



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.

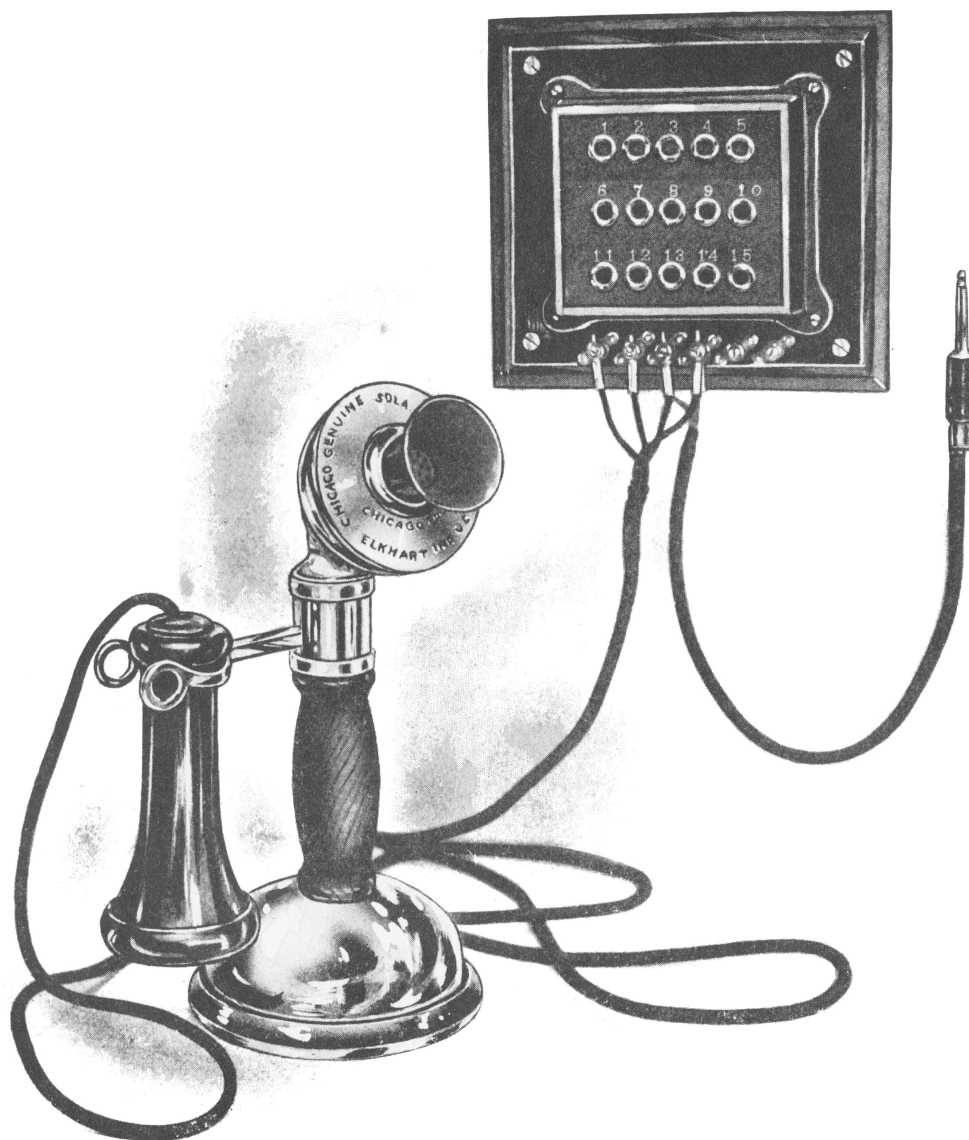
Please understand that in all cases the signals are made with an alternating current. We do not make systems on which the signals are operated with direct battery current. Such systems are faulty in design, expensive to maintain and a constant source of trouble.

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.

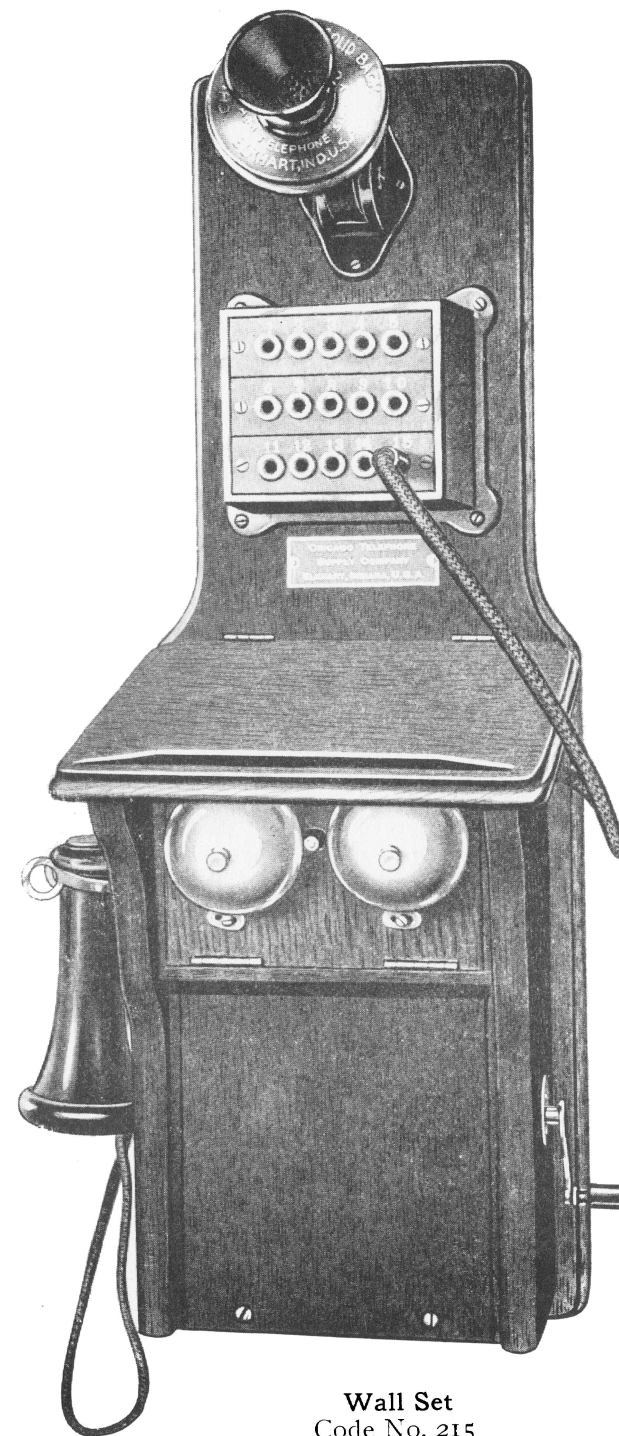
Send information as to size of system, number of wall sets and number of desk sets desired, when quotations will be promptly forwarded.



