

# Catalogue Number Forty-Three

Success depends upon doing things a little better than anybody else



# Chicago Telephone Supply Company

**Factory and General Offices:** 

Elkhart, Indiana, U.S.A.

New York Salesroom 150 Broadway

Pacific Coast Branch House Rialto Building, San Francisco





#### GUARANTEE

Material and workmanship guaranteed against inherent defects.

If any part or parts prove defective through any fault of this factory, such part or parts will be cheerfully repaired or replaced without charge, regardless of time that may have elapsed from date of purchase.

All apparatus fully warranted to give satisfaction in the work for which it is designed, when properly installed.

No risk is incurred in buying Chicago Telephones.

This factory guarantees every part as well as the complete instrument without any time limit.

In this way purchasers are protected by the Chicago Telephone Supply Company, the largest and strongest factory in the world devoted to the production of Bridging Telephones.

A guarantee bond will be furnished with every shipment.

#### **TERMS**

Ten days net to parties having good commercial ratings or satisfactory references.

Goods sent C. O. D., by freight or express, if desired. Prices subject to change without notice.

Care is exercised to pack all goods securely, but our responsibility ends when we receive a receipt from carrier. If goods are damaged in transit, customers must make claim for damages to railroad or express company delivering the shipment.

Write for our special price list on line material.





## EXPERIENCE AS A FACTOR

Years of experience have enabled this factory to overcome points of weakness until at this time every Chicago Telephone is as indestructible as a plow, as finely finished as a piano and as carefully made as a watch. A Guarantee Bond will be furnished with every instrument, if desired, and there is no time limit on the guarantee.

Success in building a high-grade telephone is simply the result of taking infinite pains in every detail. That is why so few factories have succeeded in establishing a durable reputation for their product. This factory does not claim to make the only telephone, but purchasers may be assured that Chicago Telephones represent the highest state of the art in every particular. Thousands of satisfied customers stand ready to vouch for the efficiency, durability and piano-like finish of these instruments. Purchasers will be furnished with references in their own vicinity upon request.

In the following pages are illustrations and descriptions of Chicago Switch Boards, Telephones and Parts. The merits of each part and instrument are set forth in appropriate places, so that purchasers may know exactly what they are buying and determine for themselves the fact that every feature is the result of years of experience, and is conscientiously constructed from the best materials obtainable on lines approved by the highest engineering talent.

We boldly claim that such superior apparatus would be impossible to produce by any factory of less experience, because the many details are as much the result of practical use as of engineering design. Any factory with less experience or with less careful inspection in every department will encounter many difficulties which will prevent uniformity in the durability and efficiency of the apparatus.

We recognize that a telephone is a piece of furniture as well as an electrical instrument; consequently every Chicago Telephone is mounted in a cabinet which cannot be excelled in point of finish. Quarter-sawed oak of the best grade is given a hand-rubbed golden oak finish of the highest quality. A Chicago Telephone may be placed in the finest homes among the most expensive and finely finished furniture, with the assurance that it will please the eye as well as satisfy the subscriber in its operation. The wiring scheme is so arranged that all wires are concealed and protected, but at the same time are easily accessible.

Prices are made as reasonable as possible, consistent with the extreme care taken in the manufacture and finish of every part.

We do not attempt to compete in point of price, but purchasers of Chicago apparatus are assured of efficient service by a guarantee which is as good as a government bond.

### THE CHICAGO METHOD

The Generators used in Chicago Bridging Telephones are constructed on strictly scientific lines, and retain their power permanently without deterioration. The Chicago method is the most expensive, but the superior degree of excellence justifies the higher cost.

The Chicago method is to divide each bar into three distinct magnets, and consequently a Chicago Five-Bar Bridging Generator requires fifteen magnets.

A larger quantity of magnet steel is used on the Chicago Bridging Generator than on any other generator on the market.

All magnet steel used by reputable factories is made after the same formula. After making the steel it must be hardened and magnetized. It must be hardened perfectly or it will not permanently retain magnetism. The hardening process is to bring the steel to a cherry red heat and then chill it instantly. The smaller the cross section of the steel the quicker it will chill at the center and consequently the harder it will be. Other factories do not divide the magnet bars into three sections; consequently the center of such bars requires a longer immersion in the chilling medium, and since the chilling process is slower the same degree of temper is not secured. Ask your blacksmith or any steel worker about this.

The Chicago magnets never have any soft spots, while more than half of the generator magnets built on the old plan with larger cross section have soft spots through which the magnetism will leak out like water from a bucket with a small hole in the bottom.

It will be seen that to insure permanency the Chicago method is reliable, whereas any other method which does not employ laminated bars is not. The facts outlined above are not based upon any new or mysterious principle. They are based upon common sense, experience, and the accepted principle of lamination.

Lamination is so plainly advantageous that to mention the fact seems almost superfluous. A compound magnet will always give better results than a simple one; that is, a magnet of a given size will be much stronger and more permanent if it be made up of a number of small magnets than it will if made of one piece. That is what is meant by lamination. In dynamos of all sizes and kinds, motors and other electrical apparatus, the principle of lamination is demanded. The electrical law is constant, and therefore the same principle must be advantageous in generator construction.



THE CHICAGO METHOD



Well-posted telephone men will not require argument to agree with the statement that lamination is desirable in the construction of electrical apparatus. No reputable factory makes a bridging generator which is not equipped with a laminated armature. Every manufacturer admits the advantages of lamination, but strangely and inconsistently enough, few of them apply the principle in any marked degree to magnets used on bridging generators. The reason is not far to seek. By taking advantage of modern methods and modern machinery it takes no more time and no more manual labor to make a large magnet than a small one. More power is consumed, but that item is too small to count in the cost. If a five-bar generator is made without lamination, five magnets are made.

If a five-bar generator is produced by the Chicago method fifteen magnets are made. The item of labor in preparing the magnets of a Chicago Five-Bar Bridging Generator is three times as much as the same item in a five-bar bridging generator on which laminated magnets are not used. The expense of assembling a laminated magnet is also much greater. These facts will instantly appeal to any unprejudiced mind.

The other specifications of Chicago Bridging Generators are as near perfection as the present state of the art will permit.

The laminated armature is larger than is used by competitors and consists of more than one hundred pieces, perfectly insulated and wound with more silk-covered magnet wire than is used on any competing generator. The air gap between the armature and the fields is as small as possible; the gear is large, wide and noiseless. The automatic cut-in is of a design which has proved its worth by twenty years of continuous usage. The entire generator is self-contained and mounted in the box in such a manner that it may be removed instantly.







## CHICAGO BELL TYPE EXPRESS SWITCH BOARD

The Switch Board is the heart of a telephone system. Any defect in it will render useless the best of telephones and line construction.

In the Chicago Bell Type Express Switch Board the drops and jacks are self-contained and each drop and jack may be removed from the board without interfering with any other drop and jack. The jacks may be removed from the drops if desired. Each drop is encased in a tube of Norway iron, which is insulated from the frame of the drop and from all other parts. The night bell circuit is insulated from all other parts; this point is important because in other boards if two or more drop coils become grounded on their cores, there is a possibility of their being connected with each other through the night bell circuit and thus to cause confusion.

The coil of each drop can be removed from the drop and from the board in thirty seconds, without taking the drop from the board and without interfering with any other part. In the event of coils being injured by lightning, they can, therefore, be replaced in thirty seconds without the necessity of removing the drops from the board. The armature and trigger are removable from the drop without the use of tools. In fact, throughout the construction of this board we have so arranged that all parts are easily accessible and can be removed and replaced without interfering with any other part. This applies even to the number on the drop shutters. Hard rubber insulation is used throughout.

The Chicago Bell Type Express Switch Board embodies all the latest features contained in all other switch boards, and at the same time presents many new and novel features that are very desirable. Each coil is self-contained in a tubular shell. The coils in these shells are removable by any inexperienced person.

The jack has heavy stamped brass framework, springs of heavy German silver mounted in a pure hard rubber block. The entire jack is mounted on a metal shell thoroughly insulated in front and rear by two heavy rubber plates. The two main line springs in the jack are provided with binding posts, and the connecting wires, or line wires, are fastened under a screw head. The construction insures the firmest contact, and at the same time allows the line wires to be readily removed from the drop for testing.

The night alarm on this board is absolutely perfect, as there are no circuits taken through any hinge joints or construction of similar character. When the shutter falls, it is impossible for the night bell to fail to ring, provided, of course, the night bell switch is turned on.

The drops are held in place by two screws which are held in perpendicular heavy brass bars. All the drops and parts of this board are held together by superstructure metal. Nowhere are any wooden supports used. The keys are very simple in construction and accomplish anything that any other key on the market does, and at the same time they are composed of fewer parts which are more durable and simpler in design than any other key on the market.



Only pure hard rubber is used in the insulation, and the friction of the key is reduced to a minimum by the use of rollers. It is impossible for the roller cam to ever stick or become stiff in its action. The springs are unusually heavy and are made of pure German silver of the best grade. All springs are straight and are mounted in an upright position. Each spring is provided with platinum points, both in the talking and ringing circuits.

The back of the key is composed of heavy three-sixteenth inch brass stamping and this back is mounted to a handsome nickel-plated escutcheon plate. It is impossible for the operator to pull the cam out of adjustment. No matter what degree of rough usage it may receive, the key will always be in perfect order.

All parts are of stampings, no castings being used. This insures a perfect uniformity in the manufacture of this key. Black, polished hard rubber handles are provided, and the key in general outlines presents a handsome appearance.

Especial attention is called to the operator's jack, this being usually a very weak portion of a switch board. This jack is used for cutting in the operator's head telephone, and at the same time automatically closing the transmitter battery circuit.

The jack frame is made from one piece of brass throughout, with contact springs mounted directly on a projecting knob, thus making the whole self-contained. It is attached to the board by machine screws on the inside, making a very rigid case, and at the same time not marring the face of the jack. The transmitter arm has a double adjustment, is made from brass highly nickel-plated, and is graceful in appearance. Cords, weights, and binding posts are provided with the arm.

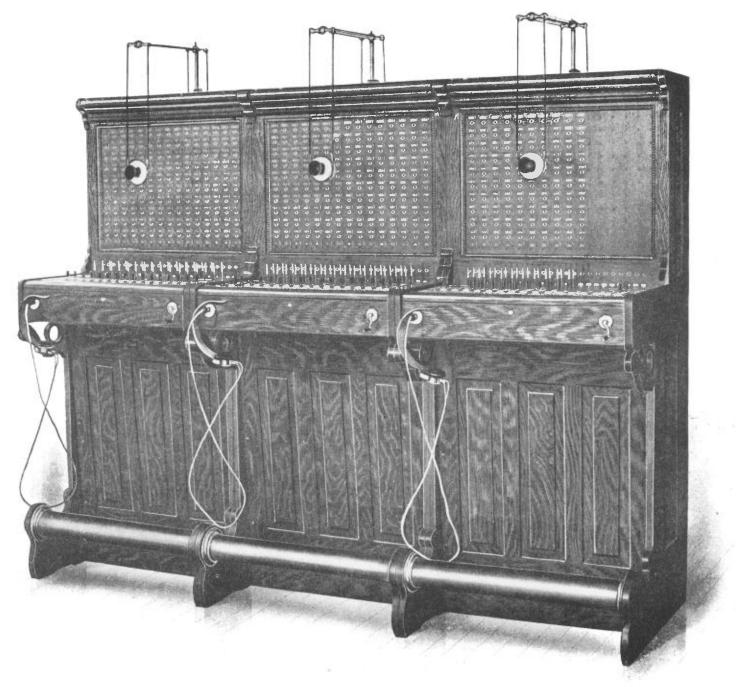
The balance of the apparatus contained in this board is our very best product, and special attention has been paid to every detail in the manufacture of this board in order to produce a perfect switch board. Full equipment of batteries and night alarm is provided for the board.

All switch board cable is made of tinned wire with two insulations of silk and one of cotton.

The switch board cords are the "kind that won't wear out."

Multiple or flashlight transfer boards furnished for exchanges of any size.

