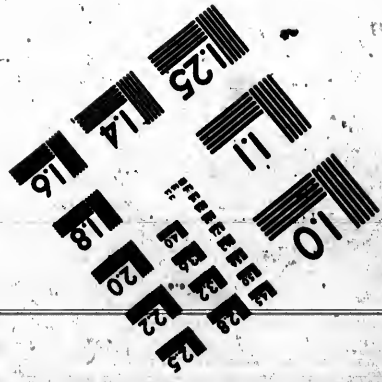
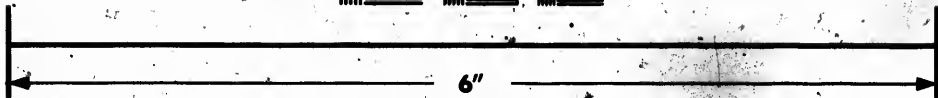


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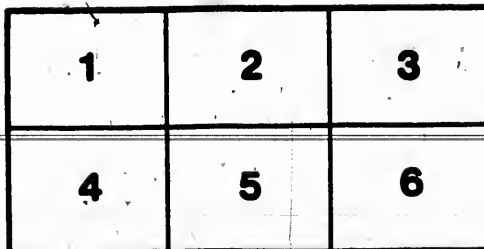
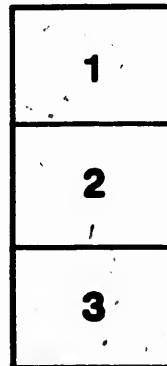
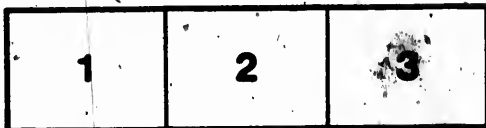
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*From J. Forman*

N. W. McLAREN.

CHAS. BATE.

# TELEPHONE

CATALOGUE

No. 15.

AND PRICE LIST . . .

**NESS, McLAREN & BATE**

MANUFACTURERS OF

Telephones, Telegraph Instruments,  
Annunciators,

Electrical House Furnishings,

and General Electrical Supplies,

**MONTREAL.**

## TERMS:

In order to save time, parties ordering goods who have no account in our books, will please accompany order with cash or references. If preferred, goods can be sent C. O. D. Nominal charges for packages.

We employ experienced packers, and will not be held responsible for damage in transit.

If you wish for any further information, we would be glad to write you fully on anything in our line.

**NESS, McLAREN & BATE,**

**MONTREAL, Canada.**

## **TELEPHONES.**

---

Do you wish to start a Local Exchange in your town or village?

---

Would you not like to connect your office and house, or your house and stable by Telephone?

---

Would it not save a great deal of time to have each department of your factory connected by Telephone? or, each floor of your store?

---

We sell these instruments outright.

---

Our Telephones are made of the very best material, and the workmanship is guaranteed.

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Our aim is to secure your trade by furnishing the best Telephone in the market at a reasonable price.

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**MAIN LINE TELEPHONES.****"LONG DISTANCE" TELEPHONE.**

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## MAIN LINE TELEPHONES.

Our Celebrated Long Distance Telephone, same as our No. 1 Standard, only fitted up with our Mildé Microphone (non-infringing) Transmitter.

Specially good for long distance.

Equally good for short.

Price, complete, with two batteries,

\$18.00.

These Transmitters are giving great satisfaction on all long distance lines in France, Germany and England, and are rapidly taking the lead over all other makes in Canada and the United States.

A trial of this instrument is the best proof that we can offer.

**MAIN LINE TELEPHONES.**

No. 1 "STANDARD" MAIN LINE  
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**MAIN LINE TELEPHONES.****Main Line Telephone, No. 1.**

Standard Magneto, Blake Transmitter, Receiver, Cord and Battery, complete, with automatic shunt, wired up, and ready for use, as shown in cut.

