# MAGNETO Telephone Apparatus

## Catalog No. 54

CHICAGO TELEPHONES SATISFY


## Chicago Telephone Supply Co

MAKERS OF TELEPHONES AND SWITCHBOARDS

## Elkhart Indiana.

# MAGNETO
## Telephone Apparatus

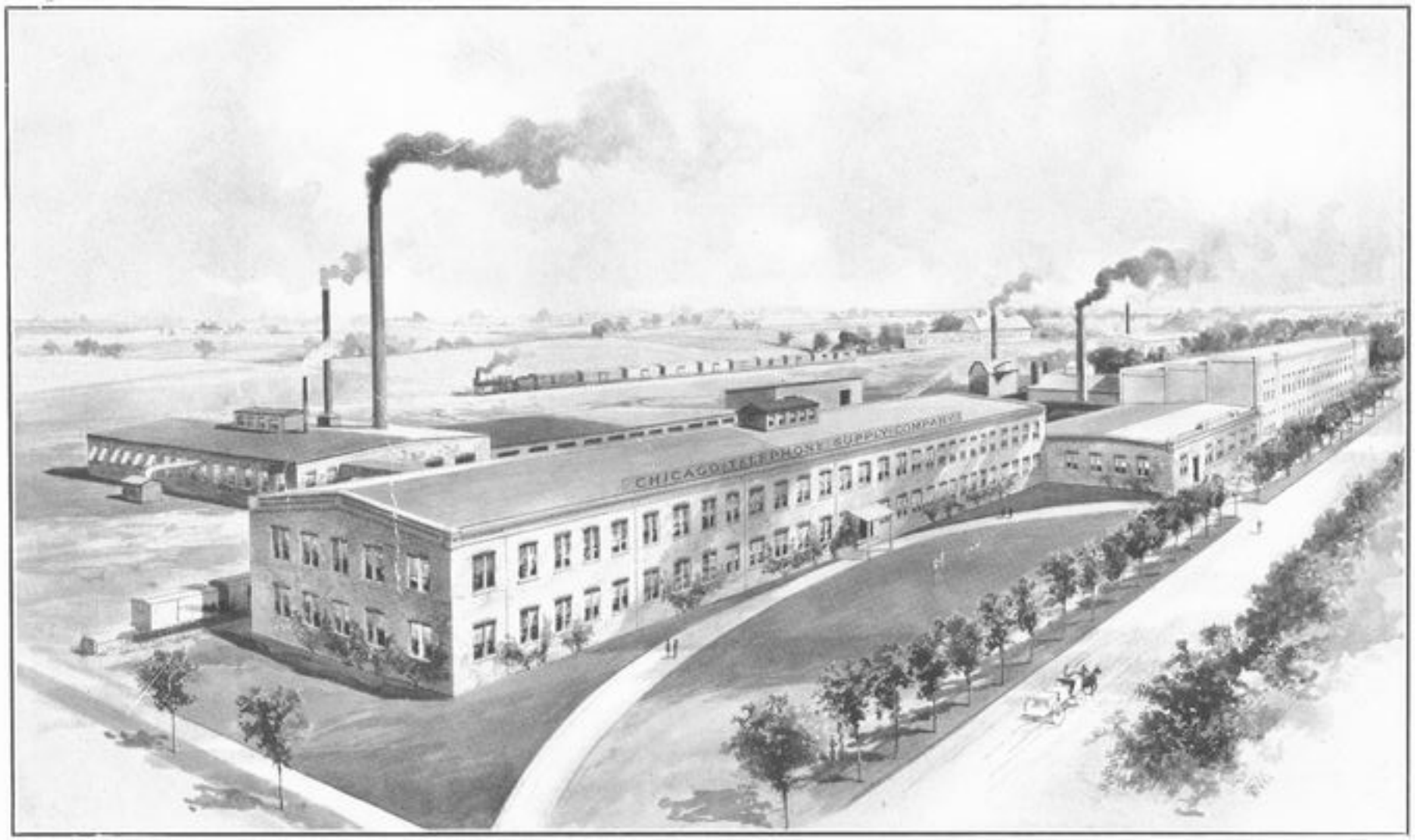
Catalog No. 54


CHICAGO
TELEPHONE SUPPLY
COMPANY

Makers of Telephones and Switchboards

Elkhart, Indiana

ESTABLISHED IN 1893




OUR BIG FACTORY AT ELKHART, INDIANA

Devoted exclusively to the manufacture of Chicago Telephones. This business established by its present owners in 1895.

# Introductory

THIS EDITION of our Catalog describes CHICAGO Telephone Apparatus. It is intended to acquaint you with all the details and refinements of our product; to give you also some idea of the organization behind our factory and our facilities for manufacturing telephones and switchboards unequalled in mechanical and electrical excellence.

¶ Our position of pre-eminence in the Magneto Telephone field has been made possible by cementing togther a smooth-working organization of experts, who have made the designing and construction of quality telephones a life study. Some of them are pioneers who by close application have improved and perfected the earlier methods until now we have a telephone that is good enough to carry with it a Trouble Insurance Policy—a positive guarantee against repair expense. We want to talk more about that Trouble Insurance Policy later on. (See pages 4 and 5.)

¶ The picture of our factory is on the preceding page. It will give you some idea of our capacity to manufacture in quantities sufficient to care for all orders promptly. We would like to lead you through the various departments and show you the modern labor-saving devices that help us to sell high-grade telephones at so reasonable a cost. We would like also to offer for inspection our warehouses. The enormous quantities of raw material that enter into the finished instrument are stored there. All these things which we would like to show you, give us confidence that you will send us your orders.

# Service Guaranty

"WHY should I buy CHICAGO TELEPHONES in preference to other makes?" This query will occur to the conservative buyer before placing his order, and the selection must not be made until he is first satisfied that the equipment is capable of furnishing reliable service for an indefinite time and under any and all practical conditions.

¶ Our answer to such a careful buyer is: "You should buy CHICAGO TELEPHONES becuase they are the only telephones made that are protected against repair expense by a Service Guaranty." This argument is unanswerable. It places the responsibility entirely upon us as the manufacturers, and binds us in a legal way to observe strictly the terms and conditions imposed by our Service Guaranty.

¶ With every telephone that we manufacture, we issue, without additional cost, a Service Guaranty Bond and a Trouble Insurance Policy, which binds us in black and white to replace or repair, without charge, any part of a CHICAGO TELEPHONE that proves defective, and to assume payment for the time and expense of the trouble man who makes these necessary repairs.

¶ We know that you will consider such a guaranty as the most valuable asset that a telephone user can possess, and that it will convince you of the absolute truth of the broad claims that we have made for the superiority of our telephones. It will convince you that we have perfected our product to the trouble-proof point during the twenty-five years that we have specialized in the manufacture of magneto telephone apparatus.

¶ It will convince you that we are deserving of the reputation that we possess as manufacturers of telephones that are best suited to the rigid requirements of bridging party line service.

¶ It is proof so positive that we are sure you will send us your order and let us make a practical demonstration of the superior talking and ringing qualities of CHICAGO TELEPHONES.

Series_____ Paid Up Capital $500000.00. No. 3100

TELEPHONE TROUBLE INSURANCE.

THE

# CHICAGO TELEPHONE SUPPLY COMPANY

OF THE CITY OF ELKHART, INDIANA,
BY THIS POLICY

Note Enoure_____

*of*_____, *from the*_____

*day of*_____, *19* ..., *at noon for the term of one year and indefinitely in excess of one year as hereinafter provided, against all trouble in the*_____ *CHICAGO TELEPHONES numbered*_____, *and the said Company will reimburse the Assured therefor in accordance with the terms and provisions of this Policy.*

*The amount of such reimbursement to be the actual cash value of the material required to place the telephones in perfect repair and the time of the regular trouble man or inspector who makes such repairs, same being computed at the rate of the regular wages paid him by his employers, and to be paid to the Assured within sixty days after due notice and proofs of same shall have been made by the Assured, and received at the office of said Company.*

And it is hereby understood and agreed by and between this Company and the Assured, that this policy is made and accepted upon the following terms and conditions, which are hereby declared to be part of this Contract, and are to be used and resorted to in order to determine the rights and obligations of the parties hereto, viz.:

1. That the telephones insured under this Policy shall be installed and maintained in accordance with the appropriate diagram printed on the back of this Policy and the specifications thereto appended.
2. That the Assured can and will truthfully certify that the trouble for which claim is made was wholly within the instruments themselves, and that no part of the claim is for line trouble, loose connections outside of the telephones, switchboard trouble, or for battery connections or renewals, or for malicious or wanton tampering with the instruments by anyone.
3. In case of trouble the Assured shall give immediate notice thereof to the Company, and within thirty days shall furnish on the blank provided for that purpose, a particular account of said trouble, stating the time, nature and circumstances of same, the parts and material necessary to repair same and the actual time consumed by the trouble man in reaching and remedying the trouble.
4. On receipt of notice, as provided in paragraph three, the Company will furnish blanks for proving claims.
5. That the Assured shall make all repairs necessary with all possible dispatch and in the most economical manner consistent with first-class service.
6. It is furthermore hereby expressly provided and mutually agreed that this Policy shall remain in force indefinitely in excess of one year, for so long a time as the Assured shall purchase no less than_____ CHICAGO TELEPHONES during each interval of one year from the date of this Policy.

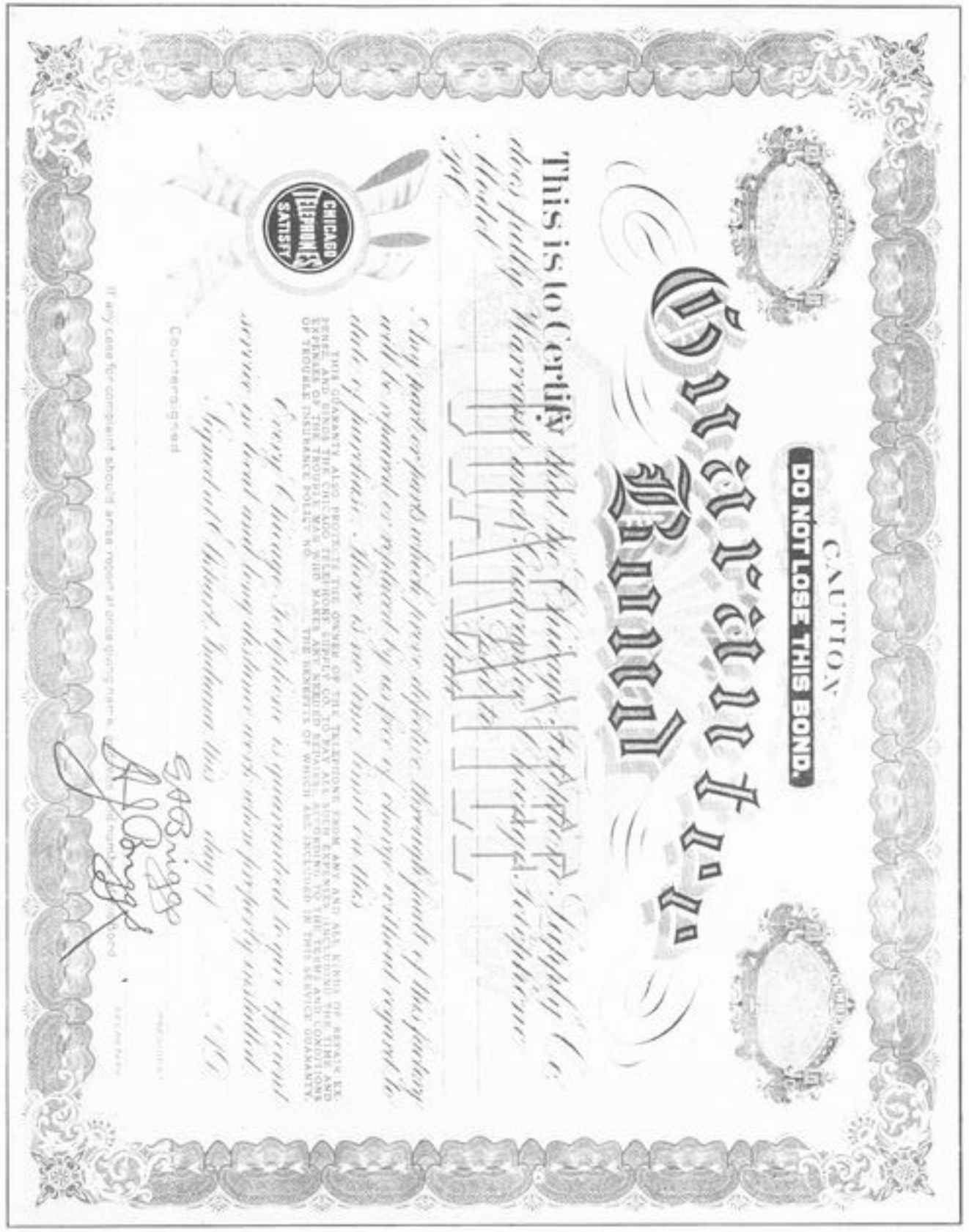
In Witness Whereof, the Chicago Telephone Supply Company has caused this policy to be signed by its President and attested by its Secretary, in the city of Elkhart, Indiana, this _____ day of_____ A. D., one thousand nine hundred and_____

CHICAGO TELEPHONE SUPPLY CO. CORPORATE 1902 SEAL MAINE

G A Briggs *President*

A J Briggs *Secretary*

*Countersigned.*



# Prices

THE PRICES OF CHICAGO TELEPHONES are as low as is consistent with the quality of our product. It is not possible for us to compete in price with manufacturers of inferior equipment, but you will find our quotations to compare more than favorably with prices offered by makers of telephones claimed to be the equal of CHICAGO TELEPHONES. This is explained by the fact that we have not taken advantage of the unusual conditions that existed during the war and after, but have sustained exactly the same relationship between cost and selling prices as existed during the pre-war period.

¶ It would not be possible for us to retain our position of pre-eminence in the telephone field if we did not guard jealously our reputation for reasonable prices and fair dealing.

# Terms

THIRTY DAYS NET, or 2 per cent. discount for cash.

In order that we may establish your account on a credit basis, we ask our new customers to accompany their initial order with bank reference or commercial rating. By so doing, needless delay can be avoided.

¶ If desired, goods will be shipped C. O. D. by express or parcel post, or if by freight, with our sight draft attached to bill of lading.

¶ Please furnish us with specific shipping instructions, and order by code number wherever possible.

# Chicago Bridging Telephones

THE most complete line of Bridging Telephones made will be found illustrated on the following pages. The various models have been developed and perfected through years of tireless effort, and each separate type represents the product of highly specialized knowledge applied to the manufacture of the loudest ringing, plainest talking telephone that it is possible to devise. For every practical purpose there is a CHICAGO TELEPHONE excellently suited for that particular need. Their sturdy qualities of strength and durability are a guarantee of long life, and their delicate sensitiveness is positive assurance of reliable and efficient service.

# Description of Different Styles

STYLE A Telephones are regular bridging code signal, party line instruments.

STYLE B Telephones are equipped with low capacity "ring-through" condensers in secondary circuit. Will ring last telephone on line with receivers of every intermediate telephone removed.

STYLE C Telephones are equipped with direct current generators to throw drop at Central without ringing other telephones on same line. Other telephones cannot be signalled by this style instrument.

STYLE D Telephones are equipped with "secret-ring" push buttons to ground generator. When installed on metallic circuit with one side of drop grounded at Central, will ring other telephones on same line by code signal without calling Central; or by using push button will call Central without ringing other bells on the line. This style is intended for use on metallic circuit only.

STYLE E Telephones are equipped with "secret-ring" push buttons for producing either direct or alternating current. (A combination of Styles A and C.) When push button is used, Central can be signalled without ringing the other telephones on the line. Can be used on either ground or metallic circuit.

STYLE F Telephones are equipped with "ring-through" condensers like Style B, and "secret-ring" push buttons for grounding generator like Style D. This style is intended for use on metallic circuit only.

CHICAGO TELEPHONES of any style will be wired for divided circuit without extra charge, if desired.

Telephones for four-party circuits can be furnished to meet any legitimate conditions.

# Bridging Telephones

## CHICAGO DE LUXE

WE ARE WILLING to let our entire line of apparatus be judged by the quality of any single type, but we take particular pride in our CHICAGO DE LUXE TELEPHONE, which we believe to be the best magneto telephone that has ever been manufactured. It possesses every feature of modern construction that adds to the convenience, accessibility and efficiency of the generator call instrument.

¶ You will notice on page 11 the illustration of the Open Cabinet. Convenience has not been sacrificed for compactness. We have kept in mind the popular demand for an extra compact wall telephone, but made our design so as to permit the installation of every part so that it may be instantly removed, should the occasion arise. To remove any part for inspection only one tool is needed—a screw-driver. Every cabinet is wired with push button and condenser loops, in order that these accessories may be installed later, if you so desire.

¶ Your attention will be called to the interior binding posts which do away with the possibility of short circuits, which so frequently occurred when the binding posts were mounted outside, caused by laying on top of the telephone a pair of spectacles, shears, metal lead pencil, etc. The back of the cabinet is drilled so that it is possible to bring in the line wires from the rear, and thus entirely concealing the wiring. No hinged connections are used, but all parts on the door are connected with the wiring inside by flexible cable, so that the chance of an imperfect connection at hinge is eliminated.

¶ We offer the CHICAGO DE LUXE Extra Compact Telephone to our customers as the best telephone that we have ever produced in our history, which means that it is the best telephone that has ever been manufactured, and one which we unhesitatingly protect against trouble expense.


CHICAGO DE LUXE TELEPHONE

CLOSED CABINET

# Bridging Telephones

SPECIFICATIONS

Bridging Generator.

Long Pattern Bridging Striker.

Short Lever Automatic Switch.

Genuine Solid Back Long Distance Transmitter.

Adjustable Transmitter Arm.
Code No. 248.

Long Distance Induction Coil.

Bi-Polar Receiver and Cord.

Two Cells Dry Battery.

Bi-Polar Lightning Arrester.

The Finest Woodwork and Finish ever used in telephone work.

