# WESTERN ELECTRIC COMPANY

## TELEPHONIC APPARATUS AND SUPPLIES

# CATALOGUE

*of*

# TELEPHONIC APPARATUS AND SUPPLIES

# WESTERN ELECTRIC COMPANY

SECOND EDITION

# WESTERN ELECTRIC COMPANY

ATLANTA—
230 Lee Street,
Atlanta, Georgia.

CHICAGO—
259 So. Clinton Street,
Chicago, Illinois.

CINCINNATI—
113 West Third Street,
Cincinnati, Ohio.

DALLAS—
Dallas,
Texas.

DENVER—
1516 Curtis Street,
Denver, Colorado.

DES MOINES—
Cor. Third and Depot Streets,
Des Moines, Iowa.

INDIANAPOLIS—
Majestic Building,
Indianapolis, Indiana.

KANSAS CITY—
611-613 Wyandotte Street,
Kansas City, Missouri.

LOS ANGELES—
117 East Seventh Street,
Los Angeles, California.

NEW YORK—
463 West Street,
New York.

OMAHA—
802 Farnum Street,
Omaha, Nebraska.

PHILADELPHIA—
11th and York Streets,
Philadelphia, Penna.

PITTSBURG—
910 River Avenue,
Allegheny, Penna.

SAINT LOUIS—
810 Spruce Street,
St. Louis, Missouri.

SAINT PAUL—
235-237 East 6th Street,
St. Paul, Minn.

SALT LAKE CITY—
445 South Third West Street,
Salt Lake City, Utah.

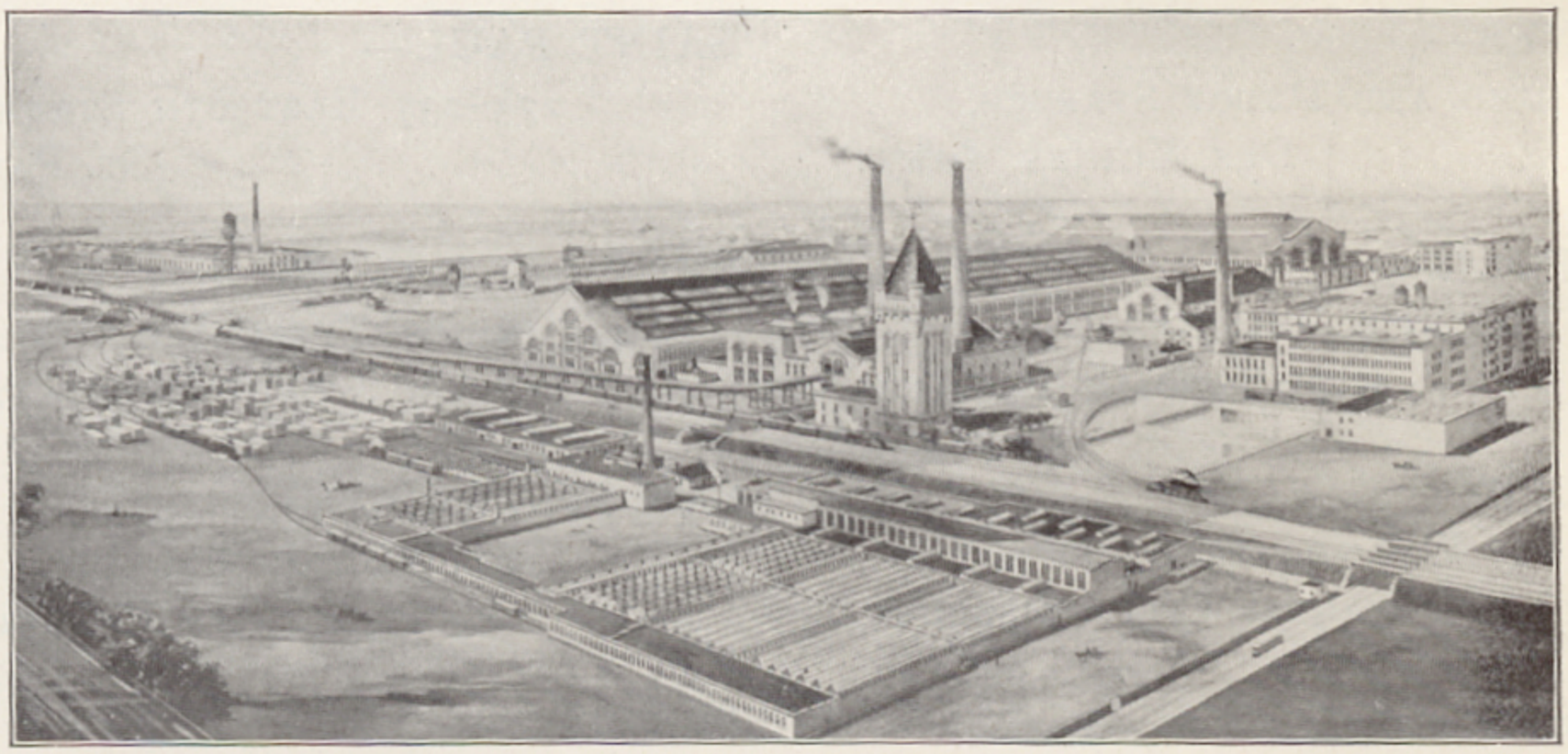
SAN FRANCISCO—
642 Folsom Street,
San Francisco, Cal.

SEATTLE—
1518 First Avenue, South,
Seattle, Washington.

NORTHERN ELECTRIC & MANUFACTURING COMPANY, Limited,

MONTREAL. WINNIPEG.