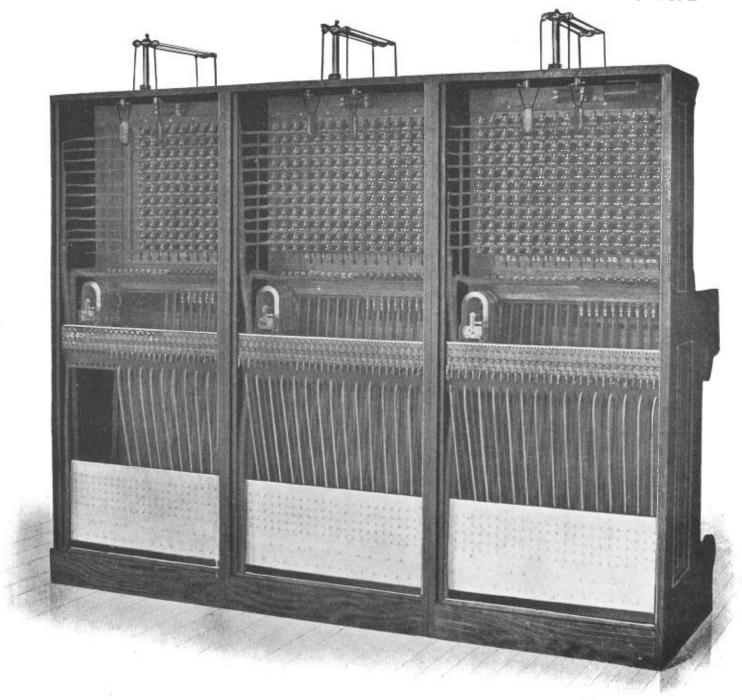
# CHICAGO BELL TYPE EXPRESS SWITCH BOARD



Cabinet Capacity, 450. Transfer Capacity, 750. Installation, 400. Sections of, 150. Code Number, 75.

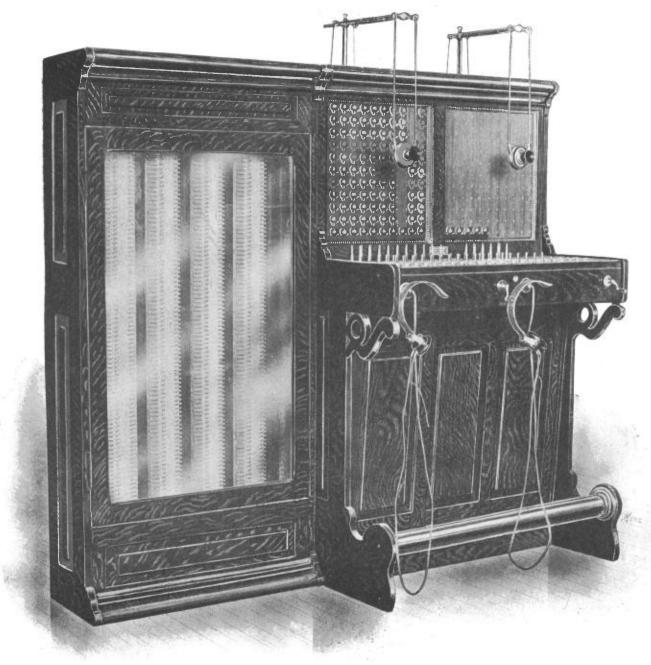


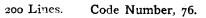
# CHICAGO BELL TYPE EXPRESS SWITCH BOARD





# CHICAGO BELL TYPE EXPRESS SWITCH BOARDS









**CHICAGO** 

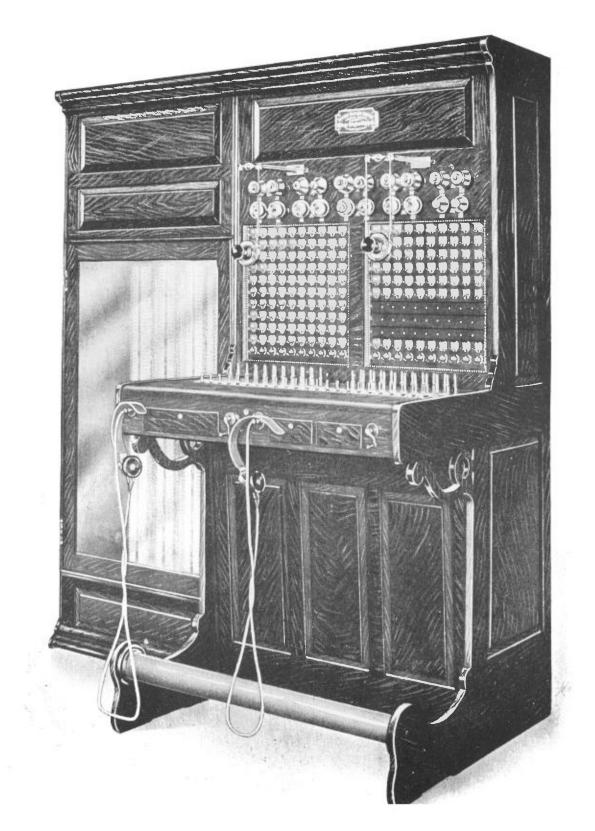
BELL

**TYPE** 

**EXPRESS** 

**SWITCH** 

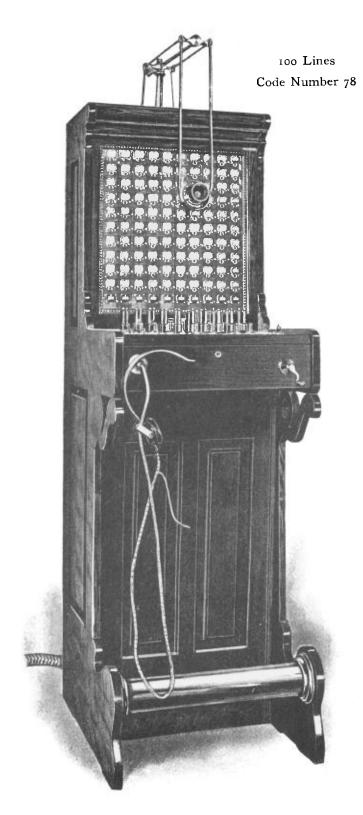
BOARD



Special Cabinet
with
Distributing
Cabinet

200 Lines. Code Number, 77.



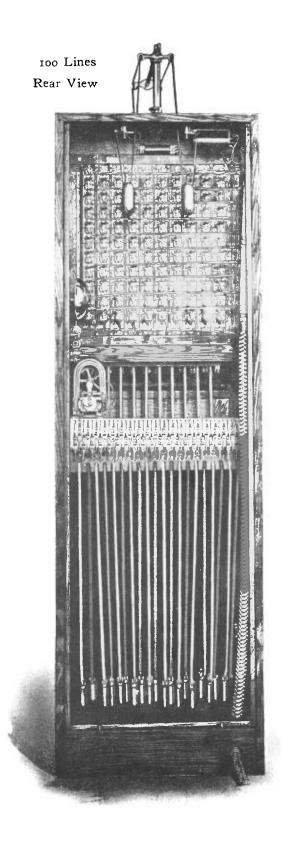


CHICAGO
BELL
TYPE

EXPRESS

SWITCH

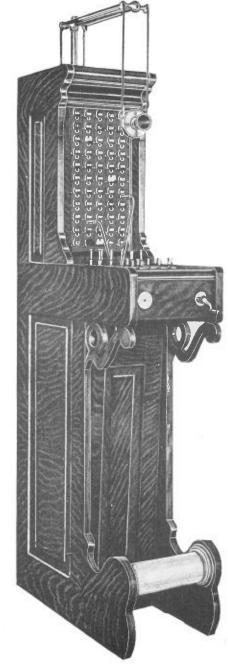
BOARD







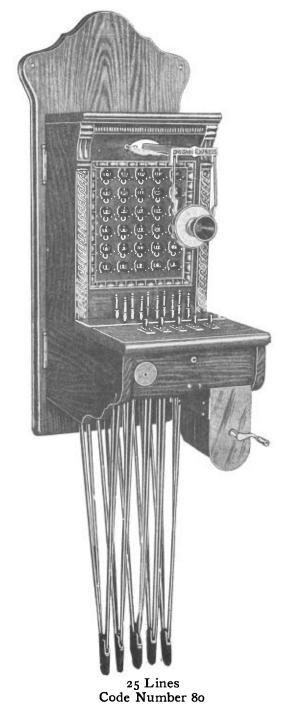
# Chicago Bell Type Express Switch Boards



50 Lines Code Number 79



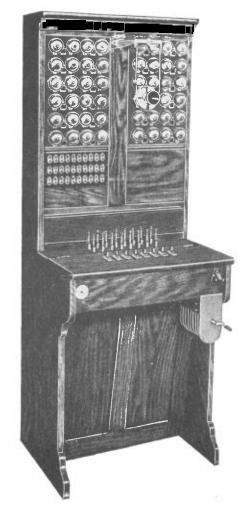
Code Number 81





## Chicago Toll Board

# Chicago Rural Line Switch Board



This board is intended for use in making connections between party lines. It is so arranged that incoming signals are received by ringer movements (strikers), mounted on the board. Immediately below each ringer movement is mounted a drop shutter which will fall when the ringer movement is energized.

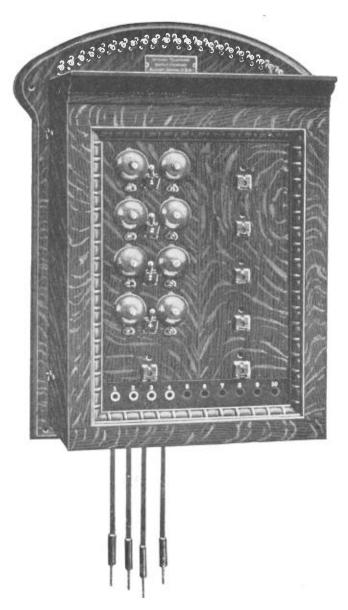
In this manner the ringer movement indicates whether or not the switch board is wanted, and the drop shutter indicates which line is calling.

The Toll Board will be esspecially valuable in branch exchanges where the board is located in a store or office and the operator has other duties besides attending the switch board.

#### Code Number 82

For local lines having only one telephone on each line the toll board may be equipped with drops, thus forming a combination local exchange and toll board.

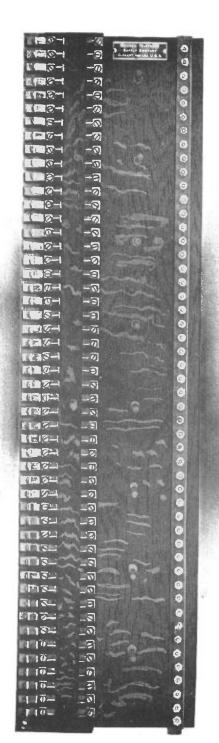
This board has capacity for twenty-four bridging lines (bells), or for twelve bridging lines (bells) and fifty local lines (drops).

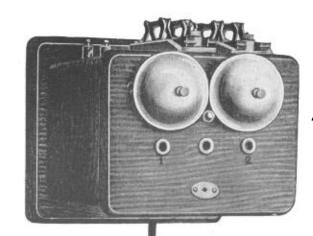


## Code Number 83

This board operates in same manner as the Chicago Toll Board. It is not equipped with operator's set and must be used in connection with a telephone located at the central office. It is especially designed for work where ten or less lines converge at one point.

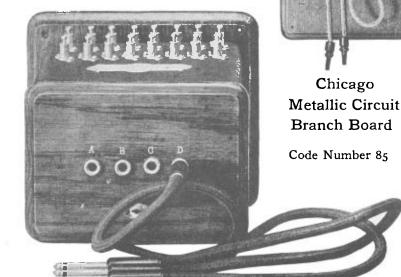






Three Way Jack Box

Chicago Plug Board Code Number 84 For Ground Circuits



For use in connection with extension bells for receiving signals from and making connections between bridging party lines.

These boards may be arranged to accommodate any number of lines, but are particularly recommended for use at stations where from two to six lines converge. At such points they will give as good satisfaction as equipment costing ten times as much.

Special Distributing Board and Lightning Arrester

Code Number 86



#### CHICAGO COMMON BATTERY SYSTEM

#### Our Aim

SIMPLICITY is our aim in the construction of Chicago Common Battery Switch Boards and Telephones. Our specialty is the manufacture of small sized switch boards of from twenty-five to one thousand line capacity.

In designing the Chicago line of common battery apparatus we realize that in order for our apparatus to be popular and successful with the managers of small exchanges, we must produce equipment that is as simple in operation and construction as the magneto system. This we have done.