# Chicago De Luxe

DESCRIPTION

| CODE NO. | |
|---|---|
| 15 | Four-Bar Generator, 1,000-Ohm Ringer, Quarter Sawed Oak Cabinet. |
| 16 | Four-Bar Generator, 1,600-Ohm Ringer, Quarter Sawed Oak Cabinet. |
| 17 | Four-Bar Generator, 2,500-Ohm Ringer, Quarter Sawed Oak Cabinet. |
| 18 | Five-Bar Generator, 1,000-Ohm Ringer, Quarter Sawed Oak Cabinet. |
| 19 | Five-Bar Generator, 1,600-Ohm Ringer, Quarter Sawed Oak Cabinet. |
| 20 | Five-Bar Generator, 2,500-Ohm Ringer, Quarter Sawed Oak Cabinet. |
| 21 | Six-Bar Generator, 1,000-Ohm Ringer, Quarter Sawed Oak Cabinet. |
| 22 | Six-Bar Generator, 1,600-Ohm Ringer, Quarter Sawed Oak Cabinet. |
| 23 | Six-Bar Generator, 2,500-Ohm Ringer, Quarter Sawed Oak Cabinet. |


CHICAGO DE LUXE TELEPHONE

OPEN CABINET

# Bridging Telephones

## Chicago Wonder

| CODE NO. | | | |
|---|---|---|---|
| 30 | Four-Bar | Generator, | 1,000-Ohm Ringer. |
| 31 | Four-Bar | Generator, | 1,600-Ohm Ringer. |
| 32 | Four-Bar | Generator, | 2,500-Ohm Ringer. |
| 33 | Five-Bar | Generator, | 1,000-Ohm Ringer. |
| 34 | Five-Bar | Generator, | 1,600-Ohm Ringer. |
| 35 | Five-Bar | Generator, | 2,500-Ohm Ringer. |
| 36 | Six-Bar | Generator, | 1,000-Ohm Ringer. |
| 37 | Six-Bar | Generator, | 1,600-Ohm Ringer. |
| 38 | Six-Bar | Generator, | 2,500-Ohm Ringer. |

For specifications see page 10.

## Chicago Glass Front

| CODE NO. | | | |
|---|---|---|---|
| 40 | Four-Bar | Generator, | 1,000-Ohm Ringer. |
| 41 | Four-Bar | Generator, | 1,600-Ohm Ringer. |
| 42 | Four-Bar | Generator, | 2,500-Ohm Ringer. |
| 43 | Five-Bar | Generator, | 1,000-Ohm Ringer. |
| 44 | Five-Bar | Generator, | 1,600-Ohm Ringer. |
| 45 | Five-Bar | Generator, | 2,500-Ohm Ringer. |
| 46 | Six-Bar | Generator, | 1,000-Ohm Ringer. |
| 47 | Six-Bar | Generator, | 1,600-Ohm Ringer. |
| 48 | Six-Bar | Generator, | 2,500-Ohm Ringer. |

For specifications see page 10.

# Series Telephones

THIS type of telephone is intended for use on private lines, or in other words, where each telephone has a separate line to the switchboard. Standard CHICAGO Telephone parts are used throughout. Our four-bar generator is powerful enough to ring past partial short circuits and shunts, and will work satisfactorily under conditions where no service could be secured with a light 3-bar generator. The general assembly and finish is exactly the same as the CHICAGO De Luxe Bridging Telephone.

**Compact Type**

CODE NO. 50

SPECIFICATIONS

Series Generator. Series Ringer Movement.
Short Lever Automatic Switch.
Genuine Solid Back Long Distance Transmitter.
Adjustable Transmitter Arm. Code No. 248.
Long Distance Induction Coil.
Bi-Polar Receiver and Cord.
Bi-Polar Lightning Arrester.
Two Cells Dry Battery.
The Finest Woodwork and Finish ever used in telephone work.

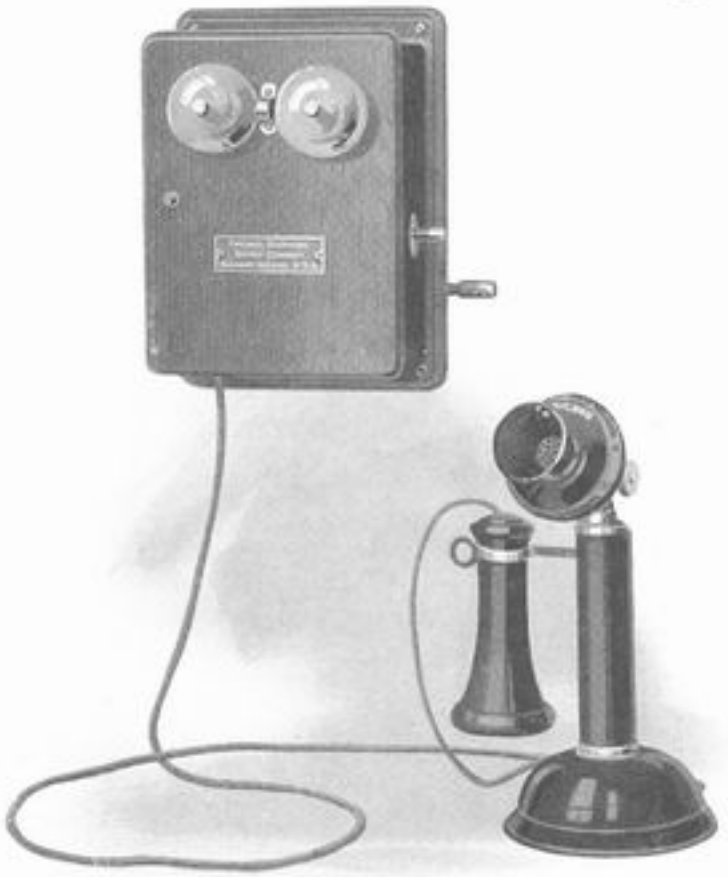
Used on separate lines to switchboard, or on private lines of two instruments.

# Hotel Type Series Telephone

THE "Hotel" type, as it is popularly known, is designed for use on private lines between a residence and store, between house and barn, etc. In such cases as these where the entire installation consists of a line with a telephone at each end, we recommend the CHICAGO JUNIOR TELEPHONE. It is a very compact little instrument, and on account of the economy of space there is not room for mounting the batteries in the cabinet, but they can be placed in the cellar, in a nearby closet, or any other dry and convenient place. A metal, fiber-lined battery box will be furnished for that purpose, if desired.

CHICAGO JUNIOR
CODE NO. 51

# Chicago Desk Sets



WE have been asked at times whether we recommend desk sets for use on rural lines. We do. The CHICAGO Desk Set is no more susceptible to trouble and increased upkeep expense than the ordinary wall type telephone. It is true that the cable, connecting the desk stand with the magneto box, wears out in time, but with our method of construction it is no more difficult to install a new cable than it is to replace a worn-out receiver cord. Our improved cable terminals are attached with contact screws. All soldered connections are eliminated. The terminals in the cabinet are numbered to correspond with the terminals on the interior shaft of the stand, and different colors are used for each of the three conductors of the cable so that no blueprint or wiring diagram is required.

The equipment is standardized. We use the same transmitter, receiver, induction coil, generator, ringer and lightning arrester that are used with our wall type instruments. The generator, ringer movement, induction coil and lightning arrester are mounted in a neat, compact magneto box, quarter-sawed golden oak finish, the dimensions of which are 8″ x 5¾″ x 4⅓″, allowing ample space for mounting all parts in an accessible position.

This arrangement enables us to use a three-conductor cable, which is more flexible and less liable to kink and wear than the four, five or seven-conductor cables used by other manufacturers.

As shown in Fig. 4, the interior shaft can be removed and the terminals revealed by simply removing the master screw from base of stand, as shown in Fig. 1.

The desk stand is sturdily constructed so as to withstand rough usage. Seamless tubing is used in constructing the shaft, which is permanently finished in black by a new process, which absolutely prevents the finish from flaking off and causing the stand to become unsightly.

The head to which the transmitter is attached is permanently fastened to the interior shaft, thus eliminating the serious trouble that is experienced with so many makes of desk sets.

The hook switch, which is mounted on the shaft, as shown by Fig. 3, is very simple and positive in operation. The nickel silver contact springs are actuated by the direct action of the switch hook, and arranged in a way that will allow the greatest possible leverage.

Hard rubber insulations are used throughout instead of poor substitutes that are sometimes used by other manufacturers to cheapen construction.

The receiver cord and cable are of best quality copper tinsel, covered with a heavy green moisture-proof silk braid. The bi-polar lightning arrester is a part of the regular equipment, and has proven so efficient that we guarantee our telephones against damage by lightning.

In this latest type desk telephone you will recognize the superior methods of construction, which mean unvarying efficiency and the elimination of both mechanical and electrical troubles.

FIG. 1—REMOVING MASTER-SCREW FROM BASE OF STAND

FIG. 2—BASE REMOVED FROM STAND

FIG. 3—LIFTING INTERIOR ASSEMBLY COMPLETE FROM SHAFT OF STAND

FIG. 4—STAND TAKEN ENTIRELY APART

## DESCRIPTION

| CODE NO. | |
|---|---|
| 70 | Series. |
| 71 | Four-Bar Generator, 1,000-Ohm Ringer. |
| 72 | Four-Bar Generator, 1,600-Ohm Ringer. |
| 73 | Four-Bar Generator, 2,500-Ohm Ringer. |
| 74 | Five-Bar Generator, 1,000-Ohm Ringer. |
| 75 | Five-Bar Generator, 1,600-Ohm Ringer. |
| 76 | Five-Bar Generator, 2,500-Ohm Ringer. |
| 77 | Six-Bar Generator, 1,000-Ohm Ringer. |
| 78 | Six-Bar Generator, 1,600-Ohm Ringer. |
| 79 | Six-Bar Generator, 2,500-Ohm Ringer. |

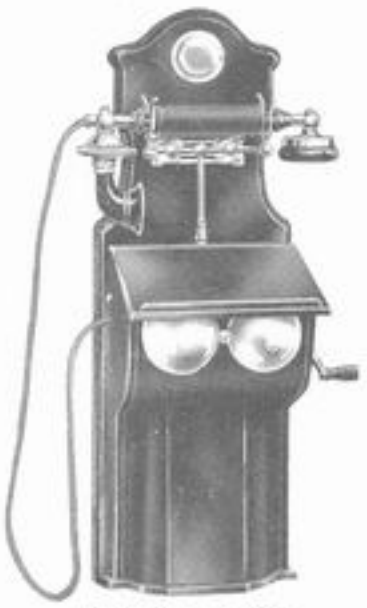
# Steel Type Magneto Telephones and Handmicrophones

Nos. 315 to 319.
Weight, 21 Pounds.

### STANDARD TYPE—ALL STEEL

Equipment furnished as follows: Adjustable transmitter arm, No. 2 receiver, No. 8 transmitter, induction coil, hook switch and lightning arrester.

| No. | Description | No. Bars in Generator | Ohms Ringer |
|---|---|---|---|
| 315 | Series | 3 | 300 |
| 315K | Bridging | 3 | 300 |
| 315L | Bridging | 3 | 1000 |
| 316 | Bridging | 4 | 1000 |
| 317 | Bridging | 4 | 1600 |
| 318 | Bridging | 5 | 1600 |
| 319 | Bridging | 5 | 2000 |

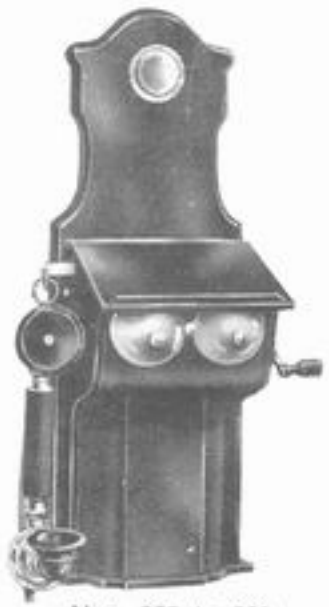


Nos. 320 to 324.
Weight, 21 Pounds.

### CRADLE SWITCH HAND-MICRO TYPE

Standard equipment furnished as follows: No. 1 hand-micro, induction coil, cradle switch hook, and lightning arrester.

| No. | Description | No. Bars in Generator | Ohms Ringer |
|---|---|---|---|
| 320 | Series | 3 | 300 |
| 320K | Bridging | 3 | 300 |
| 320L | Bridging | 3 | 1000 |
| 321 | Bridging | 4 | 1000 |
| 322 | Bridging | 4 | 1600 |
| 323 | Bridging | 5 | 1600 |
| 324 | Bridging | 5 | 2000 |



Nos. 325 to 329.
Weight, 21 Pounds.

### SUSPENDED HANDMICRO TYPE

Standard equipment furnished as follows: No. 2 hand-micro with suspension ring, induction coil, hook switch, and lightning arrester.

| No. | Description | No. Bars in Generator | Ohms Ringer |
|---|---|---|---|
| 325 | Series | 3 | 300 |
| 325K | Bridging | 3 | 300 |
| 325L | Bridging | 3 | 1000 |
| 326 | Bridging | 4 | 1000 |
| 327 | Bridging | 4 | 1600 |
| 328 | Bridging | 5 | 1600 |
| 329 | Bridging | 5 | 2000 |

### COMBINATION WALL AND DESK SETS

**With Suspended Handmicro Without Switch in Handle**

Standard equipment furnished as follows: No. 2 hand-micro telephone, induction coil, and lightning arrester.

Nos. 331 to 342.
Residence Type.
Weight, 17 Pounds.

| No. | Description | No. Bars in Generator | Ohms Ringer |
|---|---|---|---|
| | **Series** | | |
| 331 | Oak | 3 | 300 |
| 332 | Walnut | 3 | 300 |
| | **Bridging** | | |
| 335 | Oak | 4 | 1000 |
| 336 | Walnut | 4 | 1000 |
| 337 | Oak | 4 | 1600 |
| 338 | Walnut | 4 | 1600 |
| 339 | Oak | 5 | 1600 |
| 340 | Walnut | 5 | 1600 |
| 341 | Oak | 5 | 2000 |
| 342 | Walnut | 5 | 2000 |

### MAGNETO DESK SETS

**Cradle Switch Handmicro Type**

Standard equipment furnished as follows: No. 1 hand-micro telephone, induction coil, and lightning arrester.

Nos. 375 to 396.
Weight, 20 Pounds.

| No. | Description | No. Bars in Generator | Ohms Ringer |
|---|---|---|---|
| | **Series** | | |
| 375 | Oak | 3 | 300 |
| 376 | Walnut | 3 | 300 |
| | **Bridging** | | |
| 381 | Oak | 4 | 1000 |
| 382 | Walnut | 4 | 1000 |
| 385 | Oak | 4 | 1600 |
| 386 | Walnut | 4 | 1600 |
| 389 | Oak | 5 | 1600 |
| 390 | Walnut | 5 | 1600 |
| 393 | Oak | 5 | 2000 |
| 394 | Walnut | 5 | 2000 |
| 393 | Desk stand only, including handmicro, stand, inductioa coil and cord No magneto. | | |

# Magneto Table Telephone

Weight, 12 Pounds.

STANDARD equipment furnished as follows: No. 1 hand microphone, resting on cradle switch, mounted on black enameled steel case, containing generator, ringer, and induction coil. Terminal block and lightning arrester supplied with each instrument.

| No. | Description | No. Bars in Generator | Ohms Ringer |
|---|---|---|---|
| 500 | Series | 3 | 300 |
| 500K | Bridging | 3 | 300 |
| 500L | Bridging | 3 | 1000 |
| 501 | Bridging | 4 | 1000 |
| 502 | Bridging | 4 | 1600 |
| 503 | Bridging | 5 | 1600 |
| 504 | Bridging | 5 | 2000 |
| 505 | Bridging | 5 | 2500 |

# Handmicro Extension Sets

No. 451

## EXTENSION SETS

**For Local or Common Battery Service**

This set consists of No. 2 handmicrophone with suspension ring, and is equipped with 4½-foot standard four-conductor cord, with induction coil, switch hook, line and battery terminals, mounted in a handsome black enameled pressed steel box; no bells or generator.

No. 451—Local Battery.
No. 551—Common Battery.

No. 1

## HANDMIKES

**Without Switch in Handle**

No. 1—Without Suspension Ring.
No. 2—With Suspension Ring.

**With Single Contact Switch in Handle**

No. 3—Without Suspension Ring.
No. 4—With Suspension Ring.

**With Double Contact Switch in Handle**

No. 5—Without Suspension Ring.
No. 6—With Suspension Ring.

Prices include only handmicro and standard 4½-foot four-conductor cord. No induction coils, bells, etc.

No. 5

# Chicago Portable Test Sets

NO. 319 — CLOSED

CODE NO. 319

OUR newly designed test set, known as our Code No. 319, is particularly recommended for use on long, heavily loaded farm lines, as it possesses all the qualities of a portable telephone and will be furnished with either series or bridging equipment. We use our regular telephone generator, ringer and transmitter, but furnish a special watch case receiver and a pair of No. 4 Oval Columbia Batteries.

NO. 319 — OPEN

This test set is guaranteed to give excellent service for both talking and ringing purposes. It is sturdy in construction with all parts except receiver concealed and built to withstand the rough usage to which it will be subjected. The open cabinet shows how conveniently every part is mounted so as to be instantly accessible.

CODE NO. 318

A VERY compact lineman test set for testing either ground or metallic circuit lines—to detect and locate grounds, crosses, and opens. This instrument, fully equipped, weighs just eleven pounds and measures 6 inches high, by $6\frac{1}{2}$ inches wide, by $4\frac{3}{4}$ inches deep. An adjustable shoulder strap for carrying is furnished with snaps at each end for engaging the rings with which the cabinet is provided. All parts are concealed with exception of combination receiver-transmitter, which is placed in a snug leather pocket. In order to make this instrument as small, light and convenient to carry as possible we were compelled to sacrifice certain talking qualities by using a combined receiver-transmitter without batteries. It is not primarily intended for conversational purposes, but a lineman will have no difficulty in making himself heard by the operator if he talks in a clear and distinct tone of voice.