CHICAGO INTER-COMMUNICATING TELEPHONES



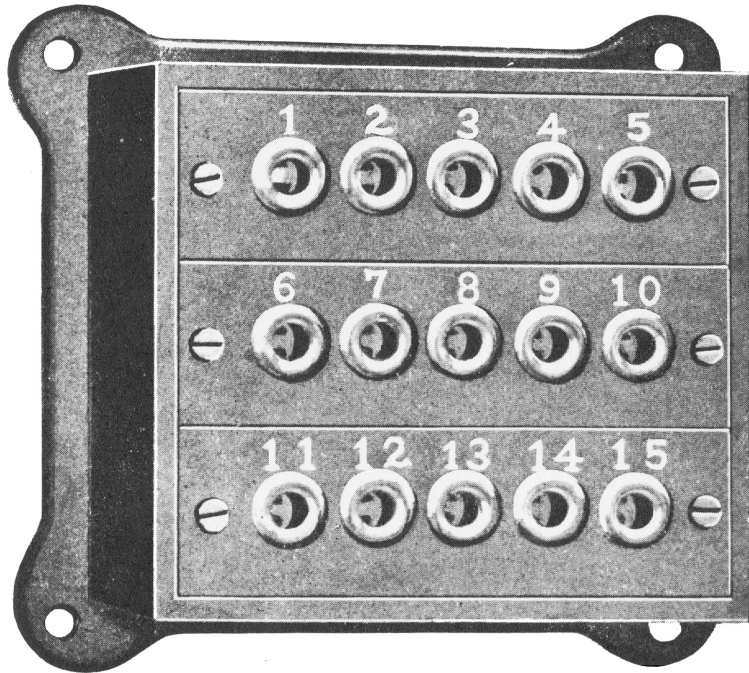
Desk Set
Code No. 214



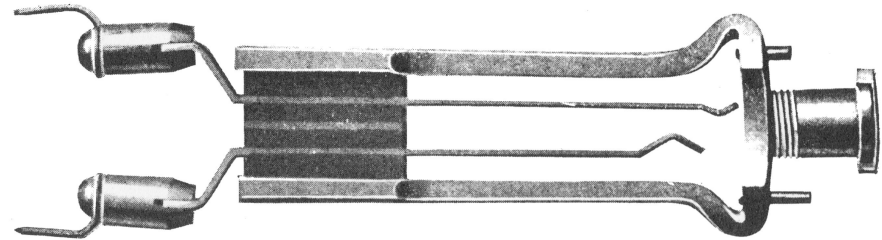
Wall Set
Code No. 215



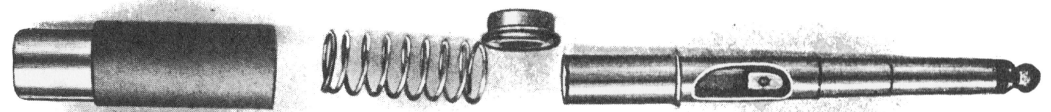
CHICAGO INTER-COMMUNICATING SYSTEM



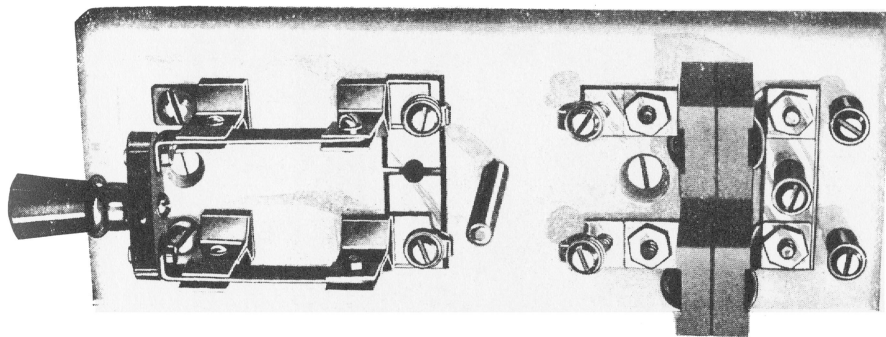
Jack Box
Code No. 216



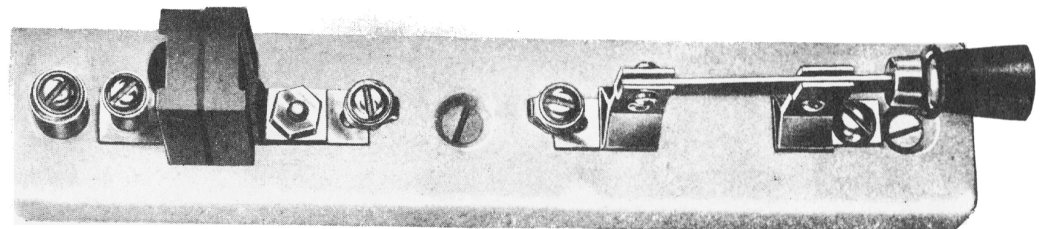
Jack
Code No. 217



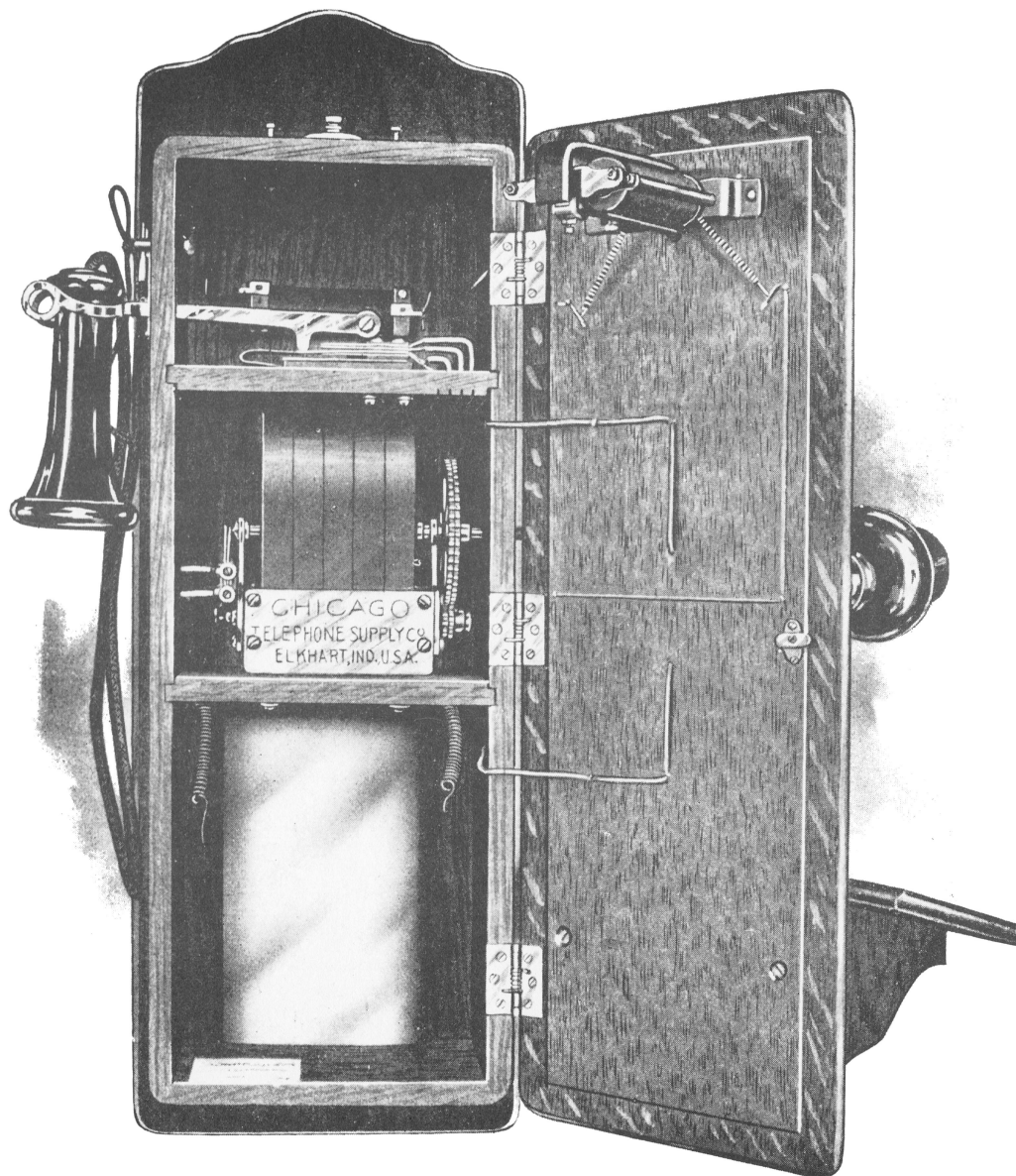
Plug
Code No. 218



Special Lightning Arrester Knife Switch
Code No. 219



Code No. 219 A



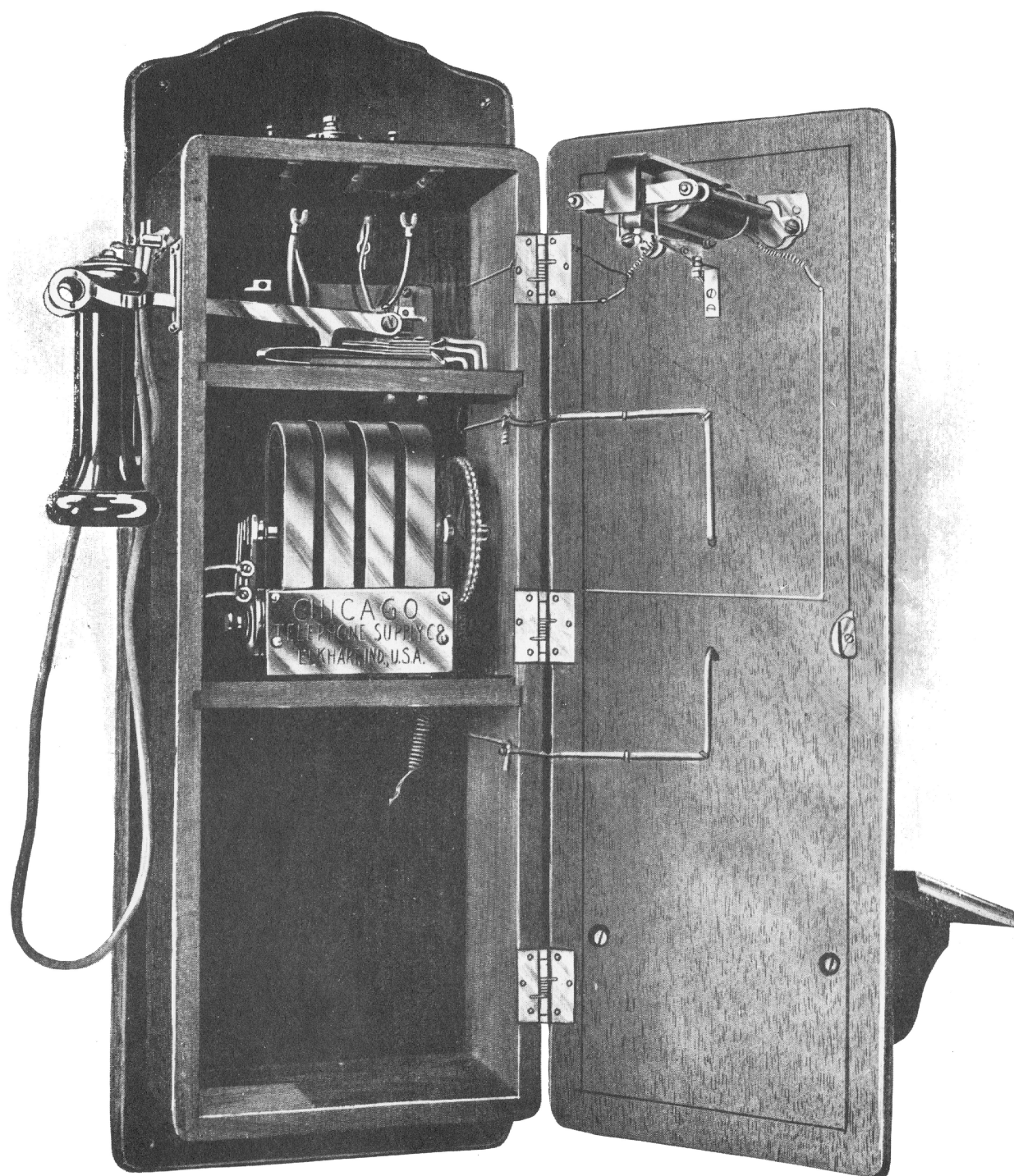
BRIDGING TELEPHONE WITH CONDENSER

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."

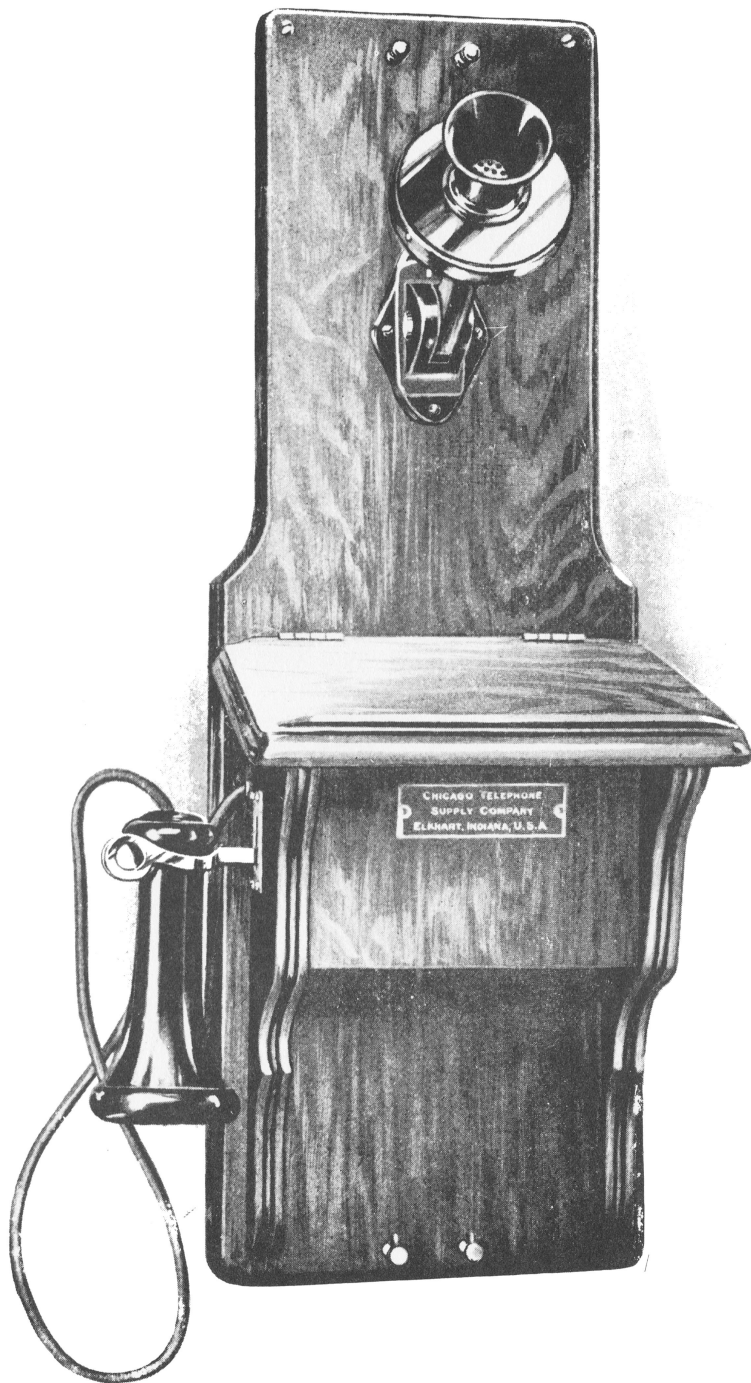


FOUR PARTY SELECTIVE TELEPHONE

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 currents.

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

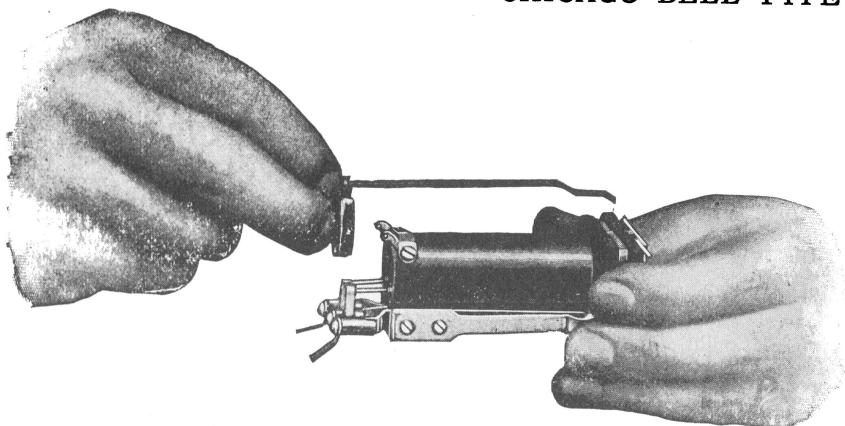
Many telephone factories are not equipped to produce every part that enters into the construction of their product.

We invite correspondence with such factories.

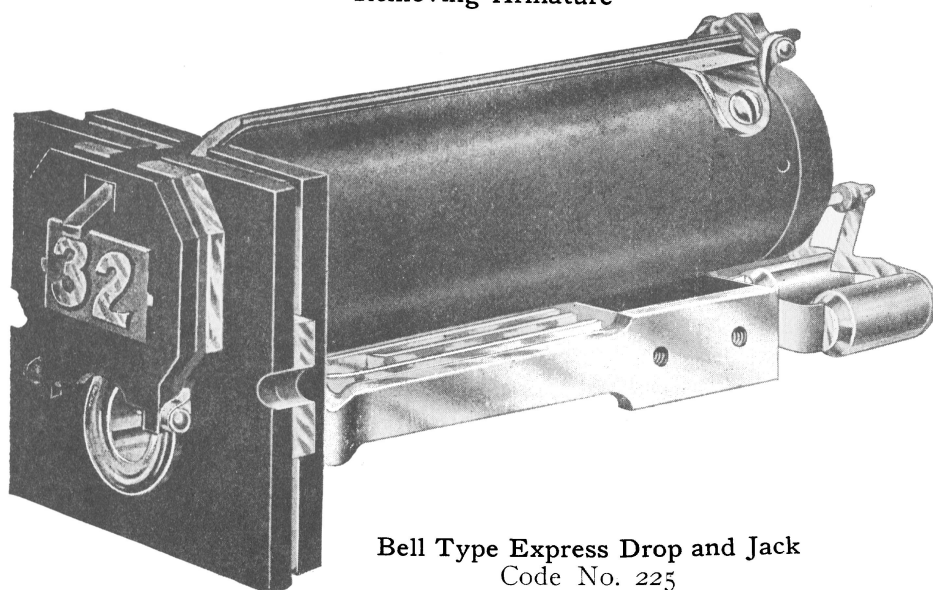
As we produce all parts in large quantities from the raw material, we are in a position to name attractive prices and to stand back of every part with a guarantee which is as good as a government bond.