Contrary to the general conception of the telephone public the relay, when properly built, is a far more satisfactory piece of apparatus than a tubular line drop with which all telephone men are familiar. Chicago signals are especially reliable and are so constructed that it is impossible for them to fail to register a call at all times and under all conditions. As many contacts as possible have been eliminated. In the Target Board there are twenty relays per hundred lines.

Any man who is capable of installing a Magneto Board will find it no difficult feat to install and operate a Common Battery System. We have adopted a low voltage which has been standard with the Bell Company for years, and no annoying leaks are experienced through trees, etc., as is common in high voltage systems. The Chicago system is entirely free from any self-induction or cross talk, as all of our lines are perfectly balanced. We accomplish this feat without the use of any retardation coils. There is never any trouble in the Common Battery system where the lines are always kept balanced in the board. This we have accomplished in a very simple and effective manner. The right and left hand side of the lines in our boards are always of the same degree of resistance and retardation; hence, a perfectly balanced circuit.

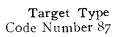
In the larger Switch Boards the same degree of simplicity characterizes Chicago apparatus. Divided into outfits they are complete in themselves and when once purchased there are no additional parts to buy. One complete shipment is made with full and concise instructions showing how to erect and maintain a Common Battery system. It is, therefore, no more difficult for a novice to install one of these systems than it would be for him to install the other type of system known as "The Magneto."

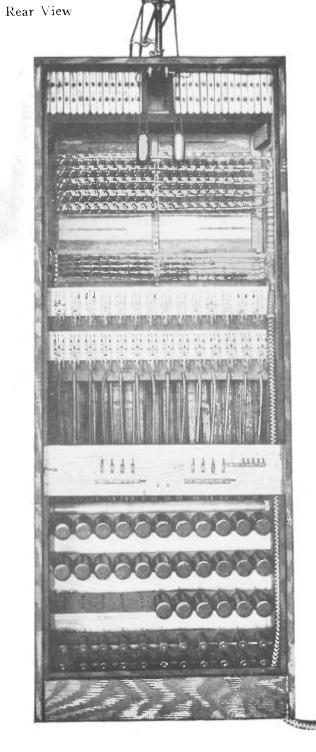
Hamlets, villages, and towns, by the installation of the Chicago line Common Battery apparatus, are enabled to give their patrons metropolitan service, thoroughly modern and up-to-date in every particular. We wish to state here with due emphasis that we are prepared to furnish small Common Battery Boards for any hamlet, village, or town that may desire them, regardless of what the conditions are covering the source of charging power.

Only the best of materials enter into the construction of this line of apparatus; only the best German silver springs are used, platinum contacts, pure hard rubber, well seasoned wood and thoroughly and carefully insulated wire.

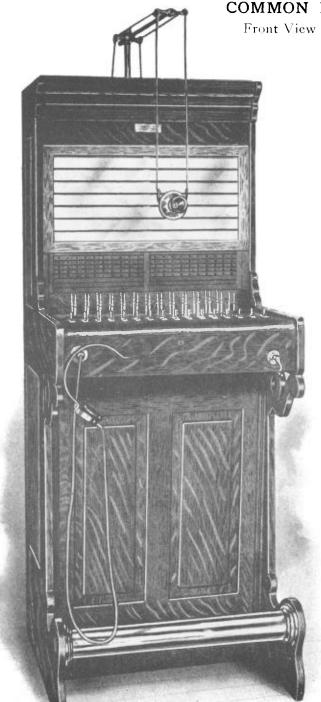
SIMPLICITY in our apparatus means that it can be maintained at the lowest possible cost; that its operation is always positive and reliable and that our outfits may be placed in the most out-of-way places and left in the hands of men who need not necessarily be experts.

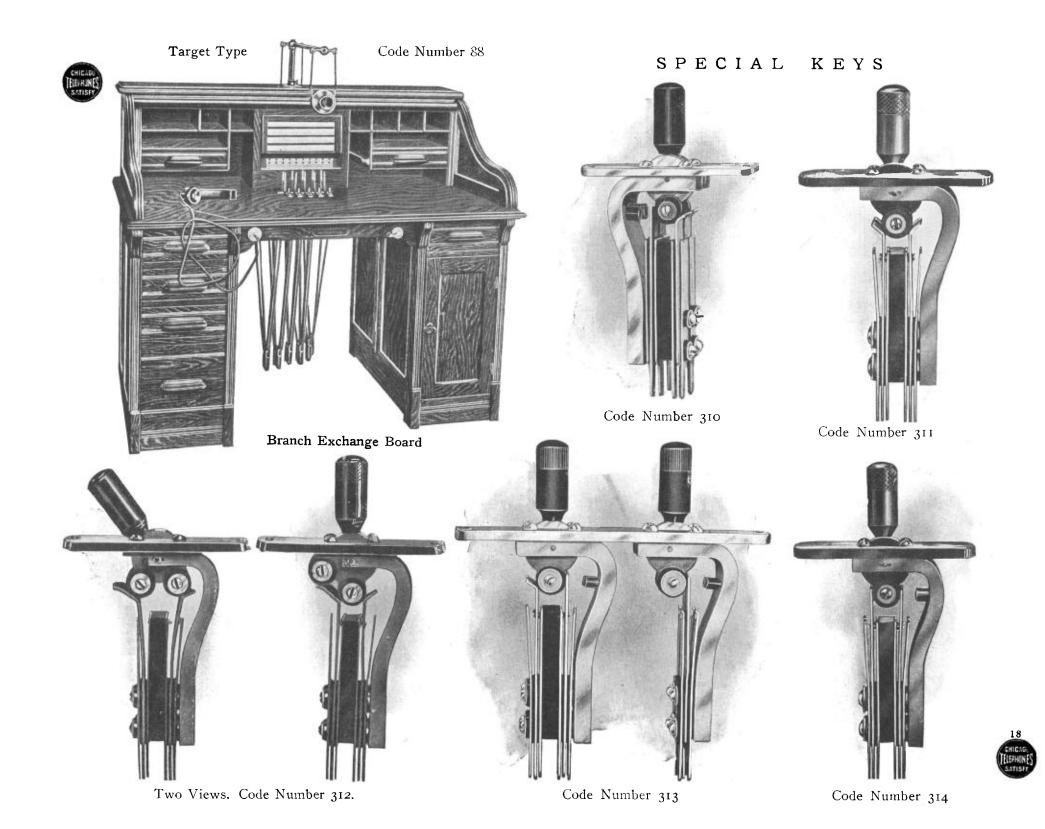














## COMMON BATTERY TELEPHONES

The Transmitter really is the feature which distinguishes between good and poor common battery telephones. The Chicago Genuine Solid Back Long Distance Transmitter (see page 55) is used on all Chicago Common Battery Telephones.

The wood work is finished in a rich golden oak with high piano polish. The cabinet is so constructed as to make all parts instantly accessible.

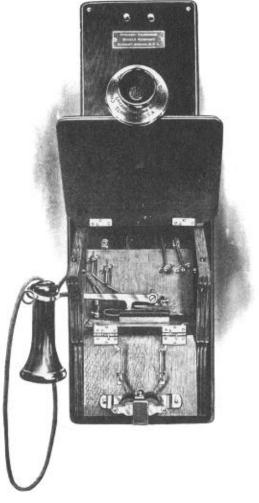
The receiver switch is equipped with platinum contacts; the coil is wound with silk-covered magnet wire; the condenser has capacity of two micro farads. The receiver is illustrated on page 51. The ringer is the same as is used on Chicago Bridging Telephones.



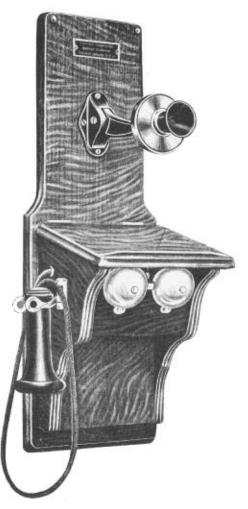
# CHICAGO COMMON BATTERY TELEPHONES

Code Number 94—Oak Finish

Code Number 95-Walnut Finish



Wall Set
With Cabinet Partially Open



Wall Set

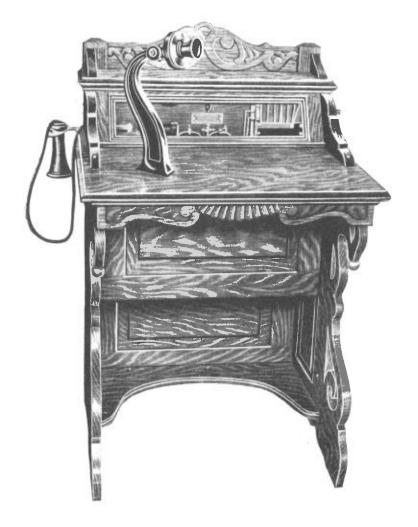


Wall Set With Cabinet Entirely Open

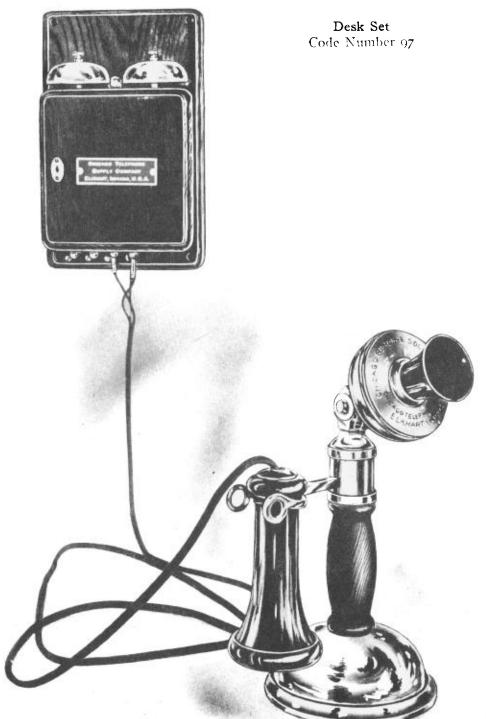




# CHICAGO COMMON BATTERY TELEPHONES



Desk Cabinet Code Number 96

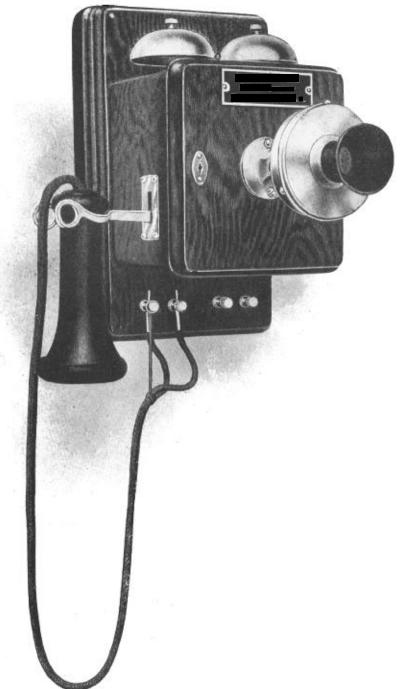




# CHICAGO COMMON BATTERY TELEPHONES



Hotel Set Code Number 98



How to Use a Telephone



The Wrong Way Code Number 299



The Right Way Code Number 300



These instruments are designed for exchange work where each telephone has a separate line to the switch board.

The Chicago Series Generator will ring satisfactorily past partial short circuits and shunts, where no service could be secured with a light generator.

All Chicago Series Telephones except Model 14 are equipped with the celebrated Chicago Genuine Solid Back Long Distance Transmitter which is built like a watch.





Code No. 99—Oak Cabinet Code No. 100—Walnut Cabinet

## SPECIFICATIONS

Series Generator. Page 60. Series Ringer Movement. Page 52. Long Lever Automatic Switch. Page 50.

Platinum Contacts.

Genuine Solid Back Long Distance Transmitter. Pages 54 and 55.

Adjustable Transmitter Arm. Code No. 248. Page 51.

Long Distance Induction Coil.

Bi-Polar Receiver and Cord. Page 51.