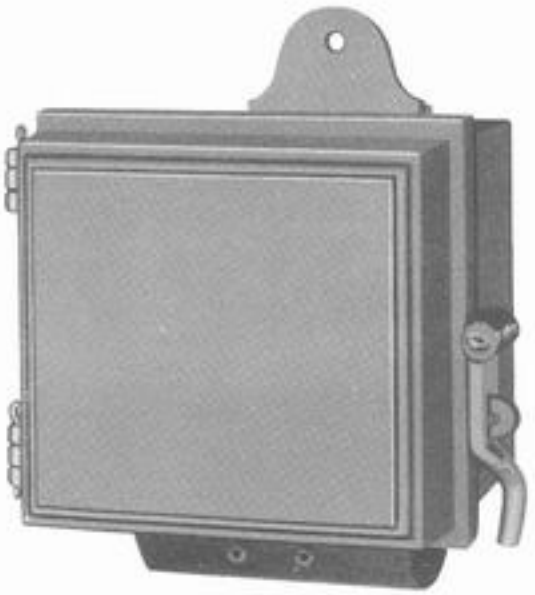
NO. 318

CODE NO. 4

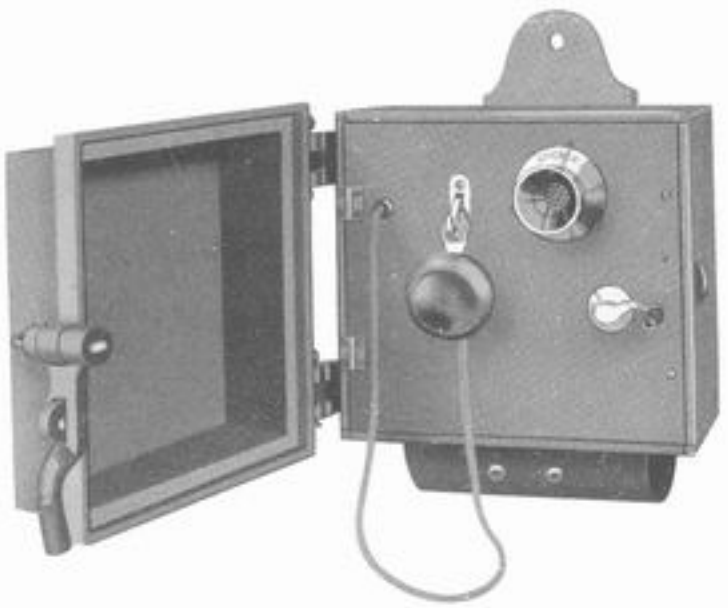
THIS set combines all of he qualities that go to make up a thoroughly efficient test set. It is light and compact, all parts are readily accessible, and its equipment includes regular talking set, consisting of microtelephone, induction coil, and dry cells. The oak case is substantially constructed with reinforced brass corners. It is regularly provided with handle for carrying, but leather shoulder strap will be furnished if desired. Equipped with four-bar generator, 1,000-ohm visual ringer, special No. 6 hand micro, dry batteries, push button for series or bridging tests.

NO. 4

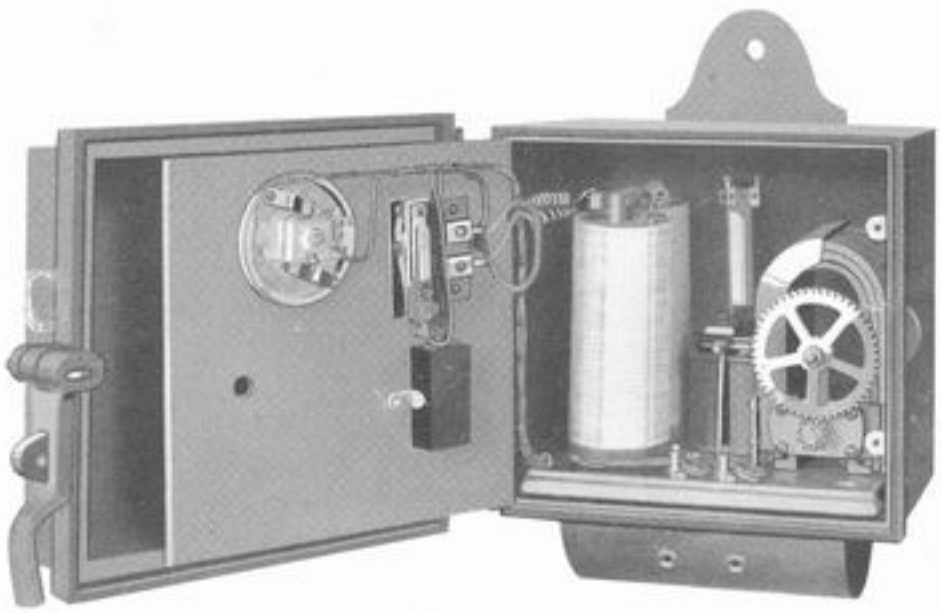
# Mine Telephones



FOR under-ground use we have designed an all metal telephone that is weather proof, fire and gas proof and rust proof. All parts are enclosed in an iron case which is treated with a metallic rust-proof paint that will resist the action of moisture or coal gas fumes. The double construction of doors, which are fitted with rubber and felt gaskets, offers excellent protection to all parts, and at the same time makes the equipment readily accessible.



The equipment consists of standard bridging telephone parts, including powerful five-bar generator, 1,600-ohm or 2,500-ohm ringer, with three-inch gongs, solid back transmitter, bi-polar receiver, etc. We thoroughly impregnate the ringer coils, induction coil, armature, receiver cord and bobbins, making them absolutely moisture proof and afterwards covering them with an insulating varnish. Brass screws and parts are used wherever possible and all steel parts heavily tinned, thus preventing corrosion or rust. These telephones are intended for installation underground or in exposed places, but are wired for standard bridging circuits and can be used in connection with regular wall or desk type bridging telephones.



Please write to us for information concerning the material and equipment necessary for the complete installation of a Mine Telephone System.

# Chicago Solid Back Transmitter


CHICAGO TRANSMITTER
CODE NO. 256

THE Transmitter is the most important of all telephone parts. Good service depends upon a sensitive, yet durable, transmitter capable of performing its functions at all times and under any and all conditions. It must be so constructed as to accurately transmit every possible voice tone from the lowest to the highest, and yet have the delicate mechanism required for this purpose so encased mechanically as to stand up in service for a lifetime.

The various parts which constitute the housing, must therefore be made of heavy, substantial materials. If lightly constructed they would not go together as rigidly as the exacting requirements of telephone transmission demand, and would have a tendency to respond to vibration and thereby distort or neutralize the vibration of the diaphragm and carbon granules. A comparison between a CHICAGO transmitter and any other will show you that our parts, such as carbon chamber, bridge, and face plate, are heavier than the similar parts of all other transmitters. We make them so at a greater expense, but the result is increased talking efficiency, excellent quality of articulation, clear, distinct tones, and greater length of life.

The carbon chamber or "button" is built with the same accuracy as the parts of a well-made watch and adjusted by delicate instruments to insure absolute uniformity. Specially prepared polished carbon electrodes are used, with surfaces as hard and bright as a mirror.

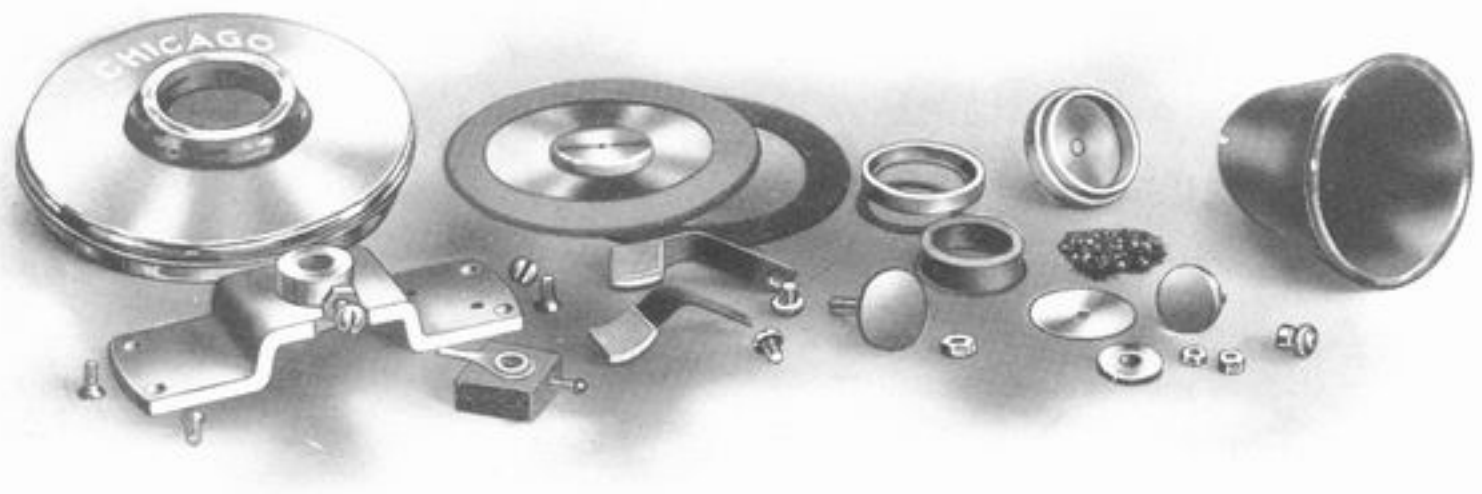
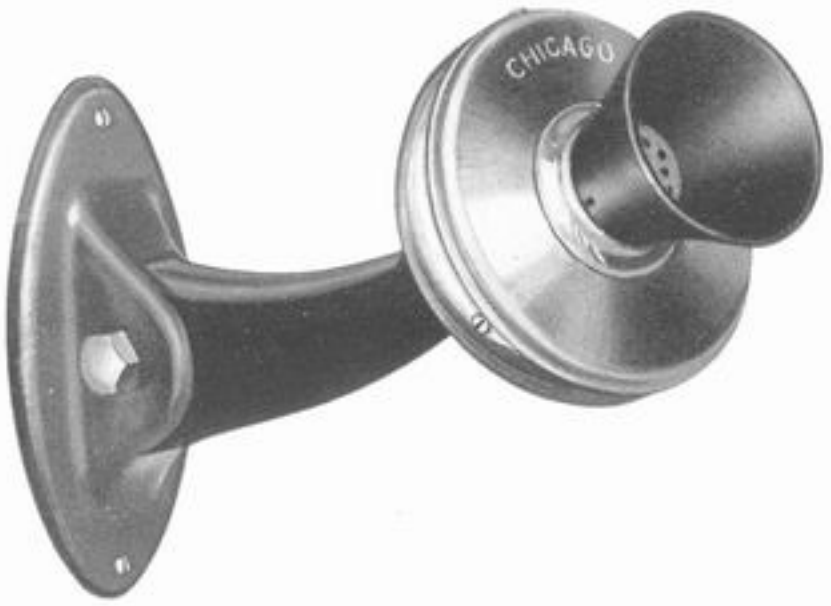



FIG. 5 — CHICAGO TRANSMITTER — KNOCKED DOWN




CHICAGO ARM TRANSMITTER
CODE NO. 248

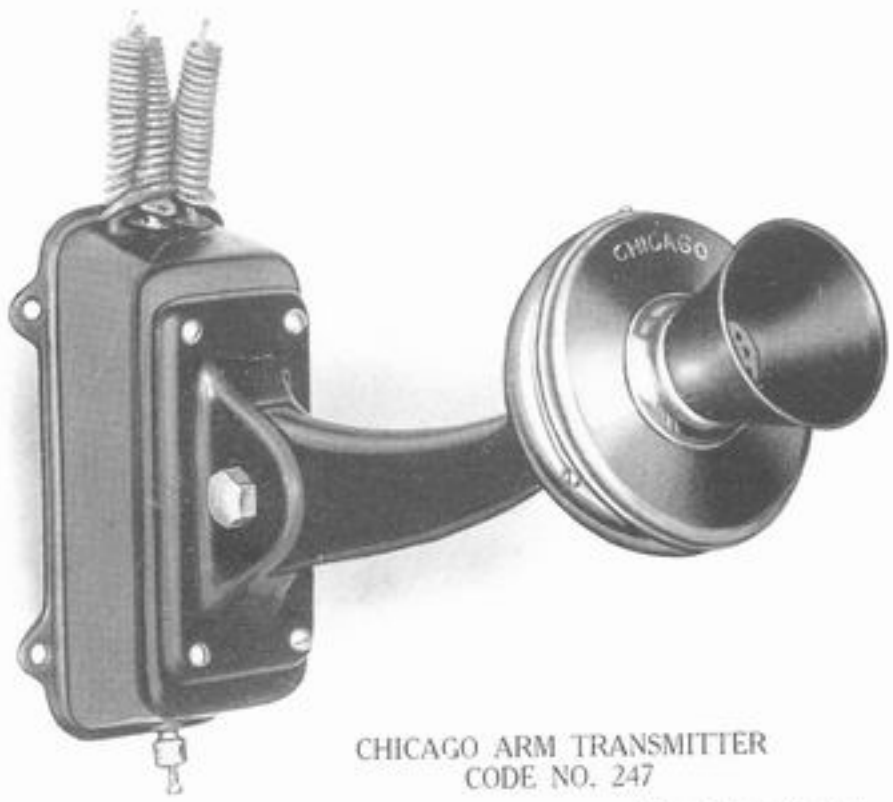
The carbon granules that we use are imported from France, and are made from the finest grade of special transmitter carbon. The size, density and hardness of these granules were determined only after exhaustive laboratory tests, but the results have justified us in taking such exquisite care. No deterioration will result from continued use, as they are not susceptible to extreme heat or cold; no annoying "frying" noises due to poor carbon; no packing due to metal particles in cheaper grades of carbon.

Our main diaphragm, which takes up the voice vibrations, is made of frosted aluminum, around the edge of which is placed a rubber ring. This rubber ring or gasket is treated by a special process in order that it will not harden with age, and acts as a cushion so that side tones or foreign noises are not taken up.

We have given the question of battery consumption the careful consideration to which it is justly entitled and have with our usual thoroughness solved the problems which make the talking qualities of our transmitters superior to all others and yet reduce the amount of current used to the minimum. Comparative tests show conclusively that CHICAGO Transmitters use less battery than any other transmitter made.

The transmitter back cup covers and protects the other parts. It is attached to the face plate by four small screws. In the bottom of this cup are two holes for attaching to an adjustable arm, and one hole through which to bring out the battery terminals. Special back cups will be furnished so that CHICAGO Transmitters can be used on transmitter arms of other makes.

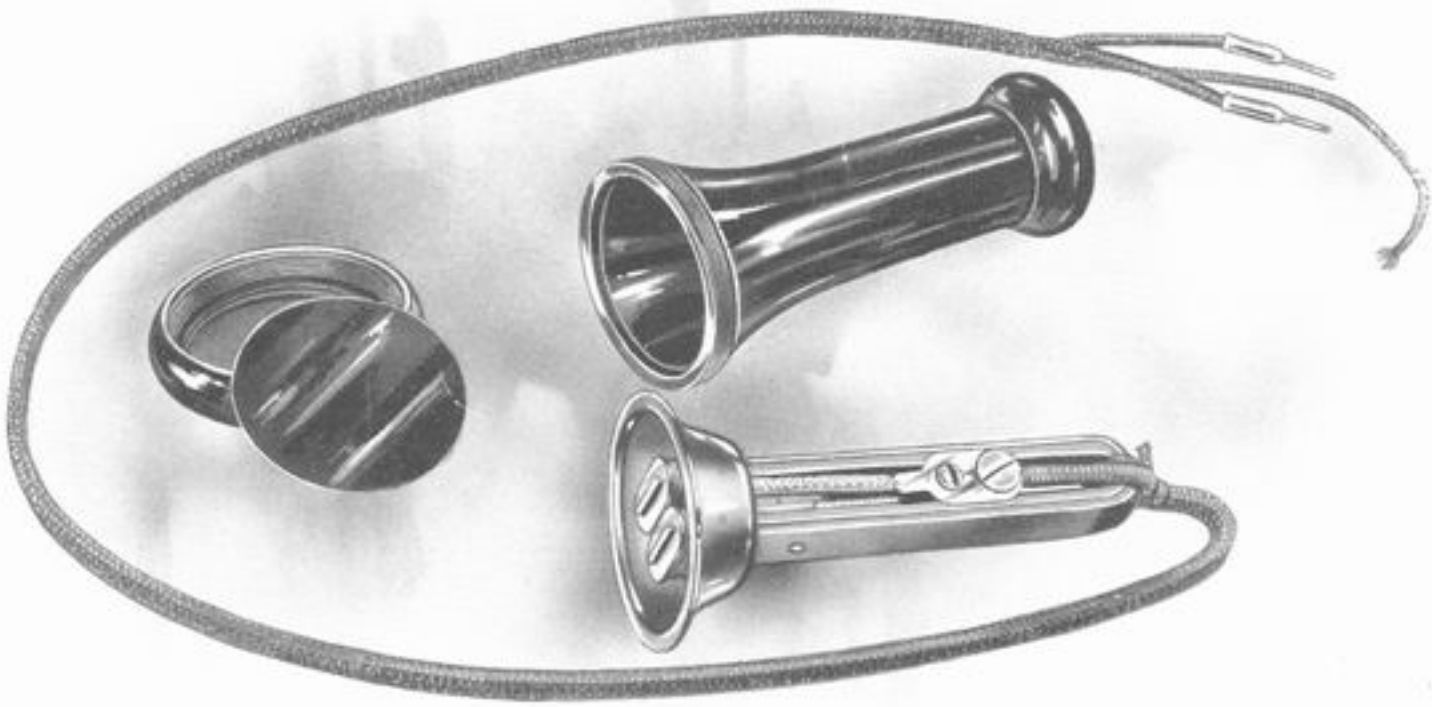
We have two standard styles of mounting. The "Pony" Arm, our Code No. 248, is used exclusively on Compact Cabinets. The Code No. 247 Arm and Transmitter, with coil in base, is used on all double battery box telephones. These arms are made of pressed steel, finished with two coats of black enamel, which will not check or peel, but will retain the handsome gloss finish indefinitely.