CHICAGO

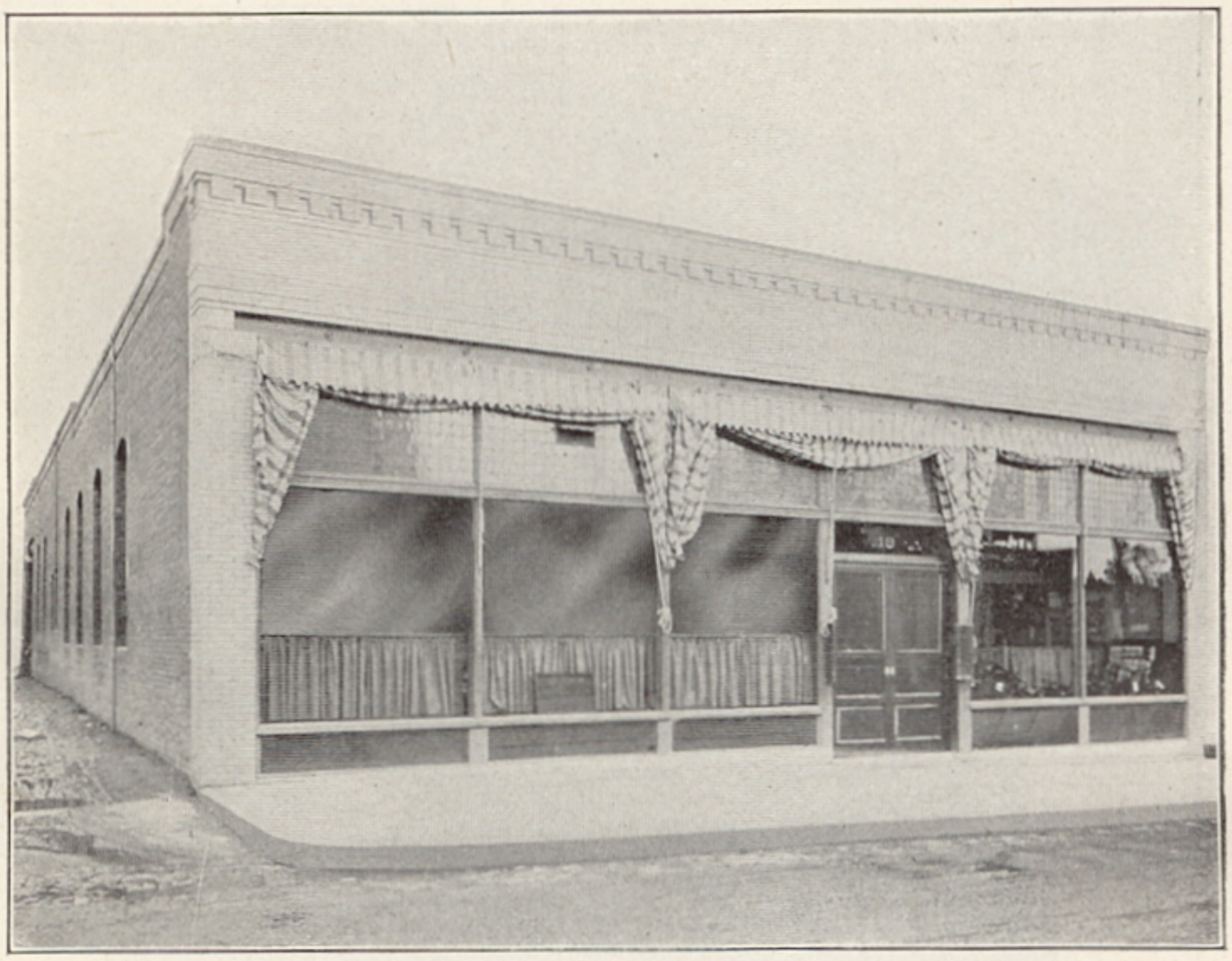


HAWTHORNE

NEW YORK


ST. LOUIS


INDIANAPOLIS



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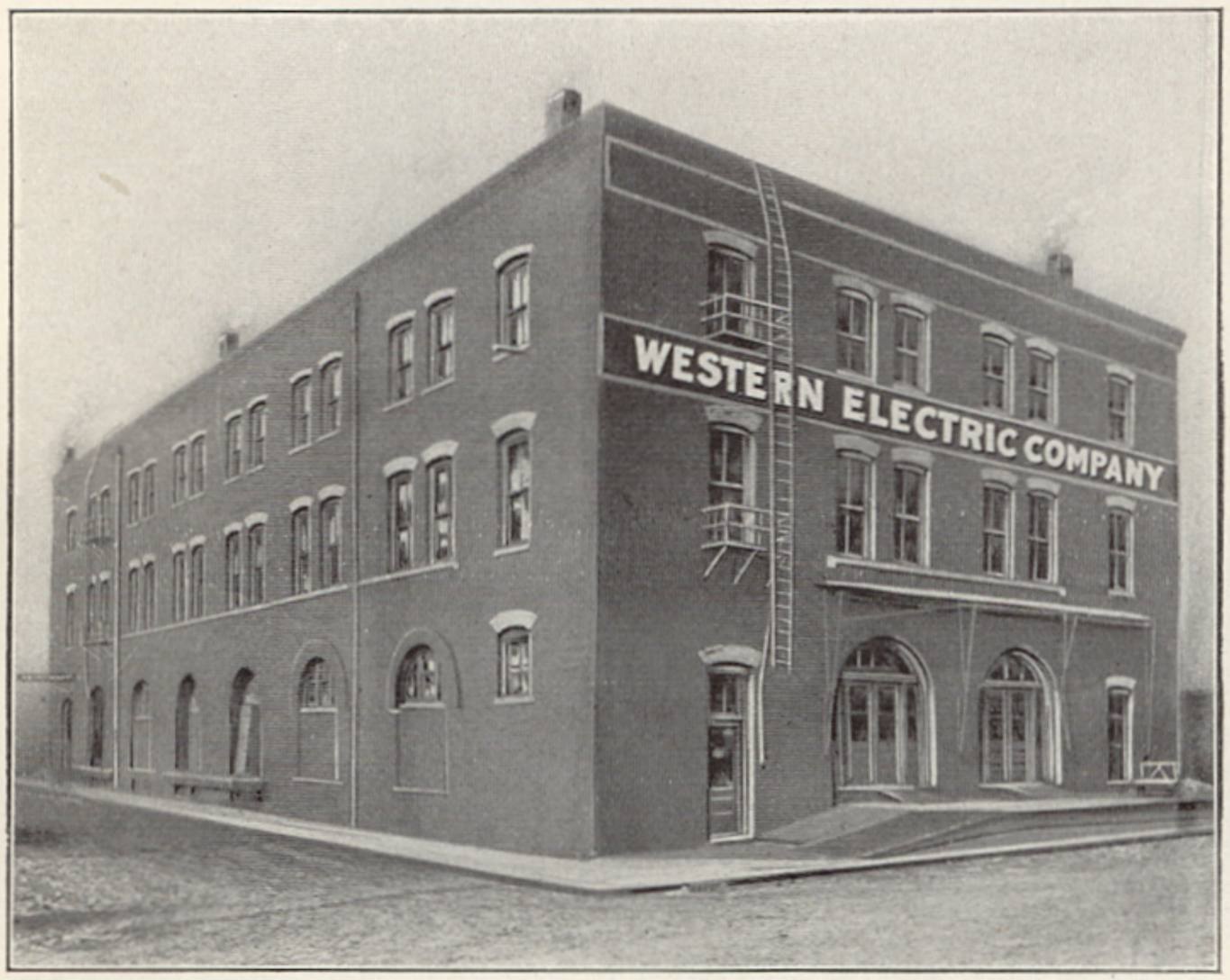


