

made it the subject of a Canton lecture in England. His conclusions are: Thanks to the experiments of M. Deprez, we know that a current of electricity equivalent to five horse-power may be sent along a telegraph wire one-sixth inch diameter, some ten miles long—there and back—with an expenditure of 29 per cent of the power. Messrs. Hems send 500 horse-power along a 3-inch wire rope. To carry this amount as in the experiment of Deprez, 100 telegraph wires would be required; these, wound into a rope, would make it 1.4 inches diameter, four times the weight of Messrs. Hems' rope. With the moving rope the loss per mile is only 1.4 per cent, while with electricity it was nearly 6 per cent. With the Hems rope the loss at the ends in getting the power into and out of the rope amounted to 2.5 per cent.; in Deprez experiments 30 per cent was lost in the electric machinery alone which is very small machinery comparatively. This does not include loss of power in transmission to and from the electric machinery. Taking the whole result, it does not appear that more than 15 or 20 per cent of the work done by the steam engine could have been applied to any mechanical operation at the other end of the line, as against 90 per cent which might have been realized with the wire rope transmission.

Small Machine Shops.

The position of the small machine shop is by no means what many believed, a few years ago, it would be. Then it was very generally argued that the extended use of special and costly machinery and tools would concentrate business in a few large manufacturing establishments, which would, from the magnitude of their operations, be able to provide facilities for doing work cheaply, quite out of reach of the smaller shops. So far from these predictions being verified, the proportion of small to large shops is about the same now as ever, with no prospect of material change in this respect. When, in small shops, the mistake is not made—a very natural one—of trying to spread operations too much, the growing use of special tools is found to be of about as much benefit as in the larger ones. In many instances, owing to the thought that has been given to the subject by tool builders, the cost of machinery for special work has, within the past few years, been greatly reduced, placing it within the reach of those who could not otherwise afford to use it; and in other instances, large shops have gone to the expense of providing for the economical manufacture of special parts to supply their own wants, are willing to extend their business to supply those of others. In still other instances—and they are rapidly multiplying—parts and pieces that were made in every shop, are made and sold as articles of special manufacture, all of which the shop of limited capacity can and does take advantage of.

By a greater degree of co-operation amongst owners of small shops—mutually supplying one another's wants in specific directions—the cost of tools for manufacturing advantageously might often be materially reduced, or several small manufacturers might have substantially all the advantages of tools that neither could afford for his individual use. In such ways as this there

is undoubtedly room for doing a great deal more than has been done.

In small jobbing shops there is almost universally a tendency to cover too much ground. Frequently, in small towns, a half dozen such shops may be found, each doing the same class of work—that is, anything there is to be done—and, as a result, not properly equipped for doing any single thing. By mutual understanding and a fair division, in which each should confine himself to certain lines, it would be found that for a less expenditure they could all put themselves in condition to do better and cheaper work, all make more money and give better satisfaction to customers. Looking through all these shops, about the same line of patterns will be found, and in the busiest times a good deal of machinery will stand idle, because on the whole there is too much of it, while, as it is divided, neither has enough. Reformation in this respect would work a real benefit, and give the small shops better prospects of competing with more pretentious ones.—*American Machinist.*

A Curious Barometer.

A French meteorologist has, in the exposed court of his house, two bars of iron planted in the earth, to each of which is attached a conductor of coated wire, terminating in a telephonic receiver. His practice is to consult the apparatus twice every day, and it never fails, through indications of earth currents, to give notice of the approach of a storm 12 to 15 hours ahead.

Projected Persian Railway.

An Odessa correspondent writes (March 18th): The St. Petersburg newspaper *Rooskaya Koorier* states that at the last meeting of the Co-operative Society of Russian Trade and Commerce a M. Korianden presented a very interesting report upon the project of connecting the Black and Caspian Seas with the Persian Gulf by means of a railway through Persia from Resht, situated within a few miles of the Persian side of the Caspian sea, to Aboosher, on the Persian Gulf, which the Shah's government has proposed to construct at its own cost, and which it is calculated would amount to 125,000,000f. The construction of that line would, according to M. Korianden, increase Russian commerce in the Indian Ocean at the rate of 50 per cent. above its present amount, and put into Russian pockets for freight 35,000,000 roubles a year. Java alone requires 10 million pods (over a million and a half tons) of kerosene yearly, and hence that island would become a very extensive market in that direction for the sale of that article. In M. Korianden's report a suggestion is thrown out for the construction also of a railway from Batoum to Bagdad.

PORTAGE LA PRAIRIE.

Dr. Wilson, M.P.P., has been appointed Provincial Secretary.

The business of the Bank of Montreal, here, will be closed up this week.

John Giles shipped a car load of fine beef cattle to Winnipeg recently.

The legal firm of Boulbee & Robertson, had been dissolved. The business will be continued by Mr. Robertson.

Mr. Plummer, manager of the Bank of Montreal, here, has gone to Calgary to select a site for a branch in that place.

Mr. Thomas Neelands, of Calgary, has admitted Mr. W. Stinson, of Portage La Prairie, as partner in his butchering business.

The lot which was sold on Saskatchewan avenue last week for \$90 has changed hands several times since, and the present-owner has refused \$500 for it.

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W. C. HARRIS, ARCHITECT, ASSOCIATE: ROYAL Canadian Academy of Art. 562 Main Street.

DISSOLUTION OF PARTNERSHIP.

The partnership heretofore existing between G. C. Read, G. M. Donaldson and J. F. Wood, under the name of Wood & Co., General Merchants, Assiniboia Mills, was dissolved on March 11th, 1884. G. C. Read accepts all liabilities of said Company, and will carry on the business in future.

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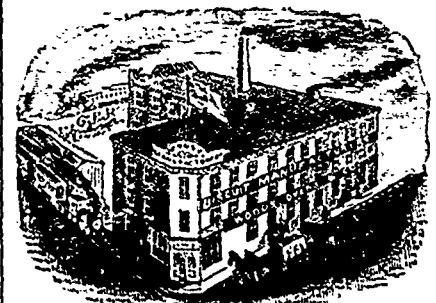
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