Price, each, with battery,

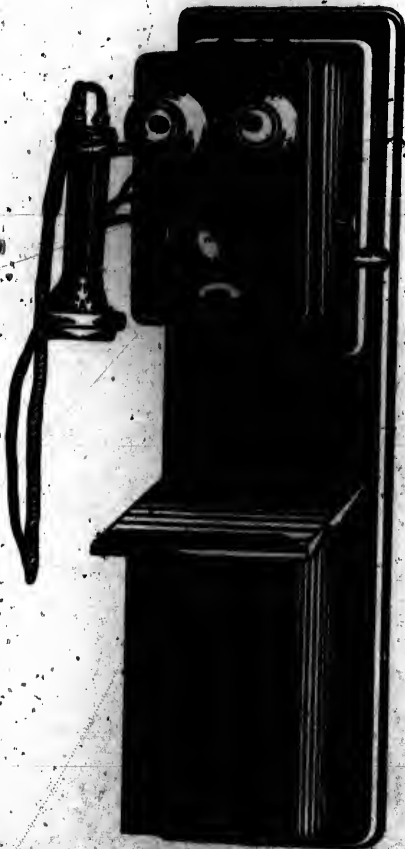
**\$17.00.**

These instruments are guaranteed to talk over long or short lines, and can be depended on every day in the year.

All our telephones are made of black walnut, unless specially ordered otherwise. (Extra charge if made up of any other wood.)

We make the best Blake Transmitter in the market, and can furnish them complete in box, or in parts, consisting of castings, drilled and tapped, diaphragms, carbon buttons, platinum points, &c., &c.

**MAIN LINE TELEPHONES.**



**No. 2 MAIN LINE TELEPHONE.**

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## MAIN LINE TELEPHONES.

### Main Line Telephone, No. 2.

This is an excellent 'Phone, same as our No. 1, only the Blake transmitter is mounted in the same box with the magneto bells. It is more compact in this form, therefore more suitable for interior work.

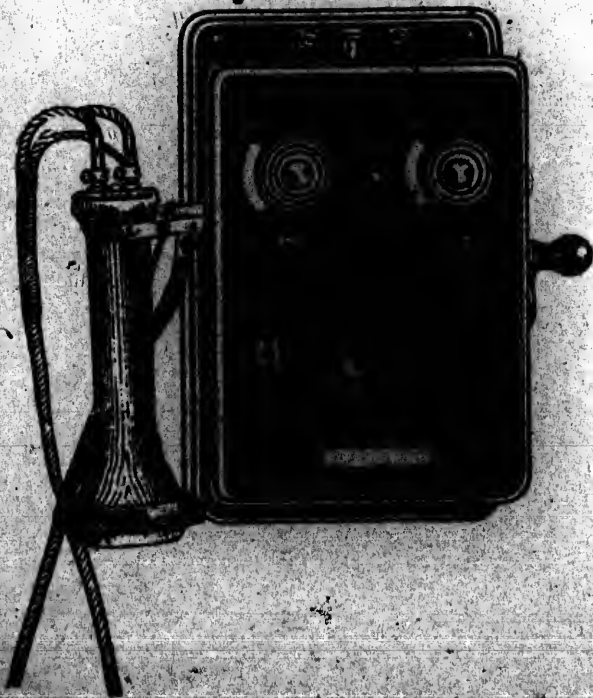
COMPLETE, AS SHOWN IN CUT.

Price, with battery,

\$16.00.

All our telephones can be fitted up with the "MILDÉ" transmitter, but two batteries would have to be used instead of one to give *perfect* satisfaction.

# MAIN LINE TELEPHONES.



No. 3 MAIN LINE TELEPHONE.

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**MAIN LINE TELEPHONES.****Main Line Telephone, No. 3.**

Standard Magneto and Transmitter combined in one box, without battery-box or backboard.

The battery is placed anywhere conveniently near the instrument, and wired up to the two binding posts at the bottom of the Phone.

**Price, complete, with battery,**

**\$15.00.**

**With nickel-plated stand for desk,**

**\$2.50 extra.**

These instruments are very popular for private lines, affording a cheap means of communication between factory and office, or store and house.