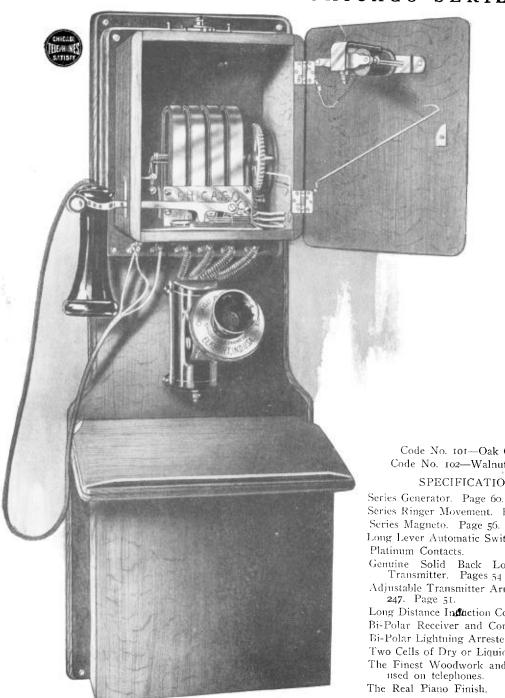
Bi-Polar Lightning Arrester.

Two Cells Dry Battery.

The Finest Woodwork and Finish ever used in telephone work. The real Piano Finish.

Used on separate lines to switch board, or on private lines of two instruments.

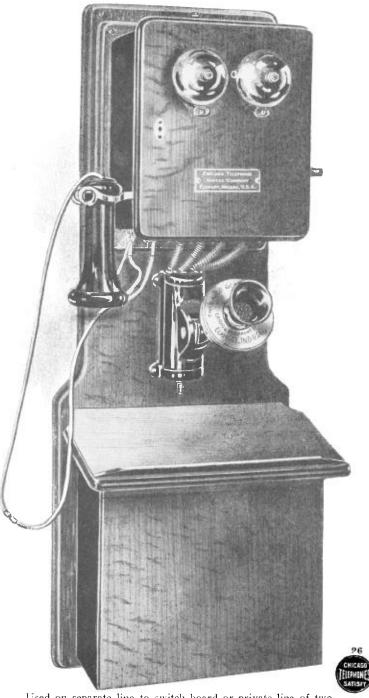




Code No. 101-Oak Cabinet Code No. 102-Walnut Cabinet

#### SPECIFICATIONS

Series Ringer Movement. Page 52. Series Magneto. Page 56. Long Lever Automatic Switch. Page 50. Platinum Contacts. Genuine Solid Back Long Distance Transmitter. Pages 54 and 55. Adjustable Transmitter Arm. Code No. 247. Page 51. Long Distance Induction Coil. Bi-Polar Receiver and Cord. Page 51. Bi-Polar Lightning Arrester. Two Cells of Dry or Liquid Battery. The Finest Woodwork and Finish ever used on telephones. The Real Piano Finish.

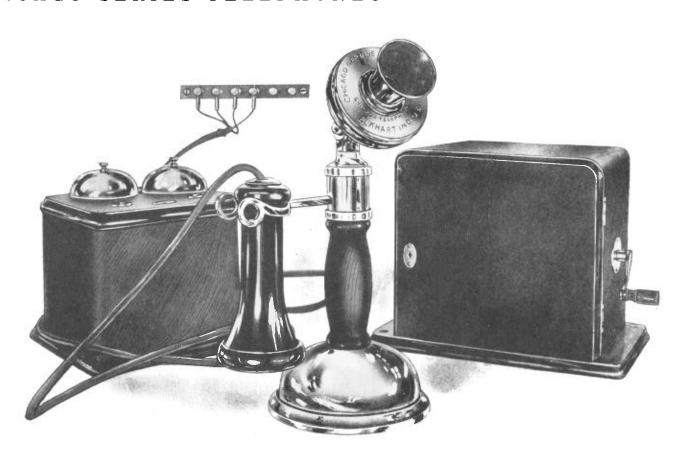


Used on separate line to switch board or private line of two.





Code No. 103—Oak Cabinet Code No. 104—Walnut Cabinet



Desk Set Code Number 105



#### FOUR-BAR-

Chicago Four-Bar Bridging Telephones are guaranteed to ring more bells than any other four-bar telephone. In every specification, except the generator, they are exactly like the Chicago Five and Six-Bar Telephones.

#### FIVE-BAR-

Chicago Five-Bar Bridging Telephones are guaranteed to ring more bells than any telephone produced by other factories. They will transmit speech better and farther than any other telephone. They will outlast any other telephone.

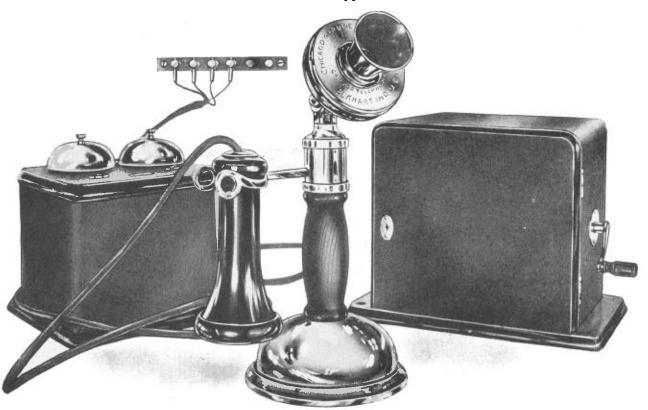
These statements are backed by the guarantee of this factory, which is as good as a government bond.

#### SIX - BAR-

Chicago Six-Bar Bridging Telephones are in a class by themselves and must not be considered on any competitive basis, where price will determine the sale. No other factory makes a six-bar telephone. Every bar of a Chicago Bridging Telephone is larger, heavier and more powerful than the bars used on any other telephone.

Chicago Six-Bar Bridging Telephones are luxuries rather than necessities. For all legitimate work on heavily loaded lines five-bar telephones will answer every purpose and give entire satisfaction. For junction points where heavily loaded lines are sometimes connected, and for those who desire the best and strongest without regard to price, Chicago Six-Bar Telephones are recommended.

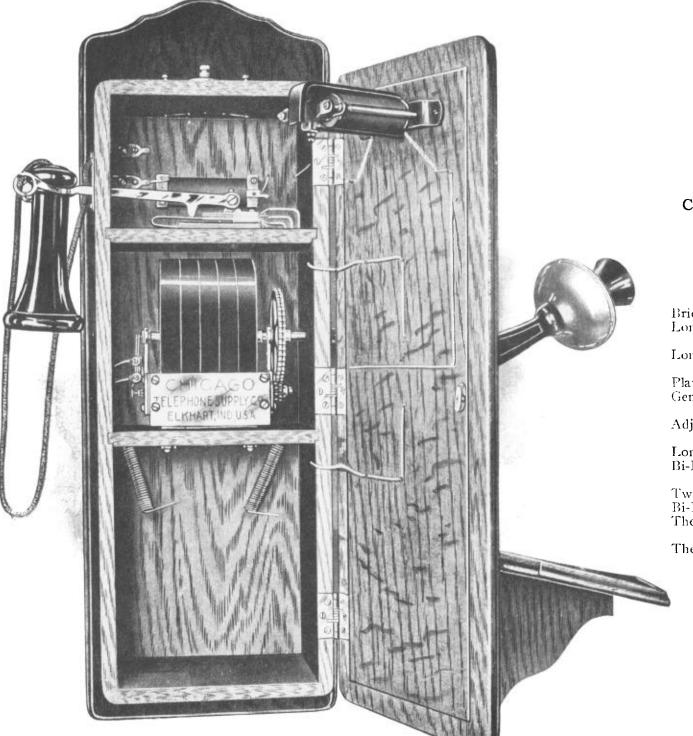
Desk Set Type



# DESCRIPTION

	2200111111011	
Code No.		
106	Four-Bar Generator, 1,000-Ohm	Ringer.
107	Four-Bar Generator, 1,600-Ohm	
108	Four-Bar Generator, 2,500-Ohm	
109	Five-Bar Generator, 1,000-Ohm	
IIO	Five-Bar Generator, 1,600-Ohm	
III	Five-Bar Generator, 2,500-Ohm	
112	Six-Bar Generator, 1,000-Ohm	
113	Six-Bar Generator, 1,600-Ohm	
114	Six-Bar Generator, 2,500 Ohm	Ringer.





## Compact Type

#### SPECIFICATIONS

Bridging Generator. Pages 60-62. Long Pattern Bridging Striker. Page 52. Long Lever Automatic Switch.

Page 50.
Platinum Contacts.

Platinum Contacts.
Genuine Solid Back Long Distance Transmitter. Page 55.
Adjustable Transmitter Arm.
Code No. 248. Page 51.
Long Distance Induction Coil.
Bi-Polar Receiver and Cord.
Page 51.
Two Cells Dry Battery.
Bi-Polar Lightning Arrester.
The Finest Woodwork and Finish ever used in telephone work. ever used in telephone work.

The real Piano Finish.



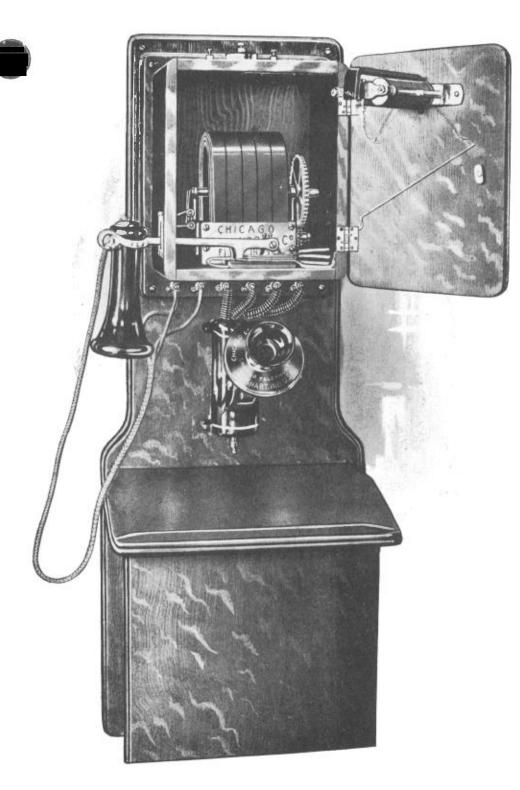


## Compact Type

#### DESCRIPTION

#### Code No.

- Four-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.
- Four-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet.
- 117 Four-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.
- 118 Four-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet.
- Four-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.
- 120 Four-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.
- 121 Five-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.
- Five-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet.
- 123 Five-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.
- Five-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet.
- Five-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.
- 126 Five-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.
- 127 Six Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.
- 128 Six Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet.
- 129 Six Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.
- 130 Six Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet.
- 131 Six Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.
- 132 Six Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.



Double Battery Box Type

SPECIFICATIONS

Bridging Generator. Pages 61 and 62.

Long Pattern Bridging Striker. Page 52.

Bridging Magneto.

Long Lever Automatic Switch. Page 50.

Platinum Contacts.

Genuine Solid Back Long Distance Transmitter. Page 55.

Adjustable Transmitter Arm. Code No. 247. Page 51.

Long Distance Induction Coil.

Bi-Polar Receiver and Cord. Page 51.

Two Cells Dry or Liquid Battery.

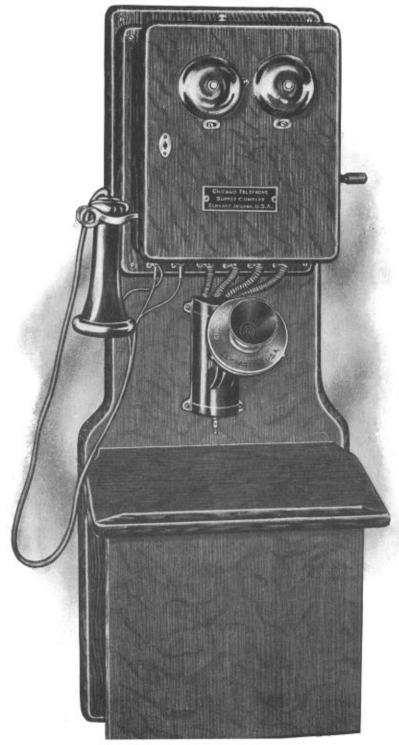
Bi-Polar Lightning Arrester.

The Finest Woodwork and Finish ever used in telephone work.

The Real Piano Finish.