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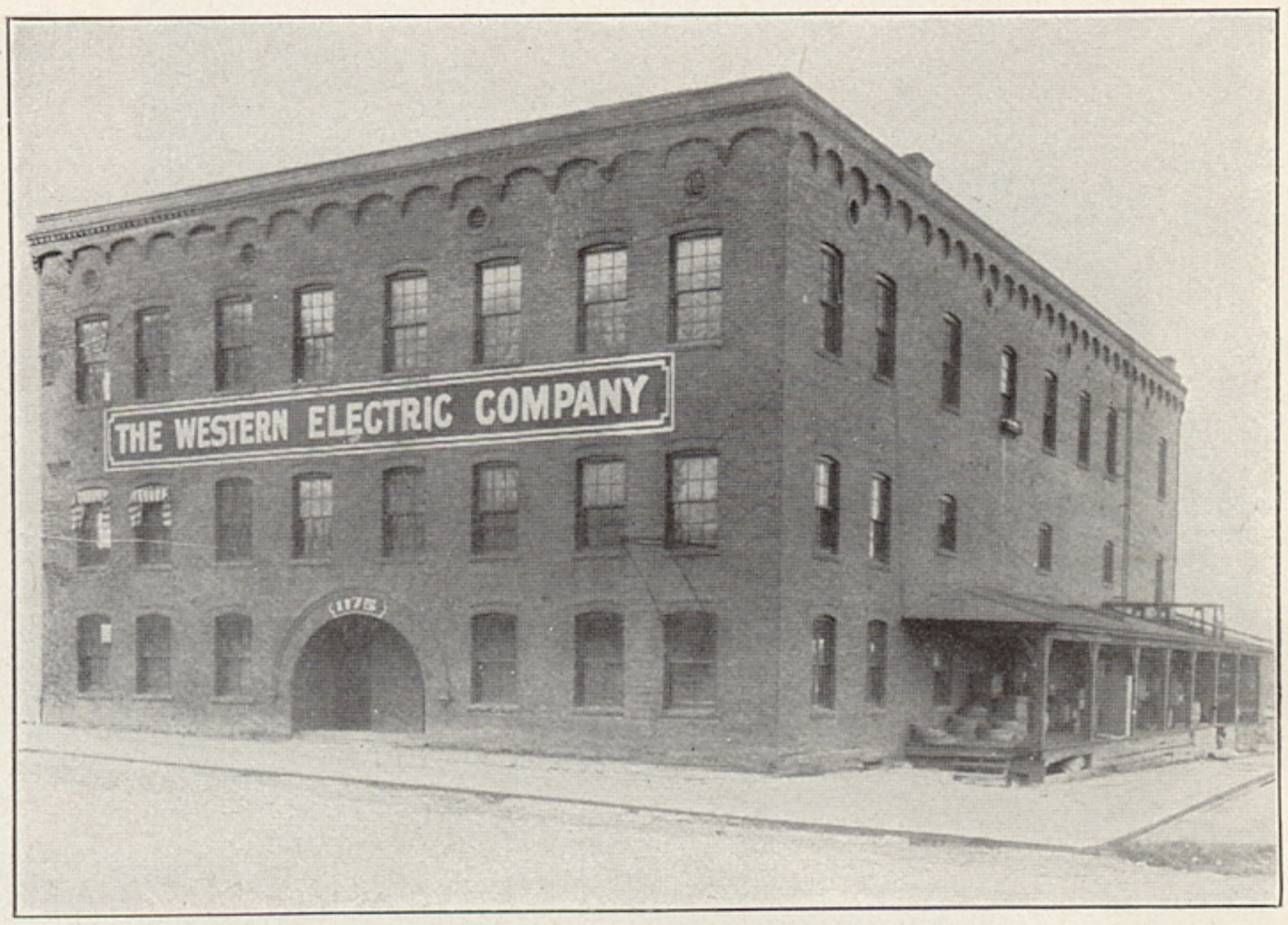
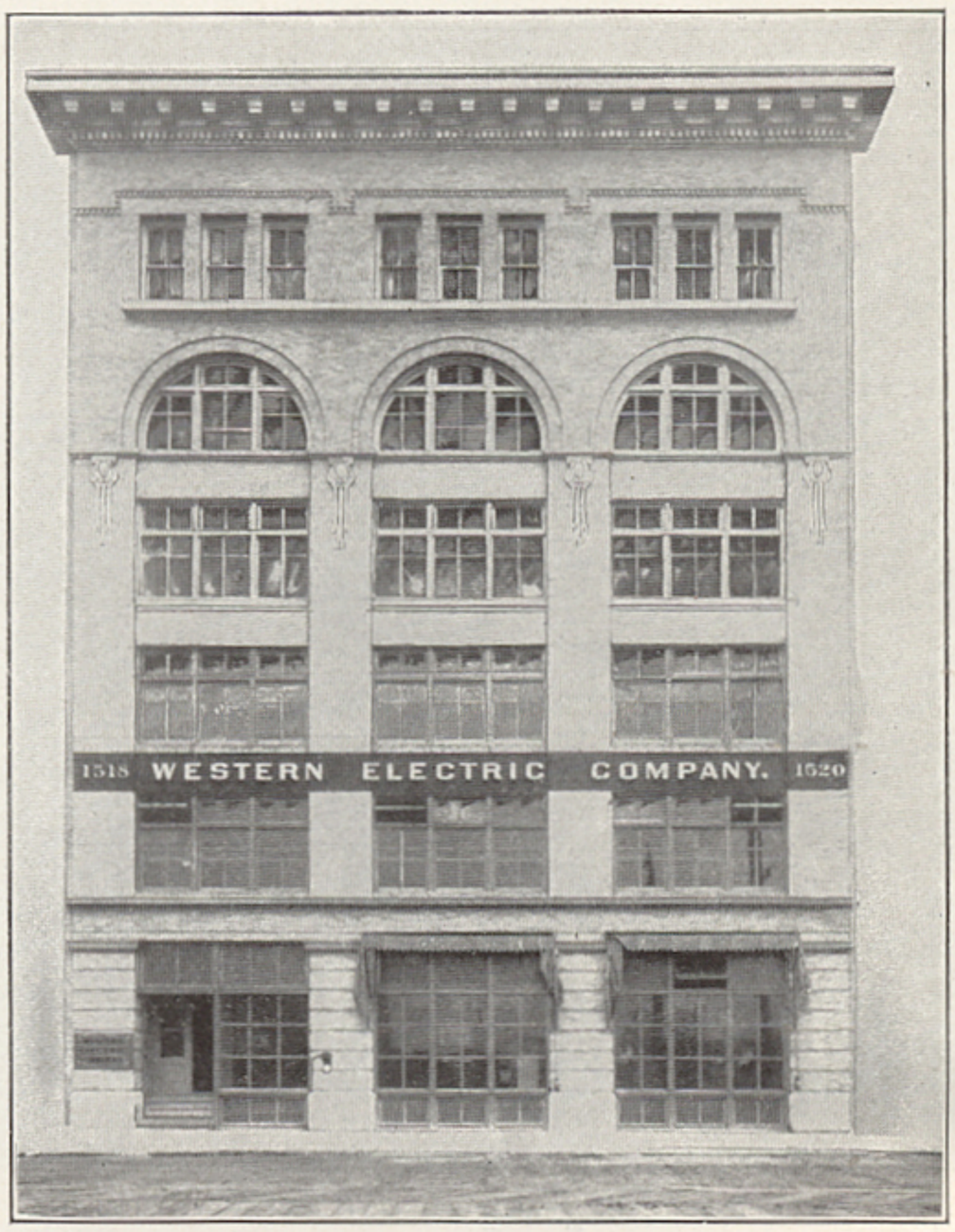