CHICAGO ARM TRANSMITTER
CODE NO. 247

# Chicago Receiver

OUR standard bi-polar receiver is the second important factor in the perfect talking circuit. All parts are encased in a substantial black composition rubber shell, of a toughness and durability that insures against excessive breakage. The diaphragm is made from selected ferro-type plate. Silk insulated magnet wire is used for winding the bobbins. The highest grade magnet steel forms the permanent magnet. An imported tinsel, moisture-proof worsted cord has been selected on account of its lasting qualities.



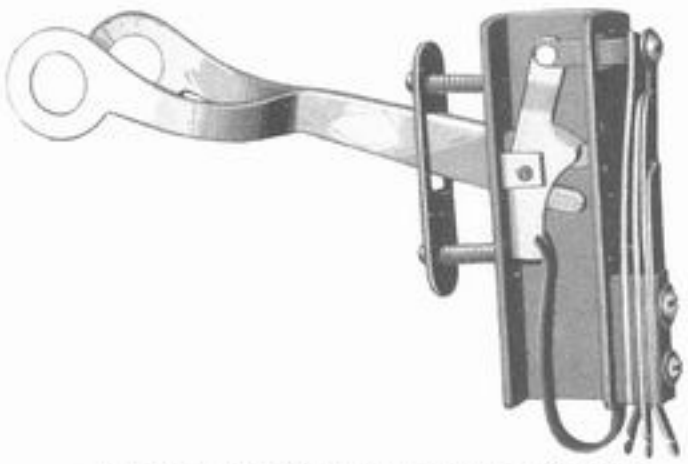
RECEIVER — CODE NO. 246

The object of the horseshoe shaped permanent magnet is to provide magnetism to constantly attract the diaghragm. The electro magnet consists of a circuit of silk magnet wire of an exactly determined resistance wound around the poles of the permanent magnet. Then when current is passed through this electro magnet it will increase the magnetism and offer more attraction to the diaphragm. If the current varies in its impulses so will the magnetism vary and likewise its attraction for the diaphragm. Now, of course, this variation in attraction for the diaphragm will cause the latter to vibrate in unison with the variations, and these variations produce sound waves.

It will be seen that in order to secure instant responsiveness and extreme sensitiveness the permanent magnet must be exactly proportioned to the size, diameter and weight of the diaphragm. A common fault with other makes of receivers is a lack of responsiveness, a deadening of sound, caused by the use of too light material in diaphragm as proportioned to the magnetism of the permanent magnet. The result is a buckled or warped diaphragm.

We have insured an absolutely uniform distance between the electro-magnet and the diaphragm by careful, accurate machining and permanent adjustment.

# Chicago Receiver Hook Switch



CHICAGO SHORT LEVER HOOK SWITCH
CODE NO. 380

THE dependability of service of any telephone is no greater than the positiveness of action of the receiver switch hook with which it is equipped.

One of the vital reasons why CHICAGO Telephones can be depended upon for service year after year is the positive, automatic action of our short lever hook switch.

The contact springs are operated by the short lever and hard rubber plunger of an improved design, allowing the greatest possible leverage and a correspondingly long motion of the contact springs. The action is controlled by tension spring, made of the finest spring steel. In order to make the contact between the lever and tension spring frictionless, we have adopted a roller contact, making it impossible for this point of contact to become harsh and rough by repeated use.

The contact springs are separated by hard rubber insulations of sufficient thickness to prevent possible leakage of current. On account of the perpendicular arrangement there is no chance for dirt, metal particles, etc., to lodge between the platinum contacts and thus prevent a good, clean connection. They are rigidly mounted on the steel frame, but insulated from it by a hard rubber block.

The receiver hook is removable without the use of tools, as shown in Fig 6. By simply holding the hard rubber plunger down with one finger, the hook can be pulled out. It can be inserted in the same manner. With this arrangement it is impossible to get the contact springs out of adjustment when removing the switch hook.

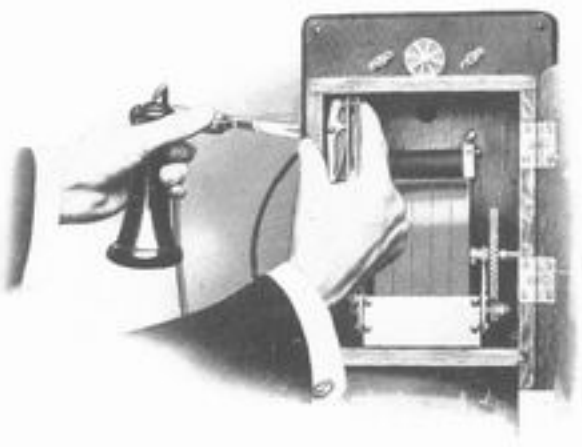


FIG. 6—REMOVING HOOK

# Chicago Ringer Movement

A CHICAGO Ringer will invariably respond to the slightest impulse of electrical current. On account of its exact balance, a loud, sweet tone is produced, even though the ringing conditions are not favorable, and for this reason they prove particularly efficient when operated on long and heavily loaded lines. There are, of course, important reasons for this positiveness and sensitiveness. It is first necessary for the materials to be exactly suited for the purpose for which they are intended. For the ringer core we use soft annealed Norway iron, unexcelled for its electro-magnetic qualities. On these cores are wound, to the desired resistance, the highest grade of insulated magnet wire.

The use of extra long coils permits the use of larger gauge wire, thus increasing the number of turns and increasing the sensitiveness of the ringer.

Instead of using small brass studs in the armature to keep it from coming into direct contact with the ringer cores, we permanently fasten to the inside of the armature a thin strip of copper which offers a parallel flat surface to the cores and eliminates chance of freezing.

BRIDGING RINGER—CODE NO. 251

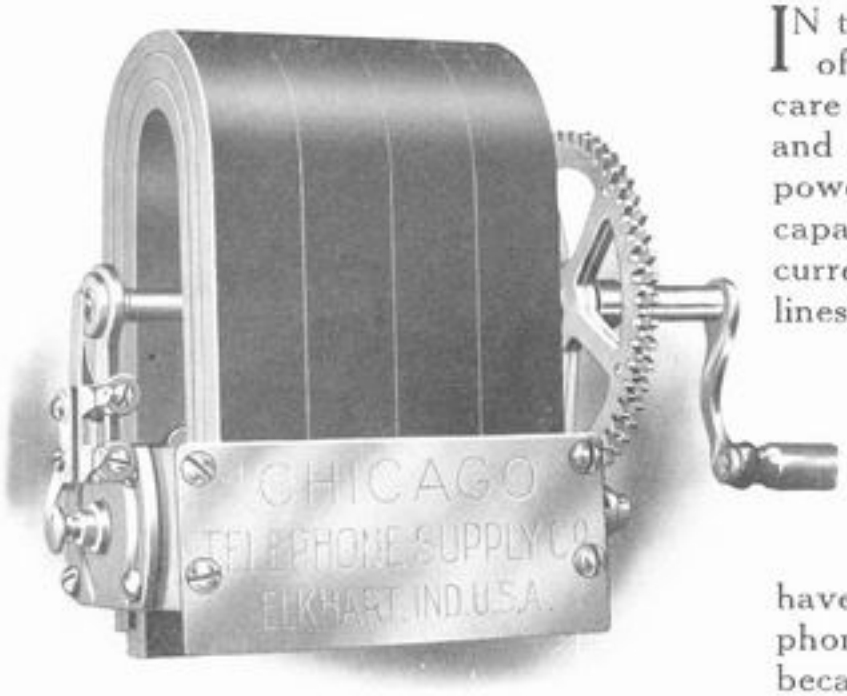
The armature with its bell clapper attachment is made very sensitive on account of our needlepoint bearings. The adjusting screw enables you to secure a wide or short movement and the lock nut insures a positive and permanent adjustment. Special attention is called to our method of mounting ringer and gongs to cabinet. You will note that the gong supports are mounted directly on the ringer frame and held rigidly in position by machine screws, another insurance of permanency of adjustment.

SERIES RINGER—CODE NO. 249

The permanent magnet is, of course, made of the best magnet steel obtainable, and will never lose its magnetism.

A common defect existing with most other makes of ringers is a noticeable sluggishness or lack of snappy response to generator current. This is largely due to the fact that the cores and coil winding are too light to overcome the magnetism in the ringer magnet, with the result that the tone is not loud or clear cut, and ofttimes no ring except possibly a faint tap is secured. If you experience that trouble, your remedy will be to install a CHICAGO Ringer. It is representative of the usual high standard maintained by the Chicago Telephone Supply Company, and it is so carefully planned and the parts so accurately balanced that continued use will never decrease its efficiency.

# The Chicago Generator

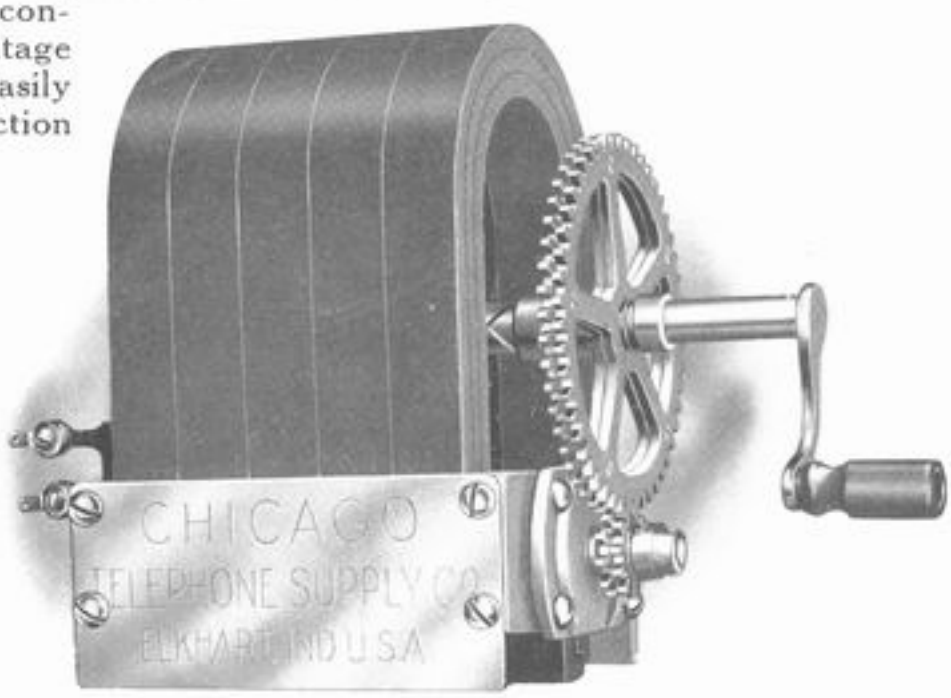



FOUR-BAR GENERATOR—CODE NO. 282

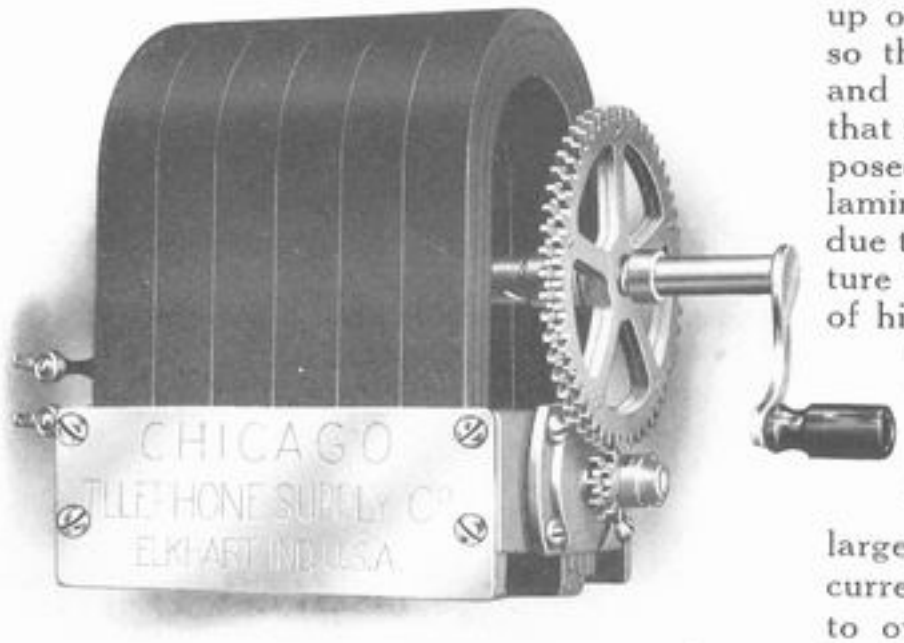
IN the construction of the Generator the best of materials must be used and the greatest care taken in order to make it mechanically and electrically perfect. It must be sturdy and powerful in order to withstand hard usage, and capable of generating a sufficient amount of current to ring through the heaviest loaded lines.

For the CHICAGO Generator we make the unqualified statement that it is the most powerful hand ringing apparatus made, and offer the following reasons why it is superior to all others: The magnet bars used on CHICAGO Generators have a larger cross section than any other telephone magnet bars, which increases its power because the relative efficiency of a generator depends upon the strength of the magnetic field. Another factor of greatest importance in making a telephone generator is permanence of its magnets. To make a powerful magnet, the analysis of the steel must be adapted to that purpose, and the quantity must be sufficient to saturate the field. These features are primary necessities. Next in importance, however, is permanence which depends upon the temper. The magnets must be heated to the point of recalescence and then chilled instantly. If the chilling process is slow, then the magnet will have soft spots in it, through which magnetism will leak like water through a sieve. For this reason, instead of making our magnets out of one piece, we make them out of three pieces in laminated form, one over the other. Each bar of a CHICAGO Generator thus consists of three magnets. The obvious advantage of this method of construction will be easily recognized. Because of its small cross section a CHICAGO Magnet chills instantly when immersed in water after being heated. It chills equally in the center as well as on the surface. Consequently, it is hard, has no soft spots, and as a magnet is absolutely permanent. The magnets used by our competitors are so thick that when exposed to the chilling medium they chill on the surface at once, but in the center of the bar they do not. Consequently the center has soft spots and a magnet so made is not permanent.

As with the magnets so also with the armature is the principle of lamination preserved. The armature is made




FIVE-BAR GENERATOR—CODE NO. 283



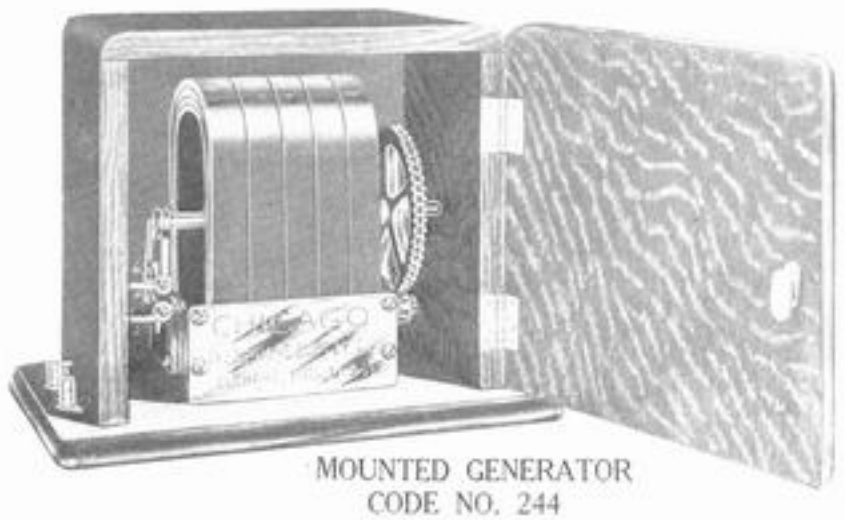

SIX-BAR GENERATOR—CODE NO. 284

up of many small segments bound together so that the entire energy may be utilized, and made of the softest steel procurable that it will retain no magnetism when not exposed to magnetic influence. By using a laminated armature there is no current loss, due to stray or "eddy" currents. The armature is wound with enameled magnet wire of highest quality. An exact balance is secured so that the number of turns of this magnet wire is sufficient to provide the required voltage to overcome the resistance of the bells and of the line, while the size of the wire is sufficiently large to provide the necessary volume of current or amperage for each bell and also to overcome the electrostatic capacity of the line.

The next feature of this generator to be considered is the gear wheel. You will recognize at once its common-sense construction. Other types of telephones have gear wheels with milled teeth, which eventually wear down, causing the generator to turn hard and finally become inoperative. Our gear wheel, on the contrary, is made on the same principle as the gear wheels on a clothes wringer. It really consists of two gears, rivited together so the teeth on one are opposite the spaces between the teeth on the other, and vice versa. There can be no lost motion, and constant usage will not strain or wear. These gears never have and never will cause trouble, and will be just as good in twenty years as when first placed in service.

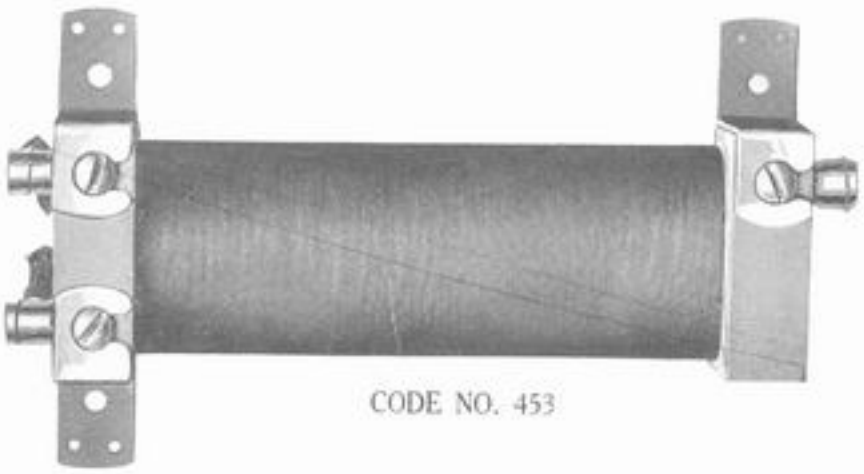
The shunt springs are made of nickel silver, arranged so that when the generator is not in operation the armature is short circuited in the Series Generator, or open in the Bridging Generator. This arrangement makes it practically impossible for an armature to be burned out by lightning.