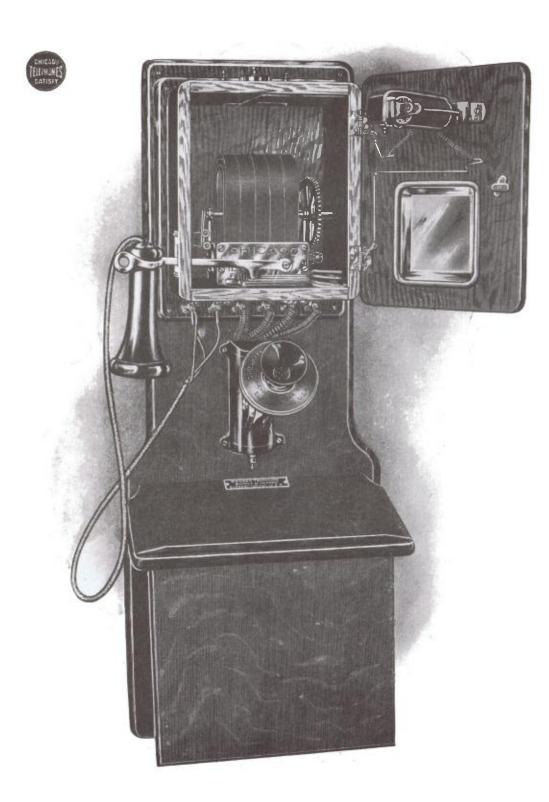




# Double Battery Box Type DESCRIPTION

#### Code No. 133 Four-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet. Four-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet. 134 135 Four-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet. Four-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet. 136 Four-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet. 137 138 Four-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet. Five-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet. 139 140 Five-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet. Five-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet. 141 Five-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet. 142 Five-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet. 143 Five-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet. 144 145 Six - Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet. Six - Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet. 146 Six - Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet. 147 Six - Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet. 148 Six - Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet. 149 Six - Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet. 150





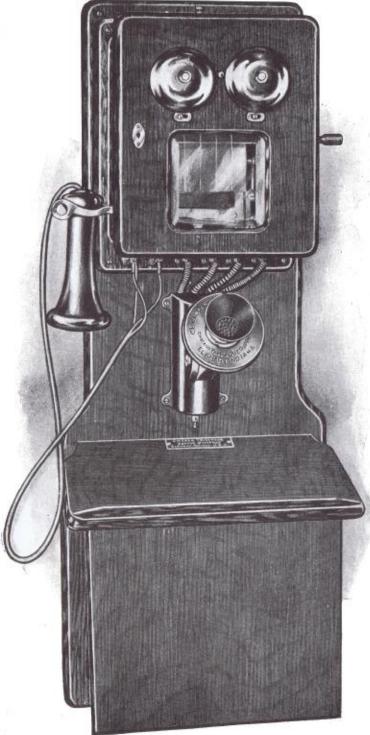
Double Battery Box Type with Plate Glass Front

## **SPECIFICATIONS**

Bridging Generator. Pages 61 and 62.
Long Pattern Bridging Striker. Page 52.
Bridging Magneto with Plate Glass Front.
Long Lever Automatic Switch. Page 50.
Platinum Contacts.
Genuine Solid Back Long Distance Transmitter. Page 55.
Adjustable Transmitter Arm. Code No. 247. Page 51.
Long Distance Induction Coil.
Bi-Polar Lightning Arrester.
Bi-Polar Receiver and Cord.
Two Cells of Dry or Liquid Battery.
The Finest Woodwork and Finish ever used on telephones.
The Real Piano Finish.







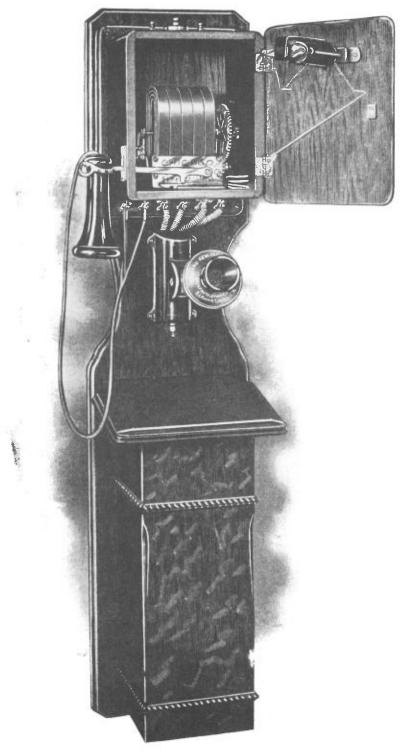
# Double Battery Box Type with Plate Glass Front

#### DESCRIPTION

#### Code No.

- 151 Four-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.
- 152 Four-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet.
- 153 Four-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.
- 154 Four-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet.
- 155 Four-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.
- 156 Four-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.
- 157 Five-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.
- 158 Five-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet.
- 159 Five-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.
- 160 Five-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet.
- 161 Five-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.
- 162 Five-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.
- 163 Six Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.
- 164 Six Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet.
- 165 Six Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.
- 166 Six Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet.
- 167 Six Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.
- 168 Six Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.





## Tandem Battery Box Type

### **SPECIFICATIONS**

Bridging Generator. Pages 61 and 62.
Long Pattern Bridging Striker. Page 52.
Bridging Magneto.
Long Lever Automatic Switch. Page 50.
Platinum Contacts.
Genuine Solid Back Long Distance Transmitter. Page 55.
Adjustable Transmitter Arm. Code No. 247. Page 51.
Long Distance Induction Coil.
Bi-Polar Receiver and Cord. Page 51.
Two Cells Dry or Liquid Battery.
Bi-Polar Lightning Arrester.
The Finest Woodwork and Finish ever used in telephone work.
The Real Piano Finish.



### Tandem Battery Box Type

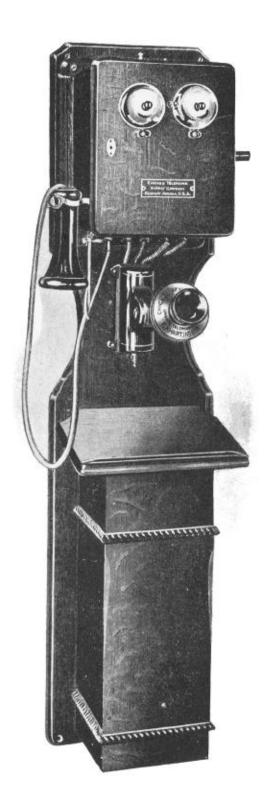
### DESCRIPTION

### Code No.

186

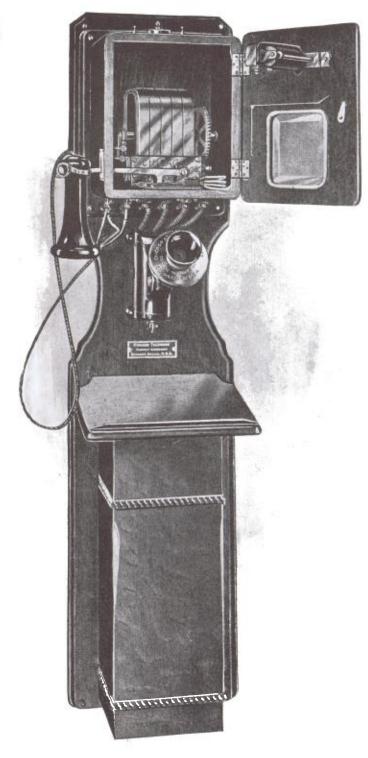
169 Four-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet. 170 Four-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet. 171 Four-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet. Four-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet. 172 173 Four-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet. Four-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet. 174 Five-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet. 175 176 Five-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet. Five-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet. 177 178 Five-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet. Five-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet. 179 Five-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet. 180 Six - Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet. 181 182 Six - Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet. 183 Six - Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet. 184 Six - Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet. Six - Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet. 185

Six - Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.









# Tandem Battery Box Type with Plate Glass Front

### SPECIFICATIONS

Bridging Generator. Pages 61 and 62.
Long Pattern Bridging Striker. Page 52.
Bridging Magneto with Plate Glass Front.
Long Lever Automatic Switch. Page 50.
Platinum Contacts.
Genuine Solid Back Long Distance Transmitter. Page 55.
Adjustable Transmitter Arm. Code No. 247. Page 51.
Long Distance Induction Coil.
Bi-Polar Lightning Arrester.
Bi-Polar Receiver and Cord.
Two Cells Dry or Liquid Battery.
The Finest Woodwork and Finish ever used in telephone work.
The real Piano Finish.





# Tandem Battery Box Type with Plate Glass Front

### DESCRIPTION

### Code No.

- 187 Four-Bar Generator, 1,000-Ohm-Ringer, Golden Oak Cabinet.
- 188 Four-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet.
- 189 Four-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.
- 190 Four-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet.
- 191 Four-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.
- Four-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.
  Five-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.
- Five-Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet.
- 195 Five-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.
- Five-Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet.
- 197 Five-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.
- 198 Five-Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.
- 199 Six Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.
- 200 Six Bar Generator, 1,000-Ohm Ringer, Walnut Cabinet.
- 201 Six Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet,
- 202 Six Bar Generator, 1,600-Ohm Ringer, Walnut Cabinet.
- 203 Six Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.
- 204 Six Bar Generator, 2,500-Ohm Ringer, Walnut Cabinet.





# Desk Cabinet Type

# DESCRIPTION

ode No.				
205	Four-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.			
206	Four-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.			
207	Four-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.			
208	Five-Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.			
209	Five-Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.			
210	Five-Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.			
2I I	Six - Bar Generator, 1,000-Ohm Ringer, Golden Oak Cabinet.			
212	Six - Bar Generator, 1,600-Ohm Ringer, Golden Oak Cabinet.			
213	Six - Bar Generator, 2,500-Ohm Ringer, Golden Oak Cabinet.			



### CHICAGO INTER-COMMUNICATING TELEPHONES

For factories, business houses, hotels and private houses where a telephone system is wanted to enable any department or room to call up any other department or room without the aid of a central switch board. All parts are constructed in the most careful manner and of the strongest materials to prevent damage to the equipment at the hands of inexperienced users.

There are hundreds of systems of inter-communicating telephones installed in as many large institutions throughout the United States, which, after the first three or four months' service, have completely fallen down, and the service they are giving at present is very poor. Insufficient contacts, poor transmitters and receivers, carelessly assembled, are some of the reasons. There seems to be an opinion prevailing among buyers of this class of apparatus that it is not necessary to have a telephone as well built to talk two hundred feet as it would be to talk two thousand miles, while the fact is, just as substantial an instrument is required to stand up and do the work on interior systems, and this fact is emphasized by the present imperfect condition of inter-communicating systems. For these reasons, the conclusion has been reached that the times are now ripe for the introduction of the Chicago System.

### DESCRIPTION OF SYSTEM.

Metallic circuits are used exclusively. Past experience has demonstrated the fact that a common return circuit is not practical in factory work, owing to cross talk and induction. The switching apparatus performs every desirable function without the use of any special mechanism, gears or troublesome springs.

Any subscriber can call any other subscriber.

The position of the plug has no effect upon the signalling circuit.

It is impossible to call the wrong station or to call more than one station at a time owing to location of plug at any of the stations. The receiving station does not pay any attention to location of plug in answering calls.

Cross talk and induction are eliminated.

### INSTRUMENTS.

The telephones and switching apparatus are of the same type and grade as are used in public multiple systems in large cities. The equipment is as carefully made,

as efficient in operation and as durable as that used in exchanges of ten thousand subscribers, the design being to offer in the Chicago Inter-Communicating System those specifications which have been approved by the consulting engineers of the best and largest public exchanges in the world.

On page 43 are illustrations of jack box, jack and plugs. The jack box is made of cast metal, handsomely finished, and will be made to accommodate any number of lines desired. The jacks are heavily made with springs of best German silver. These jacks are separately detachable and have separate springs for each side of the circuit.

In ordering, state number of instruments desired at present and ultimate number of stations. The plugs are of the same kind as those used in all high-grade exchange work. The plug cord is "the kind that won't wear out." It is covered by patents and is guaranteed to outwear six switch board cords of any other type.

A magneto generator is provided with each instrument to produce current for signalling. If an automatic call is desired, each instrument will be equipped with a double break push button for the purpose of signalling automatically by pressing the button. In such cases it will be necessary to use one battery power generator on the system or a magneto power generator where there is power in the building to operate it.

The automatic calling device is not recommended except where extremely rapid service is desired. It is more a luxury than a necessity, as the regular signalling equipment is all that can be desired, and can be depended upon under any and all circumstances.

Please understand that in all cases the signals are made with an alternating current. We do not make systems on which the signals are operated with direct battery current. Such systems are faulty in design, expensive to maintain and a constant source of trouble.

