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EDITOR'S ANNOUNCEMENTS.

Correspondence is invited upon all topics pertinent to the electrical, mechanical and milling interests.

OUR otherwise excellent contemporary, the Baltimore Journal of Commerce, is evidently a trifle off on the "Sabbath observance" question, and the same appears to be true of many of its readers. In a recent talk about itself, it remarks that "it is published in time to reach a very large share of its subscribers on Saturday night, and they, with one accord, acknowledge that it makes splendid Sunday reading."

THE announcement is made that the next meeting of the National Electric Light Association of the United States is to be held at Providence, R. I., on February 17th, 18th and 19th. If our American friends will permit a suggestion from this side the line, it is that the name of the Association should be changed to "The National Electrical Association." Its present title does not correctly indicate its character, inasmuch as there are found in its membership men engaged in helping forward not alone the progress of electric lighting, but also the many other and scarcely less important applications of electricity. Another suggestion is, that there are important duties awaiting performance at the hands of the "Canadian Electrical Association," which we hope shortly to see enter upon its existence.

THERE is no doubt that for extended areas the alternate current system of incandescent lighting is the most suitable and economical. The current can be transmitted over considerable distances at a small loss. The objection to its use in contradistinction to the direct current system has heretofore been that it was considered inadvisable to couple alternating dynamos in multiple, and consequently separate trunk wires have been run for each dynamo. It is becoming the practice now, however, to couple these dynamos in multiple, and means have been devised for synchronizing the alternations of current, or keeping them perfectly in step as it were, so that it becomes possible to feed the current from each dynamo into a general network or reservoir

of mains from which the transformers draw their supply as needed. This is a considerable step in advance in alternate current lighting, and one which will increase its possibilities in a marked degree, besides reducing very largely the cost of construction and maintenance and avoiding considerable complication in the apparatus of the station. With the system of operation demonstrated to be a complete success, we may look for the alternating current to give its older rival closer work to hold its own as a favorite in the eyes of central station managers.

BRADSTREETS, the New York financial journal, in an article calculated to show that Canada is making but slow progress compared with the United States, puts in as evidence the statement that while the population of the Dominion since Confederation has increased only about 40 per cent., the gross debt has increased by about 250 per cent., and the annual expenditure by about 300 per cent. The inference drawn from these figures can not be considered a fair one. The bulk of our public debt has been incurred in the construction of public works and in assisting railroad enterprises, which in the natural order of things precede population. These undertakings, some of them of gigantic character, as for example the Canadian Pacific railway and our system of canals, will not have to be repeated, while they rank among the nation's valuable assets. The expenditure up to the present has naturally been out of proportion to the population, but having rendered every part of the country accessible by rail and water and provided the necessary transportation facilities, we may reasonably expect that each year hereafter will tend to restore the equilibrium.

ONE of the direct results of the adoption of electricity as a power transmitting agent in the operation of street railways will be the development of the class of dynamos having slow running armatures. Multipolar machines are coming into favor very rapidly as generators of electricity. The moderate speed at which they require to be driven offers many advantages. On shipboard, for instance, where space is limited, the engine can be connected directly on to the dynamo shaft, doing away with belting entirely, and even in isolated installations on land, the lower speed of the dynamo is a desirable ultimatum. But it is when used as a motor for railroad cars that an armature with a motion slow enough to couple direct to the driving axle without the intervention of gearing finds its most appropriate place. Gear wheels, even when cut by machinery on the most approved scientific principle, are at best a clumsy and noisy contrivance. They may work well when quite new, but unfortunately they do not remain many days in a perfect condition, and the least wear from the true shape of the teeth is the cause of endless trouble. Much ingenuity has been expended on various methods of meeting this trouble. The adoption of pinions made of compressed rawhide has done much to obviate the disagreeable noise of steel gears, but its use is a continual source of expense to the railroad operators. The production of a direct acting motor, if it has a fair amount of electrical efficiency, while not being too heavy for the purpose, will do much towards increasing the comfort, economy and popularity of the electric street railroad.

STATISTICS recently published leave no room to doubt that a considerable market exists in the West Indies for many natural and manufactured articles such as Canada can produce to advantage. It must be remembered, however, that in bidding for West Indian trade we shall be brought into direct competition with American products of a similar character, and in certain lines with

British products also. Furthermore, the period during which these countries have preceded us has given them a hold upon the market of the West Indies which it will be difficult for us to break. Three things are especially necessary in order to our success—first, a spirit of enterprise; second, rapid and first-class steamship communication; third, willingness to purchase West Indian products to the largest possible extent. The first of these requirements, we are able from personal knowledge to say, has not thus far been manifested. While a great many exhibits are being sent from Canada to the Jamaica Exhibition, it is due to the fact that the Government pays all the expense connected therewith, rather than to any individual spirit of enterprise. An apathy that is not creditable to Canadian business men appears to prevail. If the Government or somebody else will undertake the trouble and expense of proving beyond a doubt that a profitable trade can be done in the West Indies, then our business men will be quite willing to do the trading and pocket the profits, but they apparently are not prepared to make personal effort or assume any risks. It was with great difficulty we are informed that several leading Toronto firms could be induced to give \$50 apiece to enable a native of the West Indies to proceed to that country with samples of their goods. The experience of every business man should teach him that it is not in such a spirit that victories are won in the world's fields of commerce. With regard to transportation facilities, it is a well-known fact that up to the present time the Canadian steamers have not given satisfactory service. They are supposed to make the round trip between Halifax and the West India Islands once a month, but we have been informed that their regularity cannot be depended upon, and the knowledge of this fact may have had something to do with the apathy in Canadian business circles concerning the West India trade. On the third point, viz., the willingness of Canadians to purchase as largely as possible West Indian goods, it is of course too early to speak. It will, however, be the wish of every patriotic Canadian that the present visit of the Canadian Minister of Finance to the West Indies may result in opening a mutually profitable trade between the two countries. The Dominion Government is certainly deserving of commendation for the enterprise which it is manifesting in this direction.

AFTER all that has been claimed for the progress made in electrical matters in the United States as against the older countries of Europe, it has been reserved for the people of England to produce the first practical and actual electric railroad. By this we do not mean a mere tramway or a few street cars, but a railroad with all the adjuncts and paraphernalia that the name implies—locomotives, passenger cars, signal system and elaborate and ornamental station buildings. It is known as the City and South London Electric Railway, and was formally opened for traffic by the Prince of Wales on the fourth of November last. The road is an underground one tunnelled 60 feet below the streets, with a slight fall below the River Thames a little to the west of London Bridge. This depth has been adopted to avoid the network of sewers, gas and water mains, etc., and is reached at each of the six stations along the route by immense and powerful hydraulic elevators, each capable of holding 150 persons at one time. The main works of the company are situated at Stockwell, where a few acres have been utilized for the erection of the engine sheds and the electrical plant. The cars and engines are drawn to the surface there up an inclined plane by means of cables. As an instance of the fact that the work is on a scale far removed from comparison with any mere tramway work, we may mention that the signal box at the western terminus contains