# MAIN LINE TELEPHONES.

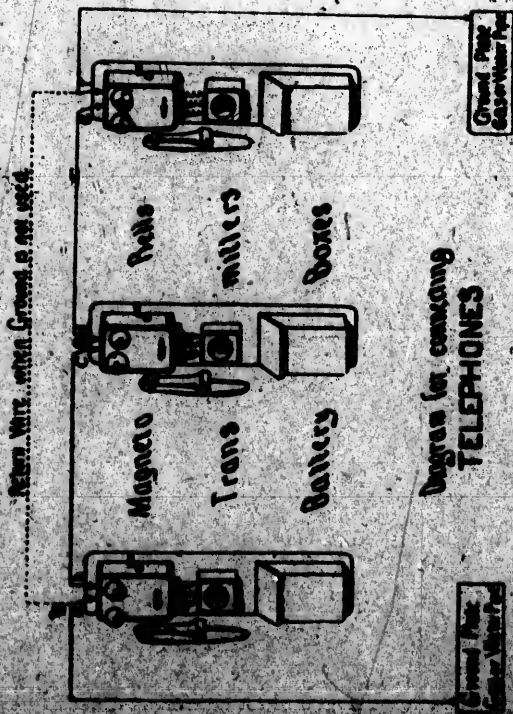


Diagram for connecting our Main Line Telephones.



## MAIN LINE TELEPHONES.

### Instructions how to connect our Main Line Telephones.

SEE DIAGRAM ON OPPOSITE PAGE.

If only two instruments are to be connected, one wire is to be run from binding post marked b to binding post e, but if more than two are to be connected, they should be wired as per diagram, b to c and d to e, etc. If the terminal instruments are not far apart, the return wire may be run from a to f (as per the dotted line), otherwise a ground connection may be made from a to f. If they are to be grounded on a gas or water pipe, wrap about two feet of bare wire tightly around the entrance pipe, and solder it well to ensure a good connection. If this is not practicable, solder the ends of terminal wires to copper plates, each having a surface of three square feet, and place them three or four feet in damp earth.

For protection against lightning in all instruments, except terminal ones using a ground wire, run a wire from the centre binding post "G" to ground, and insert plug in hole between the metal plates during a storm, taking care to remove same afterwards. In terminal instrument, where a wire already runs to ground, inserting the plug is all that is necessary.

## CENTRAL STATION SWITCH-BOARDS

Our Switch-Boards are all finely finished in hardwood, natural cherry, and built of the very best materials throughout.



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finished  
t of the**CENTRAL STATION SWITCH-BOARDS**

We do not keep all sizes of Switch-Boards in stock, but usually make them up to order with as many drops as may be desired.

It is well to always order a larger board than you have subscribers for, as the chances are you will, from time to time, add more subscribers.

We furnish Switch-Boards complete or all or any of the parts necessary to make a Switch-Board.

PRICES ON APPLICATION.

**SWITCH BOARDS.**



WALL SWITCH-BOARD

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## CENTRAL STATION SWITCH-BOARDS

On opposite page we show a cut representing our Wall Switch-Board, which is suitable for an exchange of not more than ten or twelve subscribers.

A separate telephone is used in connection with this board. For a Switch-Board of larger size, we would refer you to our Standard Exchange Switch-Board.

PRICES ON APPLICATION.

# WAREHOUSE TELEPHONES.



WAREHOUSE TELEPHONE, No. 11.

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## WAREHOUSE TELEPHONES.

### Warehouse Telephone, No. 11.

This instrument consists of Transmitter, Hook, Receiver, Cord, Battery Box, Battery for Transmitter, Bell and Switch, all mounted on Backboard, and wired for any number of points.

Price, complete, with battery,

**\$12.00.**

11. Ringing Batteries, for warehouse telephones, are always charged for extra at the rate of \$1.00 per cell (Leclanché).

These instruments are all prepared for actual use before leaving the factory, the wires having simply to be attached to the

**WAREHOUSE TELEPHONES.**



WAREHOUSE TELEPHONE No. 10.

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**WAREHOUSE TELEPHONES.****Warehouse Telephone, No. 12.**

This instrument is complete, with exactly the same parts as the No. 11, excepting the battery box, the battery being placed at any convenient point, and wired up to the binding posts at the bottom of the 'Phone.