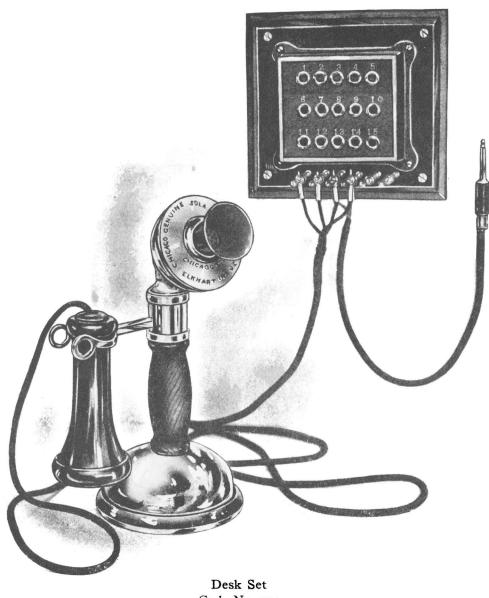
The Chicago System can be installed so as to connect with the public exchange and every instrument, being a strictly long distance telephone, may be used on local or long distance calls.

Send information as to size of system, number of wall sets and number of desk sets desired, when quotations will be promptly forwarded.

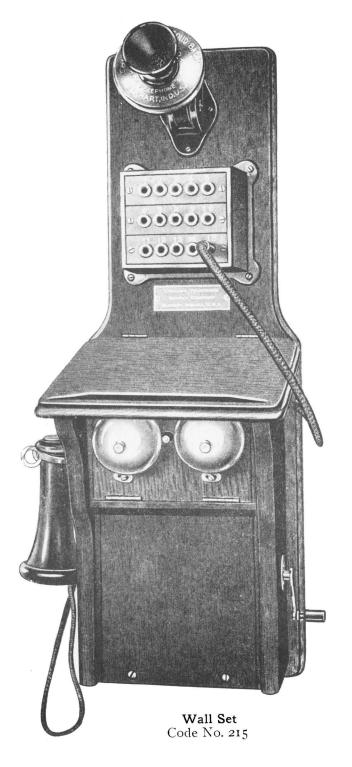




# CHICAGO INTER-COMMUNICATING TELEPHONES



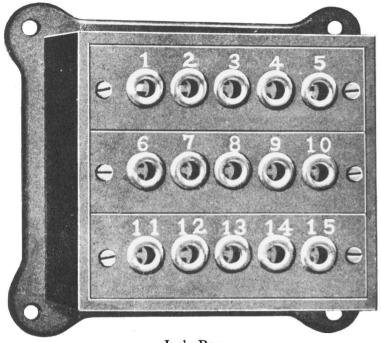




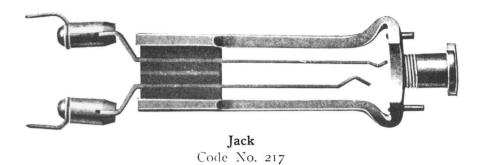




# CHICAGO INTER-COMMUNICATING SYSTEM

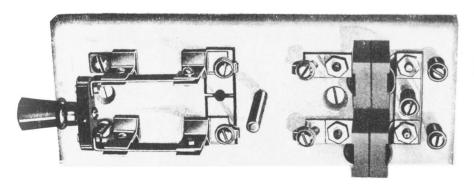


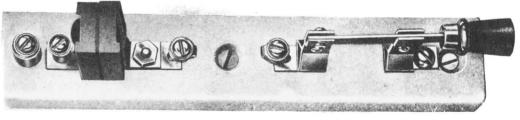
Jack Box Code No. 216





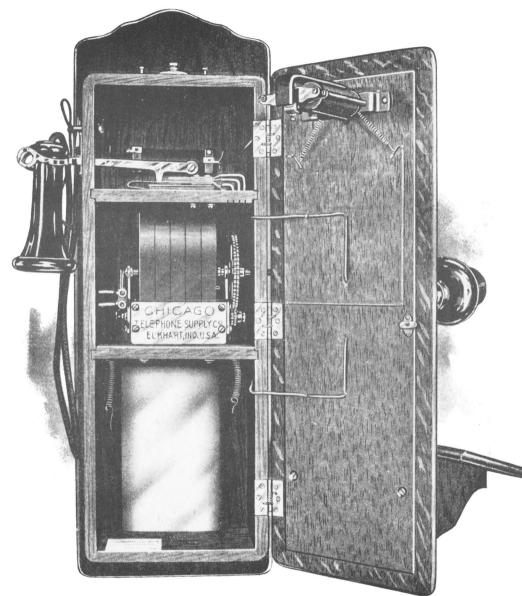
Plug Code No. 218











# BRIDGING TELEPHONE WITH CONDENSER

This telephone is like those illustrated on pages 30 and 31, with the addition of a condenser. The function of the condenser is to prevent a short circuit when a number of receivers are removed.

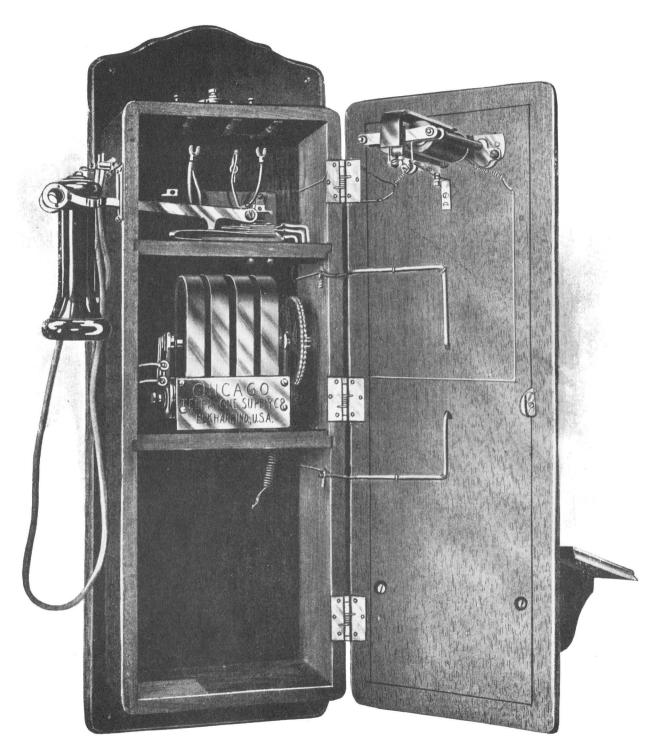
It will be found that when bridging telephones are equipped with condensers the removal of receivers along the line does not interfere seriously with the ringing circuit.

With telephones of this kind you can always ring through.

In ordering use code numbers from 115 to 132, adding the words "With Condenser."







# FOUR PARTY SELECTIVE

# **TELEPHONE**

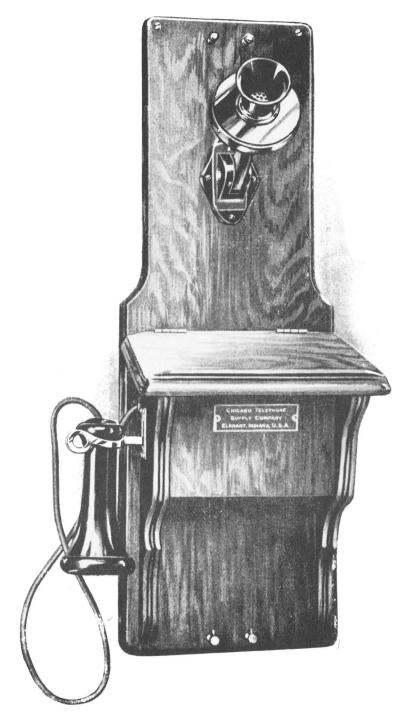
This instrument is designed for exchanges where it is desirable to economize in line construction and switch board capacity. Four telephones may be placed on one line. Any one of the four can call Central without calling the other three.

Central calls any one of the four without ringing the bells of the other three. This is accomplished by the use of biased bells, actuated by positive and negative curents.

In ordering use code numbers from 115 to 132, adding the word "Selective."







# BOOTH TELEPHONES

Code No. 350

This instrument is for use in a booth at the exchange It has no ringing circuit, but is equipped with Genuine Long Distance Solid Back Transmitter, Transmitter Arm, Automatic Switch, Induction Coil, and highly finished Cabinet in golden oak.





### TELEPHONE PARTS

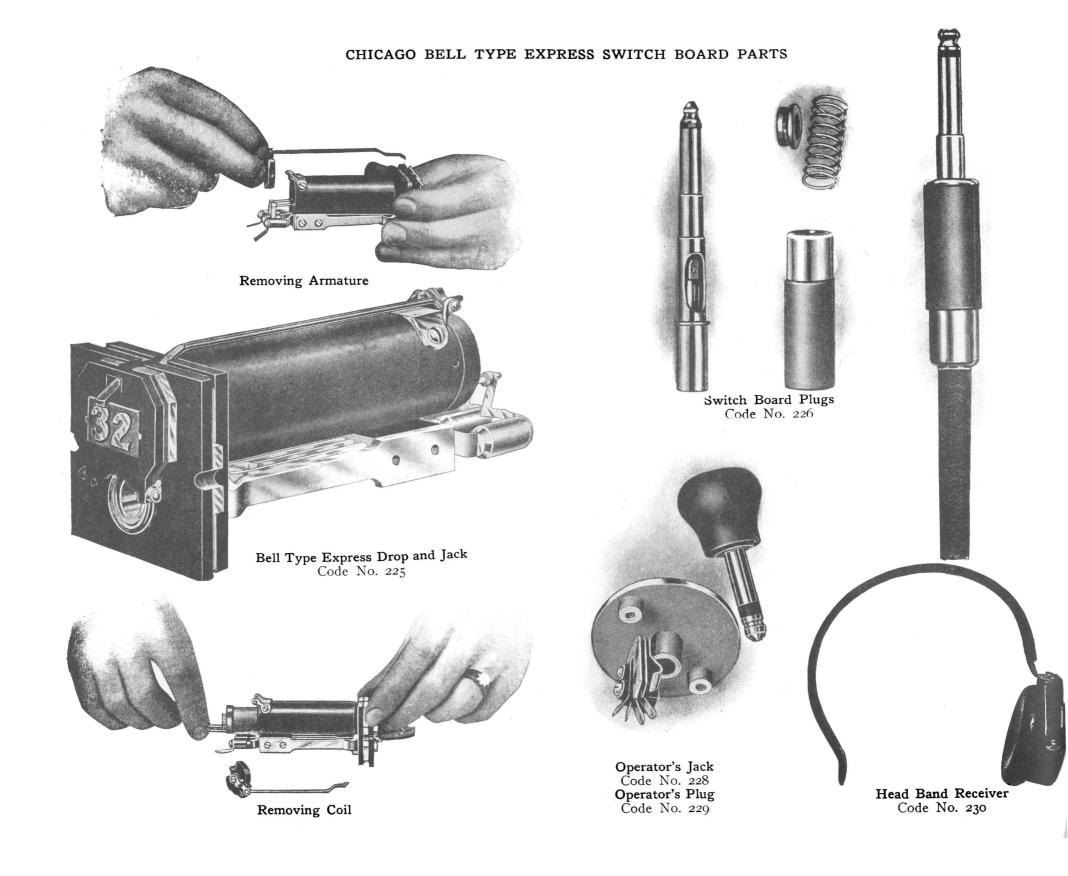
Many telephone factories are not equipped to produce every part that enters into the construction of their product.

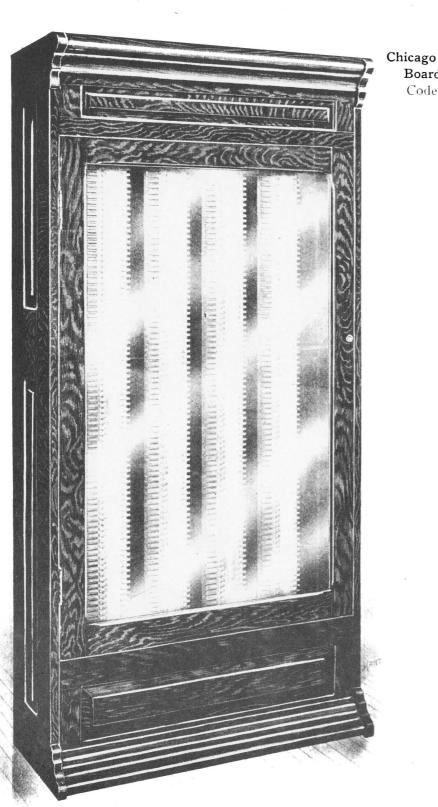
We invite correspondence with such factories.