DENVER


OMAHA


St. Paul

San Francisco

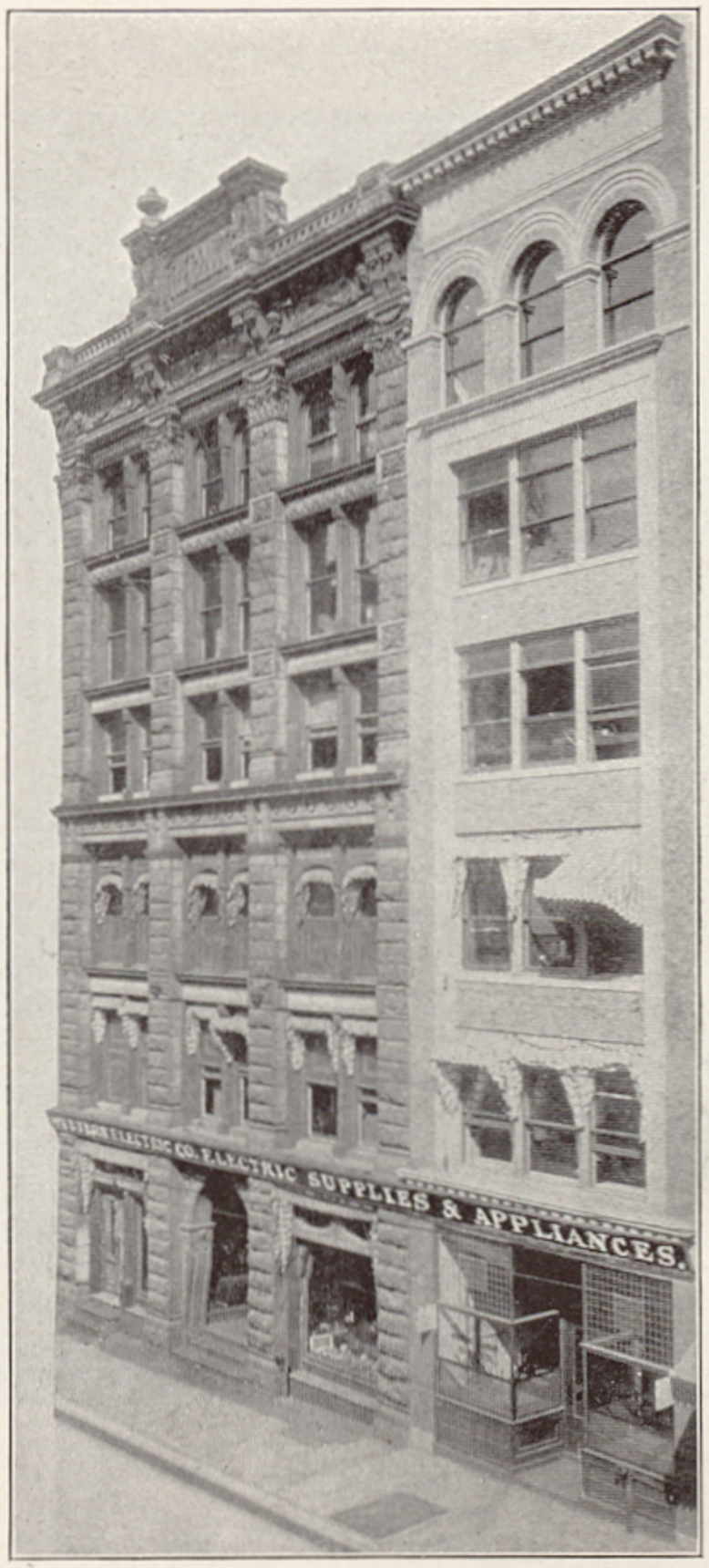



SEATTLE

PHILADELPHIA


CINCINNATI


ATLANTA

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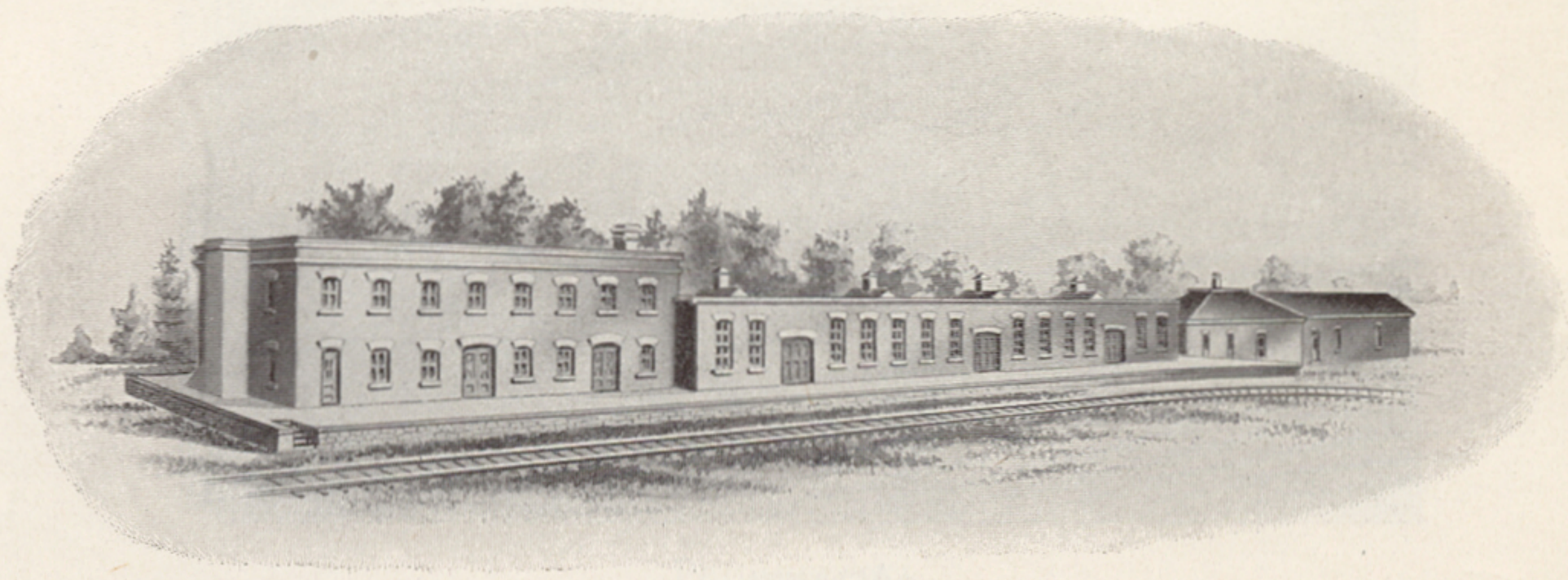