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

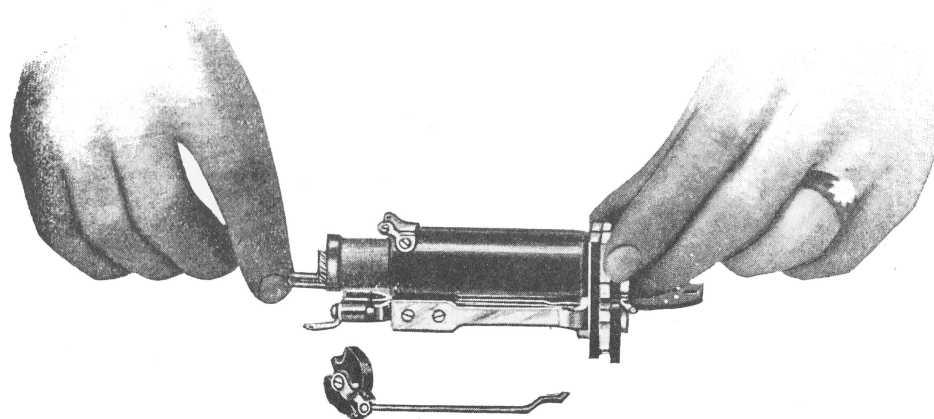
CHICAGO BELL TYPE EXPRESS SWITCH BOARD PARTS



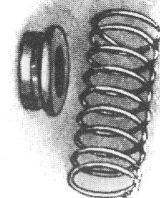
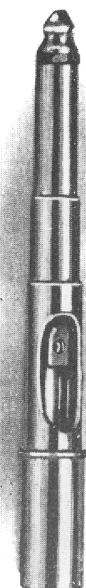
Removing Armature



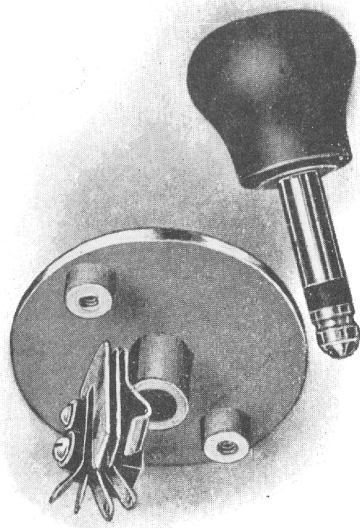
Bell Type Express Drop and Jack
Code No. 225



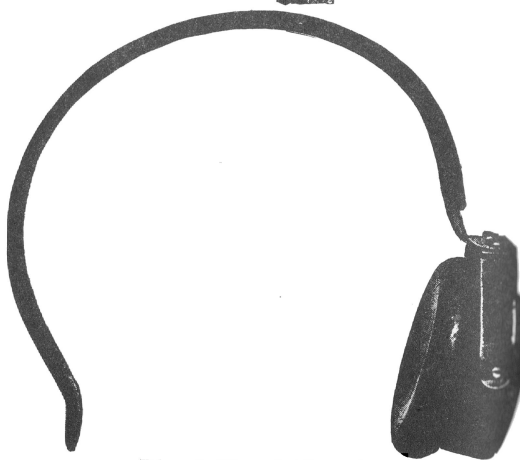
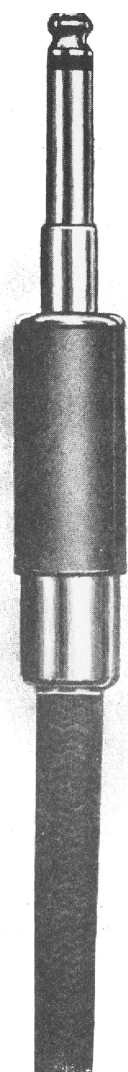
Removing Coil



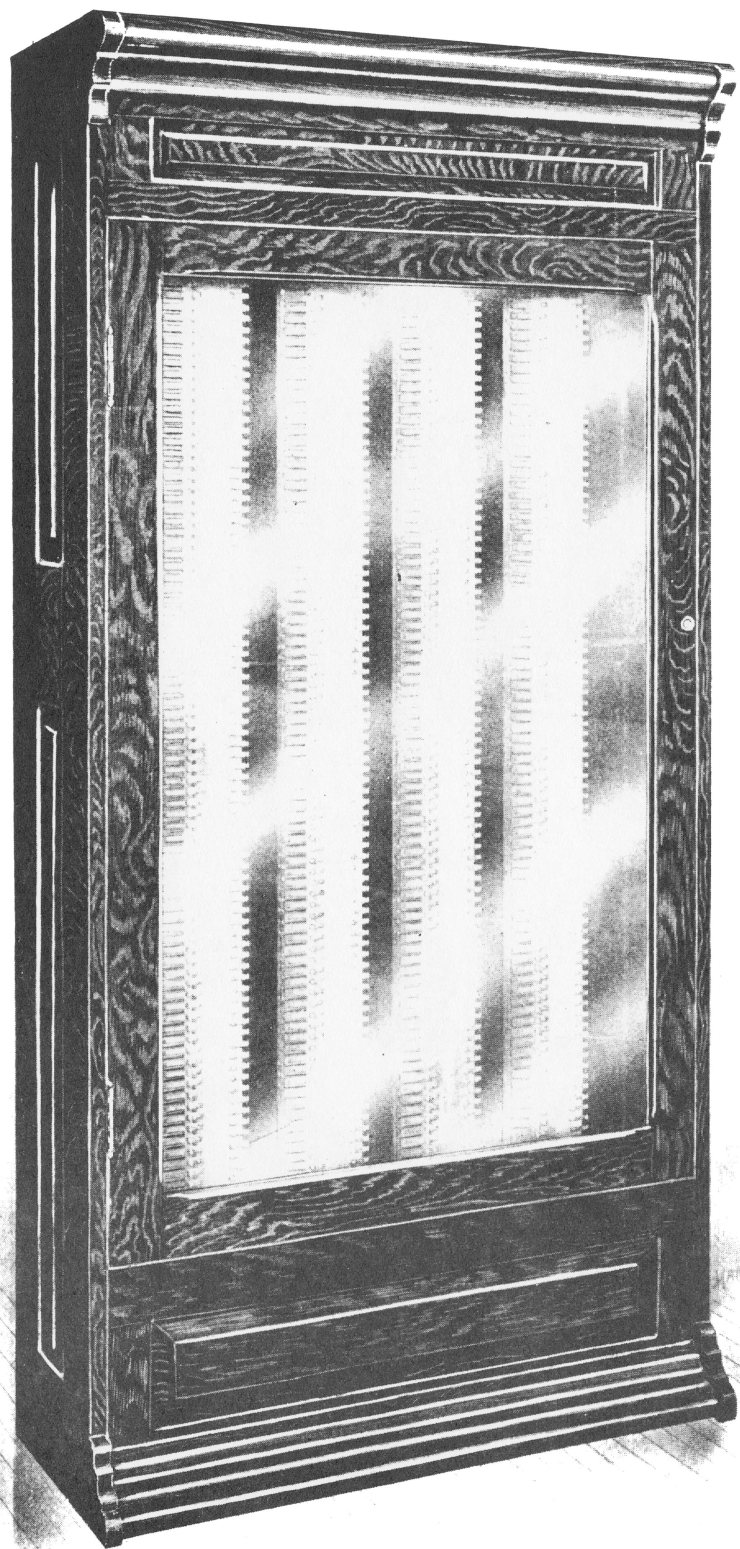
Switch Board Plugs
Code No. 226



Operator's Jack
Code No. 228
Operator's Plug
Code No. 229

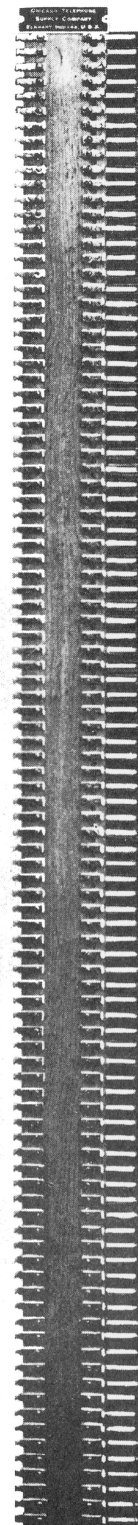


Head Band Receiver
Code No. 230

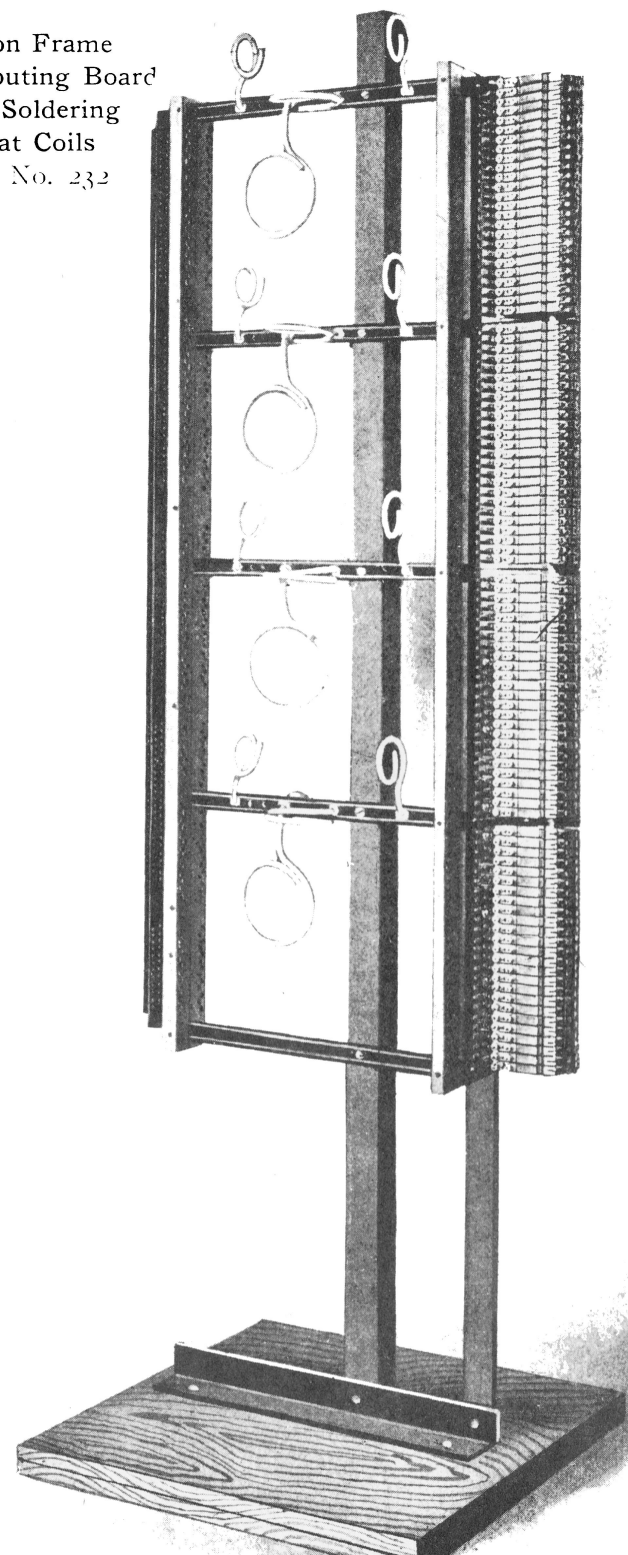


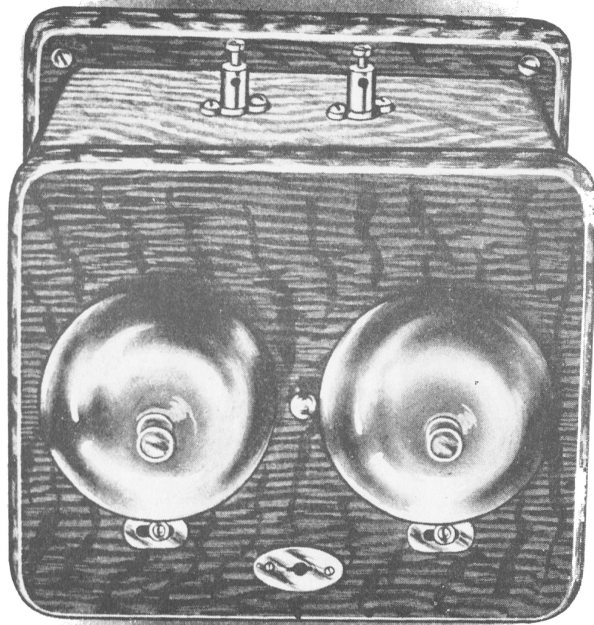
Chicago Distributing
Board Cabinet
Code No. 231