As we produce all parts in large quantities from the raw material, we are in a position to name attractive prices and to stand back of every part with a guarantee which is as good as a government bond.

Users of telephones will insure good service if they insist upon their telephones being equipped with Chicago Generators, Transmitters and Receivers.

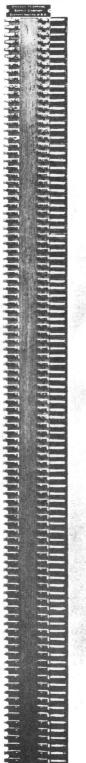




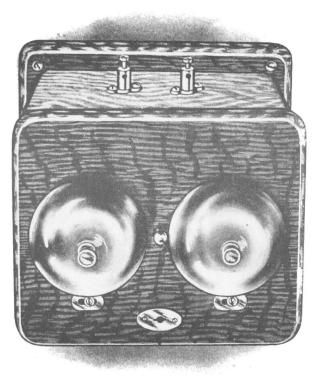


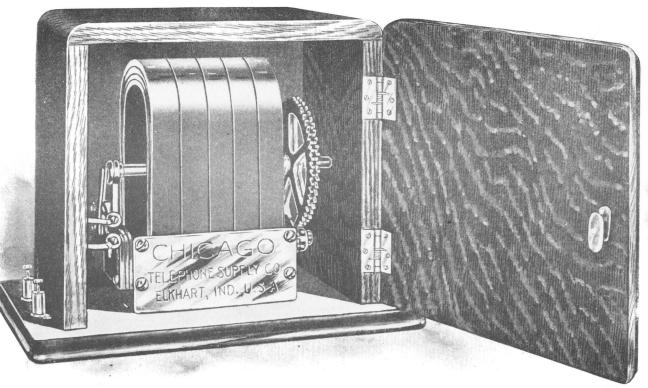
Chicago Distributing
Board Cabinet
Code No. 231

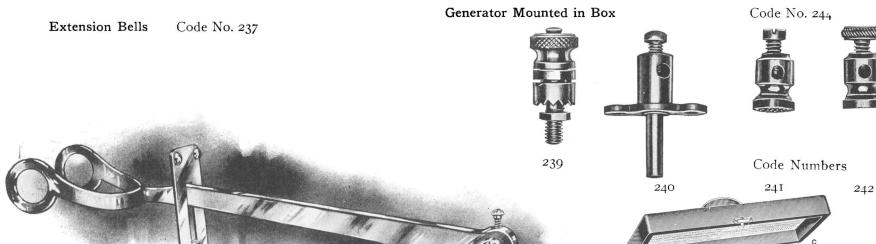
Distributing Panel



Iron Frame
Distributing Board
Self-Soldering
Heat Coils
Code No. 232







Long Lever Automatic Switch Platinum Contacts Code No. 245 Direct Reading
Ohm Meter

Code No. 238

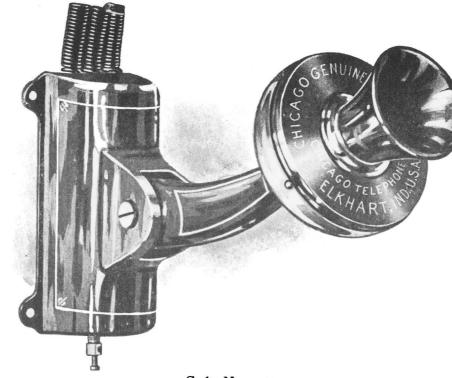
243



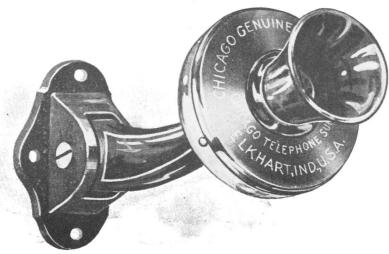
# RECEIVERS

Code No. 246

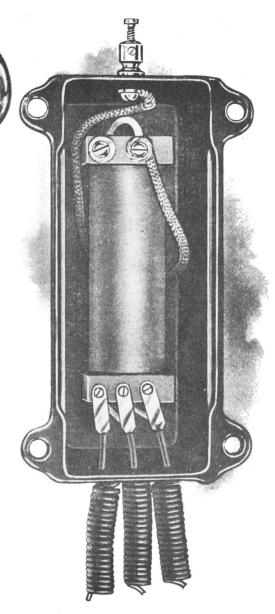
# ARM TRANSMITTERS



Code No. 247



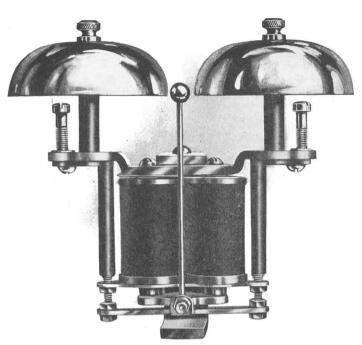
Code No. 248



Code No. 247 Rear View

### PLUG BOARD PARTS





# RINGER MOVEMENTS Strikers

Series

Code No. 249



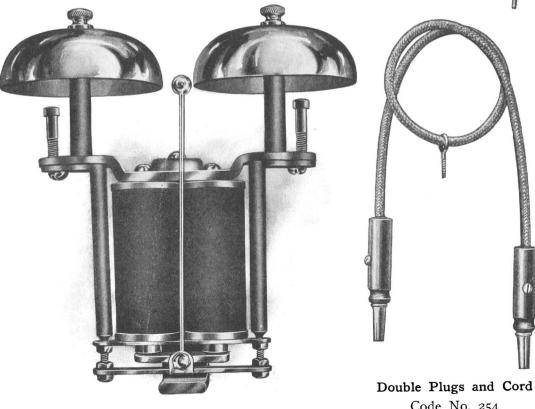
Socket Code No. 252

Code No. 254

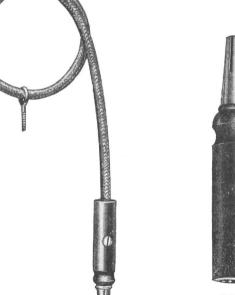


Single Plug and Cord

Code No. 253



Bridging Code No. 251



Plug Code No. 255



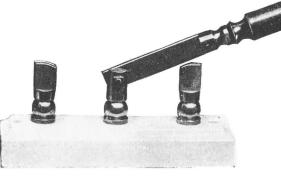


# KNIFE SWITCHES

# FUSE BLOCKS



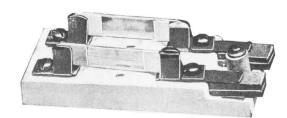
Standard Single Pole Code No. 289



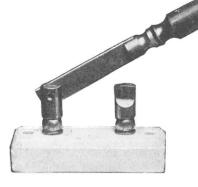
Single Pole, Double Throw Code No. 285



Double Pole, Single Throw Code No. 287



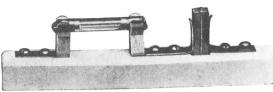
Standard Bi-Polar Code No. 290



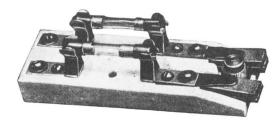
Single Pole, Single Throw Code No. 286



Double Pole, Double Throw Code No. 288



Chicago Single Pole Code No. 291



Chicago Bi-Polar Code No. 292





### CHICAGO GENUINE LONG DISTANCE SOLID BACK TRANSMITTER

There are many solid back transmitters, but only one Chicago. The reasons why the Chicago gives such excellent service and is so long lived are so simple that they will be apparent to any one who will take the trouble to examine its construction and compare the specifications with those of any other transmitter. Investigation is invited. The more thoroughly it is tried, the more popular it is.

POINT 1.—The Chicago is built like a watch. Every part receives the utmost care in every process of production.

POINT 2.—The auxiliary diaphragm is made of aluminum to secure uniformity. Mica is never uniform, hence its use is a mistake.

POINT 3.—The bridge is very heavy to insure rigidity and prevent vibration of any part except the front electrode.

POINT 4.—The rear electrode is adjustable after the transmitter is assembled. This feature insures a uniform maximum degree of efficiency. Without this adjustable feature, uniformity is impossible, because the most delicate method of measuring charges of carbon and distances between electrodes, is infinitely crude and inadequate when compared with the minute variations of sound waves which a transmitter must register. The human ear alone is competent to judge whether all of the necessary conditions are present to secure results. Only when the rear electrode is adjustable, is it possible to utilize the human voice to secure uniformly the maximum of efficiency.

POINT 5.—The heavy lug, utilized to attach the carbon chamber to the bridge, has such a long bearing that it is impossible for the centers of the electrodes and the diaphragm to get out of line. In many cases where a transmitter is out of service because it is "packed," the trouble really is caused by the centers of the electrodes and the diaphragm being out of line. In such cases it is impossible for the sound waves properly to register.

This trouble may be caused by—(1) A thin bridge. (2) Use of rubber bushing to insulate carbon chamber from bridge. (3) Failure to mill rim of front to receive bridge in exact position desired. (4) Failure to make every part with the care used in making the finest of watches.

A few points of excellence have been mentioned. In other respects, the Chicago will be made more popular by close scrutiny.

The main diaphragm is made of frosted aluminum chambered to secure the best results.

The damper springs are of the only pattern used on any successful transmitter. Variations from this form always prove to be disastrous experiments.

The front is heavy, and is finished with the finest of highly polished nickel plate. Each and every front receives a plating of copper

before being placed in the nickel bath.

The carbon chamber, or "button," is heavy and moisture-proof. The electrodes are imported from France, and specially polished by a process designed by our Engineering Department. The granular carbon is also imported from France, and is especially hard and highly polished. All carbon used will give perfect satisfaction in any kind of service, and will resist deterioration from the heaviest currents used in central energy work.

The time is fast approaching when any telephone system will be out of date, where the transmitters are of any other type than the solid back.

In securing transmitters of the solid back type, results will be insured if the merits of the Chicago are investigated. Without desire to disparage honorable competitors, we ask nothing but comparison of mechanical workmanship and electrical efficiency.





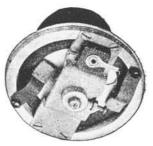
# CHICAGO GENUINE SOLID BACK TRANSMITTERS



Front View Code No. 256



Code No. 256



Back View Code No. 256



Bridge Code No. 260



Front and
Damper Springs
Code No. 257

Diaphragm Code No. 258



Button Code No. 259



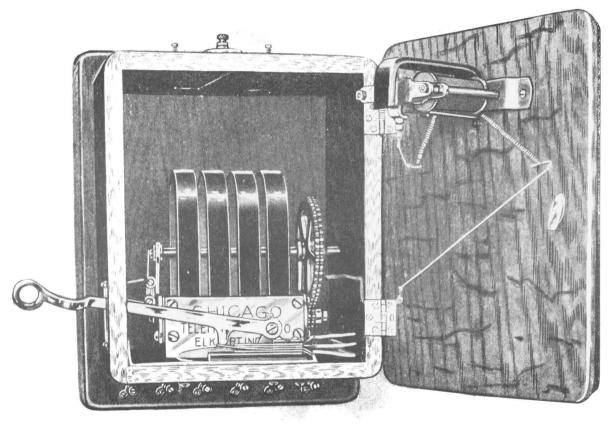
Back Cup Code No. 261

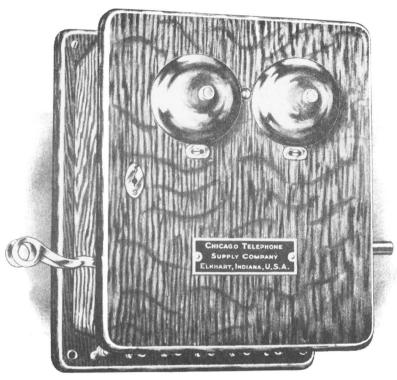




# CHICAGO SERIES MAGNETO

Code No. 262





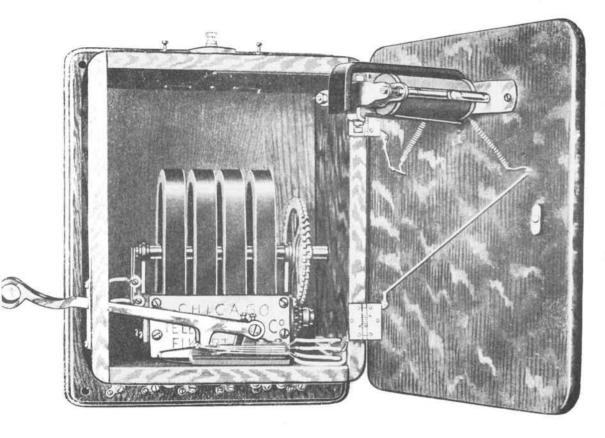
Closed

Open





# CHICAGO BRIDGING MAGNETO Four-Bar





Open

# DESCRIPTION

### Closed

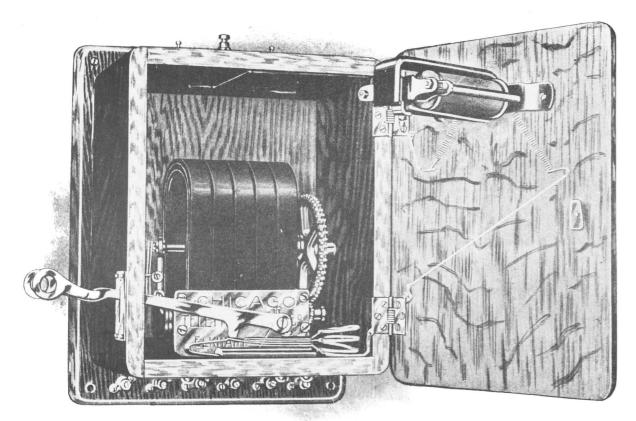
### Code No.