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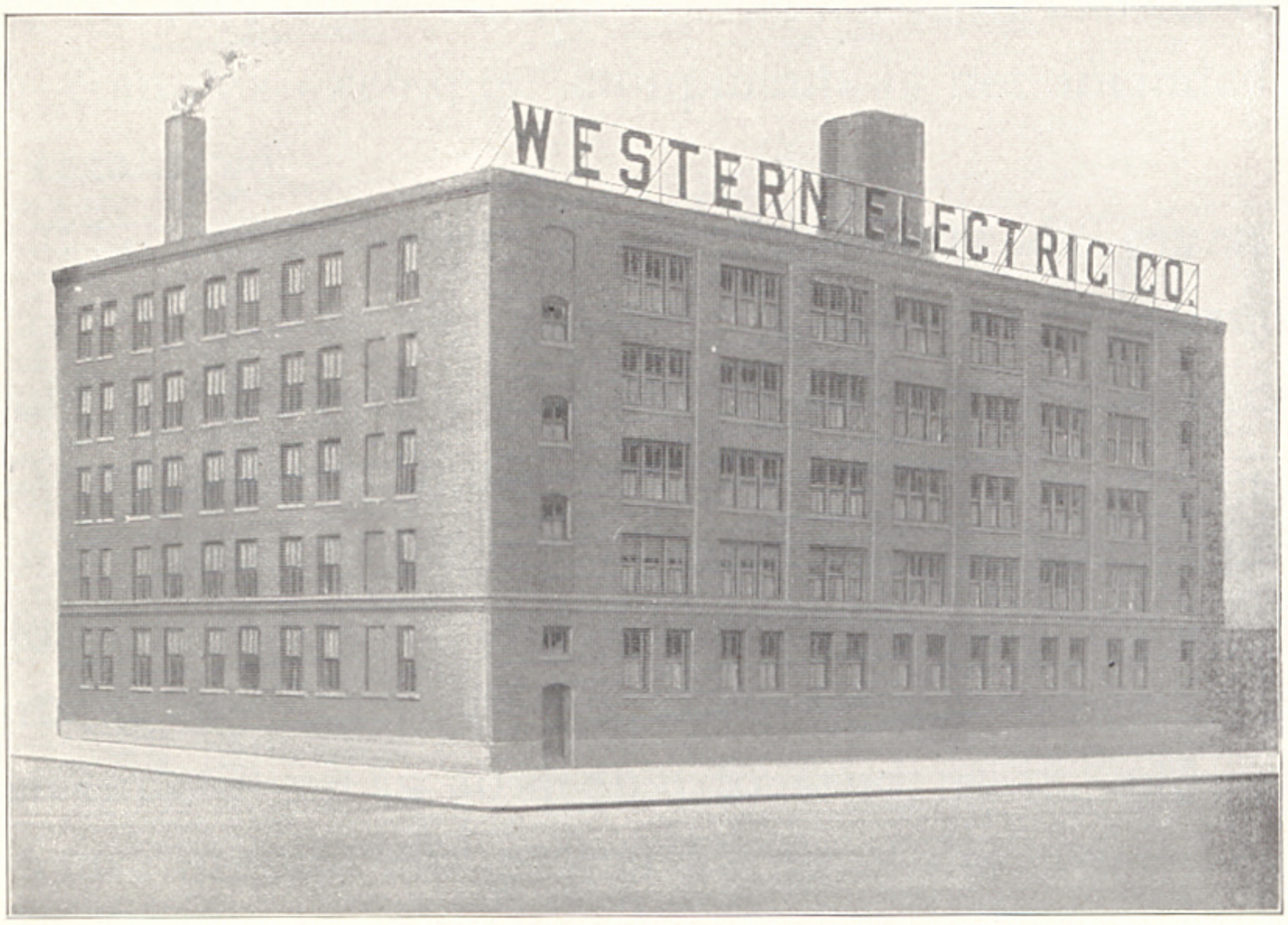
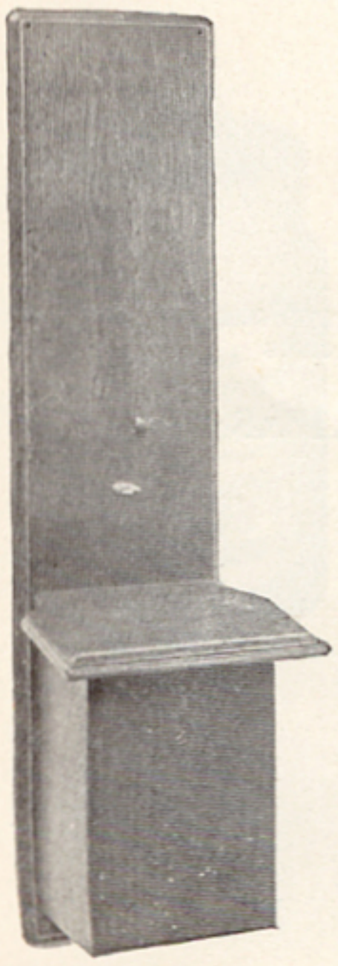
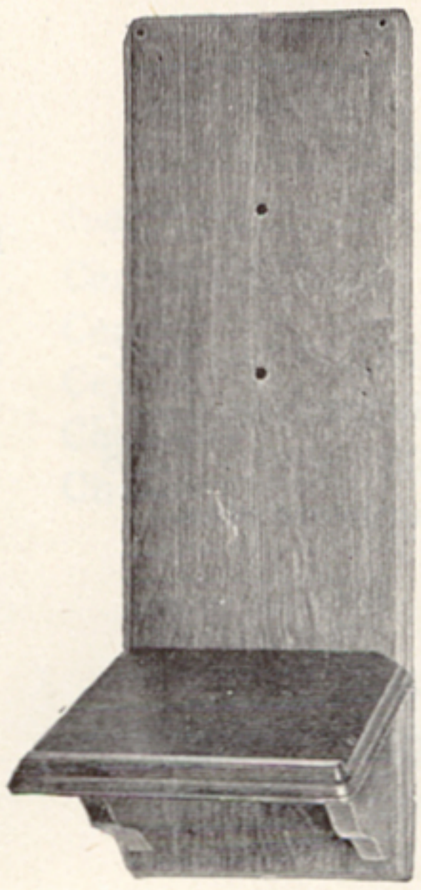