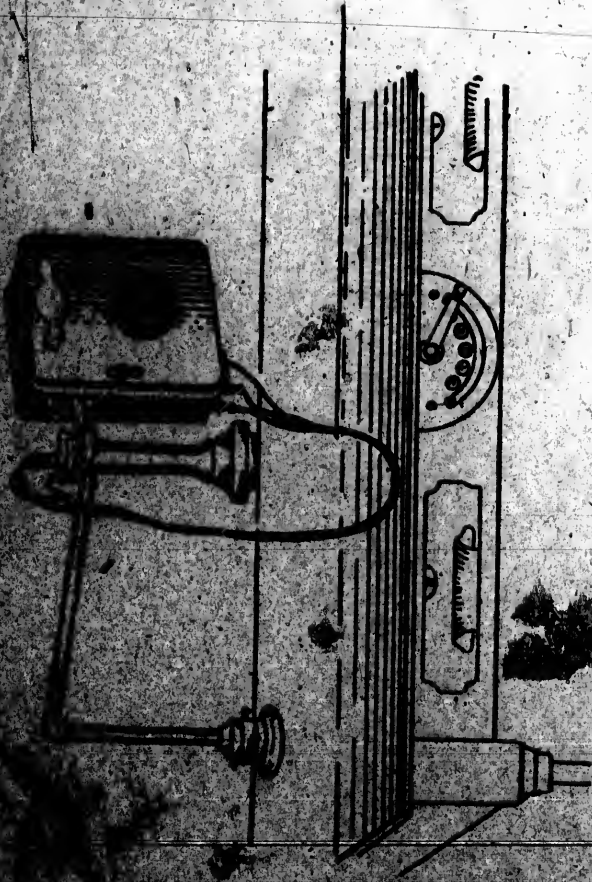
Price, complete, with battery,

\$11.50.

The same system is used in wiring as with the other warehouse telephones.

Each transmitter takes one cell of battery. For calling up, an extra *ringing* battery is necessary of, say, three to six cells, according to distance and number of telephones in circuit.

# WAREHOUSE TELEPHONES.



TELEPHONE, No. 13.

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**WAREHOUSE TELEPHONES.****Over Desk Warehouse Phone,  
No. 18.**

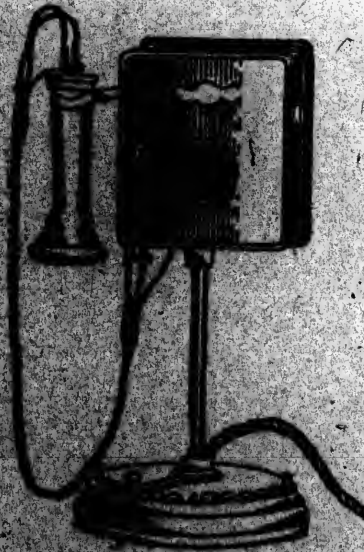
These instruments are a great convenience to business men. They may be attached to wall, table or desk, with a swinging arm, so that, when not in use, the telephone may be turned aside out of the way.

Price, complete, with battery,

**\$13.50.**

This outfit consists of Transmitter, Hook, Receiver and Cord, mounted on nickel plated swinging arm, with separate switch for connecting with other instruments.



**WAREHOUSE TELEPHONES.****WAREHOUSE TELEPHONE, No. 14.**

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## WAREHOUSE TELEPHONES.

### Warehouse Telephone, No. 14.

A complete instrument with Transmitter, Hook, Receiver and Cord, mounted on upright nickel-plated stand, with switch at foot.

Price, complete, with battery,

\$13.00.

These 'Phones are specially designed for office use, and may be fastened to desk, or simply attached to end of flexible cord, and moved about at will.

14.

WAREHOUSE TELEPHONES.



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**WAREHOUSE TELEPHONES.**

Our "Automatic Return" Warehouse Telephone.

*Patented in Canada, - September 12th, 1893.*  
*United States, " 19th, 1893.*

PATENT APPLIED FOR IN FOREIGN COUNTRIES.

