

Science Siftings

By 'Volt'

A Curious Fact About Brass.

It is a curious fact, which has hitherto puzzled the most clever philosophers, that common brass which is subjected for some time to constant tension occasionally undergoes a remarkable change. It loses its tenacity and in a short time becomes almost as brittle as glass.

Eye Photographs.

An image impressed upon the retina of the eye remains there an appreciable time. This is the reason why a torch swung rapidly seems to be a circular flame. The sensibility of the retina is different at different times of the day. Everyone has noticed how on waking in the morning and looking at the bright window, then closing the eyes, he will observe an impression or phantom of the window for an appreciable time after his eyes are closed.

Elevated Rivers.

The most elevated river in the world is the Desaguadero, in Bolivia. It is of a considerable depth, and its whole length, from the village of Desaguadero, at the south extremity of Titicaca, to the north end of the Lake Aullagas, is about 180 miles. The average elevation of the valley or tableland of Desaguadero above the level of the sea is about 13,000 feet. The river whose source lies highest is the Indus, which rises on the north of the Kailas Parbat mountain, in Tibet, 22,000 feet above sea level.

Diamond Cutting.

Although the Cullinan diamond weighs over 3000 carats in its present natural state, he would be a rash man who would venture to say what its weight will be when cut. The Koh-i-noor was reduced by an unskilled stone-cutter from 793½ carats to 280 carats; a second cutting brought it down to 186 1-16 carats, and a third to 106 1-16 carats, or less than a seventh of its original size. How delicate a matter this diamond cutting is was proved in the case of the 'Great Mogul.' In the rough state this stone, according to Tavernier, weighed 787½ carats. It was Hortensio Borgis who cut it, for which he was also badly paid. When it was cut he was reproached for having spoilt the stone, which might have remained heavier, and instead of rewarding him the King fined him 10,000 rupees.

Some Old Trees.

The coconut palms of Brazil live from 600 to 700 years, and the Arabs assert that the date palm frequently reaches the age of 200 to 300 years. Wallan's oak, near Paisley, Scotland, is known to be more than 700 years old, and there are eight olive trees on the Mount of Olives, near Jerusalem, which are known to have been flourishing in 1099. The yews at Fountain Abbey, Yorkshire, England, were old trees when, in 1132, the abbey was built, and a redwood in Mariposa Grove, California, is a manifold centenarian. Baobab trees of Africa have been computed to be more than 5000 years old, and the deciduous cypress in Chapultepec, Mexico, is considered to be of a still greater age. Humboldt said that the *Dracena Draco*, in Orotava, on Teneriffe, was one of the oldest inhabitants of the earth.

Breath Drawings.

Some curious experiments may be made with the breath. On a pane of glass or a mirror that has not been polished just beforehand trace a figure or a letter or a name with your finger. Nothing will be visible. But breathe on the glass, and the tracing will at once appear. Now, on a freshly polished plate of metal or glass place a coin. After a few moments remove the coin, and nothing will be seen on the surface, but breathe on it where the coin was lying, and an image of it will appear. If you polish the coin instead of the metal or glass the same effect will be produced when you breathe on the surface. If you have a plate of glass that has been against an engraving for several years breathe on that side of it, and the lines of the engraving will become visible. This may fail sometimes, but rarely. Does all this sound like magic? The explanation is a natural one. On the surface of all solids a layer of gas, vapor, and fine dust gathers. When you polish the object the layer is removed or it is altered by the contact of other solids. If the object is breathed upon the breath condenses more easily on some parts than it does on others, according to the condition, or state of this layer, and therefore any marks made on it will become visible.

Intercolonial

The Very Rev. J. B. Conmee, Provincial of the Irish Jesuits, who had been on a visit to the Commonwealth, has returned to Ireland.

The death is reported of the Rev. Father McCauley, of St. Arnaud, diocese of Ballarat, who passed away on January 10. The deceased was a native of Derry, and was ordained at Maynooth in 1898.

The Revs. J. O'Neill (Castlemaine), T. O'Neill (Casterton), and E. J. Luby, P.P. (Brunswick), are to leave early next month on a trip to Europe for the benefit of their health.

The Month's Mind for the Archbishop of Hobart was to be celebrated yesterday. His Grace the Archbishop of Melbourne, Right Rev. Dr. Higgins, Right Rev. Dr. Corbett, and Right Rev. Dr. Reville were expected to be present.

Among the passengers by the R.M.S. 'Ormuz,' which arrived at Adelaide on January 6, was the Right Rev. Dr. Murray, O.S.A., Bishop of Cooktown (Q.), who was on his return from his visit ad limina to Rome. He states that he found his Holiness in splendid health. Dr. Murray is transferring his residence to Cairns, where a good welcome home awaits him.

The Rev. P. Power, M.R.I.A., late lecturer at De la Salle Training College, Waterford, arrived by the R.M.S. 'Ormuz' at Adelaide on June 6. It is fifteen years (says the 'Southern Cross') since he left the diocese of Wilcannia, having been recalled by the Bishop of Waterford after about six years' arduous work at Cobarr and Bourke. Having got twelve months' leave of absence, he is going to spend it in missionary work in Wilcannia diocese. His 'Manual of Religious Instruction' has been adopted in many dioceses in Ireland, and is commended for its accuracy, conciseness and cheapness. Father Power is editor of the 'Archaeological Journal,' and has lately published a large volume on name places in County Waterford.

According to a Melbourne message, during six successive days of the heat wave 58 patients, suffering from its effects, were admitted to the hospital, and fifteen died. The total number of deaths for the State from the heat was 100. A great bush fire raged in the Colac district, and the town narrowly escaped being swept. Two men named Power and Lucas, rode through a veritable sea of fire and rescued a woman named Clapham and three children, all being more or less burned. Nearly one hundred persons at Beech Forest are temporarily blind, through the effects of the smoke. The seaside township of Angelsea, twenty-six miles from Geelong was partially destroyed by a fire. Forty settlers were burned out at South Gippsland. In the Lenthorpe district over 150,000 acres of grass, 10,000 sheep, and miles of fencing have been destroyed, and at Rivernook many large dairy farms have been almost completely swept away. Two men were burned to death at Wangerip, and a child at Mount Sabin. A house in which an infant was sleeping caught fire near Stawell. A woman rushed to the rescue, but dropped in a dead faint at the door and perished.

His Grace the Archbishop of Hobart (says the 'Monitor') will leave for Rome in February to receive the Pallium from the Holy Father, Pope Pius X. Every Archbishop is canonically required, wherever it is possible for him to make the journey, to proceed to Rome within three months after his succession to the see to apply for the Pallium. Ever since his assumption of the office of Coadjutor Bishop in December, 1893, the Archbishop-Elect has, save during a short period when he was prevented as a result of a serious illness, been most assiduous in the discharge of the duties of the episcopal office. He again and again visited all parts of the island and took upon himself for a long time the inspection and personal supervision of all the schools. After fourteen years of this continuous work his Grace is certainly due for a rest. We are glad that the discharge of the duty of fealty which every Archbishop owes to the Sovereign Pontiff will compel the Archbishop to take a rest. A long and expensive journey is not, we know, the kind of rest his Grace would choose, but it will be a rest at all events, a deliverance for a time from the cares and pressing responsibilities of official duties, and the Church in Tasmania will reap the benefits of the Archbishop's travel. For his Grace is a keen observer. He will, we may be sure, take note of what is worth noting in the improvements effected in school, college, and Church work in the Catholic centres he will visit, and we shall profit by his experiences.