Distributing Panel

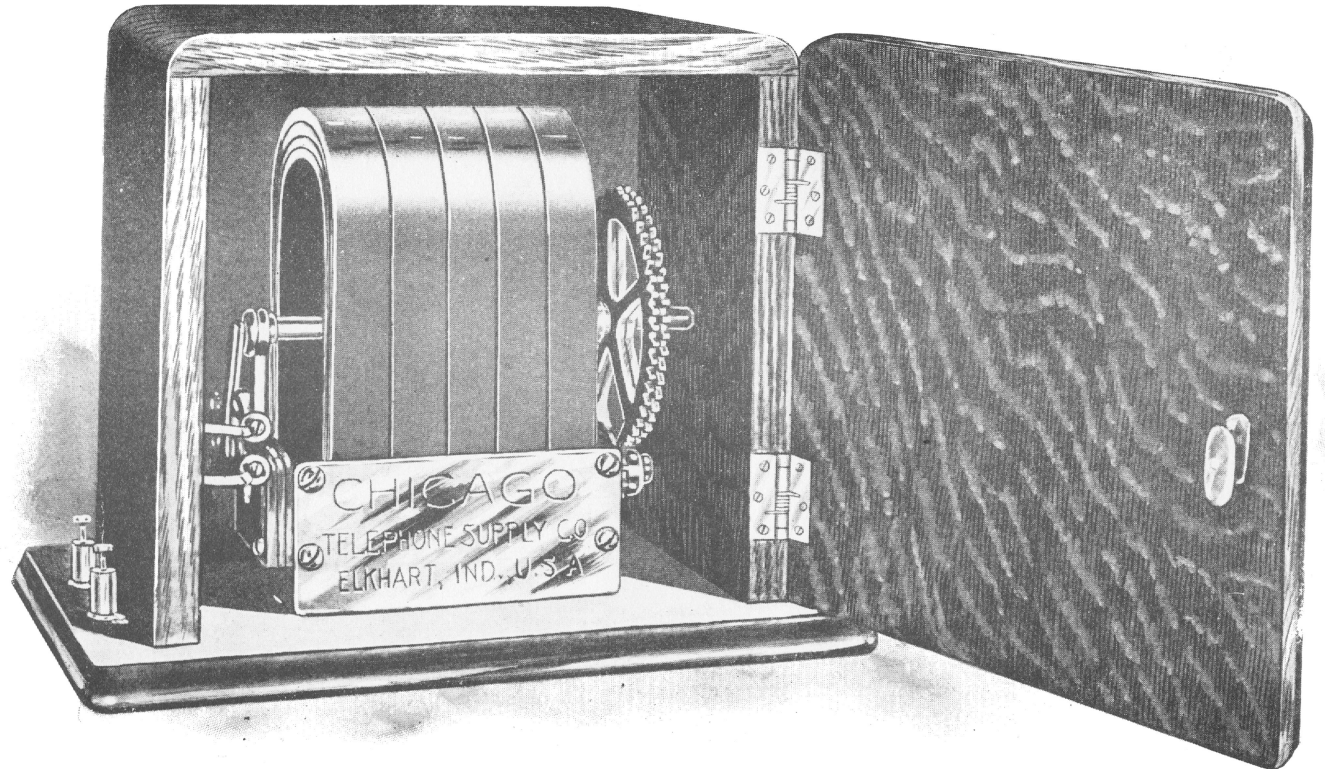


Iron Frame
Distributing Board
Self-Soldering
Heat Coils
Code No. 232



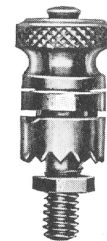


Extension Bells Code No. 237

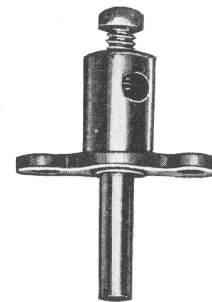


Generator Mounted in Box

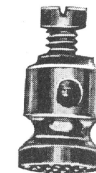
Code No. 244



239

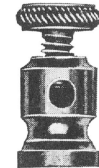


240

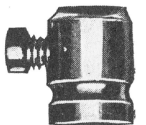


Code Numbers

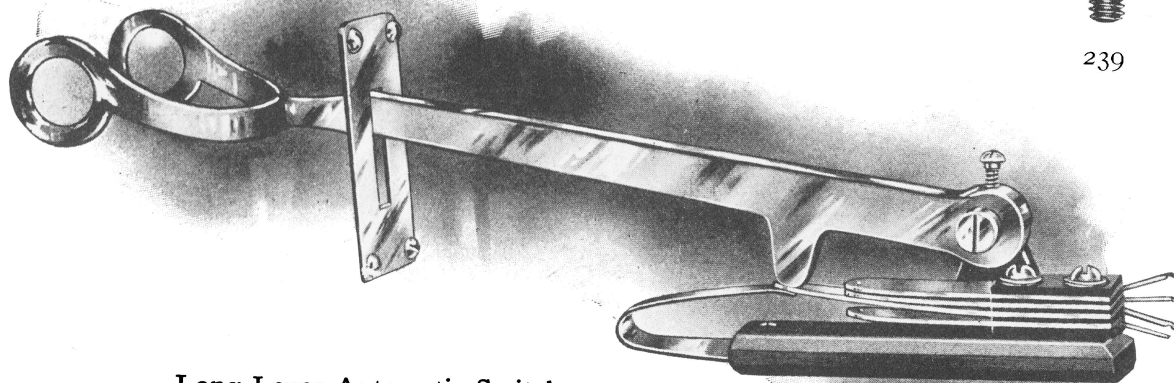
241



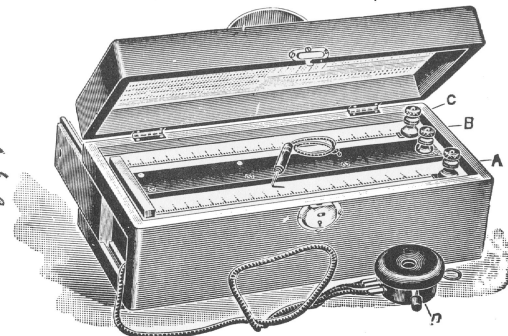
242



243

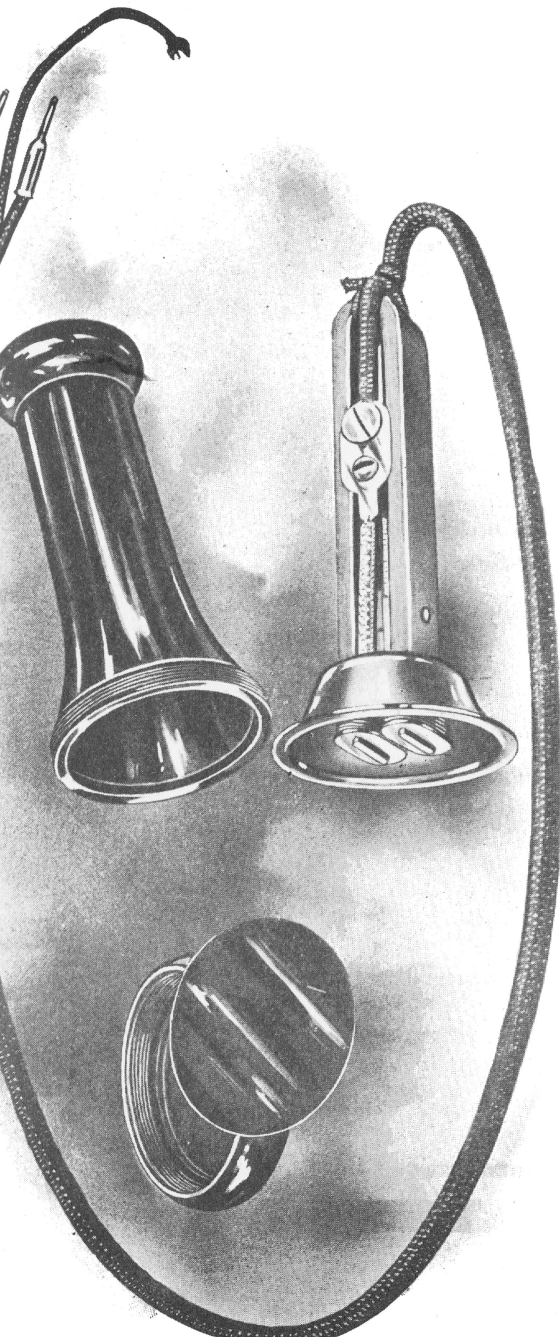


Long Lever Automatic Switch
Platinum Contacts
Code No. 245



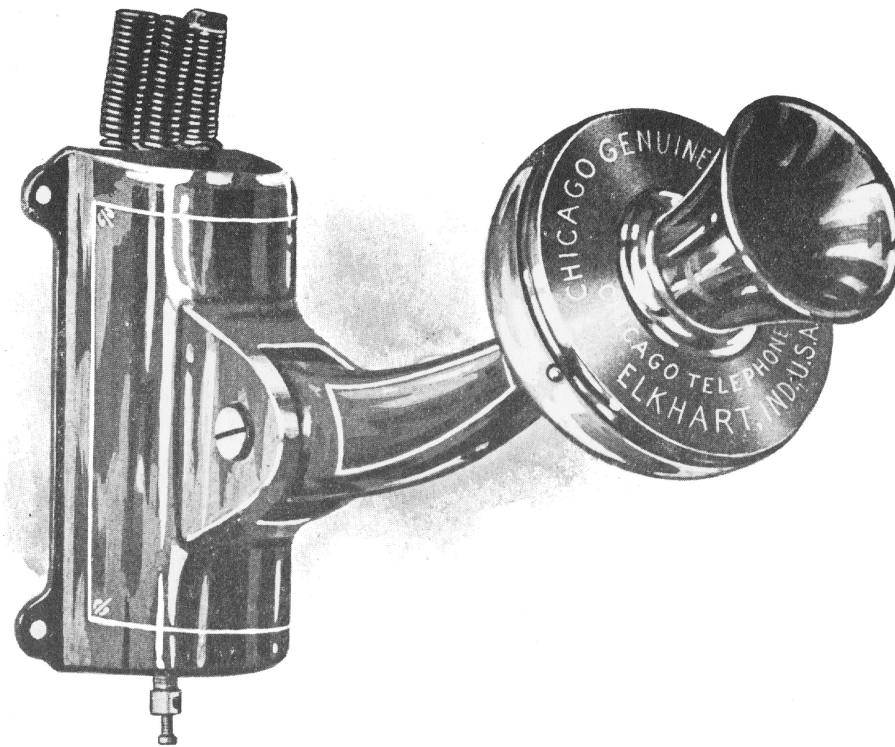
Direct Reading
Ohm Meter
Code No. 238

RECEIVERS

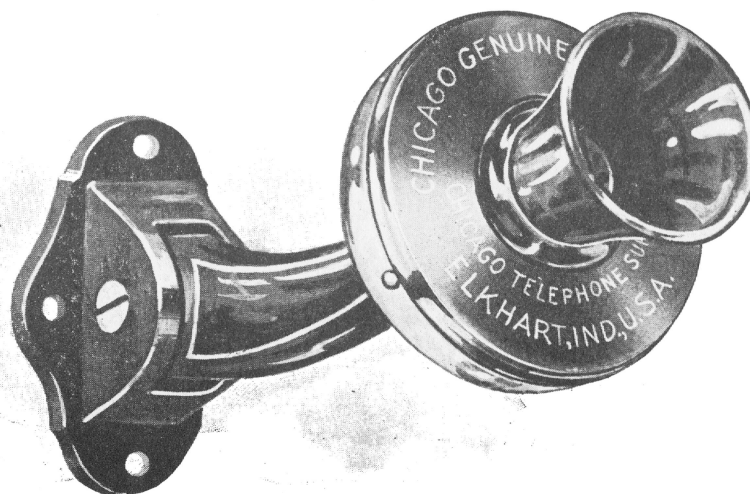


Code No. 246

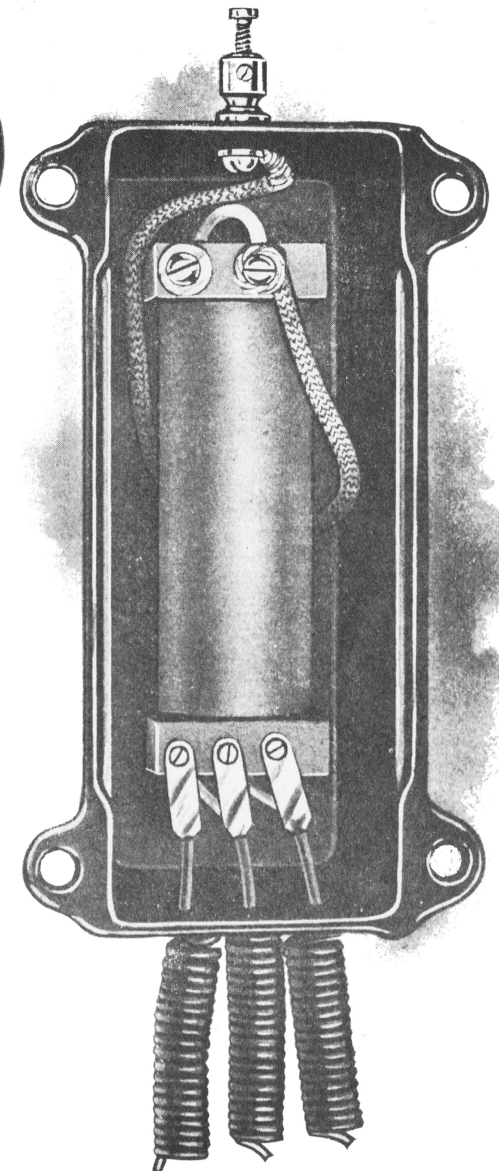
ARM TRANSMITTERS



Code No. 247



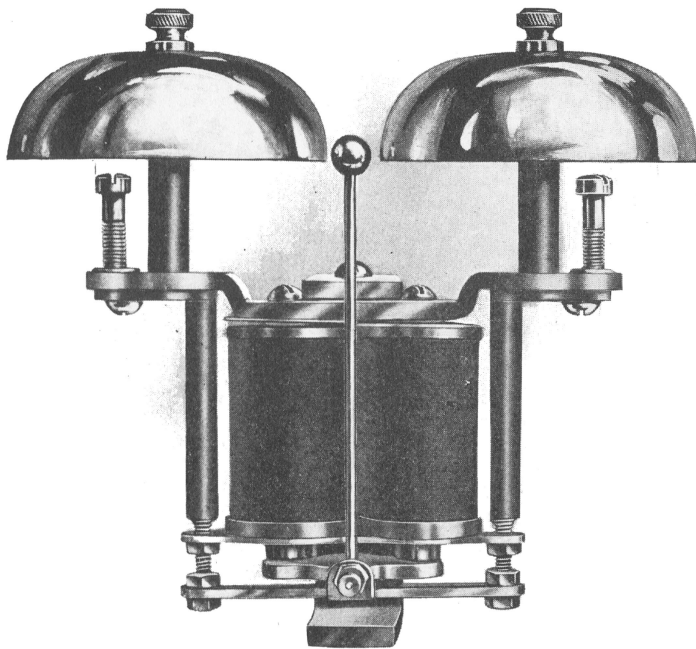
Code No. 248



Code No. 247
Rear View



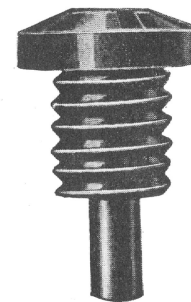
PLUG BOARD PARTS



RINGER MOVEMENTS

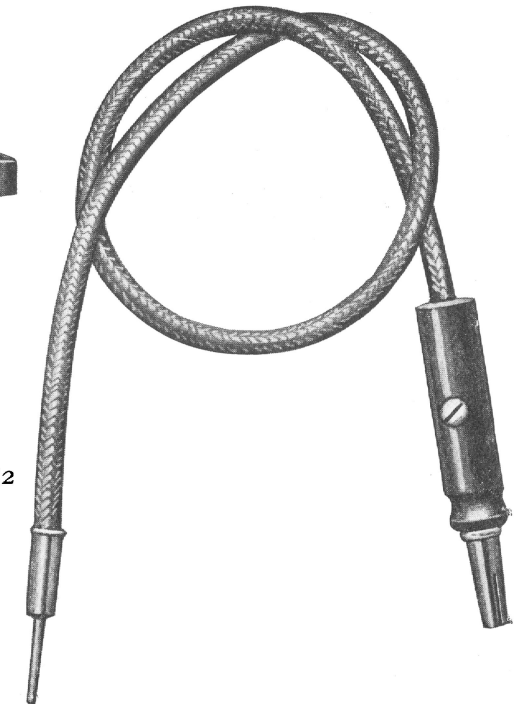
Strikers
Series

Code No. 249