CHICAGO Generators are made in three sizes—Four, Five or Six-Bar. The Code No. 282 Four-Bar Generator is recommended for use on party lines on which not more than eight telephones are installed. The Code No. 283 Five-Bar Generator is designed for use on heavily loaded lines, where the conditions require a very powerful generator to ring every bell on the line strong and clear. The Code 284 Six-Bar Generator is really a step beyond the requirements of party line service, and is so large, heavy and powerful that it is the acme of party line luxury. It is specially designed for use at junction points where two or more heavily loaded lines are sometimes connected, or on lines of poor construction, or for those who wish to enjoy the greatest possible efficiency by having the best and most powerful, regardless of price.



MOUNTED GENERATOR
CODE NO. 244

# Induction Coil



CODE NO. 453

CODE NO. 447

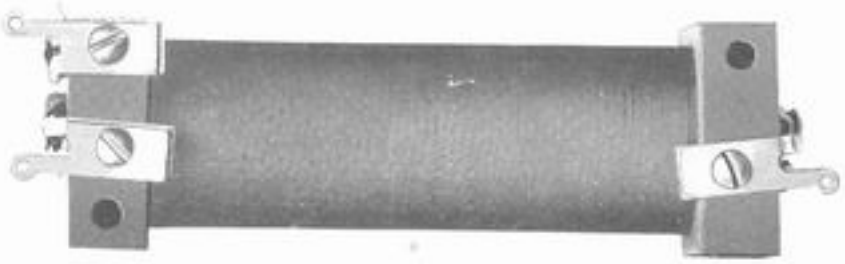
THE function of the induction coil is to intensify the three-volt current produced by the battery into a high voltage current so that it is possible to talk over long as well as short distances. Of course, in order to secure the best possible results, it is necessary to have the primary and secondary windings of the coil in exact proportion, and perfectly balanced with the receiver and transmitter.

The excellent talking and receiving qualities of the CHICAGO Telephone may be partially explained by a perfectly designed induction coil, which our engineers have worked out with their usual painstaking care and thoroughness.

High grade magnet wire is used for winding, each layer of which is separated by very thin paraffined paper. The ends are made of heavy fibre, and No. 20 annealed Norway iron wires are used for the core.

We have illustrated the four styles which are used with our different types of wall and desk telephones. They are mounted in a convenient and accessible position and are fastened to the cabinet with tinned clips and screws. This is an important feature, as it permits the removal of the coil without unsoldering any connections.

CODE NO. 451



CODE NO. 452

# Receiver Cords

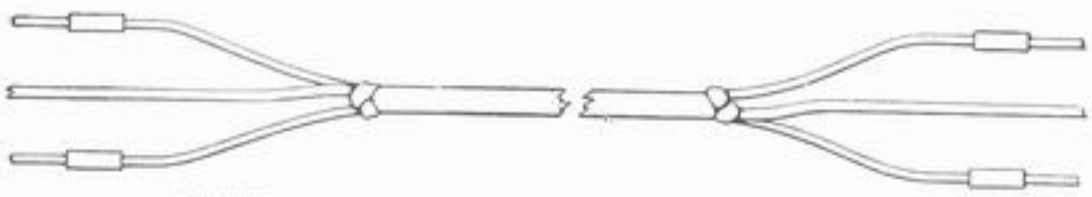
CONDUCTORS made of eighteen strands first quality copper tinsel, twisted in rope fashion in manner obtaining greatest possible conductivity and tensile strength.

STANDARD CORDS—Conductors insulated with two braids, first of uncolored cotton, second of green colored cotton. Standard cords furnished in mercerized cotton and spun silk braids.

NOTE—We can furnish cords with any arrangement of tips desired.

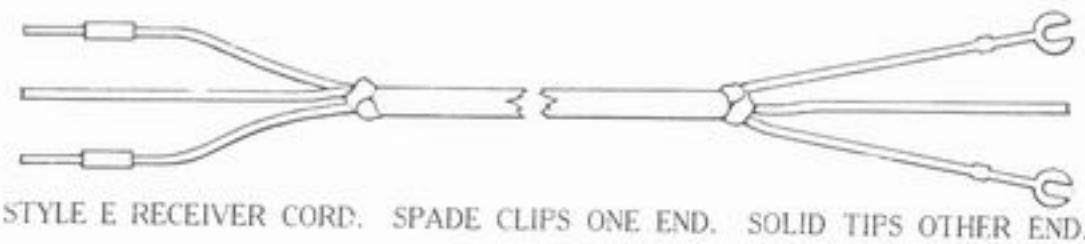
Please specify style of trim by letter. For example: No. 466A indicates standard mercerized cotton braid cord with solid tips at both ends.

Code No. 466—36 inches long, Standard Style, Mercerized Cotton Braid.
Code No. 467—36 inches long, Standard Style, Spun Silk Braid.

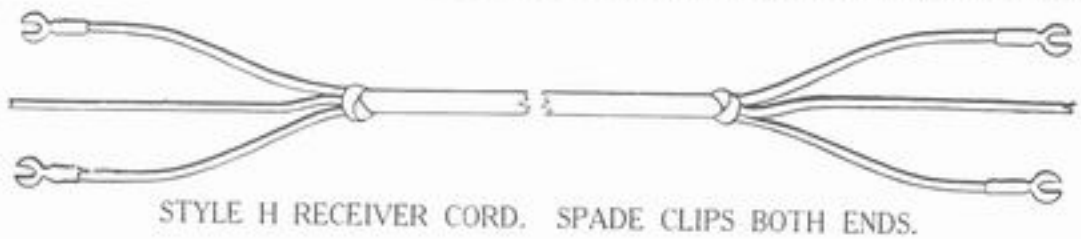


STYLE A RECEIVER CORD. SOLID TIPS BOTH ENDS.

STYLE C RECEIVER CORD. SOLID TIPS ONE END. LOOPS OTHER END.



STYLE E RECEIVER CORD. SPADE CLIPS ONE END. SOLID TIPS OTHER END.



STYLE H RECEIVER CORD. SPADE CLIPS BOTH ENDS.

# Desk Stand Cords

## Moisture-Proofed Green Braid

CONDUCTORS made of eighteen strands first quality copper tinsel, twisted in rope fashion in manner obtaining greatest possible conductivity and tensile strength.

MOISTURE-PROOF CORDS—Conductors first insulated with a serving of specially prepared wool, this insulation impregnated with moisture-proof compound. Applied next is a very substantial braid of green colored cotton, thus each conductor has a double insulation. The outer braid of cotton has tracer threads.

FORMATION—Cords consisting of two conductors, individual conductors are laid parallel. Cords consisting of three or more conductors, conductors are cabled with twist in individual conductors, making cords very flexible and less liable to kink, twist or tangle.

Moisture-proof cords furnished in silk only.

NOTE—We can furnish cords with any arrangement of tips desired.

Code No. 0468—2 Conductor, 6 feet long, Moisture-Proof, Spun Silk Braid.
Code No. 468—3 Conductor, 6 feet long, Moisture-Proof, Spun Silk Braid.
Code No. 4650—4 Conductor, 6 feet long, Moisture-Proof, Spun Silk Braid.
Code No. 04680—5 Conductor, 6 feet long, Moisture-Proof, Spun Silk Braid.

# Premier B B Steel Conductor Switchboard Cord

(Covered by U. S. Letters Patent.)

"CORD TROUBLE" is a term familiar to all exchange managers, and in designing our Premier B B Steel Switchboard Cord a careful study was made to determine the features which a good cord should have. The result is that our Premier B B Cord shows the longest life in actual test, as well as in comparative tests.

## PREMIER B B CORDS

Code No. 0366—2 Conductor, 30 inches long.
Code No. 3660—2 Conductor, 5 feet long.
Code No. 366 —2 Conductor, 6 feet long.
Code No. 03660—2 Conductor, 7 feet long.

## OPERATORS' BREAST PLATE TRANSMITTER AND RECEIVER CORDS

CONSTRUCTION—Made of four conductors of copper tinsel, each having a double insulation; first, of cotton; second, of machine twist silk. The four conductors plaited without outer braid. **Cords furnished for any make of Plug or Switchboard.**

Code No. 30—4 Conductor Cord, Standard Length, 63 Inches.
Code No. 31—5 Conductor Cord, Standard Length, 63 Inches.

## OPERATORS' STANDARD RECEIVER CORDS

TWO CONDUCTOR TYPE—Conductors composed of strands of copper tinsel, each insulated with a double braid. Outer braid green spun machine silk thread. Standard lengths, five and six feet. **Cords furnished for any make of Plug or Switchboard.**

Code No. 0472—2 Conductor Type, 5 feet long. Code No. 472—2 Conductor Type, 6 feet long.

# Chicago Magnetos

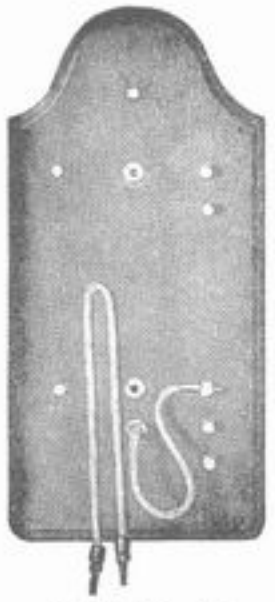

CODE NO.

181 Series
182 Four-Bar Generator, 1,000-Ohm Ringer.
183 Four-Bar Generator, 1,600-Ohm Ringer.
184 Four-Bar Generator, 2,500-Ohm Ringer.
185 Five-Bar Generator, 1,000-Ohm Ringer.
186 Five-Bar Generator, 1,600-Ohm Ringer.
187 Five-Bar Generator, 2,500-Ohm Ringer.
188 Six-Bar Generator, 1,000-Ohm Ringer.
189 Six-Bar Generator, 1,600-Ohm Ringer.
190 Six-Bar Generator, 2,500-Ohm Ringer.

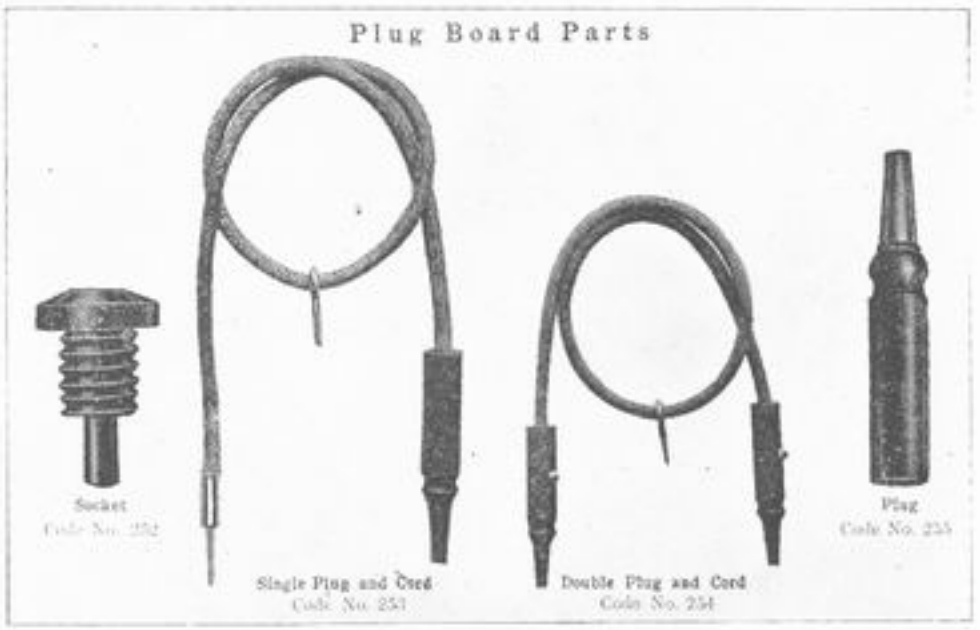
# Extension Bells

Code No. 237 Series.
Code No. 237A 1,000 Ohm.
Code No. 237B 1,600 Ohm.
Code No. 237C 2,500 Ohm.

# Chicago Plug Board

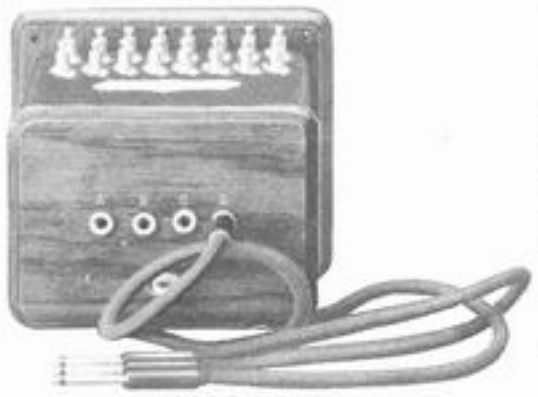


CODE NO. 84




A VERY simple switching device to be used in connection with extension bells and a telephone. For use on ground circuits only. Incoming signals are received by extension bells and the telephone is used for ringing out and talking. Detailed instructions for installing and operating will be furnished on request.

## Chicago Metallic Circuit Branch Board



CODE NO. 85

FOR use in connection with extension bells for receiving signals from and making connections between bridging party lines. A regular bridging telephone is used for talking and ringing. 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. Easy to install, simple to operate and will give as good satisfaction as more elaborate apparatus that is much higher in cost.

## Chicago Relief Switch


INTENDED for dividing a heavy loaded line or for connecting two lines together. Can be used on either ground or metallic circuit. It is used in connection with a regular telephone for talking and ringing. Designed so that neither line is prevented from calling when the other is talking, and that either may be cut out of the talking circuit, or both connected together, at will of the operator at the local telephone.

# Chicago Magneto Switchboards

WE have illustrated on the following pages a number of the standard types of Magneto Switchboards and Tollboards that we manufacture. For every purpose there is a CHICAGO Switchboard designed to meet that particular need and we are prepared to furnish any style or capacity that may be required.

Every precaution has been taken to reduce cost of maintenance, and many exclusive CHICAGO features tend to increase the speed and efficiency of operation. The particular attention of the telephone expert is called to the illustrations and descriptions of the various parts appearing on pages 34 to 39. The correctness of design will be readily recognized. Durability, accessibility, sensitiveness and the elimination of all superfluous parts are positive assurances of reliable service.

## Cabinets

OUR Switchboard Cabinets are made of highly polished quarter-sawed oak, reinforced with strip steel, making them sturdy and rigid in construction, as well as handsome in appearance. They are designed as compactly as possible and yet with ample space to permit the mounting of all equipment in a convenient and accessible position.

Each cabinet is a distinct unit, but so designed and standardized as to permit the installation of additional sections when the growth of your exchange so demands. This flexibility and adaptability enables you to purchasethe style of board best suited for your present needs and then add to the original equipment as needed.

If more than two operators' positions are installed, it will be necessary to install lamp transfer circuits and order wire keys in order that connections can be made between parties whose drops are located on widely separated parts of the board. Space for the installation of this equipment when needed is left in each cabinet and blue-prints showing circuits will be furnished, together with detailed instructions.

We wire each cabinet for ultimate capacity, but install only a sufficient number of drops and jacks, cord circuits, etc., to answer your present requirements. The cable, of course, is fanned out complete, and all terminals plainly tagged so that additional equipment can be added as needed.

Particular attention is called to the key shelf cable. In looping through from key to key enough slack is left so that each separate key can be lifted out from top of shelf and examined without unloosening any connections or interfering with th operation of the board in any way. This is an exclusive CHICAGO feature.

The various styles of cabinets appearing on pages 36 to 45 are standard, but we will gladly furnish special designs to meet your particular requirements.

# Drops and Jacks

THE CHICAGO Unit-Type Self-Restoring Drop and Jack, Code No. 526, as shown in Fig. 7, is our latest improved design, the result of years of experimental work and exhaustive tests under actual line conditions.

We have perfected a drop which years of service have demonstrated to be the most sensitive, accessible, durable, efficient and reliable switchboard signal made, and we invite a most thorough investigation on your part to prove these claims for superiority.

FIG. 7—BRIDGING, CODE NO. 526 SERIES, CODE NO. 525

Each combined drop and jack is a unit and can be removed from the board without interfering with any other drop and jack. Each drop is encased in a shell of Norway iron to prevent cross-talk.

We have secured a perfect balance between the armature and trigger so that the armature will respond to the slightest impulse of electrical current. At the same time, the adjustment and balance is so perfect that it will vibrate vigorously when stronger currents are induced.

In the construction of the drop coil we have a fixed or permanent core, accurately machined, which is riveted to the drop shell. The coil is a separate unit made to fit snugly over the core so that there may be no air space between the winding and core. With this construction, you will note that after the drop has been adjusted to the line, the distance between the armature and core is absolutely permanent.

The coil of each drop can be removed in thirty seconds without taking the drop from the board. It is simply necessary to go to the rear of board and lift the armature as shown in Fig. 8. Then loosen the screws fastening the clip terminal to each side of coil, and slip clips from beneath screws. Then give the coil a quarter turn to left and pull straight out as shown in Fig. 9. This simple operation is made without the use of any tools except a small screw driver, from the rear of board by one man, without unsoldering any connections or interfering with the operation of board in any way. The armature and trigger are removable from drop without tools, and, in fact, every part is arranged so as to be instantly accessible and so as to be removed when necessary without interfering

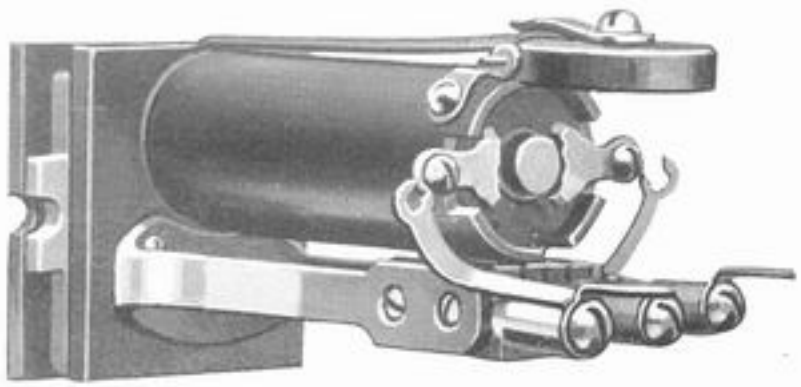


FIG. 8—REAR VIEW WITH ARMATURE RAISED

with any other part. For example: If you wish to remove shell you need not remove drop shutter or front, which, in fact, need never be taken from board after once fastened to the metal drop frame. (See Fig. 10.) At any time that a rearrangement or replacement should make the removal of a complete drop and jack necessary the operation is extremely simple. The line wires are soldered to tail washers which have the holes slotted so that they can be removed by simply loosening the screws slightly and slipping the tail washer out. Then by going to the front of board and removing screws which hold drop to frame, the entire drop and jack can be brought forward out of the board.

