

## Science Siftings

By 'Volr.'

### A Big Undertaking.

Engineers announce that by July, 1915, the Keokuk dam, the largest in the world except the Asouan, will be completed, harnessing the Mississippi. When the waters, guided by engineering craft, pass through thirty turbines, they will generate 250,000 horse-power, enough to light every private and public lamp, run every street-car, and turn every factory wheel in practically every Mississippi Valley city from the Saint on the north to the Saint on the south. Keokuk will become one of the largest distributing centres in the entire world. Already contracts have been signed for the transmission of 60,000 horse-power to St. Louis, 175 miles south, to run the street-cars and light the streets of that city. Negotiations are under way to transmit the power north and south, east and west, from St. Paul to Memphis and from Chicago to Omaha.

### Diamond Cleaving.

The art of the lapidary is one of the most delicate employments of mechanical force known. The practical diamond cutter learns many facts about precious stones which are sealed books even to mineralogists. For instance, it is the lapidaries who have found out that diamonds coming from different districts vary remarkably in their degrees of hardness. It appears that the hardest diamonds known come from New South Wales. An unfamiliar fact is that diamonds are made to assume approximately the required shape by slitting and cleaving and by 'bruting,' which is the rubbing of one diamond against another, before they are submitted to the polishing wheel. In cleaving, the diamond is cemented on the end of a wooden stick, and a steel blade is driven with a smart blow in the direction of the natural plane of cleavage. Diamonds that have been cut by the lapidary's wheel lack some of the brilliance possessed by those that have simply been cleaved.

### 'Khaki Color.'

This cotton stuff has been worn in India by British troops for many years. Its tint was a greenish brown, but it always faded when it was washed with soap. A business man from Manchester, while travelling in India, happened to fall into conversation with an English officer, who remarked carelessly that the first manufacturer who could produce a cotton drill that would not fade would make his fortune. The young Englishman never forgot this hint. He came home, found a skilful dyer, and with him began the search for an olive dye which, when used on cotton cloth, would not yield to soap or soda. They spent years in these experiments, all of which proved fruitless. One day they found among several scraps of dyed cloth one which retained its color under the most severe tests. The puzzling fact was that it had been cut from the same piece of cloth and subjected to the same processes as the other scraps, all of which faded. The two experimenters were greatly puzzled, and for months tried in vain to solve the riddle. The one little fragment of khaki was the only one which kept its color against all attacks. By chance one day they found that the dye in which this scrap had been dipped had remained for some time in a metal dish of a peculiar kind. The secret was found. The metal of the dish, in combination with the chemicals of the dye, had furnished the one thing needful. They tried the experiment with other pieces. The dye held, and their fortunes were made. It was not chance which gave them their success, but the indomitable patience and persistence which pursued the chance, and the intelligence which seized it.

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## Intercolonial

Sister Mary Joseph, the first nun to be received into the Ursuline Convent at Armidale, died there on August 3, aged 68 years.

The Rev. Mothers Gertrude and Stanislaus, visitors from New Zealand, spent last week at the Brigidine Convent, Coonamble (says the *Catholic Press* of August 10). It is thirteen years since the Rev. Mother Gertrude was last in Coonamble, and she is now in charge of the Brigidine Convent at Masterton.

The senior clergy of the archdiocese were summoned to 'Dara,' the archiepiscopal residence, Brisbane, on August 2, for the purpose of voting for the appointment of a Coadjutor-Bishop to assist Archbishop Dunne in his ever-increasing work (says the *Catholic Advocate*). His Grace Archbishop Dunne presided.

Mr. Eugene McCarthy, a member of the South Australian Corps of Veterans, died at Adelaide on Sunday, July 29, at the age of 77 years. He was a soldier of the Crimean and Abyssinian wars. He was born at Rathkeale, County Limerick, in July, 1834, and enlisted in March, 1852, in the 55th Foot, then stationed at Limerick. After coming to South Australia he was a warder for a time at Redruth, and recently resided at North Adelaide, where he was well known and liked. He was interred with military honors at West Terrace.

The H.A.C.B. Society of New South Wales sent the following message of appreciation and congratulation to his Excellency Lord Dudley on the eve of his departure from Australia:—'A special meeting of the executive of the H.A.C.B. Society in New South Wales, held on July 27, carried a resolution that they heartily endorse the sentiments expressed in your message to their Majesties King George and Queen Mary on their visit to Ireland, and highly appreciate your forethought in the matter. They avail themselves of the occasion of your departure from Australia to express their grateful recognition of your outspoken sympathy with the legitimate constitutional aspirations of the Irish race and the broad-minded and generous encouragement both yourself and Lady Dudley have shown to Catholic institutions throughout the Commonwealth during your able but all-too-brief term as Governor-General. In conclusion, in wishing for you every happiness in the future, they confidently look forward to a continuance of your great abilities to the service of the Empire.' Lord Dudley did not delay in acknowledging the complimentary resolution of the society, and wrote to Bro. P. O'Loughlin (district secretary), thanking the society for its message and the sentiment therein expressed.

The predecessor of the present Bishop of Ballarat (Right Rev. Dr. Higgins), the late Dr. Moore, by his tact and urbanity, won non-Catholic public men to his side, and the utmost *bon accord* was apparent on public occasions between all sections and classes (writes the Melbourne correspondent of the *Freeman's Journal*). Dr. Higgins has also succeeded in bringing about a similar happy state of things. On Sunday, July 30, a ceremony in connection with the recent extensive improvements at St. Patrick's Cathedral took place. The Bishop presided at High Mass, and among the invited guests were the Mayors and Councillors of Ballarat City and Ballarat East, together with official representatives of the hospital, orphanage, and benevolent asylum. There was a crowded general congregation. Rev. J. Ryan, S.J., who preached the occasional sermon, said he had been requested by the Bishop to thank the Mayors, Councillors, and other public men for their presence at the ceremonies that day. He was glad to find that a really good feeling would long continue. Father Ryan said he had also been requested by the Bishop to thank Mr. Thomas Loughlin, of 'Kil-larney,' Warrenheip, for his generosity, not only to the Church in Ballarat, but also to the Church throughout the Australian Commonwealth.

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