PITTSBURG



No. 111-C



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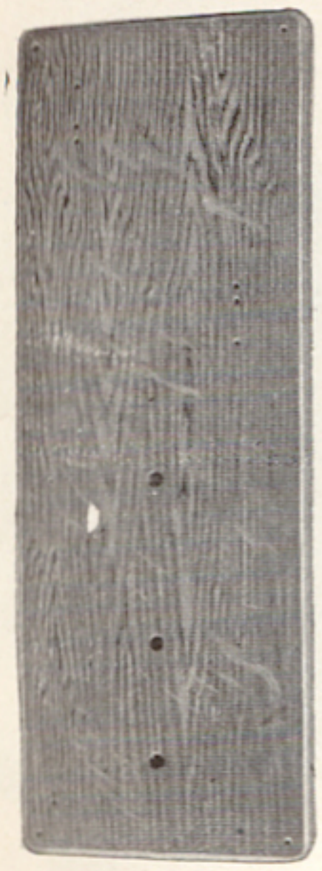
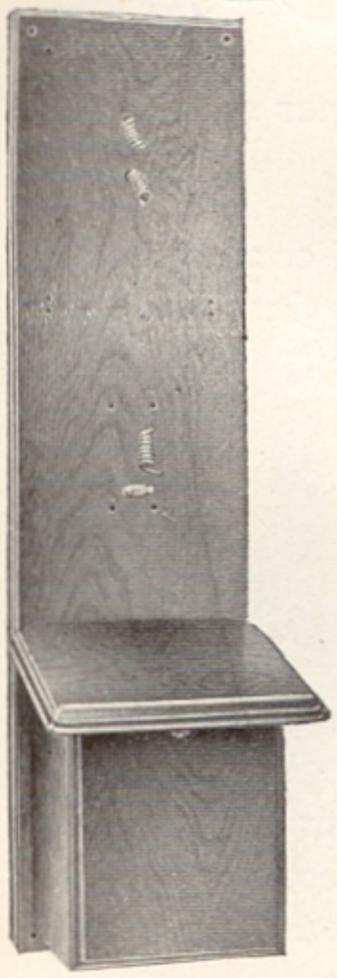


No. 133-A



No. 134-A



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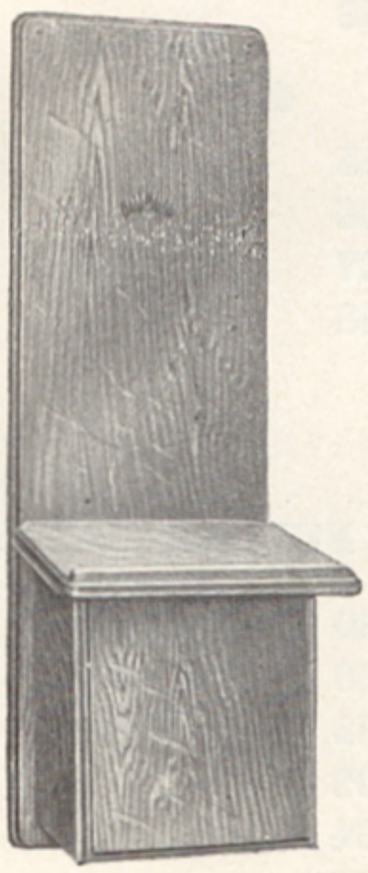


No. 136-B

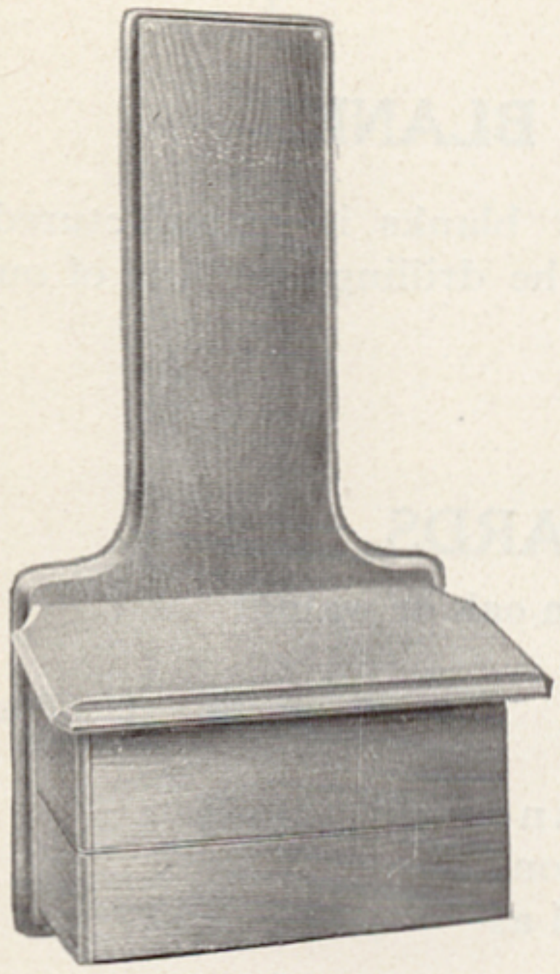
# APPARATUS BLANKS

A complete line of apparatus blanks is manufactured. These are suitable for covering the drillings for any of our apparatus which is not provided.

