

## Science Siftings

By 'VOLT.'

### The Longest Bridge.

It is at Sangong, China, and is called the Lion Bridge. It extends  $5\frac{1}{2}$  miles over an arm of the Yellow Sea, and is supported by three hundred huge stone arches. The roadway is seven feet above the water, and is enclosed in an iron network.

### An Arctic Coal Mine.

According to *La Nature* the most northerly coal mine is that of the Arctic Coal Company (an American concern) at Advent Bay, on the east coast of Spitzbergen. The coal crops out at the surface of the ground several hundred feet above sea level, and is brought down to the harbor by a funicular railway. The company has about 150 men at work, chiefly Norwegians, who remain on the spot all the year, although Advent Bay is blocked by ice and inaccessible to vessels for eight months—viz., from November to June. About 6000 tons were taken out last year, but the maximum output has not yet been reached. The chief market for this coal is Norway, which has no coal mines of its own.

### Making 'Battle Relics.'

A careful observer who has visited many of the world's great battlefields declares that the greater part of the mementoes, of which there seems to be an inexhaustible supply, are wholly spurious; but so well are they simulated that the average visitor is content. Pieces of shell are made by casting hollow spheres and cracking them with a sledge. The fragments are then treated to a bath of diluted nitric acid and allowed to gather rust in the open air. The appearance of verdigris is easily procured, when desired, by the use of copper in solution. The writer was shown several basketfuls of pieces of shell, all of which seem to be at least thirty or forty years old. The acid has slightly honeycombed the edges, and they looked exactly as if corroded by long burial beneath the soil. Such trifles as single bullets and minié balls are made with the greatest ease in an ordinary mould. They are dented with a small hammer and given the requisite discoloration by remaining for a few days in a bucket of lime. The more elaborate relics, such as sword belts, spurs, pieces of harness, bayonets, canteens, and so on, are turned out by individual workmen, who make a good profit out of the business.

### A New Zealand Airship.

In response to communications from the naval authorities, Mr. Joseph Taylor, mining engineer of Nelson, has been on a visit to Wellington, and laid before Captain Gansit, of H.M.S. Challenger and the Naval Engineer, the plans relating to his invention of a 'Universal Combination Airship,' and of its several modifications, the patent rights of which have just been secured. Mr. Taylor has also explained his plans and designs to the New Zealand Defence Department, in order to induce the Defence authorities to initiate experiments preparatory to undertaking practical construction of one or more of his three new types of airship. By means of his inventions (says a Press Association message), Mr. Taylor claims to have solved the problem of aerial navigation for general commercial purposes, his leading ideas having been to secure carrying capacity, stability, safety, and comfort, partly by combining all proved advantages in connection with aerial craft and partly by the introduction of several fundamentally new features. The invention is said to embody in one homogeneous machine all the proved principles in connection with balloons, aeroplanes, gyroscopes, motor cars, etc. It is expected to possess a carrying capacity of several tons for passengers and cargo after allowing for its own weight. For purposes of defence Mr. Taylor claims it will supersede all existing types of aerial craft. The vital principle of the invention is a matter of a combination of lifting screws driven by powerful motors.

## Intercolonial

The late Mr. Allen McLean, at one time member of the Legislative Assembly (Vic.), and of the Federal House of Representatives, left an estate estimated at £53,000, comprising almost equal amounts of realty and personality. Testator bequeathed £50 each to the Gippsland Hospital, Sale, and Bairnsdale District Hospital, the Catholic Convent at Maffra, the Carmelite Catholic Church, Middle Park, and the Old Colonists' Association. The remainder of the estate was left to his family and relatives.

The Rev. Father Shaw, who proposes to establish an experimental wireless station at King Island, had an interview with the Postmaster-General. No objection (says the *Sydney Freeman's Journal*) was raised to the application of Father Shaw for an experimental license, and formal permission would be granted in due course. The license would be similar to others granted under the regulations, and the licensee would not have any permit to enter into a commercial project for the transmission of messages by wireless telegraphy.

Mr. Norbert Keenan, the member for Kalgoorlie in the Legislative Assembly of W.A., who is coming in for a good deal of notice at the present time, is the son of Sir Patrick Keenan, of Dublin (says the *Advocate*). The ex-Attorney-General, who has recently returned from a trip to Ireland, was Mayor of Kalgoorlie during the opening of the Goldfields water scheme.

A new marble altar, the gift of Thomas Loughlin, K.S.G., was blessed and unveiled a few Sundays ago at the Church of the Immaculate Conception, St. Arnaud (Ballarat). The altar, which is a beautiful work of art, was executed by Fratelli Agrone, an Italian sculptor of fame, and the cost, including erection, amounted to £700. After thanking a number who had given donations towards the furnishing, the Rev. Father Doyle referred in pleasing terms to the characteristic generosity of Mr. Loughlin, who, in addition to donating the altar, had also given £250 towards the building fund of the church, as well as presenting him (Father Doyle) with the handsome vestments he was wearing. The beautiful cope he wore at Benediction and the chalice at Mass that day were also his gifts.

No more appropriate last resting-place could be found for the remains of the Cardinal than under the roof of his own Cathedral, and in front of the handsome marble altar dedicated to St. Patrick and Irish saints (remarks the *Freeman's Journal*). The altar was erected by Mr. T. J. Dalton, K.C.S.G. (Vice-Consul for Spain), as a memorial to his late father, the Hon. Thomas Dalton, M.L.C. The altar, which is beautiful in design, was imported from Italy, where it had been manufactured to Mr. Dalton's order. The door of the tabernacle is composed of pure gold, and the carving generally of the memorial is of the most artistic description. The altar is situated in the eastern side of the Cathedral.

His Lordship Bishop Grimes, of Christchurch, accompanied by his private secretary (Rev. Dr. Kennedy), arrived by the Levuka on August 22 (says the *Sydney Freeman's Journal*). His Lordship left Lyttelton on July 12 on a visit to Nukualofa, Haapai, and Vavau, in the Tongan Group. He then went on to Apia, in Samoa, and subsequently to Levuka and Suva. The Bishop had visited Fiji 17 years before, and noticed vast progress in the work of the Marist Brothers in the establishment of churches and schools. Bishop Olier, of Tongoa, who is well known in Sydney, was, unfortunately, in very indifferent health. While at Apia, the Bishop paid a visit to the ex-King Mataafa, whom he found in a cheerful and thriving condition. News of the Cardinal's death was received by wireless telegraph aboard the Levuka while on the way to Sydney, and, of course, caused his Lordship great grief and surprise. Dr. Grimes will remain in Sydney for a fortnight, and during that time will be the guest of the Marist Fathers at St. Patrick's presbytery.