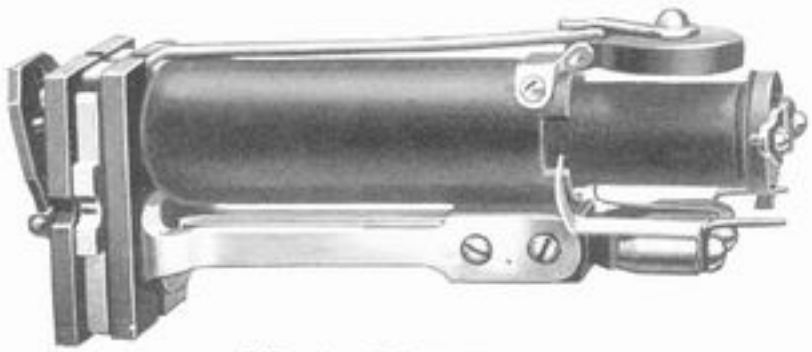


FIG. 9 — REMOVING COIL

The shell, core, drop coil, etc., are carefully insulated from mounting plate and frame by hard rubber insulations. The shutter is also thoroughly insulated from any remaining part of drop and thus chance of cross-talk through the night bell circuit, which otherwise might be made possible if the windings of two or more drop coils were crossed with core or shell of drop, is entirely eliminated.

The jacks are made with extra long, heavy nickel silver springs, mounted in a hard rubber block, which offers perfect insulation. On account of extra strength and length of these springs, they bear firmly on tip and sleeve of plug when inserted, insuring positive contact. They retain their spring tension even after many years of hard usage, but should it ever be necessary, new springs can be substituted by merely removing the two screws which hold the springs and hard rubber insulations together. The jack thimbles are also removable, and a jack wrench will be furnished so that such replacements, whenever necessary, can be made quickly and conveniently.

The night alarm on CHICAGO Switchboards is absolutely perfect. In operation it is simplicity itself, for when the shutter falls, making contact with concealed night bell contacts, it is impossible for the bell not to ring, providing, of course, that the night bell operator's key, one of which is installed in each operator's set, is thrown into position. An excellent vibrating bell is installed for this purpose, with platinum contacts, and which is operated by two or three dry cells.

The various features above described insure a sensitive, durable and accessible signal, absolutely reliable, which invariably registers an incoming signal which is instantly called to operators attention by the vigorous vibration of trigger which distinctly interprets code rings. — We would like to submit a sample for your careful examination and test.

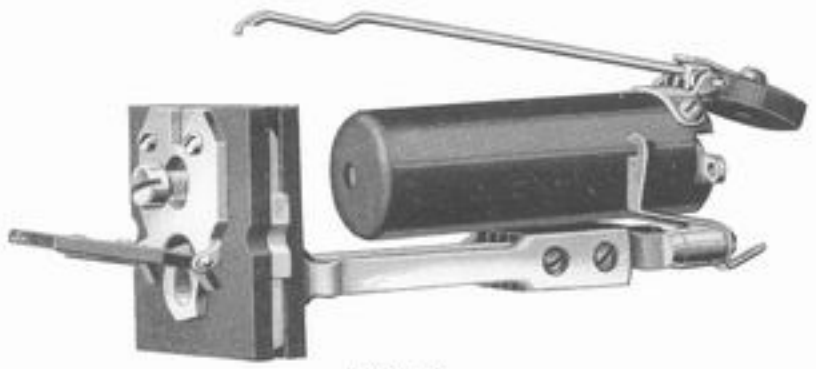


FIG. 10
Showing Method of Removing Shell and Coil without Taking Drop and Jack from Frame

# Cord Circuit Equipment

CODE NO. 313—KEY

EACH complete set of cord circuits, single supervision, consists of a pair of plugs with reinforced BB Premier Switchboard Cords, a high impedance clearing-out drop and a platinum pointed double ringing and listening key.

Double supervision cord circuits consist of double clear-outs, two low capacity condensers, a pair of plugs and cords, and our platinum pointed double ringing and listening key.

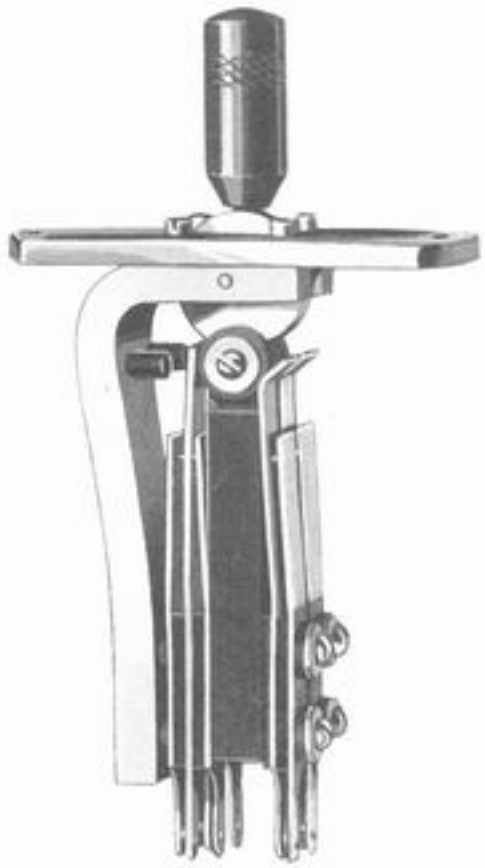
We particularly recommend double supervision, as it not only insures a positive ring-off, but enables the operator to determine, without listening in, which one of the connected parties is calling. Another advantage is the non-ring-through feature, which prevents the subscriber from ringing back on the other line. A blue-print showing this improved circuit, and a more detailed description of it advantages will be gladly sent upon request. The illustrations on pages 36 and 37 show the arrangement of equipment on a switchboard equipped with double supervision cord circuits.

# Keys

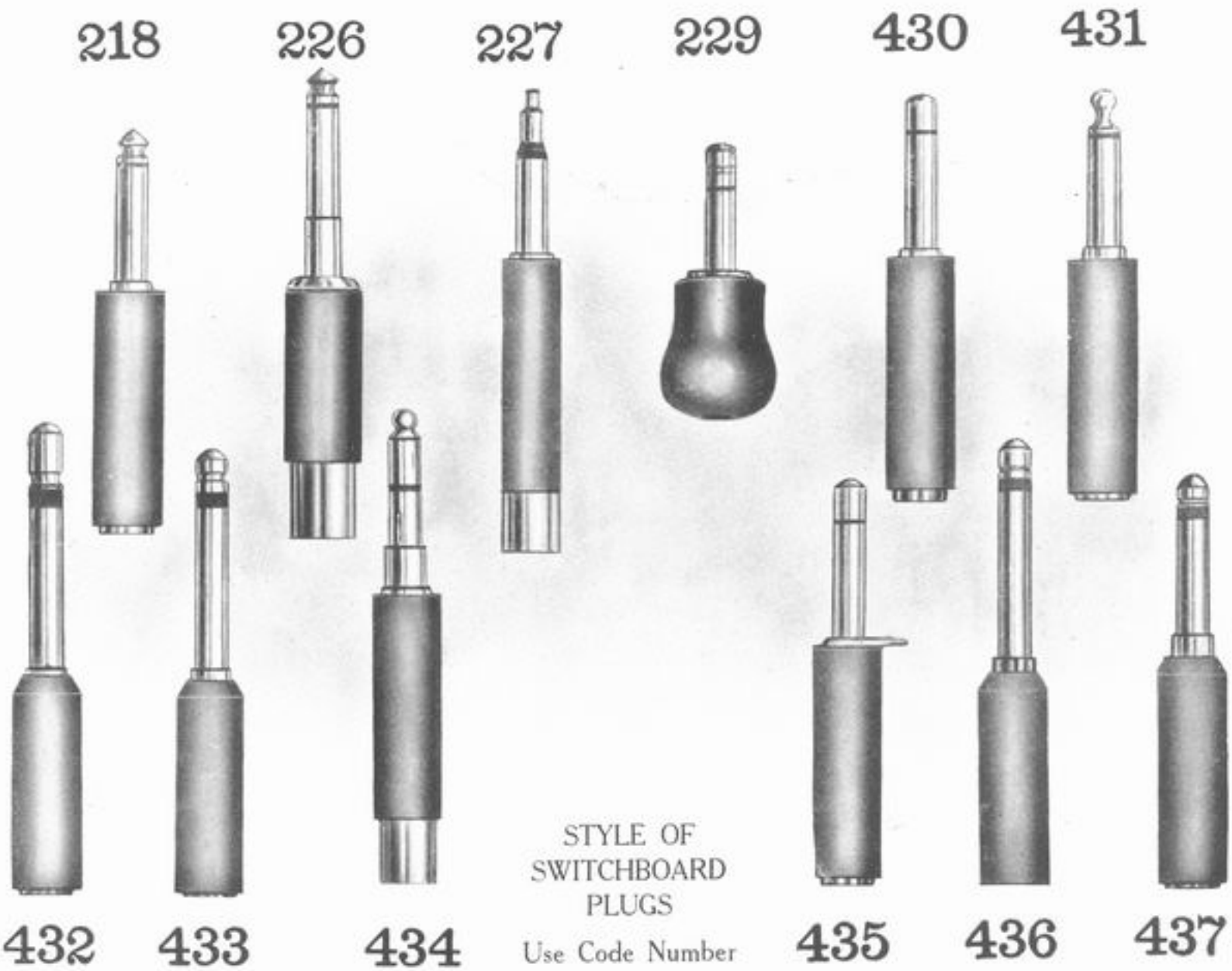
THE Code No. 313 Double Ringing and Listening Key is considered as standard and is shown above. The front key is arranged for listening on either cord and ringing on the front cord, and the rear key is for ringing on the back cord. This style of key enables the operator to ring out on either line without taking down the connection.

Nickel silver springs, platinum contacts and pure hard rubber insulations are used, and so mounted as to insure clean positive contacts. The cam is fitted with frictionless roller bearings made of hard rubber. The key handles are also made of hard rubber, but have metal bushings so that the thread will never strip.

The key is built substantially and so perfectly designed as to perform its important function accurately and lastingly.



CODE NO. 310—KEY




STYLE OF SWITCHBOARD PLUGS
Use Code Number

# Plugs

THE durable construction of CHICAGO Plugs, made possible by careful machining and best of materials, is a guarantee of long life. Its parts are separated by heavy rubber insulations, and the tip and sleeve, turned out of rolled brass rod, possessing lasting wearing qualities. The Code No. 218 is standard for CHICAGO Bell Type Switchboards, and the Code Nos. 43 0and 431 for CHICAGO Toll Boards.

# Operator's Equipment

EACH position on our standard switchboards has a complete operator's set, consisting of long distance transmitter with adjustable suspended arm; head band receiver with silk cords, plug and jack; induction coil; battery; powerful six-bar generator; hand and power generator switching key; and night bell switching key. On boards of more than one position a switching key is installed for cutting the operator's sets together, so that if necessary one operator can handle the entire switchboard.

# Operator's Transmitter with Adjustable Arm

THE regular CHICAGO Transmitter used with our switchboards insures perfect talking efficiency for local and long distance work. It is mounted conveniently with a suspended type adjustable arm.

A vertical adjustment is also made possible by our arrangement of transmitter cord and cord weights, which enables the operator to raise and lower the transmitter at will.

The swinging arm transmitter is considered as standard, although the breastplate transmitter will be furnished if specified.

# Operator's Head Band Receiver

THE working parts of this receiver are mounted in an aluminum cup independent of the shell. By this method greater mechanical strength and permanent adjustment is secured. The diaphragm rests on the rim of the aluminum cup and is securely locked by the ear piece. The magnets are laminated, semi-circular in form, and will retain their strength indefinitely.

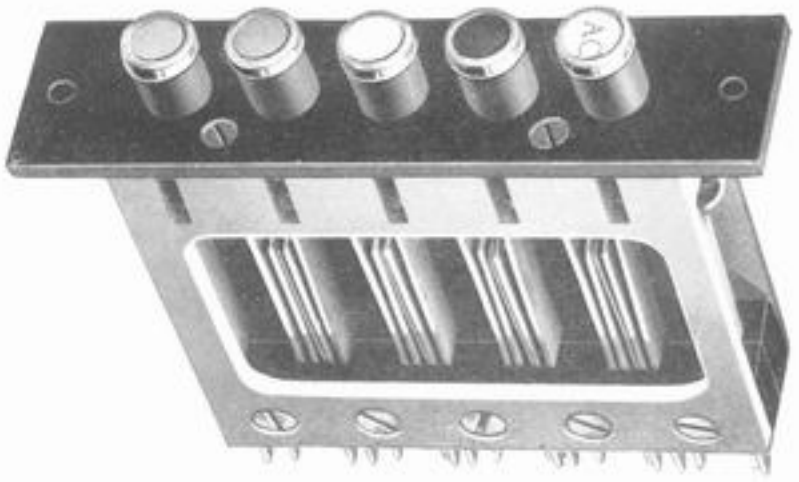
HEAD BAND RECEIVER — CODE NO. 230

To illustrate the strict attention that is paid to detail, we call attention to the metal bushings embedded in shell for holding the head band pivots, thus preventing wear of the shell. The band is made with leather-covered steel and is self-adjusting to the operator's head.

# Four-Party Master Key

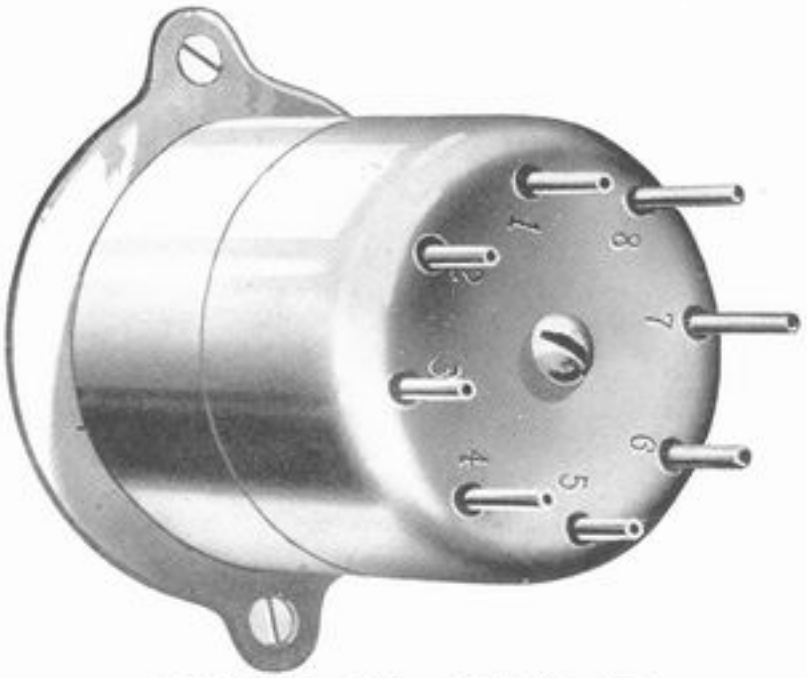
THE Four-Party Key is used in connection with our four-party selective telephones. It has five push buttons, one for each of the four stations, and one to be pressed when four-party lines are not in use, so that alternating current can be used on any cord circuit. Our circuit is very simple and our master key can easily be installed in your switchboard even though it is not regularly wired for four-party work.

We will be glad to send blue-print with full directions for installing, and detailed explanation how reliable four-party service can be secured by using CHICAGO polarized ringers to respond to either positive or negative current.