This instrument, complete, with Transmitter, Receiver and Cord, Automatic Return Switch, Battery Box and Backboard.

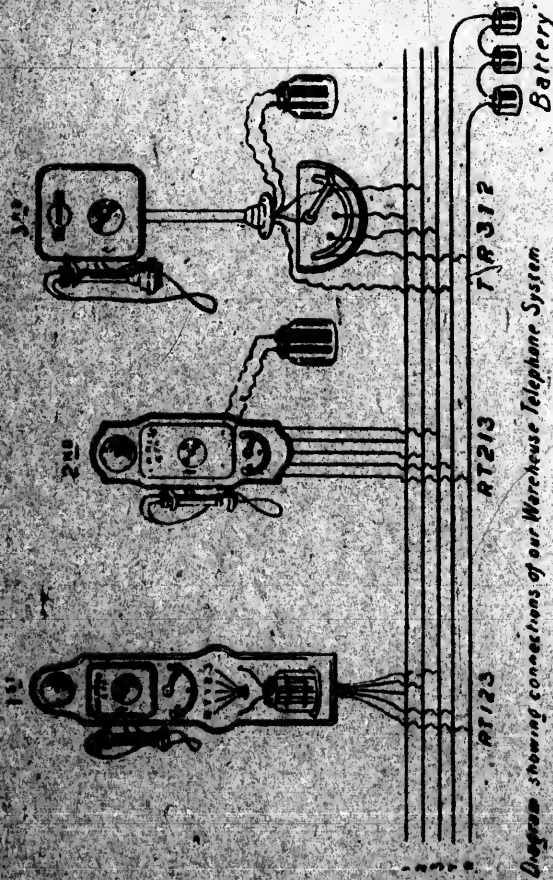
Price, with battery,

\$18.00.

The Automatic Return, a very valuable feature, is fully covered by patents.

Made on principle of our ordinary warehouse instruments, but with special attachment, so arranged that switch-lever returns automatically to its own point when the receiver is hung up after a conversation is finished. This can be applied to any type of our warehouse instruments.

**WAREHOUSE TELEPHONES.**



*Diagram showing connections of our Warehouse Telephone System*

*Diagram for connecting our Warehouse Telephones.*

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## WAREHOUSE TELEPHONE CONNECTIONS.

### Instructions how to connect our Warehouse Telephones.

This is the only system that insures thorough connection between different departments.

No exchange is required, each instrument having its own Switchboard.

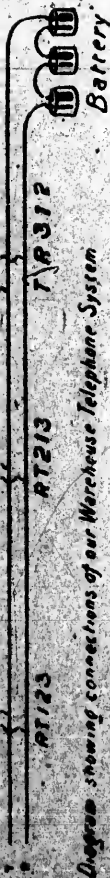
Instant communication is at once procured with the instrument required by turning the Switch to the desired number.

The lines can be used by more than two persons at one time; for instance, with a system of nine instruments, numbers one and three, two and eight, five and seven, four and nine, can converse at the same time.

We use a Cable made up with No. 18 Conductors, covered with office or weather-proof braiding. This Cable must have one wire for each instrument, and also two extra wires for the ringing and talking circuits; for instance, a system of eight telephones would require a ten-wire Cable. This is run around to the different instruments, and tapped into as shown in the diagram.

SEE DIAGRAM ON OPPOSITE PAGE.

NESS.



# TELEPHONE PARTS.



Milde Microphone, in frame, ready  
 for mounting on door of Transmitter  
 box ..... each, \$1.25

Milde Transmitter, complete, in walnut  
 box, with long distance Induction  
 coil ..... each, \$4.00

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## TELEPHONE PARTS.

### The Mildé Microphone Transmitter.

PATENT, NON-INFRINGEMENT GRANULAR  
CARBON TRANSMITTER.

This transmitter has taken the lead over all others in the *world*, and only needs a trial to prove its merits. It is a *sound magnifier*, always in adjustment, and cannot get out of order. You cannot *blur* this transmitter by loud talking, as is often the case with the Blake when too finely adjusted. A shout or a whisper is heard with equal clearness.

