

Science Siftings

BY 'VOLT'

A Cargo Hard to Handle.

Asphalt is said to be the most difficult cargo for a vessel to unload. The asphalt is taken out of the asphalt lakes in Trinidad in a semi-fluid state, and by the time the vessel reaches a northern port has hardened, so that to unload it it is necessary for the men to go into the hold and dig it out with pick and shovel. This takes time, and a vessel carrying such cargo always has to arrange for a considerable stay in port.

Colored Underwear for Summer.

Colored underwear for hot, sunny climates is advocated in a leading editorial by *American Medicine* (New York). When it was first suggested (says this paper) that skins were pigmented to exclude too much light, physicians were sceptical, preferring to consider nature a fool to create colored races in light countries. The light theory was utterly rejected by the French and British, however, who are now taking steps in the tropics to give themselves the same protection by colored underclothing that nature gives to the natives by colored skins.

Ten Miles of Panama Canal Finished.

According to the Isthmian Canal records a stretch of five and a half miles of the Panama Canal at the Atlantic entrance was opened to navigation on August 13 for the sand and sand rock fleet of the Atlantic division. Tugs with barges in tow from the quarry and crusher at Port Belle and from the sandpits at Nombre de Dios which now enter the French canal at Cristobal will hereafter enter the canal off Mindi, and from that point continue as heretofore through the old channel to Gatun. Five miles of the canal at the Pacific entrance is in use by vessels of all kinds, and the five and a half miles at the Atlantic entrance now to be used for construction purposes will make ten and a half miles already actually useful.

Lighthouse Voices.

Wonderful possibilities are claimed for a Swedish invention called the photographone, by means of which it is said that sound waves can be registered on a sensitized plate.

The negative is developed in the ordinary way, and the sound curves transferred to ebony plates, from which the sound is reproduced as by the gramophone.

The photographone records can be reproduced ad infinitum, and if the original music or song should not be strong enough to fill a large concert hall, the sound can be increased as desired. On account of the immense volume of its sound, the inventor prophesies that the photographone will replace fog sirens in lighthouses.

Instead of the inarticulate howl which the sirens send out in the night, the photographonic foghorn will call out the name of the lighthouse for miles over the ocean.

Ingenious Arc Lamp Pole-top.

When arc lamps are supported directly over the tops of poles by fixtures known in practice as pole-tops, it is customary for the trimmer to climb either the pole itself or a ladder leaned against the same when he goes to recarbon the lamp. This is objectionable not only because of the danger in windy weather, but also because a man steady himself on a pole or ladder cannot use his hands to the best advantage. To overcome these drawbacks an ingenious type of pole-top is being introduced in England, in which the lamp is hung from an inverted stirrup pivoted within the pole-top proper. Paying out a wire rope (which runs down one side of the pole) allows the stirrup to swing the lamp several feet out from the pole, and to then lower the lamp so that it can be trimmed by a man standing on the ground. On lowering the lamp it is automatically disconnected from the circuit, but is switched into it again when the lamp is returned to its normal position by pulling the rope taut.

Sound Waves and Rain Drops.

From a series of observations made during thunder storms, W. J. Laine, of the Finnish Society of Sciences, shows in an interesting way that sound waves in the atmosphere affect the size and form of raindrops. He notices that a peal of thunder invariably causes a rainbow to take up a peculiar vibration and to widen in appearance, its red end becoming almost invisible while the violet is greatly intensified. A little later the colors which the shock has obscured narrow down and are more brilliant than before. First the yellow reappears, and then a band of striking red. Assuming as true Pertner's Rainbow Theory, which attributes rainbow colors to the mixture of the intensities of different light waves, caused by the diffraction of light by the raindrops, Mr. Laine concludes that this illusion of a vibrating rainbow is due to a rapid alteration of the diameter of the raindrops and the consequent variation of the distance between maxima and minima of the diffracted light waves. Furthermore, he holds this phenomenon to be due to the sound waves of thunder, and not to lightning, since the interval between the lightning and the thunder is often as much as twenty seconds.

Intercolonial

The total subscriptions towards the completion of St. Mary's Cathedral, Sydney, now amount to £57,283, made up as follows:—Cash in hand and results of fair, £21,000; Roll of Honor, £32,283; contributions not on Roll of Honor, £4049.