- 263 1,000-Ohm Ringer, Golden Oak Cabinet.
- 264 1,000-Ohm Ringer, Walnut Cabinet.
- 265 1,600-Ohm Ringer, Golden Oak Cabinet.
- 266 1,600-Ohm Ringer, Walnut Cabinet.
- 267 2,500-Ohm Ringer, Golden Oak Cabinet.
- 268 2,500-Ohm Ringer, Walnut Cabinet.





### CHICAGO BRIDGING MAGNETO Five-Bar





Open

# DESCRIPTION

### Code No.

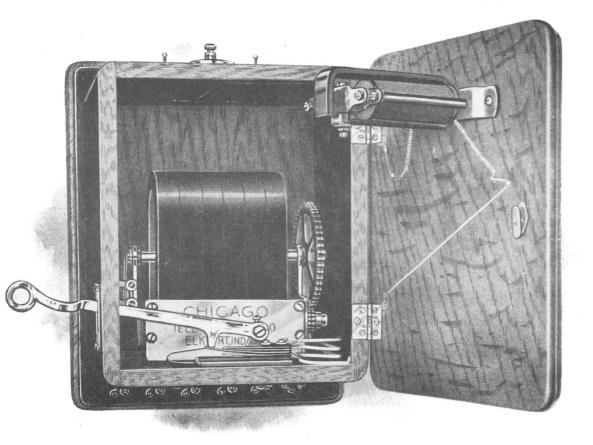
1,000-Ohm Ringer, Golden Oak Cabinet.
1,000-Ohm Ringer, Walnut Cabinet.
1,600-Ohm Ringer, Golden Oak Cabinet.
1,600-Ohm Ringer, Walnut Cabinet.
2,500-Ohm Ringer, Golden Oak Cabinet.
2,500-Ohm Ringer, Walnut Cabinet.
2,500-Ohm Ringer, Walnut Cabinet.

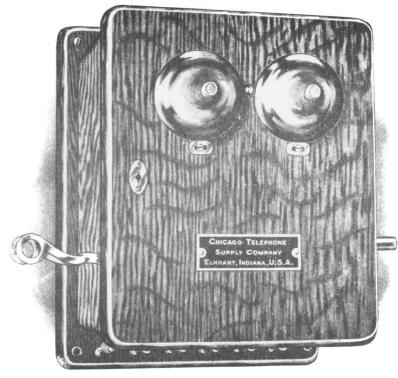
Closed





### CHICAGO BRIDGING MAGNETO Six-Bar





Open Closed DESCRIPTION

### Code No.

275 1,000-Ohm Ringer, Golden Oak Cabinet.

276 1,000-Ohm Ringer, Walnut Cabinet.

277 1,600-Ohm Ringer, Golden Oak Cabinet

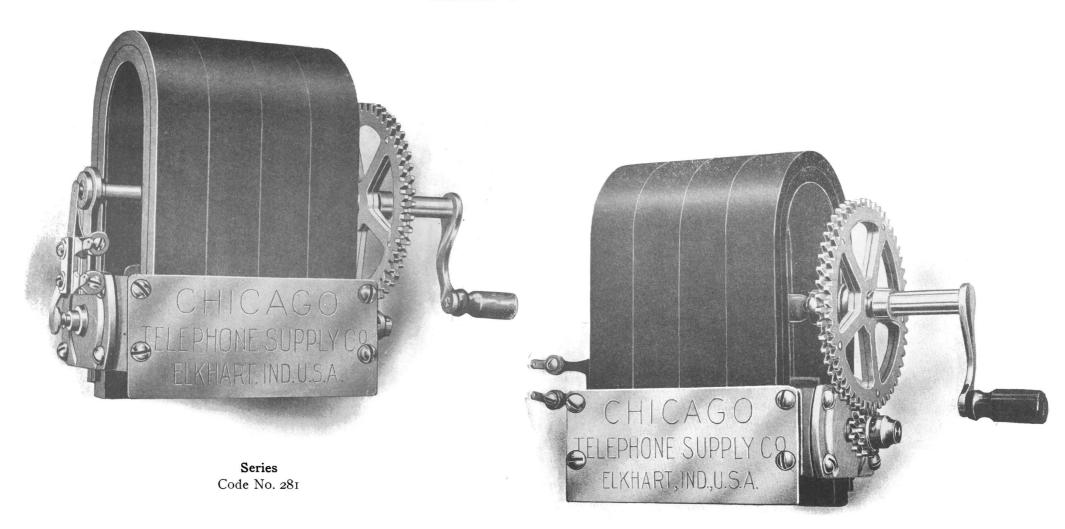
278 1,600-Ohm Ringer, Walnut Cabinet.

2,500-Ohm Ringer, Golden Oak Cabinet.280 2,500-Ohm Ringer, Walnut Cabinet.





### CHICAGO GENERATORS



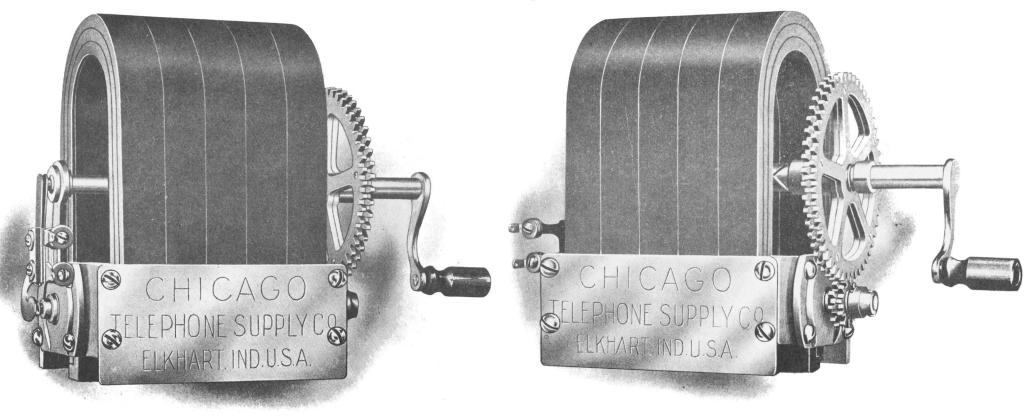
Four-Bar Bridging Code No. 282





# CHICAGO FIVE-BAR BRIDGING GENERATOR

Code No. 283

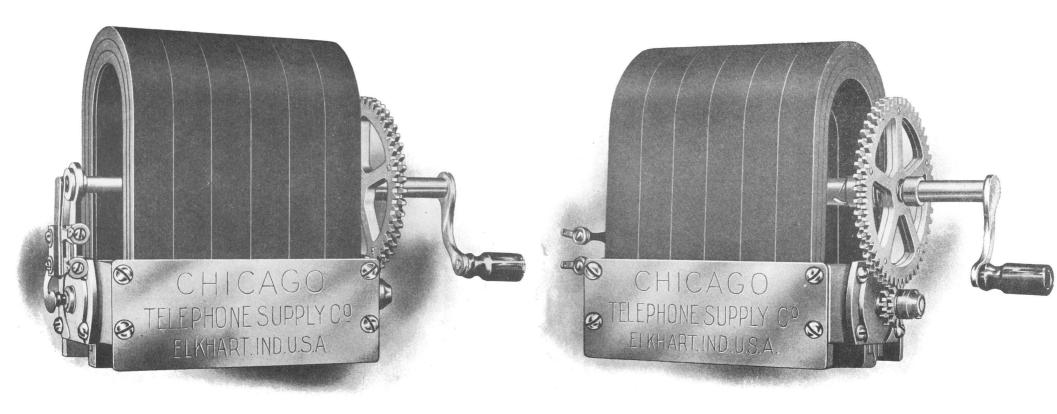






# CHICAGO SIX-BAR BRIDGING GENERATOR

Code No. 284

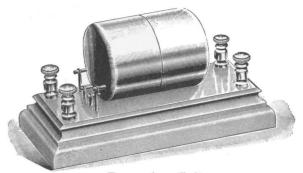








Hot Blast Torch Code No. 293



Repeating Coil Code No. 297



Dry Battery Code No. 294



Wet Battery Code No. 295



Pay Station Sign Code No. 298





# INDEX.

Page	Page	Pag
Arm Transmitters 51	Generator in Box 50	Rural Switch Boards 1
Automatic Switch 50	Genuine Solid Back Transmitter 54-55	Selective Telephones 4
Batteries	Guarantee 2	Series Generator 66
Battery Generator	Head Band Receiver 48	Series Magneto 5
Bell Type Express Switch Boards 6-14	Hook—Automatic 50	Series Telephones 24-2
Bell Type Express Drop and Jack 48	Hotel Set—Common Battery 23	Signs 65
Binding Posts 50	How to Use a Telephone 23	Socket—Plug Board 55
Blow Torch 63	Inter-Communicating Telephones 41-43	Solid Back Transmitter 54-55
Booth Telephone	Jack—Inter-Communicating 43	Strikers 55
Branch Board	Jack-Operator's	Switch, Automatic 5
Bridging Generators 60-62	Jack Box—Inter-Communicating 43	Switches, Knife43, 55
Bridging Magnetos 57-59	Keys, Operator's	Switch Boards—Common Battery 17-18
Bridging Telephones 28-40	Knife Switches	Switch Boards—Express 6-1
Chicago Method 4	Lightning Arrester	Switch Boards—Rural 1
Common Battery Telephones 20-23	Magnetos, Bridging	Switch Boards—Toll 14
Common Battery Switch Boards 17-18		Switch Board Chair
Common Battery System 16	Magnetos, Series 56	Switch Board Generator
Desk Set—Bridging	Ohm Meter 50	Switch Board Transmitter 19
Desk Set—Bridging	Operator's Keys	Target 19
Desk Set—Common Battery	Operator's Jack	Telephones—Booth 46
Desk Set—Inter-Communicating 42 Desk Set—Series	Operator's Receiver	Telephones—Bridging
Distributing Board	Parts 47-63	Telephones—Common Battery 20-23
Distributing Cabinet	Party Line Telephones 28-40	Telephones—Condenser 4
Distributing Panel	Party Line Telephones with Condenser 44	Telephones—Inter-Communicating 41-45
Drop and Jack, Express	Plugs—Express	Telephones—Selective 4
Dry Battery	Plugs and Cords for Plug Board 52	Telephones—Series
	Plug Board	Telephone Parts 47-63
Express Drop and Jack	Plugs—Inter-Communicating System 43	Terms
Express Switch Boards 6-14 Extension Bells 50	Receiver 51	Three Way Jack
	Receiver—Head Band 48	Toll Boards
Fuse Blocks	Relay	Transmitter, Arm 5
Generators	Repeating Coils	Transmitter, Genuine Solid Back 54-55
Generator—Battery 19	Ringer Movements	Wet Battery 63

