Test No. 6. Bement-Miles horizontal cylinder boring mill machining very hard cast iron 19-inch locomotive cylinder. Speed of cut, 18 feet per minute; depth of cut 3%-inch; feed, ½-inch.

Test No. 7. Pond driving wheel tire lathe turning down hardened driving tire. Speed of cut, 24 feet per minute; depth of cut, 3%-inch; feed, 3-32-inch; weight of metal removed per hour, 90 lbs.

Test No. 8. Pond planer machining No. 1 scrap iron side rod. Speed of cut, 18 feet per minute; depth of cut 9-16-inch; feed, ¹/₄-inch; weight of metal removed per hour, 247 lbs.

All of these tests were made with Novo tool steel, forged at high lemon color, cooled slowly in air, reheated to white, almost running heat, then cooled in steady air blast or in oil, the latter giving the best results.

Lethbridge has voted \$120,000 for waterworks and sewers.

The Fredericton, N.B., Gas Co. has sold its electric light plant to the city for \$15,500 Some new machinery is to be installed.

The Canada Furniture Manufacturers, owning and operating the Wiarton electric light system, has offered to sell the plant to the town.

The Cape Breton Coal, Iron and Railway Co. is reported to have purchased a complete electrical mining equipment, the first in the province.

Moosomin has accepted a proposition from the Acetylene Construction Company of St. Catharines for the installation of a street lighting system.

The St. John, N.B., opera house has contracted with a Montreal electrician for the installation of a thoroughly new and modern electric plant, at a cost of about \$12,000.

To further facilitate the prompt filling of orders, the Sawyer-Man Electric Company have recently established a distribution depot in New York, where over a million lamps are kept in stock, so that all calls may be speedily and completely answered. They have similar depots in Philadelphia and other centres of trade.

The New Brunswick Telephone Co. having raised its rates in St. John, Joseph A. Magilton is trying to secure one thousand subscribers for a new system. The present rates are \$40 for business houses and \$23 for residences, while the proposed new plant will furnish instruments for an average rate of \$22.

The Clergue and Jenison interests, which have amalgamated, are about to develop the water power at Kakabeka Falls to supply current for lighting and other purposes at Fort William and Port Arthur. They promise to purchase the present town plant, and to furnish power for \$15 per horse-power per annum. 5,000-h.p. is to be available in eighteen months.

The German Wireless Telegraph Company, recently formed by the amalgamation of the Slaby and Braun systems, claims to be able to intercept Marconi messages. It says all that is necessary is to erect a strong station on the shores of the Baltic or the North Sea, attune its receiving wires to the Marconi station at Poldhu, Cornwall, and it would be impossible for Marconi to receive transatlantic messages.

The Ontario law for the regulation of automobiles goes into effect September 1st. All machines must register with the Provincial Secretary, paying a fee of \$2, must carry a number prominently displayed, and lamps at night, be provided with a gong or horn, and not exceed a speed of ten miles an hour in town, or fifteen miles in the country, except on streets set apart for the purpose by municipal councils. E. J. Watts, Marconi's representative, has gone to Labrador, with a view to selecting five or more sites for wireless stations for the benefit of the fishermen. It is hoped to have them in operation before navigation closes.

The Canadian Pacific Telegraph Co. has just completed the laying of forty miles of cable between Bamfield and Alberni, on the west coast of Vancouver Island. This will give the company an alternate connection between the land and cable lines, and prevent delays through accident.

Telephones at \$6 a year, and one cent a call, electric light at 8 cents per thousand watts, and electric power at about 5 cents per 1,000 watts, are the rates proposed for Toronto by the Stark Electric System, recently described in the Engineer. A canvass is being made for subscribers, and as soon as 5,000 are secured a company will be formed and the work proceeded with. The system has been installed at Massey's Dentonia Farm, near the city, where it has been inspected by a number of Toronto and Hamilton aldermen, who express themselves as very favorably impressed. As Mr. Stark is not in a position to instal the system on a large scale at once, the Hamilton city council have made a new contract with the Bell Company for five years. The Stark system is that in which the same wire is used for light, telephone, telegraph, etc.

Telephone lines, owned by individuals, municipalities, and local companies, are steadily growing in number in Ontario. Port Arthur, Fort William, Sturgeon Falls, Rat Portage, and St. Joseph Island have them, and there are farmers' lines in the vicinity of Markham, Beaverton, Shelburne and Grand Valley, (Dufferin County), East Luther, (Wellington County), Harrietsville, (Middlesex), Fonthill in the Niagara District, Prince Edward County, and elsewhere. The construction of these lines is simple and inexpensive. In the case of farmers' lines, a single line is used. The average is No 12 copper wire, weighing 105 pounds per mile, and costing 16 cents per pound. Poles placed 150 feet apart, cost from \$1.50 to \$2 in place; cross arms cost from 20 cents to 35 cents, according to size and the number of pins, the latter price, 35 cents, providing for ten wires. The insulators cost 11/4 cents each. Stringing the wire costs \$5 per mile. Telephone instruments cost from \$10 to \$14 each.

Toronto City Council has secured reports from R. J. Parke of Toronto and Alex. Dow of Detroit, two electrical experts, on the question of electrical transmission. R. J. Parke estimates that at present 18,425 horsepower will be required for the city. Regarding the annual charges, Mr. Parke, after consultation with the City Treasurer, has allowed interest on the bonds for 20 years at 3.75 and he has also added 7 per cent. for sinking and depreciation fund. This can be safely reduced to 5 per cent., which would decrease the annual cost to \$35,712 per annum. Mr. Dow states that assuming it will be \$10 per horsepower at Niagara Falls, he estimates that it will amount to \$18.96 delivered at the city limits, that is providing for 13,500 horsepower. To increase this 50 per cent., making it 20,000 horsepower, would bring the cost down to \$16.48 delivered at the city limits. If the Toronto Railway Company will agree to take their power over the same line it would be reduced to \$15.23 per horsepower. Taking the highest figure, the horsepower at city limits will cost \$18.96. Adding distribution, losses and the expense of distribution, brings the total amount to \$38.16. Those figures show that the city should receive an average figure for power distributed sufficiently in excess of \$38.16 per annum to prevent any possibility of loss. If we can find a market for 25,000 horsepower, he is of the opinion that this estimate can be reduced to \$33. Assuming that power will cost an average of \$8.136 per horsepower, and comparing this price with the present rate charged in this city for electric light and power a very large saving will be effected. F. H. Rust, city engineer, stated that power costs the city \$50 per horsepower at the waterworks and city manufacturers about \$56 per horsepower. P. W. Ellis, Toronto, declares that power at \$15 a horsepower, as was predicted, was equivalent to coal at \$3 a ton.