

present a short list of the most commonly used terms and explanations thereof, which we take from *The Engineers' Hand Book*, published by Biggar-Samuel, Limited, Montreal and Toronto.

Ohm.—The unit of electrical resistance, equal the resistance of one thousand feet of No. 10 (B. and S. gauge), pure copper wire at a temperature of 75 deg. F.

Ampere.—The unit of volume (or strength), of electric current, equal to the current generated by a battery consuming zinc at the steady rate of one ounce per twenty-four hours; or, the amount that one volt will force through one ohm of resistance.

Volt.—The unit of pressure (voltage of electro-motive force), equal to one-half the pressure of a single freshly charged lead storage battery cell; or, pressure required to force one ampere through one ohm of resistance.

Watt.—The unit of power equal to 1/746 of a horse-power.

Kilowatt.—A thousand watts, or roughly, 1 and 1/3 horse-power.

Candle-power.—The unit of light, equal to that produced by a candle burning two grains of spermaceti per hour.

BOOKS RECEIVED.

"The First Business of the World,"—i.e., Life Assurance. A beautiful book of 200 pages, half calf, library size, gilt, comes to us from New York with the compliments of Mr. Darwin P. Kingsley, vice-president of the New York Life Insurance Company. It is entitled, "The First Business of the World," and at least one of the striking papers it contains is devoted to proving that life assurance is this first of mundane businesses. Mr. Kingsley modestly calls his book a series of messages to life assurance men, especially to the agents of the New York Life during ten years. But these papers, essays, speeches, are a series of stimulating pæans in honor of life assurance—its dignity—its advantage—its blessings. He quotes from Longfellow, Darwin, Bellamy, Spencer, Lincoln and from Arthur Balfour's "Foundations of Belief." He argues, he compares, he exhorts, he warns, until a man who reads the eloquent periods feels ashamed of himself that he is not insured, and the young agent who listens thinks himself a new John the Baptist, ready to cry out in the uninsured's wilderness a twentieth century evangel. A great pleasure, as well as a great stimulus, must have been received by those who were privileged to hear Mr. Kingsley's addresses. And as to his papers, we have already quoted from some of them and hope to do so again. We are very much obliged for so handsome a Christmas box.

ANSWERS TO ENQUIRERS.

A. B., Brantford.—There is much more than that to be learned; you had better take a course of instruction in some college or go to work in an electrical shop. We cannot in this place give you all the information you ask: it would need a course of lectures. Your last question may be answered, however, broadly thus: The unit of electro-motive force or what is called potential, is the volt; the unit of electrical current is the ampere; the unit of resistance is the Ohm. There are other terms employed to designate electric forces, such as the Coulombe, the Farad, the Joule, the Watt, and so on.

Banker, Ottawa.—The imports of cement into Canada for the past three years were as follows:

| | Year 1900, Bbls. | Year 1901, Bbls. | Year 1902, Bbls. |
|----------------|---------------------|---------------------|---------------------|
| Belgian | 89,747 | 85,600 | 107,796 |
| German | 53,450 | 25,320 | 31,450 |
| English | 53,385 | 22,065 | 9,525 |
| American | | | 1,950 |
| Totals | 196,582 | 132,985 | 150,721 |

G. K., Detroit, Mich.—The proper way is to get a Year Book of Canada. Apply to Mr. George Johnson, statistician, Department of Agriculture, Ottawa.

—During the first eleven months of the present year, according to a report of the building inspectors of Montreal, the sum of \$4,500,000 was spent on new buildings in that city, an increase of more than 50 per cent., compared with last year.

—From London comes a despatch that one of the largest cotton spinning concerns in Bradford is preparing to establish mills in the United States owing to the fact that, under the present high rate of duty reigning in that country they cannot carry on their present American department at a profit.

—A British Columbia paper, à propos the departure from Victoria for the Orient and Europe of the steamship "Calchas," with a cargo of cased salmon, etc., remarks that none of the dog-fish salmon which formed so important a part of the exports to the East last year, were included, this species of fish, like other salmon, having been remarkably scarce this year.

—According to latest calculations, the British Columbia salmon pack for 1903, including Fraser river and northern points, amounted to 473,547 cases, comprising 368,709 cases of sockeye, 25,533 of red and white springs, 25,735 of humpbacks, and 53,570 of cohoes. This year there have been in operation thirty-five canneries on Fraser river and twenty-five in northern waters, a total of sixty canneries, or more than double the number ten years ago.

—M. Prefontaine, the Dominion Minister of Marine and Fisheries, has arrived at the conclusion that if a better system of curing and packing Canadian herring were followed, it would command much more favor and a higher price. Scotch herring being from 50 to 100 per cent. better prices, and this is attributed to the superior way in which the latter is treated. The Minister is thinking of a plan to bring some of the Scotch fishermen over to this country to instruct our people in the matter.

The result of the hydraulic operations at the Cariboo (B.C.), Consolidated Hydraulic Gold Mining Company's operations this year has been disappointing, owing to the unusually dry season. Hydraulic mining could only be carried on for fifty-three days, the clean-up for that period being about \$60,000. It is anticipated, however, that there will be plenty of water for next season, as a large supply, which fell after the men disbanded, has been stored up in readiness.

It is noted in the Bank of Montreal report that since the last meeting of the shareholders branches of that bank have been opened at Edmonton, Alta.; Indian Head, Assa., and Brandon, and Gretna, Man.; and a branch at Sherman Ave., Hamilton, has been arranged for. The bank also established a branch at Yarmouth, N.S., through the purchase of the business and premises of the Exchange Bank of Yarmouth. The Bank of Montreal is at present erecting premises for the branches at Edmonton, Alta., and Birchy Cove, Newfoundland, and has acquired properties on the corner of St. Catherine street and Papineau road, Montreal, and the corner of Greene and Western avenues, Westmount, where premises are being erected for branches.

—A very important sale of Ontario timber limits was held in the Parliament Buildings, Toronto, on Wednesday last, the auctioneer being Mr. Peter Ryan. The area sold comprised 826 square miles, and the amount realized was \$3,677,337.50, the average price per mile thus being \$4,450. The largest amount previously realized was in October last year, when 633 miles realized \$2,315,000, or an average price of \$3,657.18 per mile. The record price per mile, so far realized, was reached at the latest sale when a small berth in Hammell township, Nipissing District, was sold at the rate of \$31,500 per mile. Besides, the large return to the province from the actual receipts of the sale, there will be the increased receipts from dues and ground rents. One feature was the competition from the United States, especially in the Rainy River District.