FOUR-PARTY MASTER KEY — CODE NO. 401

# Repeating Coil

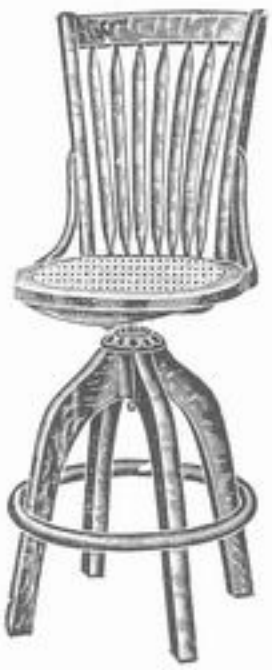



REPEATING COIL — CODE NO. 297

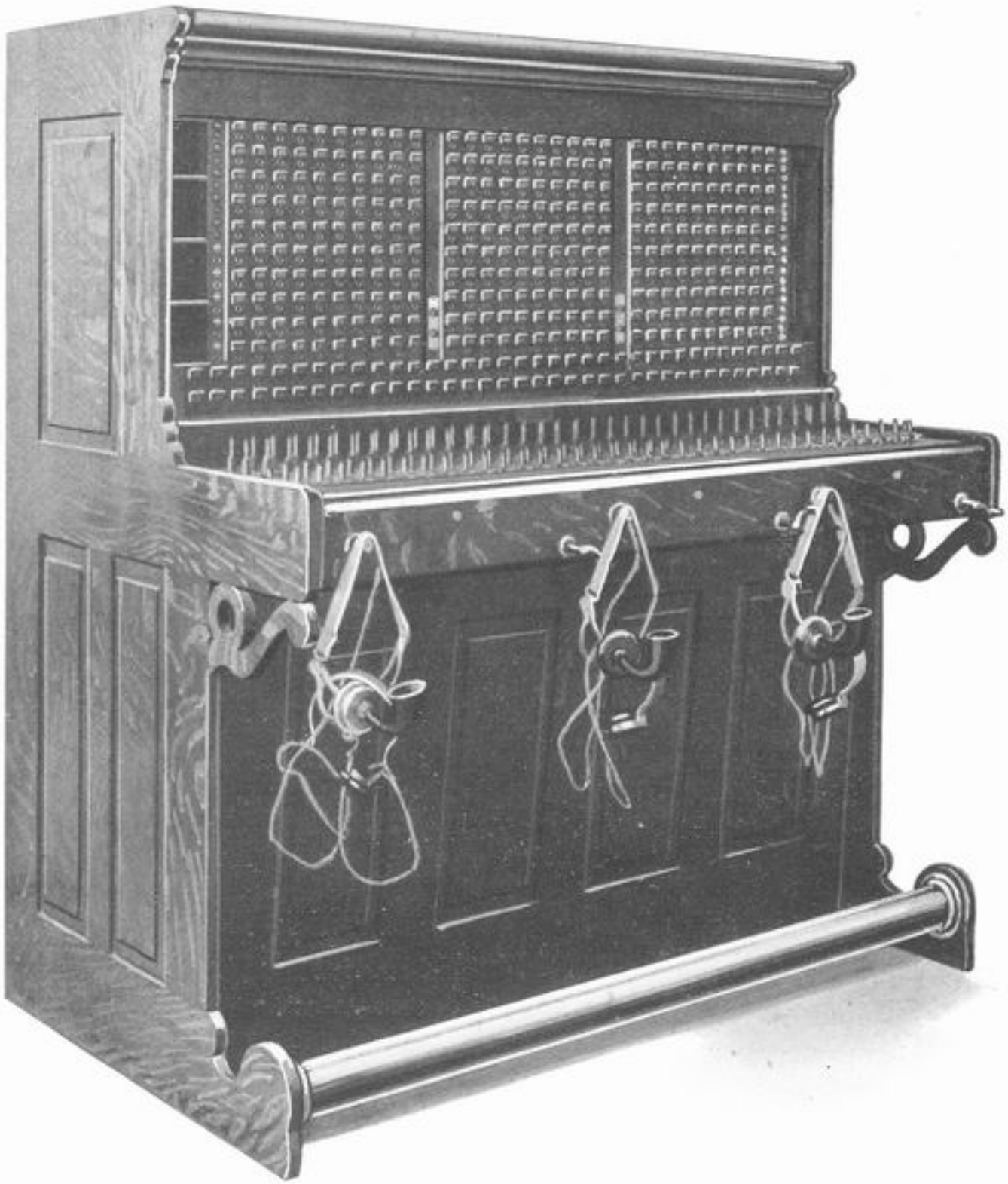
WHENEVER a metallic circuit is connected with a ground or common return line, the connection should be made through a repeating coil. By so doing you avoid a physical connection between the ground and metallic circuits and eliminate the noise which would ordinarily result from an unbalanced line. Our Code No. 297 Repeating Coil is especially designed for switchboard cord circuit use and the windings are so perfectly balanced that high efficiency as a talk-through and ring-through coil is secured.

# Operators' Chairs

SPECIALLY designed for switchboard work. Substantially built, in oak or birch mahogany. They are very comfortable, and are made in two heights—one adjustable 18 to 24 inches, the other from 25 to 28 inches. In ordering, please specify height desired and whether with cane or leather seat.



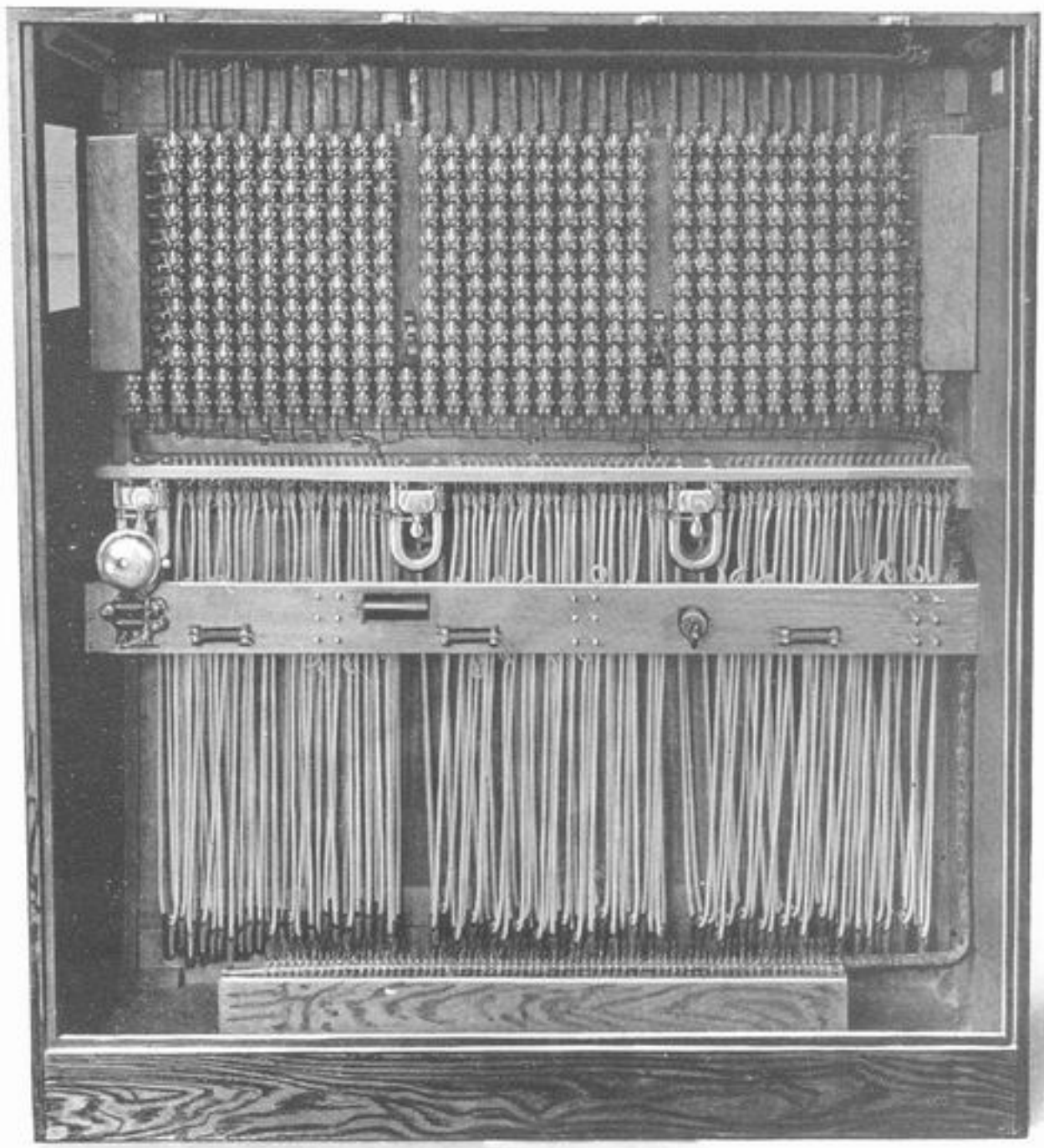
# Chicago Magneto Switchboards



CABINET — CODE NO. 350

Capacity — 300 Drops and Jacks.
30 Cord Circuits—double or single supervision.
2 Operators' positions, with either swinging arm or breastplate transmitters.

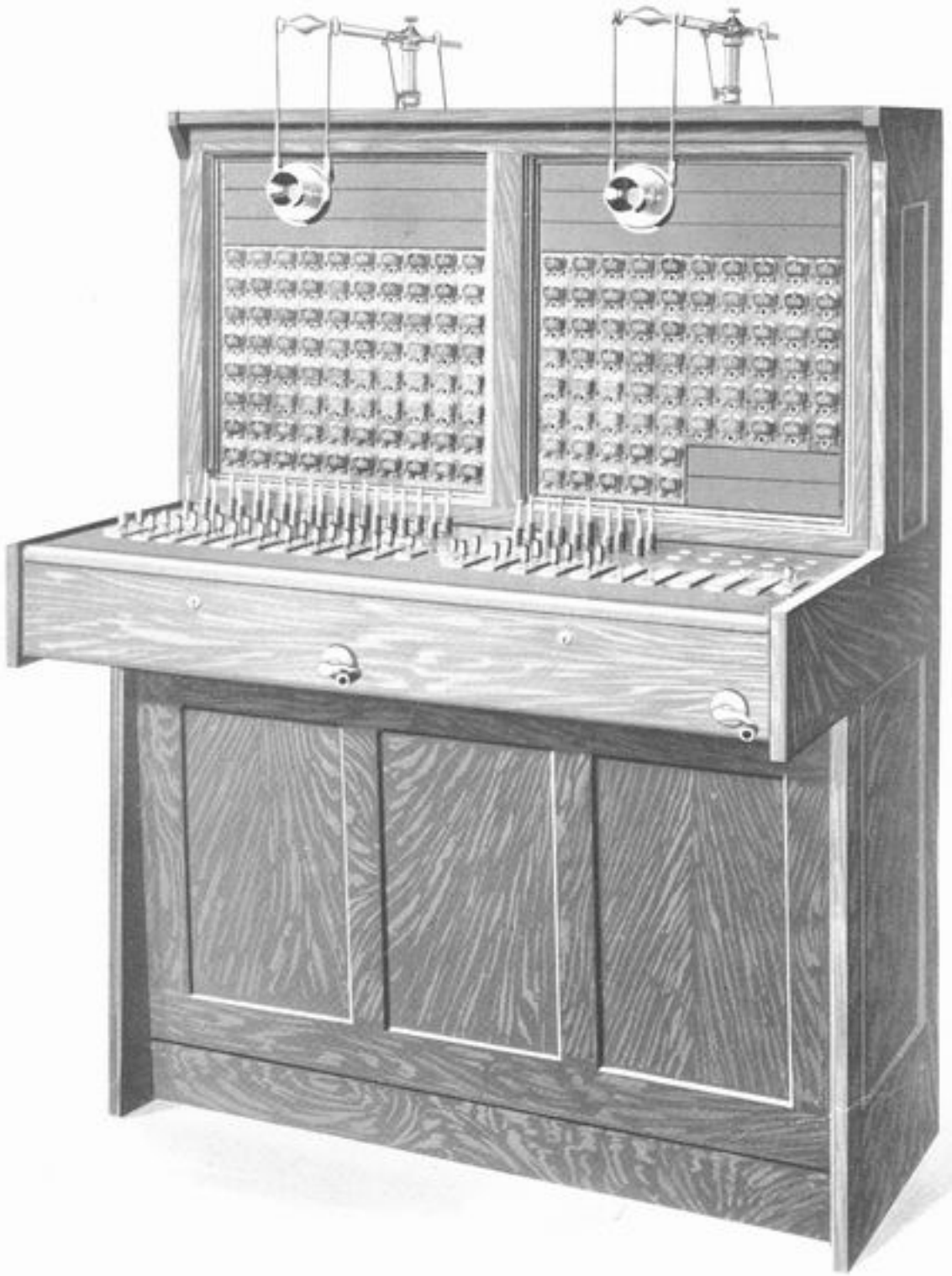
# Chicago Magneto Switchboards



CABINET — CODE NO. 350

Rear View — showing arrangement of cable, repeating coils, night bell relay, double supervision cord circuits, with condensers, double clear outs, etc.

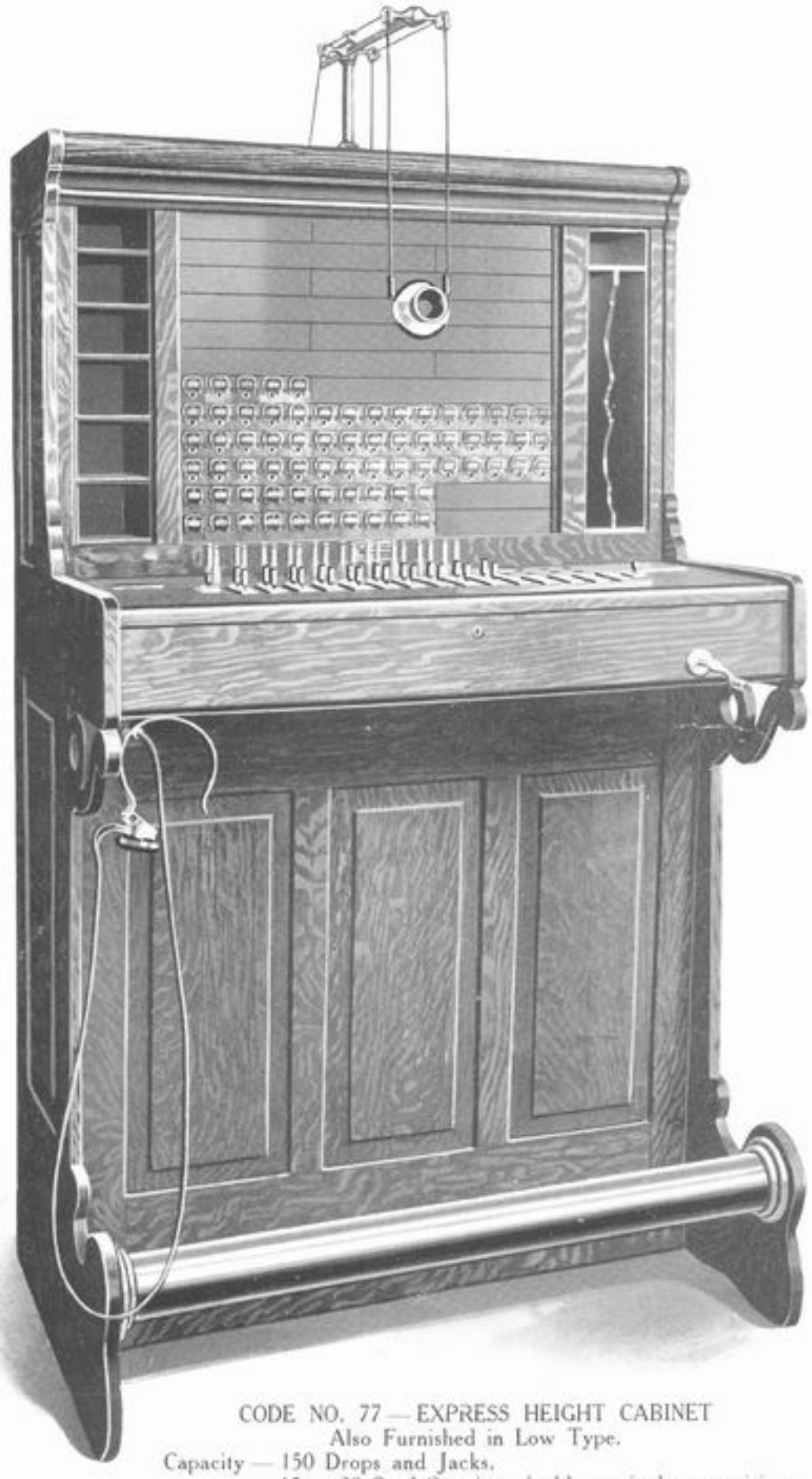
# Chicago Magneto Switchboards



CODE NO. 76 — LOW TYPE CABINET

Capacity — 200 Drops and Jacks.
20 Cord Circuits—double or single supervision.
2 Operators' positions.

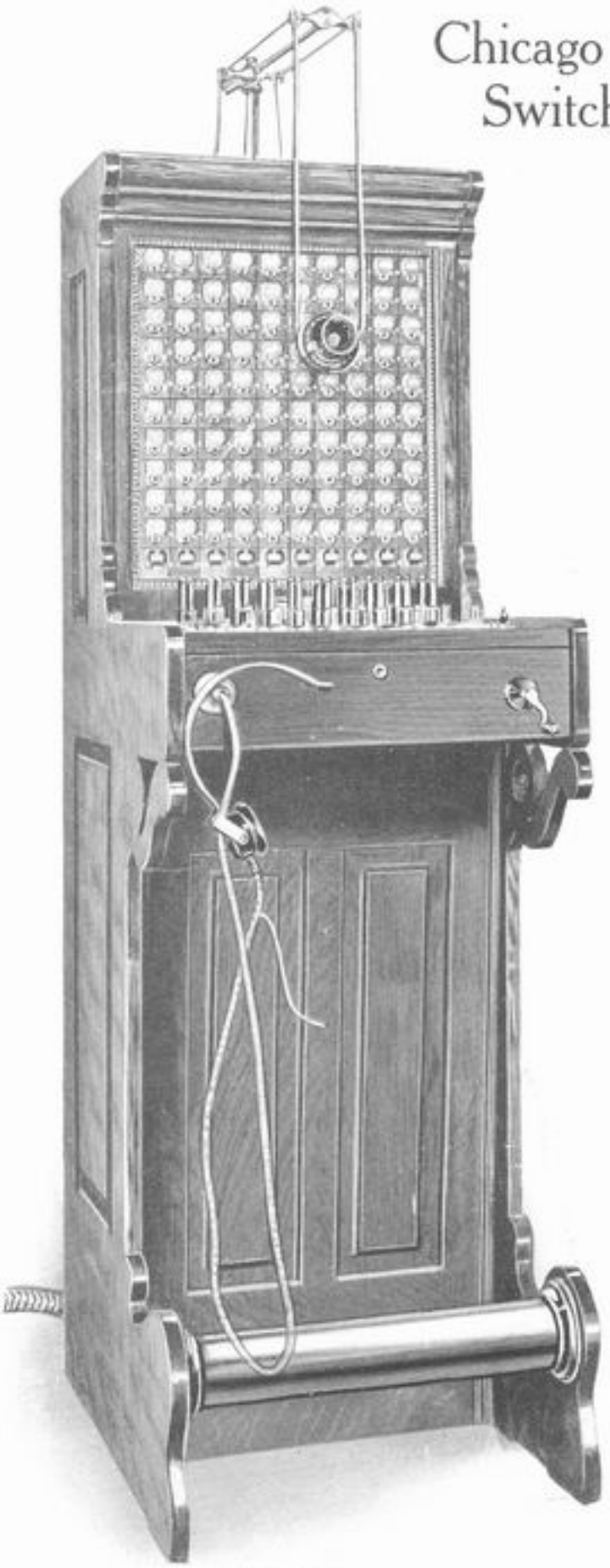
# Chicago Magneto Switchboards



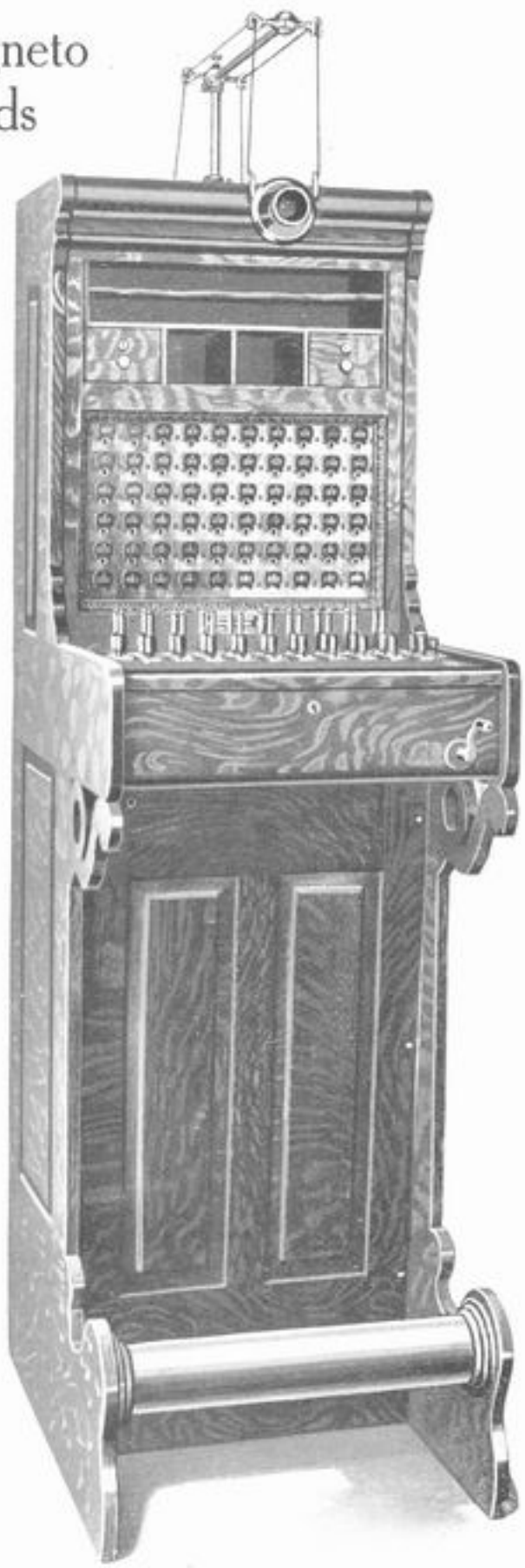
CODE NO. 77 — EXPRESS HEIGHT CABINET
Also Furnished in Low Type.

