

## Science Siftings

### The Panama Canal.

Mr. John F. Stevens, the former chief engineer of the Panama Canal, says that in his opinion there is no question of the possibility of the completion of the Panama Canal by the end of 1914, and, if necessary, it might be finished two years earlier. He believes also that the cost of the work will be considerably under £60,000,000, possibly as low as £50,000,000, including the price of the French concession.

### Tobacco as an Antiseptic.

A well-known Manchester physician has just finished a series of experiments to test the truth or fallacy of regarding tobacco smoke as an antiseptic, and to ascertain if the smoke of tobacco is more fatal to disease-bearing microbes than the smoke of other substances—hay, for instance. His experiments prove that tobacco smoke has a most destructive effect on almost all microbes, but that of hay seems to be quite as effective, and there are few noxious microbes that resist both.

### Decay in Wood Prevented.

It is estimated that a fence post, which under ordinary circumstances will last for perhaps two years, will, if given preservative treatment, last eighteen years. The services of other timbers, such as railroad sleepers, telephone poles, and mine props, can be doubled and often trebled by inexpensive preservative treatment. To-day, when the cost of wood is a big item to everyone who must use timber, where it is likely to decay this is a fact which should be carefully considered. Moreover, many woods which were for a long time considered almost worthless can be treated and made to last as long as the scarcer and more expensive kinds.

### The Waltz of the Ostrich.

The dance of the ostrich is one of those peculiar native customs which certain fowls develop, without any apparent incentive except it may be the law of heredity. It usually occurs at early morning, when the young, strong birds are let out of their enclosure, and is said to be entirely due to awkwardness and uncertainty. This leads them to advance and turn in a dervish-like whirl which is very quaint and fantastic as they float about, assisting their motions by their outspread wings. They circle and reverse almost as a waltzer would, and when a large number of these birds go through their dancing antics, it is almost impossible to believe that they have not been taught the accomplishment by a dancing master. Their waltz often ends in disaster, as they break each other's legs, which is certain death, or become dizzy and fall down in a demoralized heap.

### Origin of Moving Pictures.

The beginning of moving pictures was in this wise: Sir John Herschel, after dinner in 1826, asked his friend Charles Babbage how he would show both sides of a shilling at once. Babbage replied by taking a shilling from his pocket and holding it to a mirror.

This did not satisfy Sir John, who set the shilling spinning upon the dinner table, at the same time pointing out that if the eye is placed on a level with the rotating coin both sides can be seen at once. Babbage was so struck by the experiment that the next day he described it to a friend, Dr. Fitton, who immediately made a working model.

On one side of a disc was drawn a bird, on the other side an empty bird-cage; when the card was revolved on a silk thread the bird appeared to be in the cage. This model showed the persistence of vision upon which all moving pictures depend for their effect. The eye retains the image of the object seen for a fraction of a second after the object has been removed. This model was called the thaumatrope.

Next came the zoetrope, or wheel of life. A cylinder was perforated with a series of slots and within the cylinder was placed a band of drawings of dancing men. On the apparatus being slowly rotated the figures seen through the slots appeared to be in motion. The first systematic photographs taken at regular intervals of men and animals were made by Muybridge in 1877.

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## Intercolonial

The death of Rev. James J. Flynn occurred at Lambton (N.S.W.) on April 29, after an illness of a few days. The deceased was a native of Singleton, and was in his 47th year.

The silver jubilee of the ordination to the priesthood of the Very Rev. W. E. O'Reilly, of Merriwa, was celebrated in an enthusiastic manner by his parishioners at Merriwa and Cassilis.

The Rev. P. Mahoney, of Yarrowonga (V.), who has been transferred to the Myrtleford parish, was presented with a purse of 250 sovereigns by the parishioners of Yarrowonga, prior to his departure.

The Hospital Saturday collection in Sydney and suburbs this year totalled over £586, with outstanding sums which will bring it up to £6000. This amount is between £800 and £900 above last year's total receipts. No less than 3300 ladies engaged in the campaign of collecting.

A number of the Marist Fathers, who have been doing duty in the mission-fields of the Islands for some years past, are now on their way to Sydney for the purpose of making their second novitiate at Villa Maria, Hunter's Hill. At the conclusion of the ceremony they will return to spend the remainder of their lives in the Islands.

Among the passengers by the R.M.S. 'Oruba', which left Sydney on May 2, were the Very Rev. W. E. O'Reilly (Merriwa), the Rev. Fathers J. Collins (P.P., Mt. Carmel, Waterloo), P. J. Roche (Muswellbrook), and D. Ahern (Muswellbrook). Father O'Reilly, who has not had a holiday for twenty-two years, will tour Ireland and Europe, and return in twelve months' time. Father Collins' holiday will be limited to six months, while Fathers Roche and Ahern have been ordered a sea voyage by their medical advisers.

Mr. H. A. Lenehan, F.R.A.S., the New South Wales Government Astronomer, who died somewhat suddenly on May 2, was born in Sydney in 1843. He was educated at Lyndhurst College, which was conducted by the Benedictine Fathers. He became assistant at the Sydney Observatory in 1870, and was appointed to the charge of it last year. After a Requiem Mass at St. Mary's Church, North Sydney, the remains were interred in the Gore Hill Cemetery.

Mr. Justice Real, in speaking the other Sunday at a H.A.C.B. Society Communion breakfast in Brisbane, dwelt on the inspiration afforded by such spectacles as was witnessed that day in Brisbane, and previously in Toowoomba, and on the spiritual and temporal advantages of the Hibernian Society. Truth, justice, honor and honesty, he said, were idle words unless they represented ideas founded on the recognition of man's duty to God, and of the paramount object of man's life on earth, namely, to prepare for a higher destiny beyond the grave. He commended the formation of female branches of the society, while regretting the necessity that at present existed for women to support themselves. He thought woman's proper sphere was the home, whence proceeded all those virtues and those noble traits of character and devotion to faith and country, which were pre-eminent in the Irish race.

In the course of an address at the laying of the foundation stone of a new church at Hurstville on Sunday, May 3, his Eminence Cardinal Moran said it was not the material resources that sufficed to make a country attain its destiny. It was the genuine energy and devotedness of its people. The home countries had given to Australia some of the best of its enlightened citizens, and all, he hoped, would blend together all their resources, strength, and energy so that Australia might be true to her destiny. He was delighted to find that some of the best citizens of the country, men of talent and genius, were earnestly promoting the interest of Australia. If they had a great many more such men Australia would move quicker in the paths of progress towards her destiny than she had done hitherto. Speaking of the Commonwealth, the Cardinal likened it to a ship ready to sail, which had not a great many men to set it out on its journey. He hoped that New South Wales would co-operate in sending its best men to steer the ship, and thus enable Australia to carry out the great purpose which Australia was destined to carry out.

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