

## Science Siftings

### Artificial Diamonds.

The famous French chemist, M. Moissan, has just died from appendicitis at the premature age of fifty-four. He was one of the great modern French scientists who gave rise to the saying that 'chemistry is a French science.' His most extraordinary achievement was his process for manufacturing diamonds. He had invented the Moissan oven for storing formidable quantities of caloric, and he had demonstrated that substances which, till then, had resisted the highest temperatures could be melted in his oven. In his patent apparatus he put carbon into a bath of molten iron, heated to a terrific degree, and the mixture thus obtained was suddenly plunged into icy cold water, and subjected to a tremendous reaction. The result was a solid crust which turned into a diamond. The eminence of M. Moissan was recognised in recent times by the Nobel Prize for Chemistry. At the same time, although M. Moissan was able to create diamonds, he does not seem to have, in any way, upset the diamond market in Kimberley.

### Clock of Glass Except Springs.

After six years of work, Joseph Bayer, a Bohemian glass-worker of St. Louis, seventy-one years old, has completed a working clock, every part of which, except the springs, is made of glass. The plates and pillars which form the framework are of glass and are bolted together with glass screws. The dial plate, hands, and shafts and cogwheels are of glass, and glass wedges and pins are used for fastening the various parts of the running gear together.

All these parts are ground to the average proportions of the metal parts of other clocks of the same size. The teeth of the cogwheels are cut with minute exactness. Only the balance wheel is heavier and thicker than it would be in an ordinary clock, but it is fashioned so as to properly control the movement of the whole whole machine.

Like the clock itself, the key with which it is wound is of glass. The completion of the work was a matter of infinite pains. Some of the parts had to be made over and over again, as often as forty times before a clock that would go and keep time was produced. The builder sets a price on the finished model of £120.

### History in Trees.

A remarkable instance of history being told by a tree has been found by the felling of a giant Sequoias. This tree, which has just been cut down, revealed a most interesting history of the forest fires which had swept the region where for more than 2000 years the tree had existed.

The effects of fires occurring centuries ago are registered in the trunks of the trees, and the record is completely concealed by subsequent healthy growth. The tree which supplies the instance of which we are speaking (says a scientific correspondent of the 'Morning Post') had an enormous burn on one side, 30ft in height and occupying 18ft of its circumference.

This burn was due to a fire which occurred in 1797, and the tree had therefore occupied more than a century in its efforts to repair this injury, its method being in-growth of new tissue from the margin of the great black wound. The tree began its existence about 271 B.C., and in 245 A.D. occurred a burning on the trunk three feet wide.

This fire was therefore in its 517th year. A hundred and five years were occupied in covering this wound with new tissue.

For 1196 years no further injuries were registered. In 1441 A.D., at 1712 years of age, the tree was burned a second time in two long grooves. Each had its own system of repair.

In 1580 A.D., at 1851 years of age, occurred another fire, causing a burn on the trunk two feet wide, which took fifty-six years to cover with new tissue. Two hundred and seventeen years of growth followed this burn. In 1797 A.D. occurred the tremendous fire which burned the great scar eighteen feet wide. In the hundred odd years which have since gone by, the tree had been repairing the burn, and had reduced the exposed area by about four feet of width.

The memorial church to the late Rev. Father James H. O'Gorman, which is being erected at Michelago, is rapidly nearing completion.

## Intercolonial

A 'record' cargo of fruit for London left Hobart on April 12, nearly 125,000 cases of apples being shipped.

The great ecclesiastical College of St. Patrick's at Manly has now, we learn, seventy-nine students in residence, and five or six others preparing to enter.

Experts say (remarks the Sydney 'Freeman's Journal') that Master M. Manning, of St. Benedict's school, who put up a world's record high jump (under sixteen) at St. Patrick's Day sports, could easily have added three inches to his jump of five feet; but his father did not desire the lad to further exert himself.

Fortitude Valley, Brisbane, gave an enthusiastic farewell to the Rev. Father M. Morris, when he left that city for Sydney to join the Rev. Father Daniel Leahy, of Koorawatha, both of whom have left for Europe. They intend visiting Ireland. Father Morris' health has not been satisfactory of late, and his people hope that he will return to them restored to his usual vigor.

Consternation was caused in a Canterbury (Sydney) household the other day, when the family 'plant' of cash and jewellery beneath the bedroom floor, was found to have been looted. The police were called in, and the robbery was subsequently sheeted home to rats, which had removed the hoards to their lair. All the missing property was recovered, as in the case of the famous jackdaw of Rheims.

At St. Patrick's Cathedral, Melbourne, on Sunday, April 14, his Grace the Archbishop of Melbourne ordained to the priesthood Rev. Thos. Bride, of North Fitzroy. Father Bride commenced his studies in the Christian Brothers' College, East Melbourne, and, after matriculating, went to St. Xavier's College, Kew, where he spent some years. His course for the priesthood was commenced at St. Patrick's College, Manly, some six years ago, and he was ordained deacon at the end of last year.

At the annual district meeting of the H.A.C.B. Society of Victoria, the officers reported that the value of the funds of the district and branches was as follows:—District funeral fund, £16,171 7s 1d; district ladies' funeral fund, £611 9s 2d; district juvenile funeral fund, £5 11s; district management fund, £276 15s 5d; branch sick funds, £31,423 7s 9d; branch management fund, £2153 12s 5d; branch benevolent fund, £828 1s 4d; branch other funds, £572 7s 7d. Total, £52,042 11s 9d, showing an increase of £1901 7s 7d for the year.

Victoria (writes a Melbourne correspondent) has lost a liberal-minded statesman by the death of Sir Henry Cuthbert, M.L.C. He was one who never allowed religious or racial leanings to interfere with his public duties, and assisted all good works by his presence and purse. He was born in Roscommon County, Ireland, in 1829. He was educated at the Drogheda Grammar school. In 1852 he became an attorney of the Court of Queen's Bench, Common Pleas, and Exchequer, and a solicitor of the Irish Court of Chancery. Shortly afterwards he left for Australia, and landed in Melbourne in 1854.

The Rev. Father M. A. Flemming, private secretary to his Grace the Coadjutor-Archbishop of Sydney for some years, has been appointed to the charge of Rydalmere and to the chaplaincy of the Benedictine Nuns at Subiaco. The Rev. Father T. J. King, who spent about a year in the diocese of Armidale, and was for the last seven months at Tenterfield, has returned to Sydney, having been appointed to St. Benedict's to replace Father Flemming. The Rev. Father P. J. Baugh has gone to the charge of Cooma during the absence of Father J. J. Norris, P.P., who is about to leave on a well-earned holiday to Europe.

The blessing of the new cathedral at Lismore, which was originally fixed for Pentecost Sunday, has been retarded by an abnormal rainfall (thirty inches in three months), and a postponement has been made to Sunday, August 15, when a brilliant function and a great attendance may be expected. Most of the Australian Archbishops and Bishops (says the 'Freeman') have expressed their intention of being present. This diocese is advancing by leaps and bounds not only by industrial development, but in the provision for religion and education. At two of the newest points—Bangalow and Mullumbimby—new convent schools are in course of erection, and will soon be in possession of the Presentation Nuns.