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WIRELESS TELEGRAPHY.

(Continued from page 1.)

transmitter a continued train of electric waves
causes a continued action on the receiver. A
short stream from the transmitter causes a
short signal on the receiver. The dashes and
dots of the Morse system immediately be-
come possible. The chief modification to
the simple arrangement which was introduced
by Marconi was to replace the metal plates on

Alphabetical List of Advertisers.

	PAGE
Algoma Steel Co., Sault Ste Marie, Ont.	10
American Locomotive Co., New York	16
A. E. Ames & Co., Toronto	32
Baldwin Locomotive Works, Philadelphia, Pa.	24
Estate of John Battle, Thorold, Ont.	6
M. Beatty & Sons, Welland, Ont.	28
Bell Telephone Co. of Canada	32
Bonzano Rail Joint Co., Philadelphia	20
Bradstreet Company	36
The Acton Burrows Co., Toronto	Cover 1
Canada Switch & Spring Co., Montreal	24
Canadian Locomotive Co., Kingston, Ont.	Cover 1
Canadian Pacific Railway Land Department	24
C. P. R. Ocean Steamship Agency	30
Canadian Steel and Wire Co., Hamilton	12
W. H. Coddington, Hamilton, Ont.	26
James Cooper, Montreal	18
Dominion Bridge Co., Montreal	26
Dominion Wire Rope Co., Montreal	Cover 2
E. L. Drewry, Winnipeg, Man.	24
Duff Manufacturing Co., Pittsburg, Pa.	20
Firstbrook Box Co., Toronto	26
Galena Signal Oil Co., Franklin, Pa.	4
J. J. Gartshore, Toronto	32
Government of Manitoba	30
Gutta Percha & Rubber Mfg. Co., of Toronto	Cover 2
Holt, Renfrew & Co., Toronto	26
Hudson's Bay Company	Cover 4
Hunter, Rose Co., Toronto	26
James Hutton & Co., Montreal	32
Illinois Central Railroad	30
Imperial Bank of Canada	32
Independent Order of Foresters	34
Intercolonial Ry.	18
Wm. Jessop & Sons (Ltd.), Sheffield, Eng.	26
Lehigh Valley Railroad	36
Rice Lewis & Son, Toronto	Cover 1
Mail Job Printing Co., Toronto	32
McCaskill, Dougall & Co., Montreal	Cover 1
John S. Metcalf Co., Chicago, Ill.	28
Mica Boiler Covering Co., Montreal	32
Montreal Rolling Mills Co., Montreal	20
W. H. C. Muesen & Co., Montreal	20
New York Central Railroad	30
Northern Electric and Manufacturing Co., Montreal	36
A. O. Norton, Coaticook, Que.	8
Ogilvie Flour Mills Co., Montreal	10
Page Wire Fence Co., Walkerville, Ont.	20
Eugene F. Phillips Electrical Works, Montreal	24
The Hiram L. Piper, Co., Montreal	24
N. L. Piper Railway Supply Co., Toronto	20
Place Viger Hotel, Montreal	32
Polson Iron Works, Toronto	28
J. W. Pyke & Co., Montreal	14
Queen City Oil Co., Toronto	30
Railway and Shipping World, Toronto	Cover 1
Rhodes, Curry & Co., Amherst, N. S.	28
Russell House, Ottawa	32
St. Thomas Brass Co., St. Thomas, Ont.	32
Safety Car Heating & Lighting Co., New York	16
Simplex Railway Appliance Co., Montreal	20
Toronto Engraving Co., Toronto	24
Travelers' Insurance Co., Montreal	Cover 1
Westinghouse Manufacturing Co., Hamilton	Cover 2
Wire & Cable Co., Montreal	16

the transmitter by two vertical wires, one con-
nected to earth and the other rising directly
into the air. By means of similarly arrang-
ed collecting wires on the receiver signals for
hundreds of miles have been accomplished
with the greatest ease.

It is at once apparent that on account of
the spreading out of the spherical waves from
the transmitter any receiver within range of
the waves will respond to the signal. Secrecy
is by this impossible. To render any one re-
ceiver or set of receivers sensitive to a mes-
sage while all the others remain silent it be-
comes necessary to arrange a form of tuned
telegraphy, by which the transmitter may be
arranged to give out waves of one particular
period. A familiar form of tuning is given
when a musical note is sounded near a piano.
The string of the piano, which vibrates in the
same period as the note will immediately
sound in sympathy, while all the others not so
tuned remain silent. Before wireless tele-
graphy becomes a commercial success a sim-
ilar result must be accomplished. Experi-
ments along this line are being rapidly con-
tinued with no small measure of success, and
already many important results have been
accomplished.

Recently Marconi astonished the world by
stating that he had received signals across
the Atlantic, a distance of over 2,000 miles.
It has been demonstrated in Europe that mes-
sages can be flashed 1,000 miles with ease
across highlands and lowlands as well as
across water. In the U.S. wireless tele-
graphy is being carefully tested by the army
and navy. Stations are to be installed at Fort