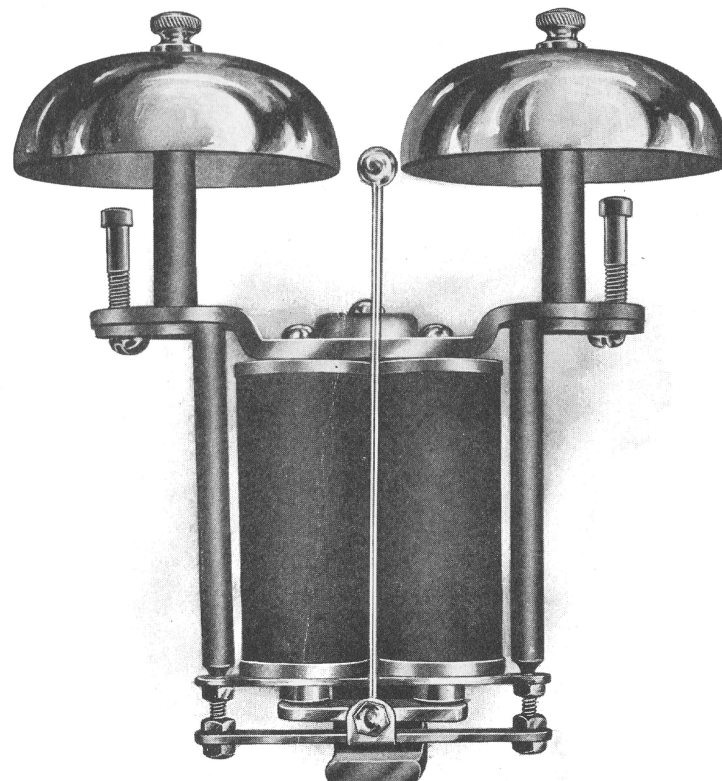
Socket

Code No. 252



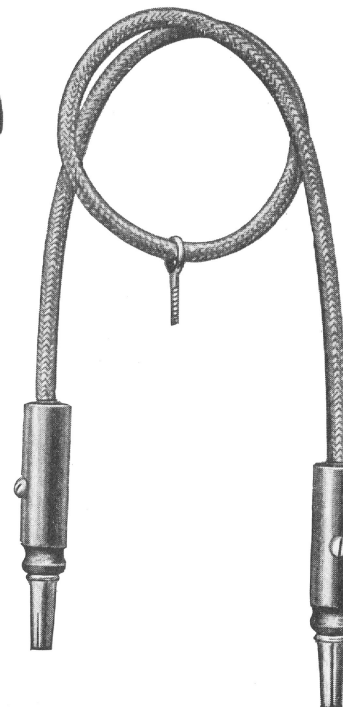
Single Plug and Cord

Code No. 253



Bridging

Code No. 251



Double Plugs and Cord

Code No. 254

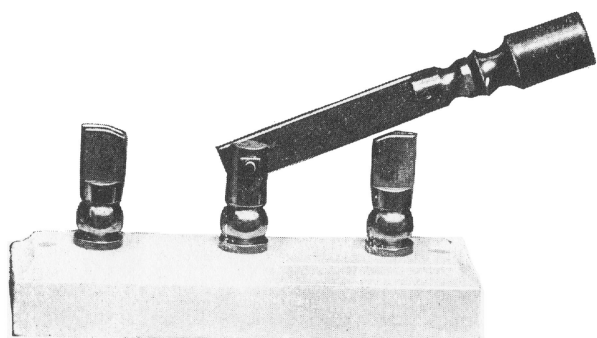


Plug

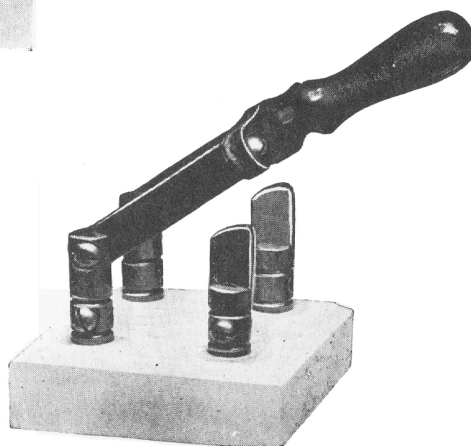
Code No. 255



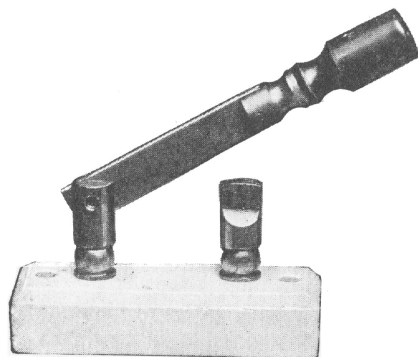
KNIFE SWITCHES



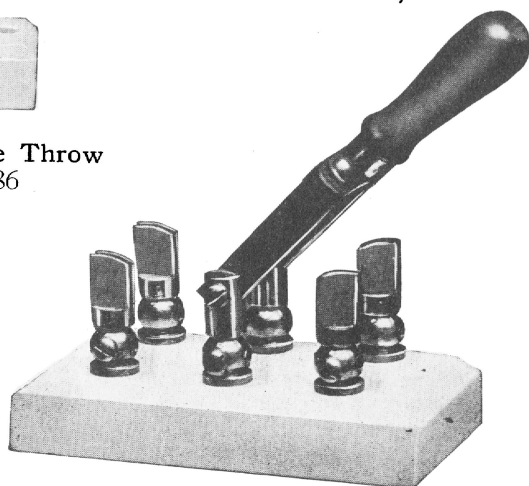
Single Pole, Double Throw
Code No. 285



Double Pole, Single Throw
Code No. 287

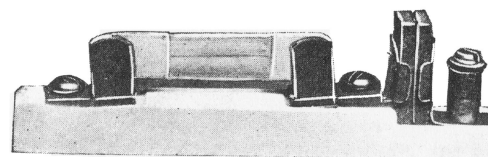


Single Pole, Single Throw
Code No. 286

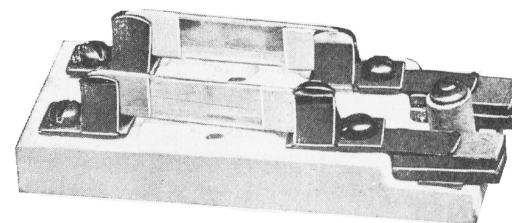


Double Pole, Double Throw
Code No. 288

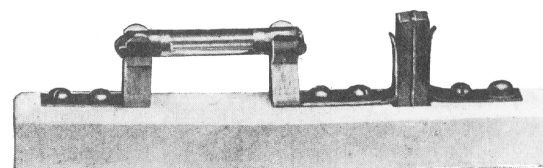
FUSE BLOCKS



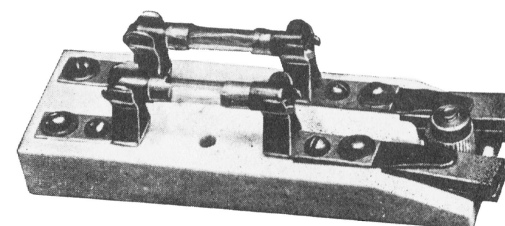
Standard Single Pole
Code No. 289



Standard Bi-Polar
Code No. 290



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.

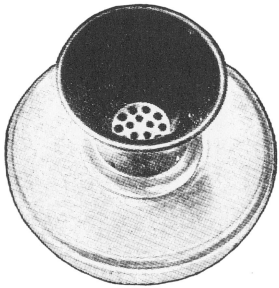
The time is fast approaching when any telephone system will be out of date, where the transmitters are of any other type than the solid back.

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.