Capacity — 150 Drops and Jacks.
15 or 20 Cord Circuits—double or single supervision.
1 Operator position.

# Chicago Magneto Switchboards

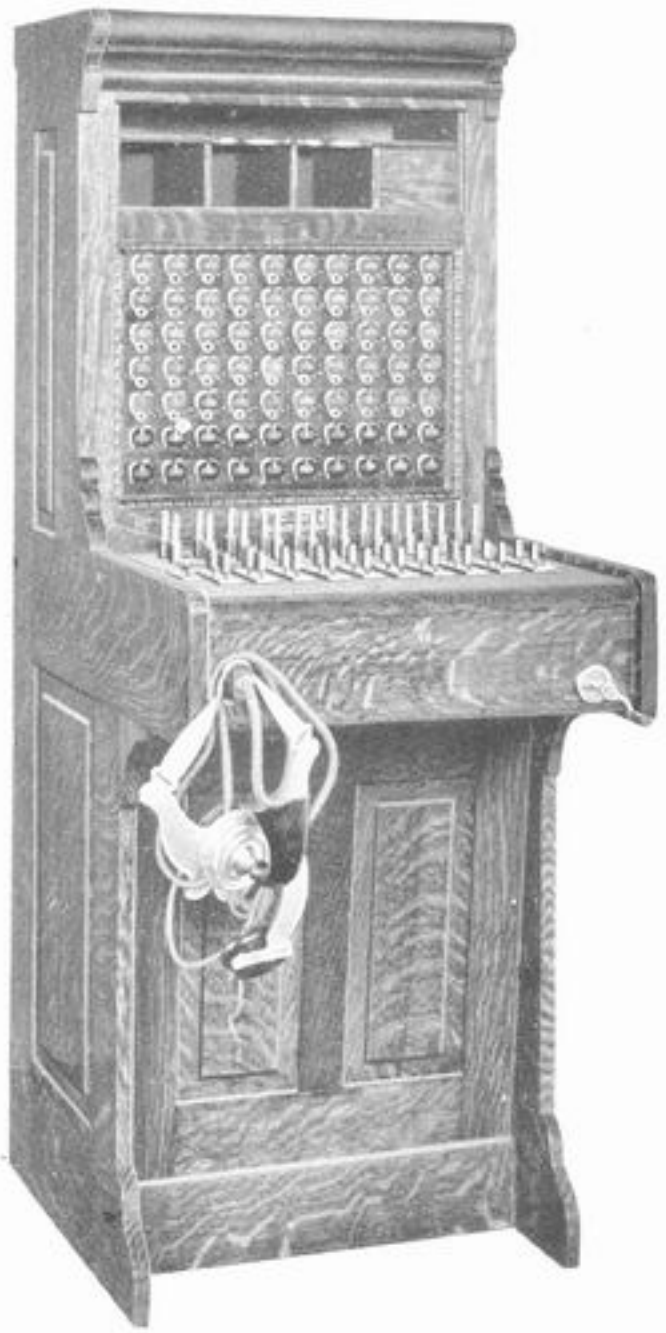


CODE NO 78
Capacity — 100 Drops and Jacks
10 Cord Circuits.
Unit Type Cabinet — can be added to as your exchange grows.



CODE NO. 73
Capacity — 50 Drops and Jacks.
10 Cord Circuits.
Showing convenient arrangement of compartments for toll tickets, ledger space and cash drawer.

# Chicago Magneto Switchboards



CODE NO. 72 — FRONT VIEW

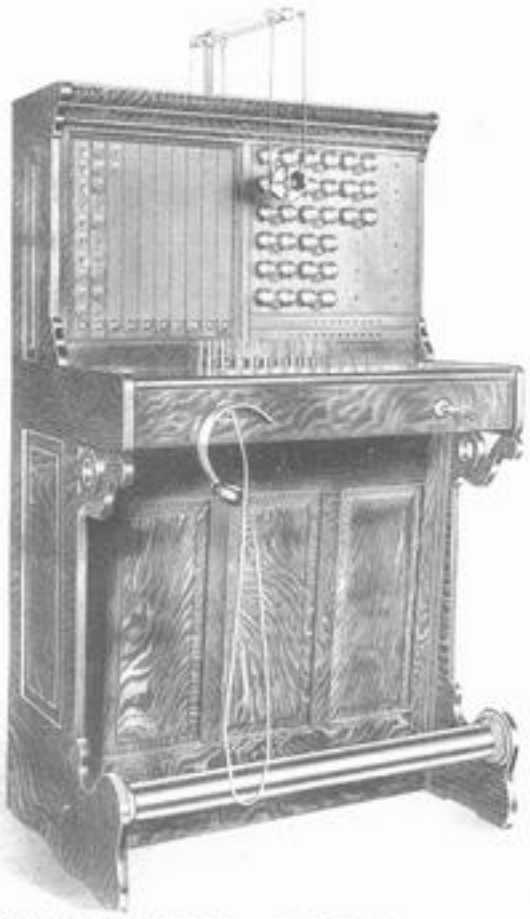
Showing the new low cabinet with key shelf only 30 inches high.

Operator can use an ordinary height chair.

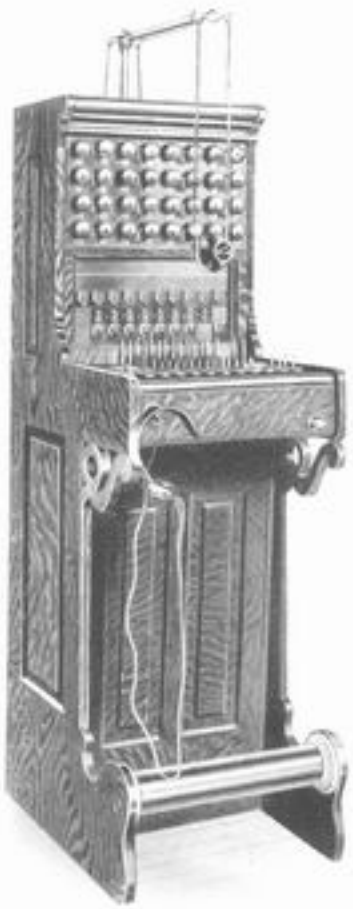
CODE NO. 72 — REAR VIEW

Capacity — 50 Drops and Jacks.
10 Cord Circuits.

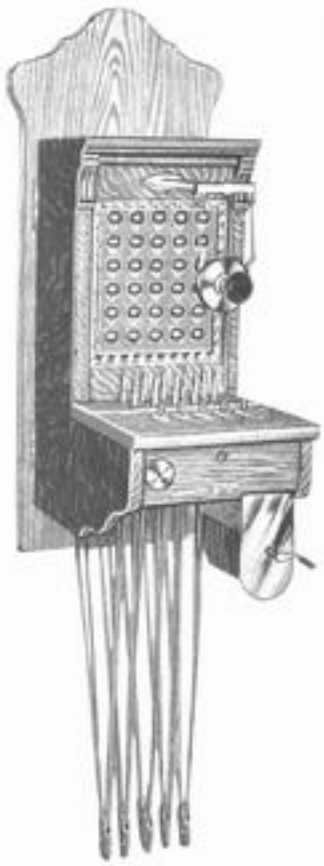
This style cabinet will be furnished in any desired cabacity.



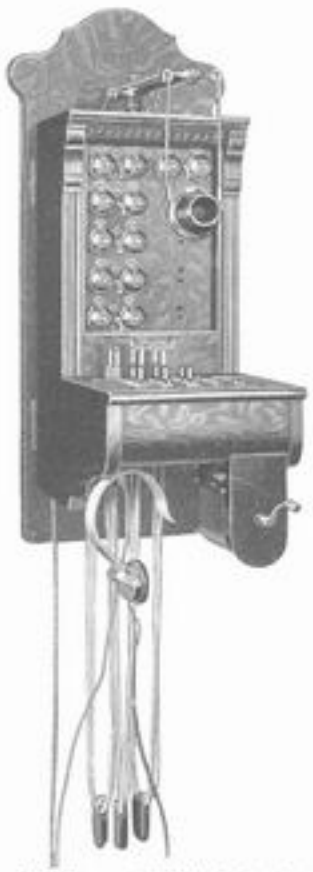
TOLL AND LOCAL — CODE NO. 358
Capacity — 100 Drops and Jacks.
25 Ringers and Jacks.
15 Cord Circuits.



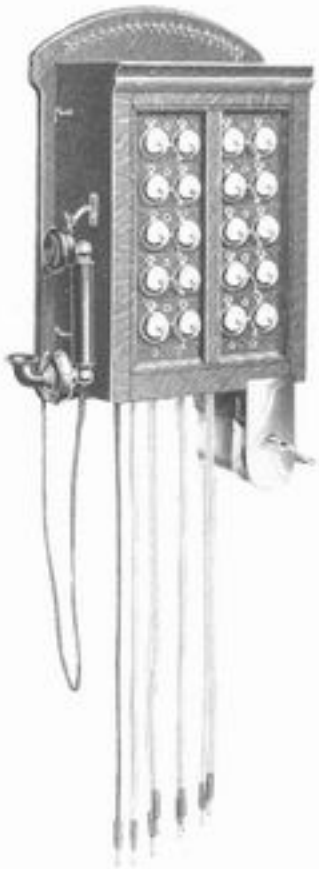
TOLL — CODE NO. 359
Capacity — 30 Drops and Jacks.
16 Ringers and Jacks.
10 Cord Circuits.



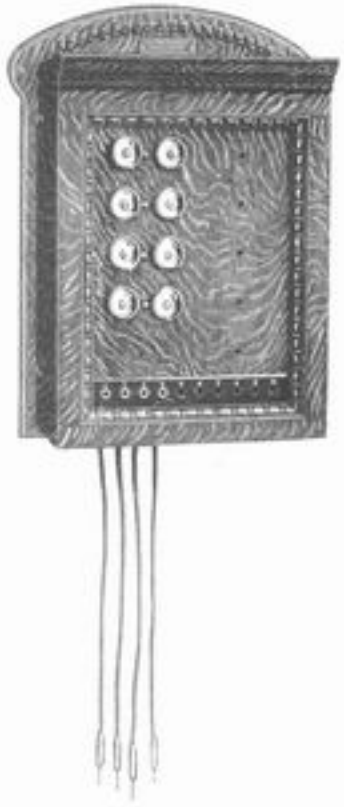
CODE NO. 80
Capacity — 25 Drops and Jacks.
5 Cord Circuits.



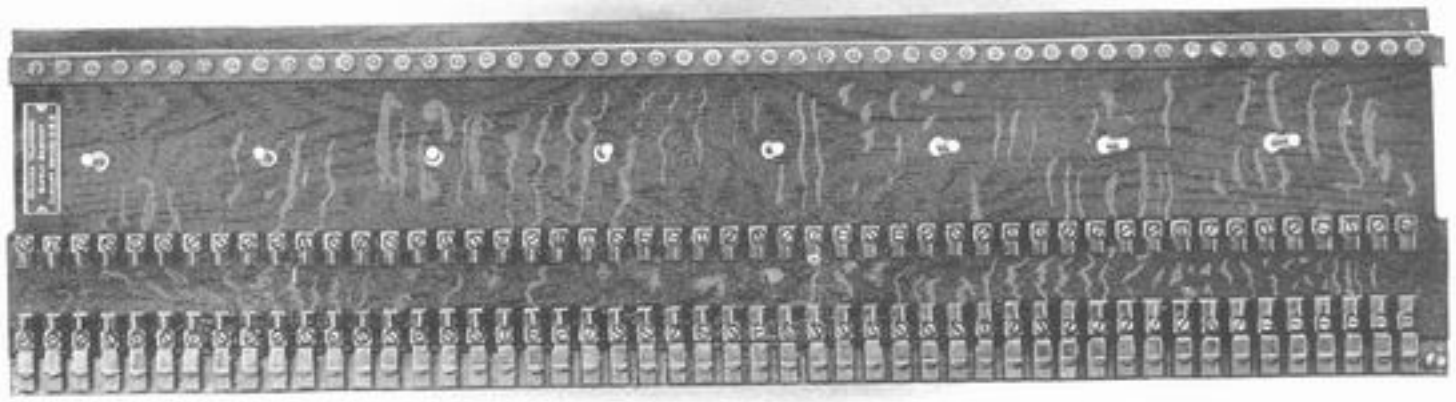
TOLL — CODE NO. 81
Capacity — 10 Ringers and Jacks.
5 Cord Circuits.



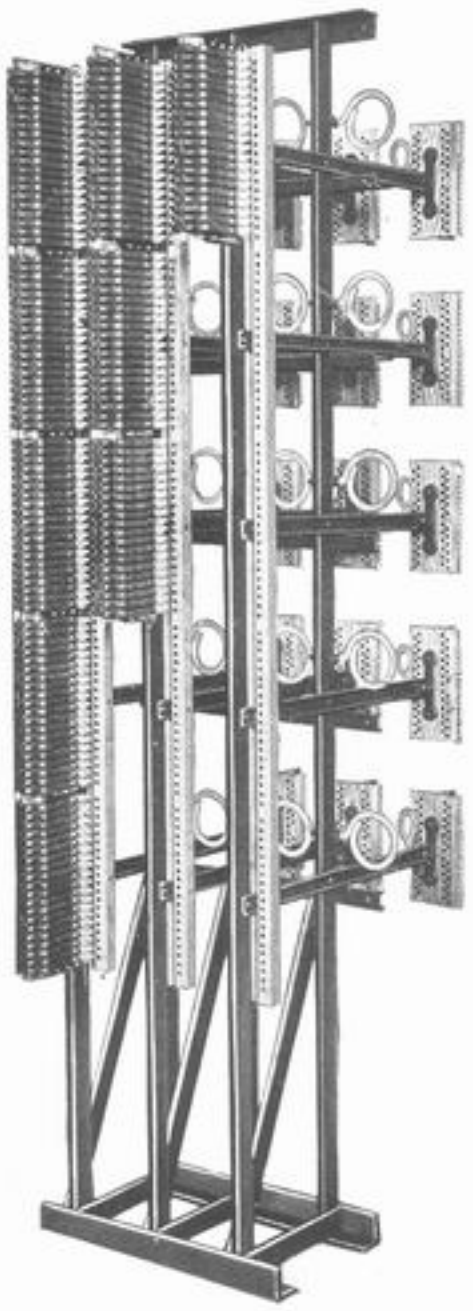
TOLL — CODE NO. 88
Capacity — 10 to 20 Ringers and Jacks.
8 Pair Cords and Plugs.



TOLL — CODE NO. 83
Capacity — 10 Ringers and Jacks.
5 Pair Cords and Plugs.
No Operator Set.
Use with regular telephone



DISTRIBUTING BOARD AND LIGHTNING ARRESTER. CODE NO. 86



TYPE L DISTRIBUTING FRAME AND PROTECTORS

# Switchboard Protective Apparatus

WE are prepared to furnish any type of protective apparatus desired, but on account of limited space only two types are shown here.

The No. 86 Distributing Board and Lightning Arrester, as illustrated above, is the standard mica fuse and carbon block protector with cross connecting panel. Without extra charge we fan out the switchboard cable and connect to panels of 10, 25 or 50 pair capacity. This greatly simplifies your work of installation. When ordering be sure to specify whether for ground or metallic circuit.

Where lines are in close proximity to high tension electric light or power circuits, or in localities subject to unusually severe electrical storms, and where the best possible protection is desired, we particularly recommend the Cook Type L Frame with No. 10 Protectors, which we can furnish in any capacity desired. This type of protective apparatus offers positive protection against damage by lightning, and when used in connection with CHICAGO Switchboards we guarantee your drop coils against burn-outs. Write us for literature fully illustrating and describing Cook Protectors.

# INDEX



**CHICAGO TELEPHONE SUPPLY CO.**

MAKERS OF TELEPHONES AND SWITCHBOARDS

Factory and General Offices

**ELKHART, IND. U.S.A.**

PRESS OF
JAMES A. BELL COMPANY
ELKHART, IND.