Sample instruments sent on approval to intending purchasers. Give it a trial and you will have no other.

SEE OUT AND PRICES ON OPPOSITE PAGE.

NESS, McLAREN & BATE.

TELEPHONE PARTS.



BLACK TRANSMITTER.

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## TELEPHONE PARTS.

Blake Transmitter, complete, in walnut box,  
with Induction Coil.....\$3.50

Fitted up with Hook for Receiver, . . . \$5.00

We make a specialty of Blake Transmitters, and claim them to be the best in the market.

Standard Magneto Bell, in Walnut box, ~~\$5.00~~ <sup>5.00</sup>

Fitted with long lever-hook, . . . ~~5.00~~ <sup>5.00</sup>

TELEPHONE

PARTS.



ACTUAL SIZE.

**WACH  
RECEIVERS.**

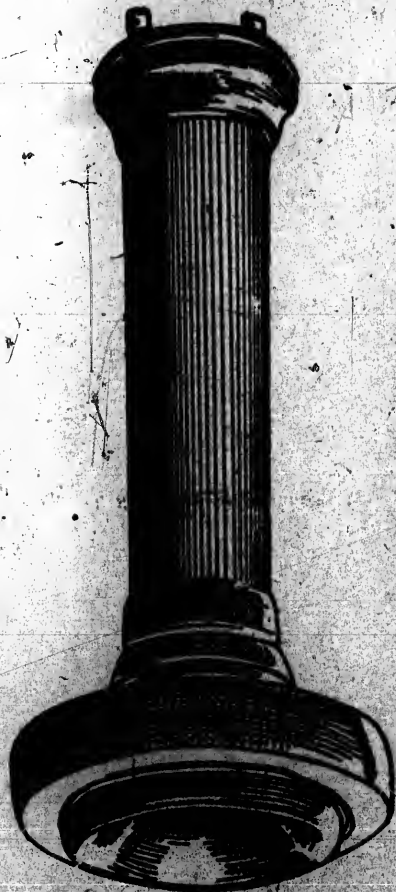
These take up very little  
space, and have very  
powerful Magnets.

PRICES ON APPLICATION.

HARD RUBBER SHELL with best Laminated Magnets,

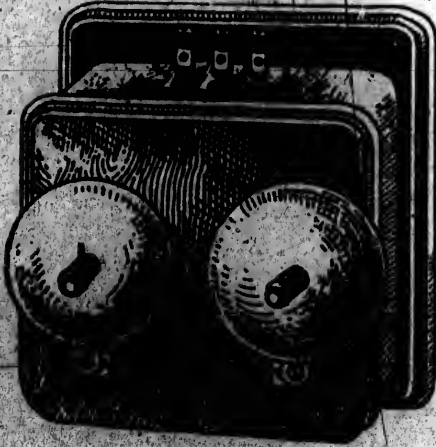
TELEPHONE PARTS.

HARD RUBBER SHELL, with best Laminated Magnets,  
complete, tested, ready for use.



Price, without Cord, \$1.75 each.  
" Cord only, .25 "

These Receivers are carefully constructed  
and finely finished.

**LINE SUPPLIES.****STANDARD EXTENSION BELL, \$3.50.****DOUBLE POLE SWITCH, \$2.00.**



## LINE SUPPLIES.

Oak Side Blocks,

Locust and Oak Top Pins,

Hard Rubber Hooks,

Pony Glass Insulators,

Regular Glass Insulators,

Porcelain Insulators,

Galvanized Iron Wire,

Cross Arms,

Window Connectors,

etc., etc., etc.

Line Supplies kept constantly on hand.

WRITE FOR PRICES.

## LINE SUPPLIES.

We also carry in stock :—

Incandescent Lamp Cord,  
 Cord Adjusters,  
 Rubber Bushings and Nipples,  
 Shade-holders, Sockets,  
 Incandescent Lamps,  
 Rubber Tubing, Tape,  
 Cleats and Moulding,  
 Single and Double Pole Jack Knife Switches,  
 Galvanized, Weatherproof and  
 Rubber-covered Wires,

AND EVERYTHING IN THE LINE OF

Electric Bells, Batteries, Push Buttons,  
 Annunciators, and other  
 Electrical House Furnishings,  
 Telegraph Instruments,  
 Electrical Books,  
 Medical Batteries, &c.