There were 140 priests at the Diocesan Synod in St. Mary's Chapter Hall, Sydney, on October 25. His Eminence the Cardinal presided, and confined business to the new decrees of first Holy Communion for children and in application of the new marriage laws. His Eminence, in the course of his remarks, made most feeling reference to the enthusiasm and marvellous generosity of the clergy of the archdiocese in contributing out of limited means £10,000 towards the completion of St. Mary's. The Cardinal believed it was unparalleled in the history of English-speaking countries. It had, he said, also the merit of inspiring a similar enthusiastic generosity into the minds of the laity.

Speaking at the Hibernian Society's Communion breakfast at Charters Towers on Sunday, October 23, his Lordship Bishop Dulig thanked the members of the society for their generosity in providing a scholarship for the Catholic schools. He stated in the diocese of Rockhampton alone nearly £70,000 had been spent in providing buildings for the purpose of education. The grounds and buildings of the new Christian Brothers' School, Townsville, had cost £6000, and a contract which would involve the expenditure of about £4000 was being let for the erection of a new convent high school in the same town. There was no school in North Queensland equal to the Christian Brothers' here. It was yet only in its infancy, but they were proud of the splendid results it had achieved in public examinations. The Catholic schools of the diocese of Rockhampton were saving the Government £20,000 a year.

On October 19 the Very Rev. Dean Guerrini, O.F.M., Bundarra (Armidale), celebrated the golden jubilee of his ordination to the priesthood. His Lordship Bishop O'Connor attended, and among the clergy present was the Right Rev. Mgr. O'Reilly (Phames, Auckland). After the celebration of Solemn High Mass, the Bishop placed a golden crown on the head of the aged priest, saying, while doing so, he trusted it would be symbolical of the crown of glory that would adorn his brow hereafter in the kingdom of heaven. Bishop O'Connor then read the address from the clergy of the diocese. With the address a purse of 70 sovereigns was handed to the Dean from the Bishop and priests of the diocese. The venerable jubilarian expressed his heartfelt gratitude to the Bishop and priests for their kindness and generosity to him on this occasion. Valuable presents, consisting of vestments, altar ornaments, etc., were presented by the Sisters of St. Joseph, the Sisters of Mercy, and the school children. At a conversazione in the School of Arts the ladies of Bundarra presented him with a valuable set of plate, and the laity of the town and district with an artistically illuminated address and golden testimonial.

His Lordship Bishop Gallagher, speaking at the opening of new convent schools at Berrigan on October 16, said it had been his motto for forty years, and the conviction was growing stronger and stronger as his physical energies grew weaker—'Get a little school for the children if you have the means.' After that let them get a house for the teachers, and then the room for the priests. It did not matter about a church. If they had no school for the children they would have no people for the church. He had seen the question asked often in the daily press, 'Why don't men go to church?' He looked upon the one who asked such a question as a fool. Men did not go to church because they were never taught to know God, and because they did not know the difference between good and evil. His Lordship confessed that the year had been the busiest of his life, and enumerated the various ceremonies he had attended, and what his forthcoming engagements were. At Berrigan there was not much more to be done. They had now their school, their convent, their presbytery, and their church.

His Eminence Cardinal Moran, when replying to the congratulatory addresses presented to him at the celebration of the silver jubilee of his Cardinalate on Sunday, October 23, said: 'In the political world the contending parties have distributed themselves into two opposing camps, each, however, unfurling the banner of democracy. The Catholic Church exhorts her faithful members to prove themselves genuine patriots, and to be at all times amongst the foremost in sustaining every measure that they conscientiously believe to promote the interests of Australia. The Church, however, is absolutely unpledged and independent in regard to either political party. There is no covenant or league, no understanding even with any political leaders, and I trust that the Catholic voters will long continue to maintain the same independent attitude. At the same time, common-sense and the instinct of self-respect will inspire them when the occasion offers to cast their decisive vote against men who offer insult to their religious convictions, or avow themselves enemies of the Catholic faith. Such an attitude of the Catholic voters has achieved some splendid results in the defeat of avowed enemies of the Church during the late Federal and State electoral campaigns, and I am confident is destined to win still more brilliant laurels in future contests.'