# BACKBOARDS

**Regularly furnished in oak or walnut**

| Code No. | Style | Used with | Dimensions inches | List Price each |
|---|---|---|---|---|
| **111-C** | Battery Box for 3 dry cells | Nos. 1240-A and 1240-E telephone sets. Included as part of set | $3\frac{1}{8}$x$8\frac{1}{8}$x$7\frac{3}{4}$ | |
| | | Walnut | | **$1.60** |
| | | Oak | | **1.50** |
| **132-A** | Writing Shelf | Nos. 1293-A, 1293-Y and 1296-A telephone sets | $22\frac{1}{4}$x$7\frac{1}{2}$x$7\frac{3}{4}$ | **1.05** |
| **133-A** | Plain | No. 1293-J telephone set. Included as part of set | 21x$7\frac{1}{2}$ | **.53** |
| **133-B** | Plain | Special No. 1293-J telephone set when No. 7-E coin collector is used | $24\frac{3}{4}$x$7\frac{1}{2}$ | **.57** |
| **134-A** | Plain | Nos. 1293-A and 1293-Y telephone sets | $9\frac{1}{8}$x$6\frac{1}{2}$ | **.24** |
| **136-B** | Battery Box for 3 dry cells | No. 1293-Y telephone set | 26x$8\frac{1}{8}$x$7\frac{3}{4}$ | |
| | | Walnut | | **1.50** |
| | | Oak | | **1.45** |
| **138-A** | Battery Box for 3 dry cells | No. 1298-A telephone set. Included as part of set | $30\frac{3}{4}$x$8\frac{1}{8}$x$7\frac{1}{4}$ | |
| | | Walnut | | **1.60** |
| | | Oak | | **1.50** |



No. S-7296

## Backboards—Continued

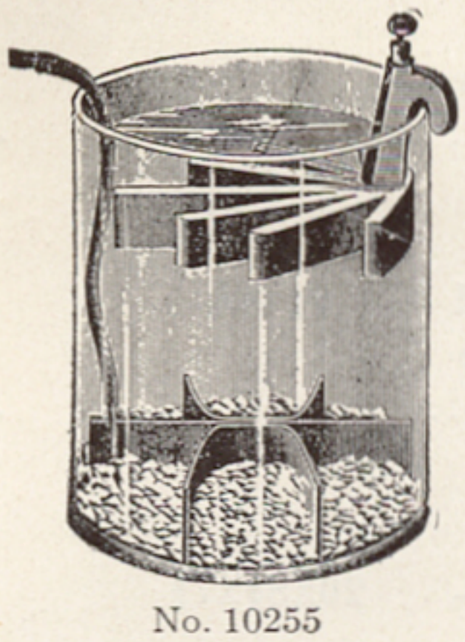
| Code No. | Style | Used with | Dimensions inches | List Price each |
|---|---|---|---|---|
| **S-7296** | Battery Box for 3 wet cells | Not drilled but suitable for Nos. 1240, 1293 and 1298 telephone sets. | 35x16x8 | **$2.70** |

No. 1-A

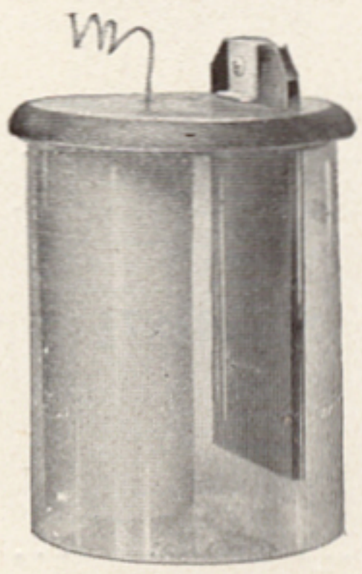
## BATTERY BOXES

Made of sheet steel, with black japan finish and lined with pressboard.

| Code No. | Used for | Dimensions inches | List Price each |
|---|---|---|---|
| **1-A** | 3 standard size dry cells | $8\frac{23}{32}$x$3\frac{7}{32}$x$7\frac{25}{64}$ | **$0.75** |



No. 10255



No. 10130

## PRIMARY BATTERIES

### GRAVITY BATTERY

**5x7**

| Code Word | List No. | |
|---|---|---|
| **Deerfield** | **10250** | Cell, complete |
| **Defiance** | **10251** | Jar, glass 5x7 |
| **Delanco** | **10252** | Zinc |
| **Deland** | **10253** | Copper |

**6x8**

| | | |
|---|---|---|
| **Delano** | **10255** | Cell, complete |
| **Delaware** | **10256** | Jar, glass 6x8 |
| **Delevan** | **10257** | Zinc |
| **Delhi** | **10258** | Copper |

### STANDARD FULLER BATTERY

| | | |
|---|---|---|
| **Colville** | **10130** | Cell, complete |
| **Comanche** | **10126** | Jar, glass, 6x8 |
| **Comillah** | **10132** | Cover for jar |
| **Comines** | **10133** | Carbon |
| **Como** | **10134** | Porous cup |
| **Compton** | **10135** | Zinc |

## Primary Batteries—Continued

No. 10000

### LECLANCHE BATTERY

| Code Word | List No. | |
|---|---|---|
| Ceredo | 10000 | Cell, complete |
| Ceretto | 10002 | Porous cup |
| Ceylon | 10003 | Jar |
| Ceylones | 10004 | Zinc, amalgamated |
| Chase | 10005 | Sal-ammoniac, package |

### GLADSTONE-LALANDE BATTERIES

Model G-10 Vitrified Porcelain Jar and Cover
Size over all, 4½ inches x 6¾ inches
Capacity, 100 ampere hours

| Code Word | List No. | |
|---|---|---|
| Knieboog | G-10 | Complete battery with charge |