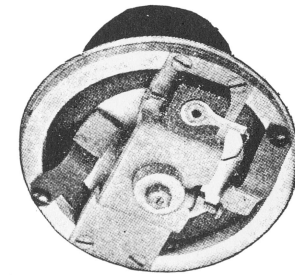




CHICAGO GENUINE SOLID BACK TRANSMITTERS



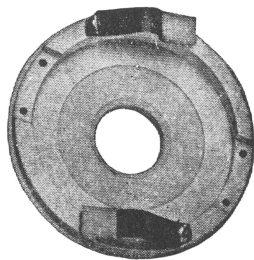
Front View
Code No. 256



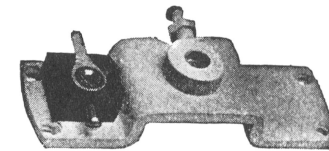
Back View
Code No. 256



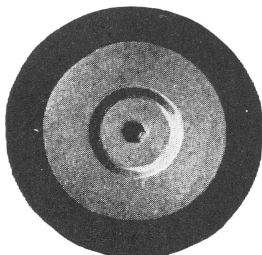
Code No. 256



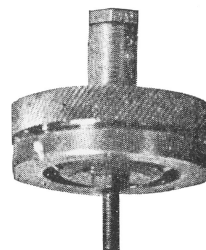
Front and
Damper Springs
Code No. 257



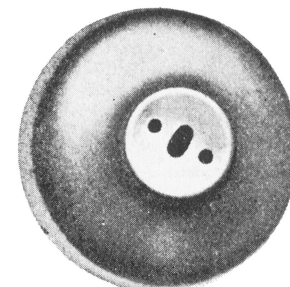
Bridge
Code No. 260



Diaphragm
Code No. 258



Button
Code No. 259

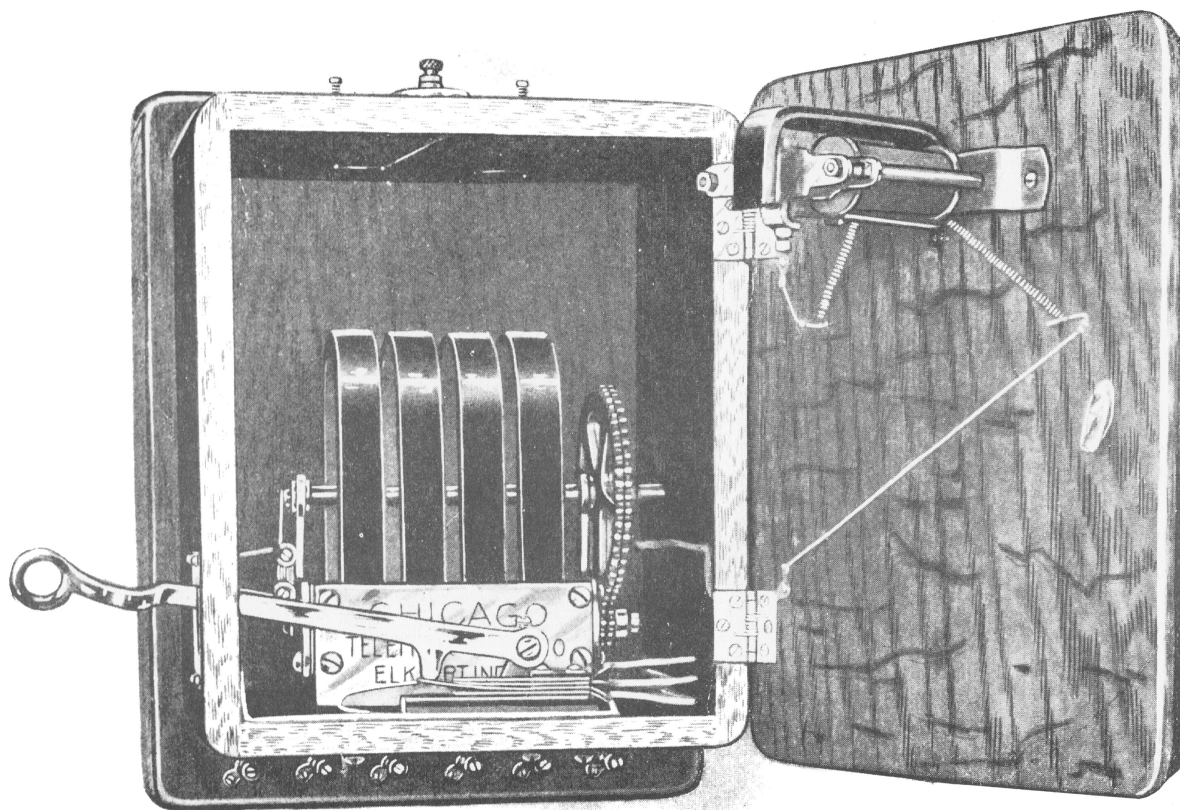


Back Cup
Code No. 261

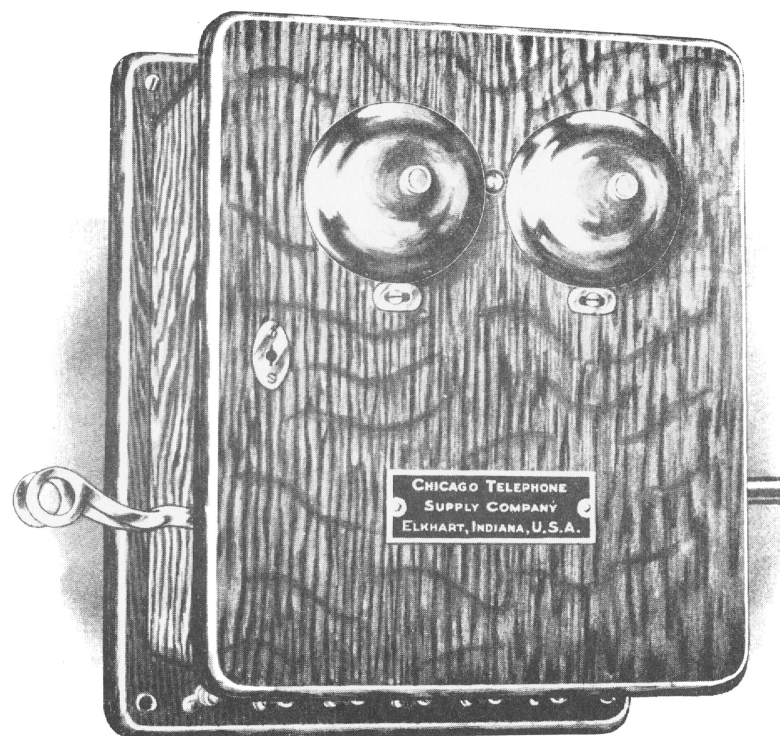


CHICAGO SERIES MAGNETO

Code No. 262

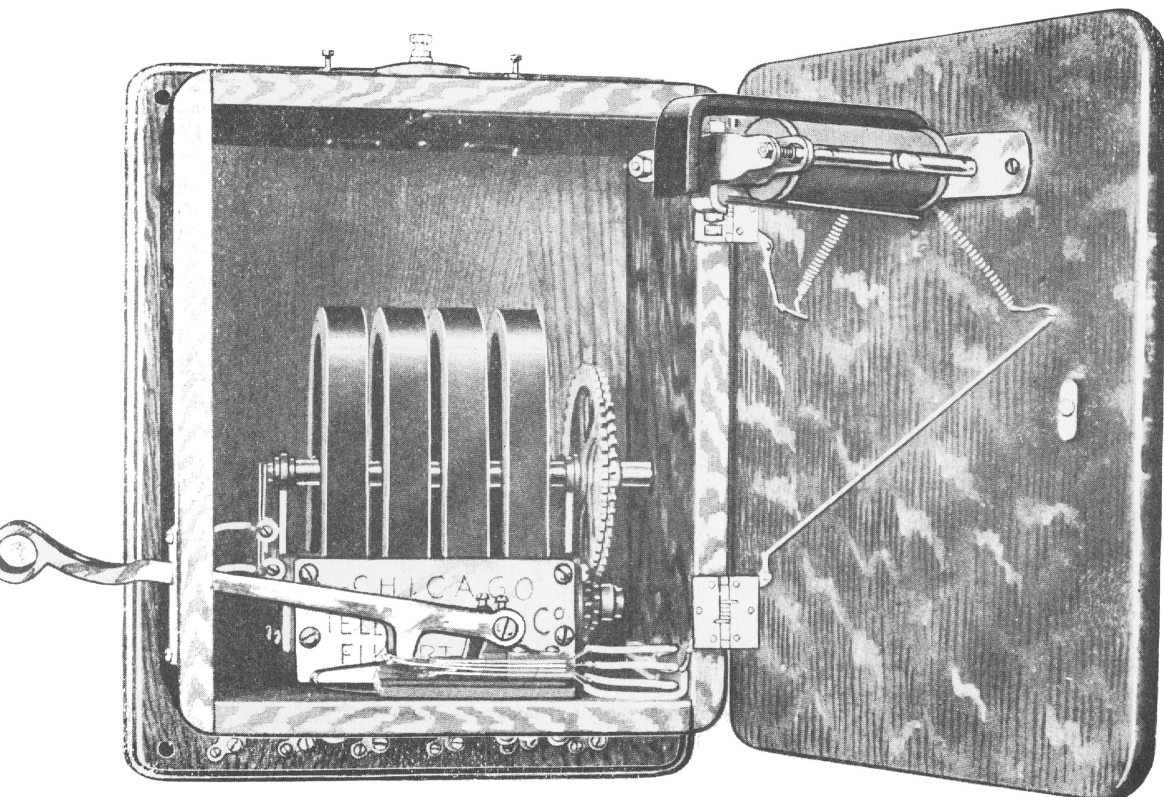


Open

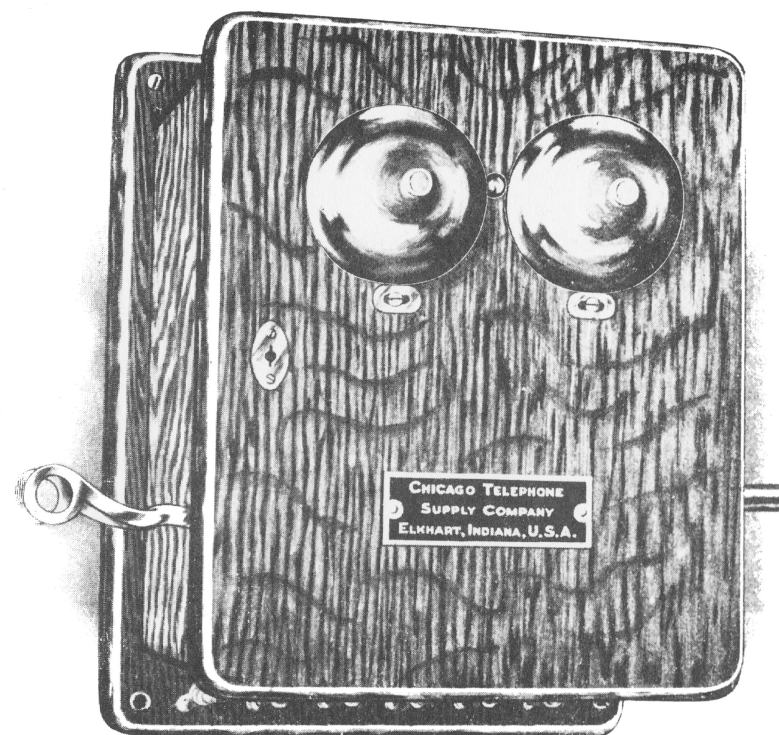


Closed

CHICAGO BRIDGING MAGNETO Four-Bar



Open



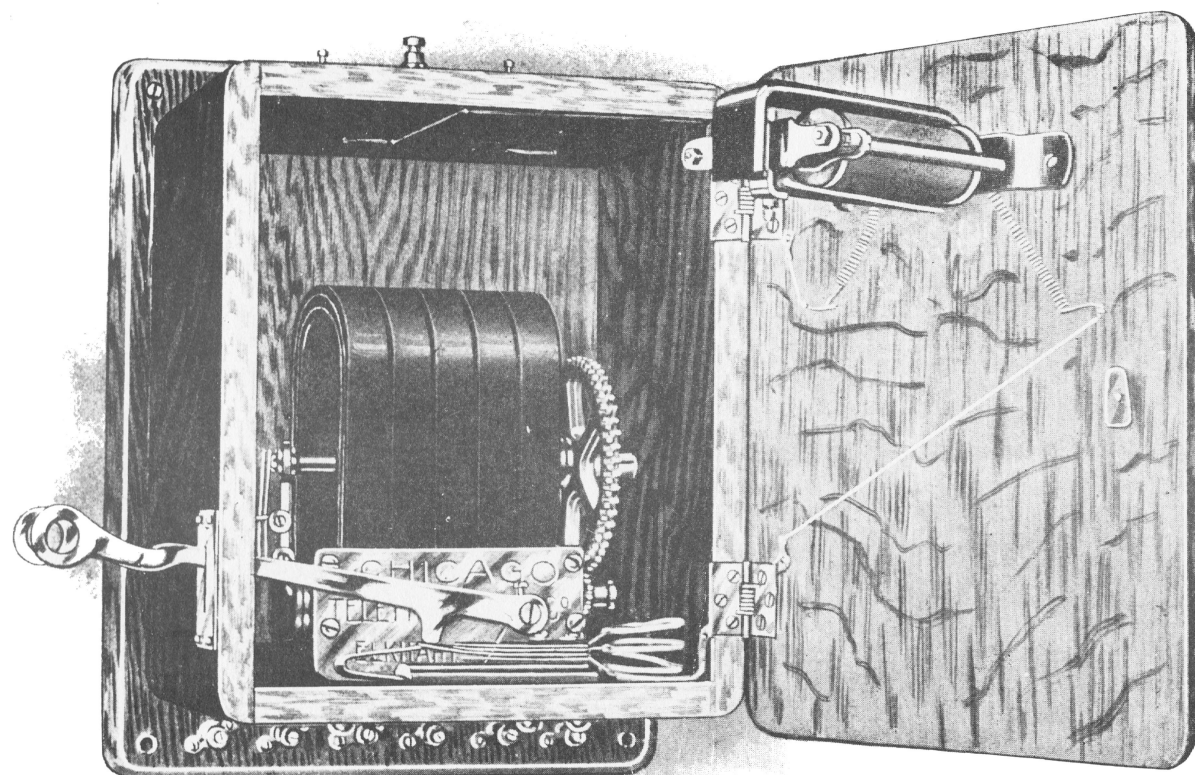
Closed

