March 7, the occasion of the golden jubilee of the pioneer convent of Victoria. Nor could any institution more justly merit the great interest which marked the anniversary celebration. From many parts of Victoria old pupils and descendants of those who have passed away, travelled to Melbourne to do honor to the school which has won such fame. Exactly fifty years ago—in March, 1857—on the invitation of the late Dr. Goold, three Sisters of Mercy came to Melbourne. These were Mother M. Ursula Frayne (Superioress), Sister M. Xavier Dillon, and Sister M. Joseph Sherlock (who still lives). They arrived in Melbourne on March 7. On landing, they were met by the late Bishop Goold and his Vicar-General, the late Dr. Fitzpatrick, who conducted them to the Bishop's own residence—a small cottage in Nicholson-street, Fitzroy. This Dr. Goold gave up to the Sisters for the site of their convent. The first Mass was celebrated in it on April 15, 1857. At the celebrations in connection with the golden jubilee his Grace the Archbishop of Melbourne presided at Pontifical High Mass, which was celebrated by his Lordship the Bishop of Ballarat, Most Rev. Dr. Higgins, their Lordships the Bishops of Sandhurst and Sale, the Most Rev. Dr. Reville, O.S.A., and the Most Rev. Dr. Corbett, being also present in the sanctuary. The occasional sermon was preached by the Very Rev. Dean Hegarty of Kyneton.