PRICES ON APPLICATION.

## FAULTS.

“IN telephonic, as well as in all other systems of electric communication, certain defects, called ‘faults,’ will from time to time develop themselves, however well the apparatus may have been constructed and erected.”

Such faults may be readily located by those familiar with telephonic apparatus, but to the inexperienced the causes may be very difficult to trace: we therefore subjoin a list of the common faults, with suggestions as to their origin:—

1. **CAN HEAR BUT CANNOT BE HEARD.**—This fault is frequently caused by leaving the receiver off the Switch-hook, after conversation is ended, the neglect resulting in the premature exhaustion of the battery.

2. **CAN HEAR AT BOTH ENDS, BUT CAN RING ONE WAY ONLY.**—This may result from a weak battery at one end, or the bell at the faulty end may be out of adjustment.

3. **CAN RING IN BOTH DIRECTIONS, BUT CANNOT HEAR AT EITHER STATION.**—This may result from a broken receiver-cord, or from a disconnected wire in some other part of the secondary (or speaking) circuit, at one end only.

4. **RINGING AND SPEAKING ALIKE UNSATISFACTORY.**—This may result from weak batteries at both ends, or from a bad joint or bad earth connection.

5. **HEARING BAD, WITH RASPING NOISES.**—This may result from either of several causes—a loose joint, rust or buckled diaphragm, or excessive battery power in microphone circuit.

**NOISES IN ONE RECEIVER ONLY.**—This will probably result from one or more particles of iron having been attached to the poles of the magnet, the diaphragm's vibrations being interfered with in consequence. To remedy this, unscrew Receiver cap and wipe off magnet tip.

Badly soldered joints, loose terminals, dirty contacts, broken battery jars, and terminals short circuited, are also frequent causes of local causes.

Line faults may be caused by two or more lines in contact, by the line making partial or dead earth, or by a broken wire or insulator.

**LINES IN CONTACT** may result in cross talk, and bells ringing when not required.

**LINE MAKING PARTIAL EARTH** will cause ringing and speaking to be alike unsatisfactory.

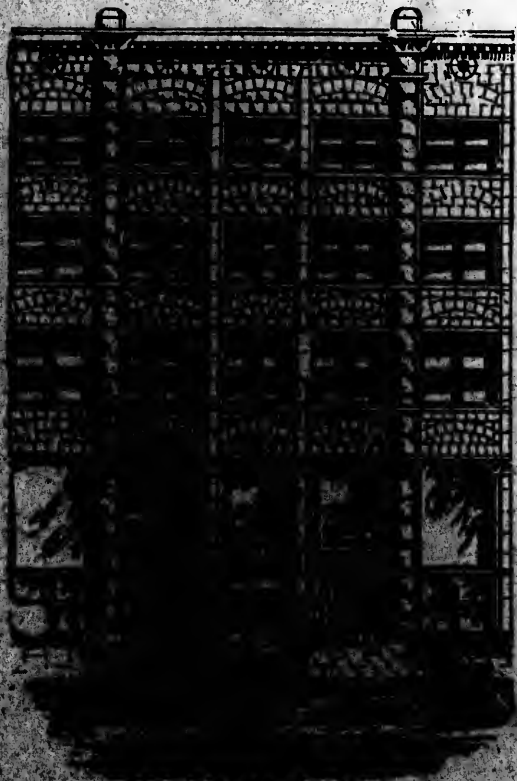
N. W. McLAREN.

CHAS. BATE.

# NESS, McLAREN & BATE,

MANUFACTURERS OF

TELEPHONES AND SWITCHBOARDS,  
TELEGRAPH INSTRUMENTS,  
AND FIRE ALARM APPARATUS.



GENERAL ELECTRICAL SUPPLIES.

Office and Factory: 749 CRAIG STREET,  
MONTREAL, Canada.