DESCRIPTION

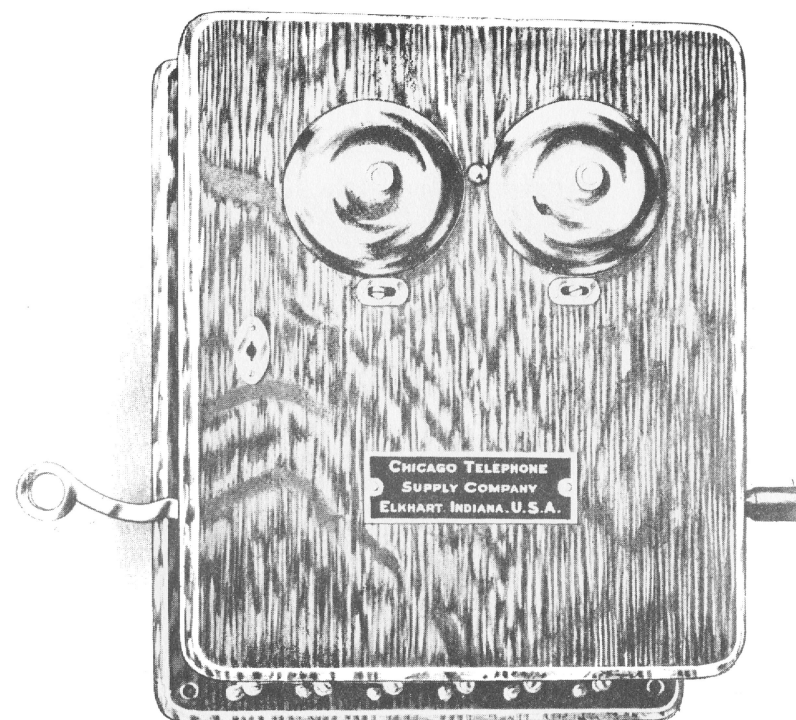
Code No.

| | |
|-----|---------------------------------------|
| 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



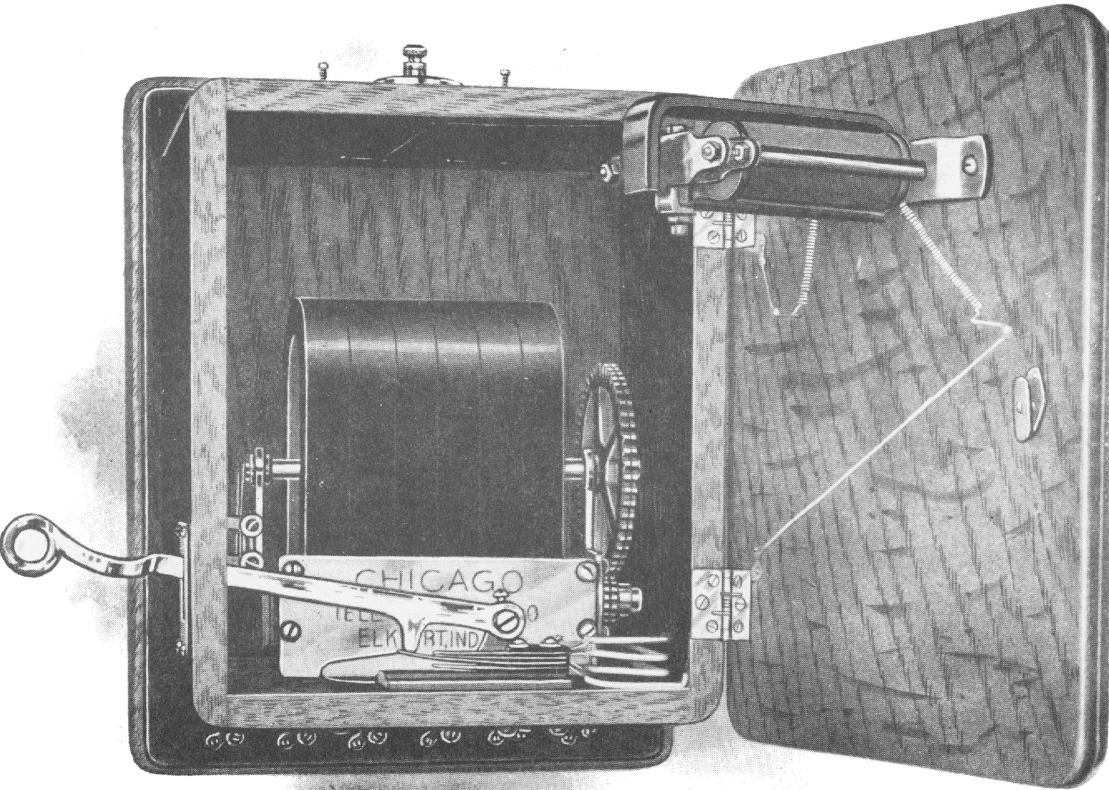
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DESCRIPTION

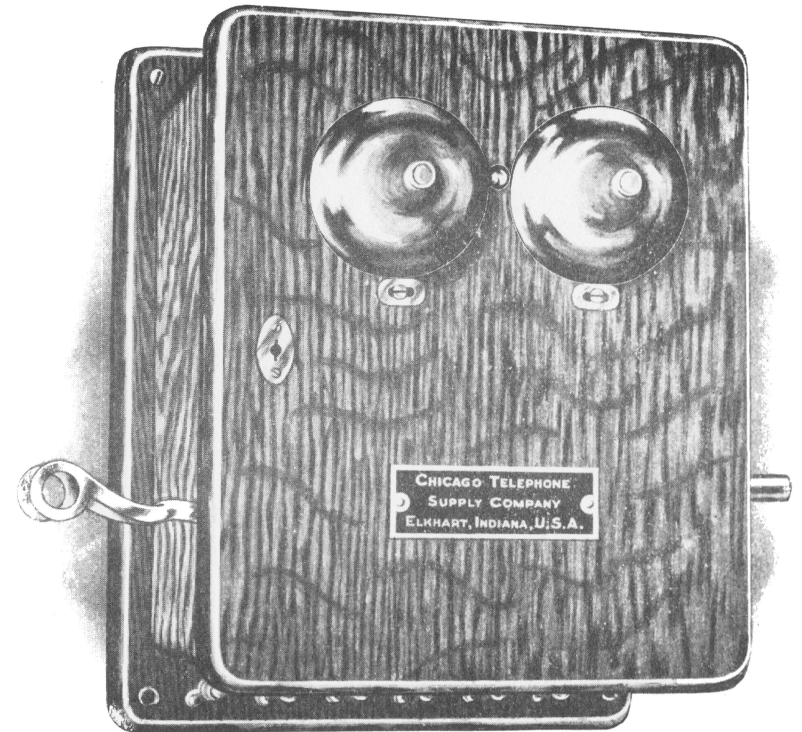
Code No.

| | |
|-----|---------------------------------------|
| 269 | 1,000-Ohm Ringer, Golden Oak Cabinet. |
| 270 | 1,000-Ohm Ringer, Walnut Cabinet. |
| 271 | 1,600-Ohm Ringer, Golden Oak Cabinet. |
| 272 | 1,600-Ohm Ringer, Walnut Cabinet. |
| 273 | 2,500-Ohm Ringer, Golden Oak Cabinet. |
| 274 | 2,500-Ohm Ringer, Walnut Cabinet. |

CHICAGO BRIDGING MAGNETO Six-Bar



Open



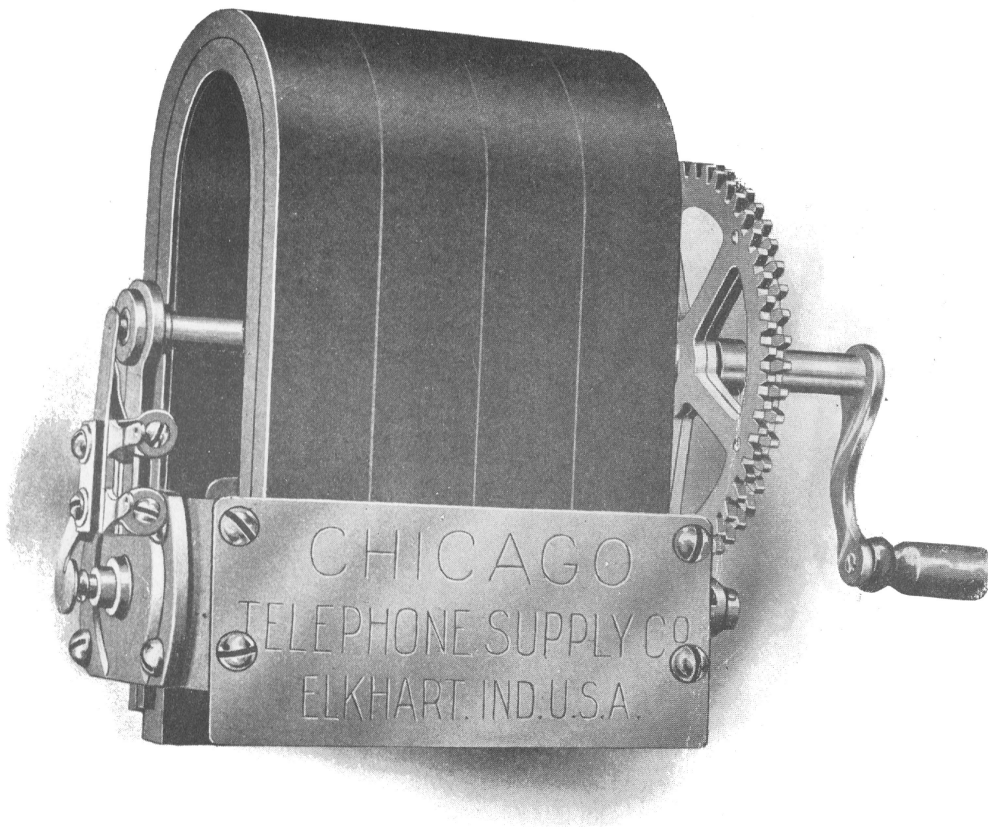
Closed

DESCRIPTION

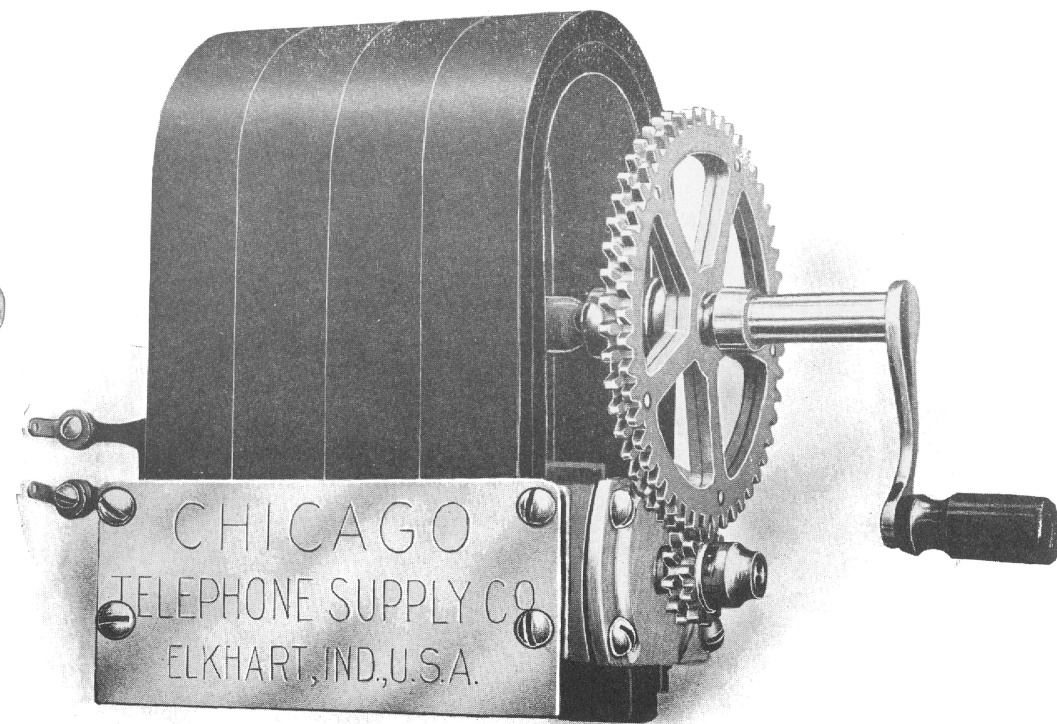
Code No.

