

Science Siftings

By 'VOLT.'

Protection for Physicians.

Dr. Paul Aubourg, of Paris, has designed garments for physicians operating the X-rays which will ensure protection from all harmful effects. The outfit consists of a rubber mask with spectacles of a lead glaze, a long blouse made of lead, rubber, and bismuth, and thick gauntlets of the same materials.

Power of Niagara.

What makes Niagara Falls' power possible is the fact that Lake Superior, Lake Michigan, Lake Huron, and Lake Erie, with a combined area of 90,000 square miles, representing the reservoirs of some 250,000 square miles of watershed, are situated 600 feet above the sea level. The great volume of water falling over the vast territory flows on its natural course to the Atlantic ocean with but a slight descent until it is brought into the narrow Niagara River, when, in the rapids just above the falls, it declines 55 feet and then, with a single plunge, drops into the abyss 165 feet below. Eminent engineers have computed that 275,000 cubic feet of water pass over the falls every second, representing in theoretical energy over 6,000,000 horsepower.

A Waterspout.

A waterspout is a miniature tornado originating in a strong upward draught of air which occurs above the surface of a body of comparatively warm water. Its effect first becomes visible in a circular motion at the point in the clouds to which it ascends. This becomes a whirl, which condenses the vapor at its centre, causing the portion of the cloud there to drop downward in the shape of a gigantic jelly-bag. At the same time the continuing upward draught increases the rapidity of its original swirl and the condensed vapor caught within it until the ascending and descending masses join to form the waterspout. Necessarily by this process the air beneath the spout is rarified, and thus where the phenomenon occurs at sea the water always seems to be sucked up into it, although this is not really the case to any considerable extent. For similar reasons where a waterspout or tornado passes over a building it does most of its damage by exhausting the air outside, causing what is within to expand and blow the structure to pieces.

Wire for Felling Trees.

From Berlin comes the news that a device reported some years ago on this side of the world is in actual use in Germany for felling trees. The trunks are cut by the friction of a steel wire one-millimetre in diameter which, as demonstrated by practical tests, is able to cut through a tree about 20 inches in thickness in six minutes. The wire, which is carried to and fro by an electric motor, is heated by friction on the tree to such an extent as to burn through the timber, the result being a cut which is both smoother and cleaner than that effected by saw. The wire, it is said, will work satisfactorily on the thickest trees without the insertion of wedges into the cut, and the trees may be cut immediately above or below the ground. In the latter case the stump may be left safely in the soil. The motor which actuates the wire is placed outside of the range affected by the fall of the tree, and when electricity is not already available it can be generated by a transportable power plant consisting of a 10-horse power gasoline motor and dynamo, which are left at the entrance of the forest during the felling operations.

PORTRAITS ARE OUR FORTE.

Sittings a pleasure, not an ordeal at the "Tesla" Studios, opposite Post Office, Wanganui, so the hackneyed phrase no longer required—sooner have a tooth out.

Enlargements made from any photo. in black and white, sepia, or water colours.

Intercolonial

Among those received in audience at the end of June by his Holiness the Pope was the Ven. Archdeacon Smyth, of Perth, who for several years edited the *West Australian Record*.

At a meeting of Brunswick parishioners held shortly after the death of the Rev. E. J. Luby, it was decided that a memorial to the memory of a loved and revered pastor should be erected, and it was decided that it take the form of an altar in St. Ambrose's Church.

On the Feast of Our Lady of Mount Carmel, a most impressive ceremony took place at St. Joseph's Convent, Mount street, Sydney, when ten Sisters pronounced their vows, and eight postulants received the habit. His Grace Archbishop Kelly officiated. Among the postulants was Sister M. Gerarda (Miss Elizabeth O'Connor, New Zealand).

Bishop Dunne, of Wilcannia, who recently completed a visitation of his vast diocese, extending over three months, is now back in Broken Hill, his episcopal centre (says the *Catholic Press*). Such a visitation with his Lordship is no light matter. To reach the north-eastern portion of his diocese on the Upper Darling he has to make a train journey of 1900 miles before he reaches Bourke, travelling via Adelaide, Melbourne, and Sydney. Then he has to return to Sydney again to visit the Riverina portion of the diocese.

Widespread regret was felt when the death was announced of Mother Meagher, one of the most loved members of the Sacred Heart Convent, Bourke street, Malvern, Victoria. Deceased was the only daughter of the Hon. John Meagher, K.C.S.G., of Bathurst, and was 36 years of age, thirteen of which had been spent in the Sacred Heart Order. Deceased had a long and distressing illness, which she bore in a spirit of perfect patience and resignation to the edification of the whole community.

Speaking at the opening of a new school recently, his Grace the Archbishop of Melbourne said that he had not lost sight of the question of erecting a college within the University, on whose grounds there is an allotment reserved for this purpose. The Archbishop said that £20,000 could easily be found for the building, but the main question was the maintenance of the college, for which an adequate endowment fund would have to be provided.

The Very Rev. Thomas O'Farrell, C.S.S.R., who left the other day for his native land, gave the first mission in St. Mary's, St. Kilda, when Dr. Corbett (now Bishop of Sale) was pastor. That was in 1884, two years after the foundation at Singleton, N.S.W. In 1888, the late Bishop of Ballarat invited Father O'Farrell to found a home of the Order there. The Fathers began their work in an unpretentious building, but soon a splendid monastery was built on the shores of Lake Wendouree.

Mr. Allan McLean, one of the best-known men in Victoria, and at one time Premier of that State, died on July 13 at his home in Melbourne. He had been ill many months. Though born in the Highlands of Scotland, Mr. McLean, who at the time of his death was in his 72nd year, arrived in Australia when three years of age, so that he might properly have been regarded as an Australian product. His father was a settler and station-owner in Gippsland in the days when the blacks were not past the troublesome era; his mother was the first white woman in that part of the country. The education of young McLean and his sisters was entrusted to an old Highland tutor named McDonald, a man with a most wonderful memory, and the power of teaching others to remember also. Like his forebears, Mr. McLean was a Catholic, and was not backward to identify himself with his faith. The remains of Mr. McLean were taken to Sale for interment in the General Cemetery, where his first wife is buried. His Lordship Bishop Corbett officiated at the grave.