| | |
|-----|---------------------------------------|
| 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. |
| 279 | 2,500-Ohm Ringer, Golden Oak Cabinet. |
| 280 | 2,500-Ohm Ringer, Walnut Cabinet. |

CHICAGO GENERATORS



Series
Code No. 281

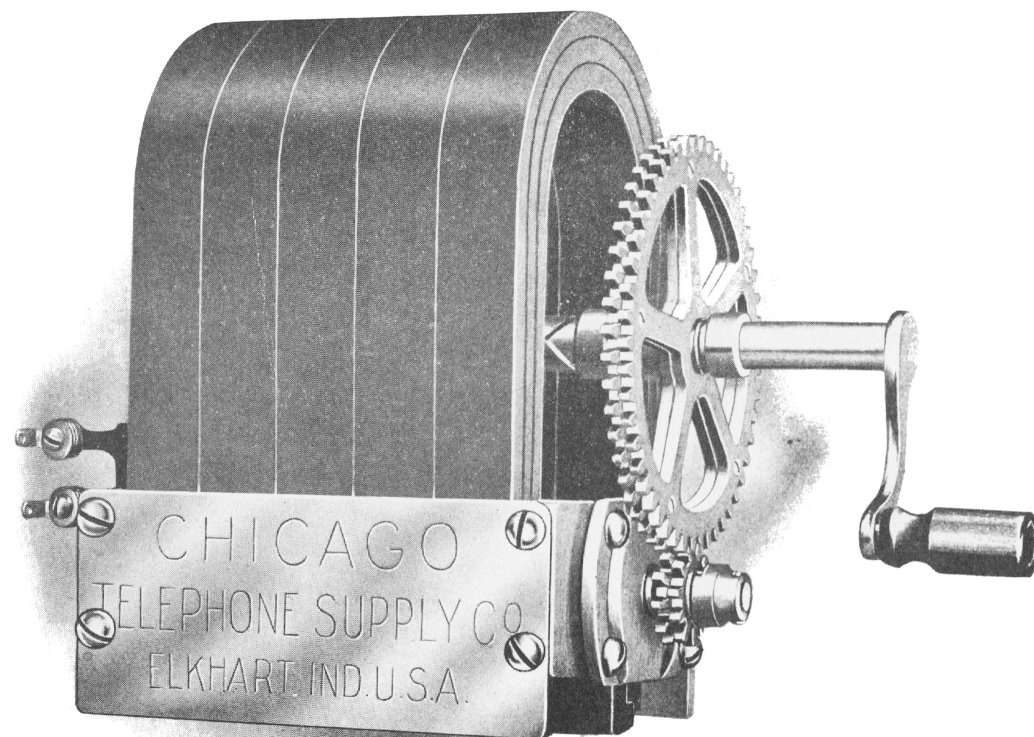
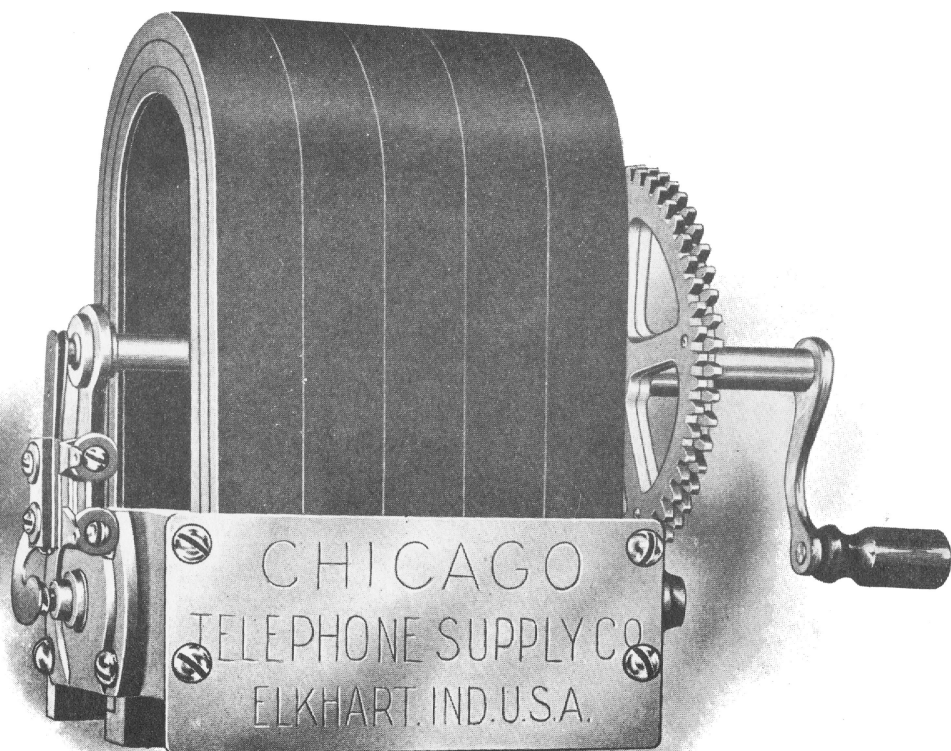


Four-Bar Bridging
Code No. 282



CHICAGO FIVE-BAR BRIDGING GENERATOR

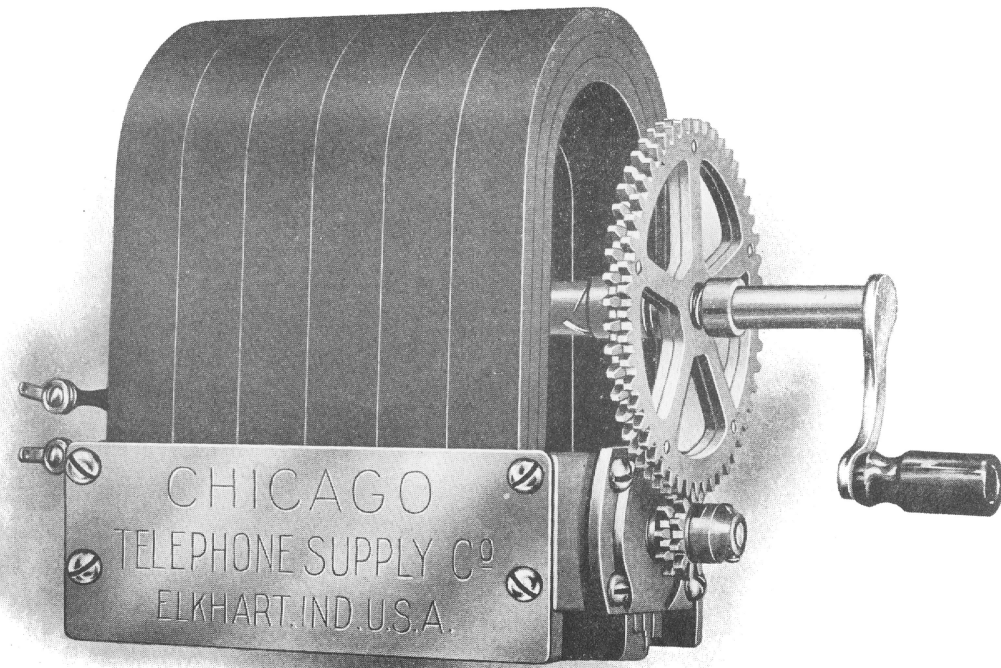
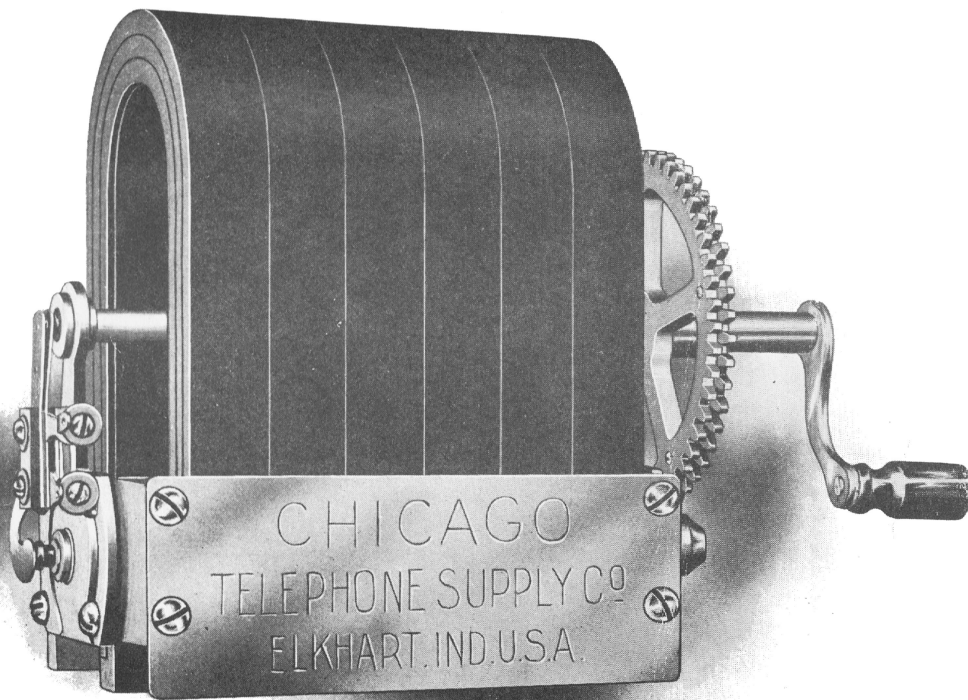
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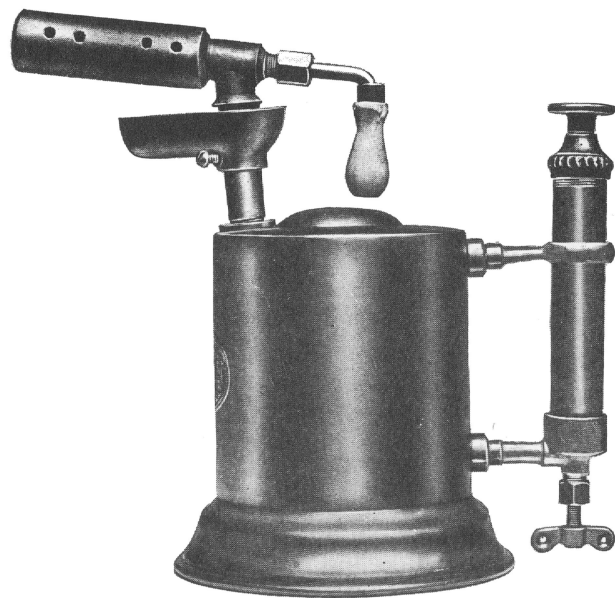




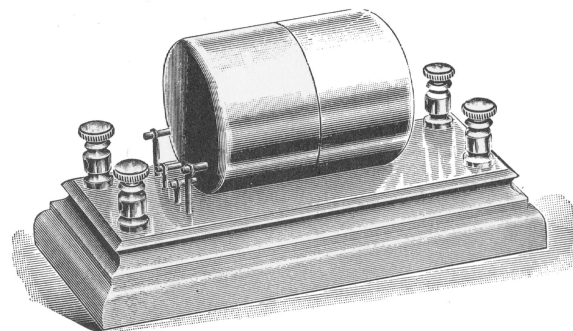
CHICAGO SIX-BAR BRIDGING GENERATOR

Code No. 284

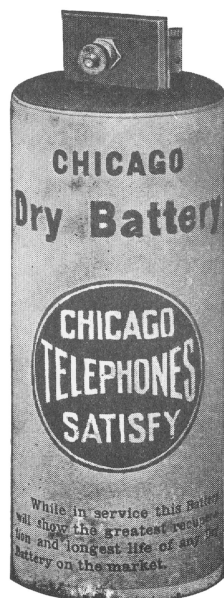




Hot Blast Torch
Code No. 293



Repeating Coil
Code No. 297



Dry Battery
Code No. 294



Wet Battery
Code No. 295



Pay Station Sign
Code No. 298



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