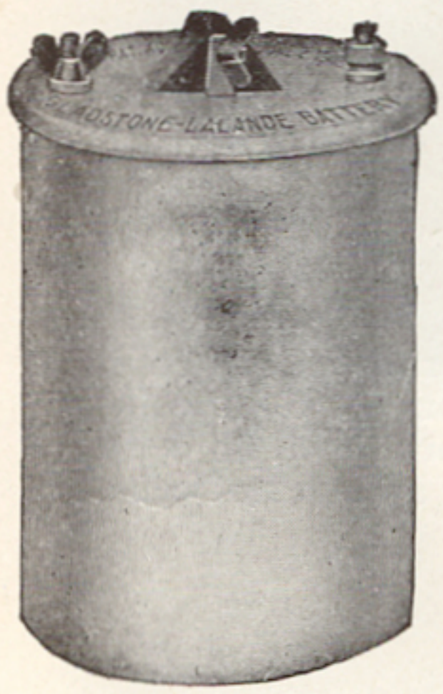
**Renewal Charges**

| | | |
|---|---|---|
| Kniedicht | G-11 | Complete renewal |

**Separate Renewal Parts**

| | | |
|---|---|---|
| Kniefall | G-12 | One oxide plate |
| Kniefalles | G-13 | One double zinc plate |
| Kniegurt | G-14 | One can caustic soda |
| Kniegurtes | G-15 | One bottle paraffine oil |

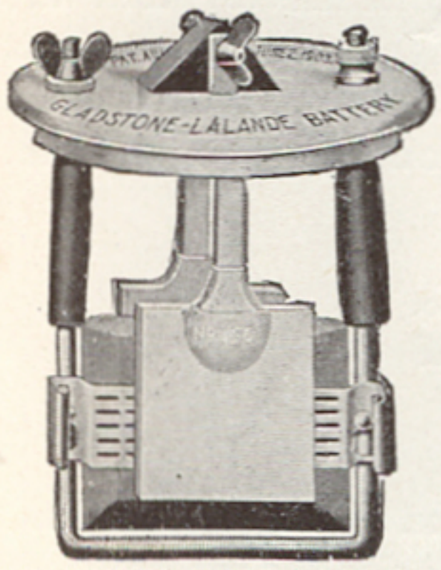
These renewal charges can also be used in Lalande cells, types BB and Z.



G-20 with Jar

Model G-20 Vitrified Porcelain Jar and Cover
Size over all, 5¾ inches x 8¾ inches
Capacity, 150 ampere hours

| Code Word | List No. | |
|---|---|---|
| Kniehebel | G-20 | Complete battery with charge |



G-20 without Jar

**Renewal Charges**

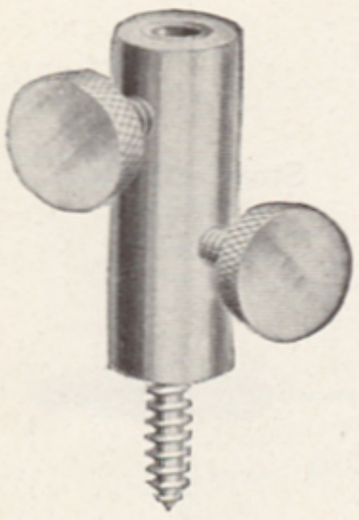
| | | |
|---|---|---|
| Kniehieb | G-21 | Complete renewal |

**Separate Renewal Parts**

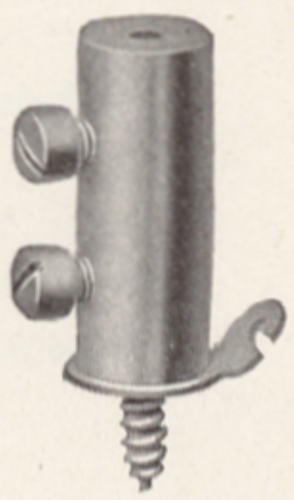
| | | |
|---|---|---|
| Kniehout | G-22 | One oxide plate |
| Kniehouten | G-23 | Two zinc plates |
| Kniekappe | G-24 | One can caustic soda |
| Knielap | G-25 | One bottle paraffine oil |

These renewal charges can also be used in Lalande cells, type Q.

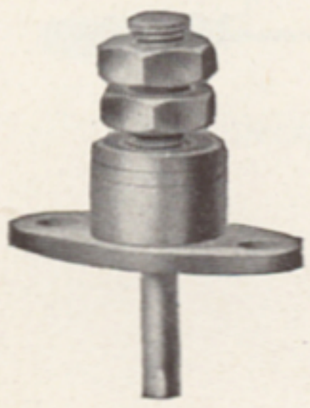
# BINDING POSTS



No. 1-A



No. 1-B



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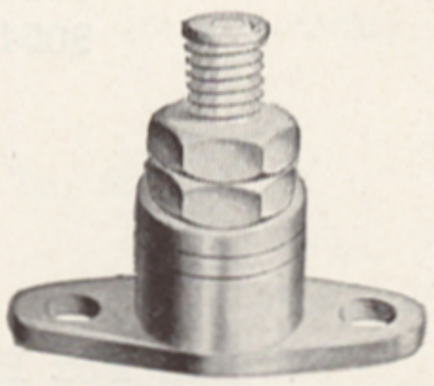

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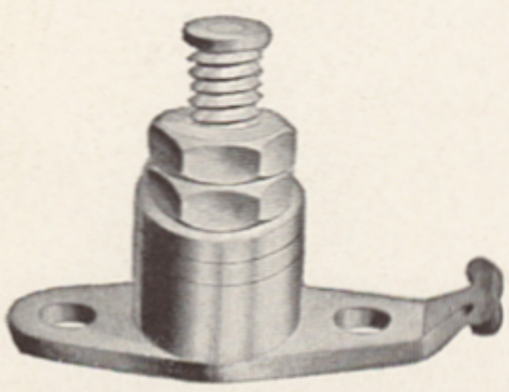

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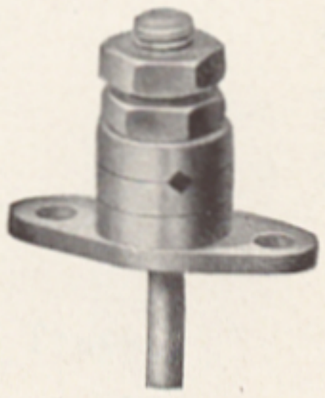

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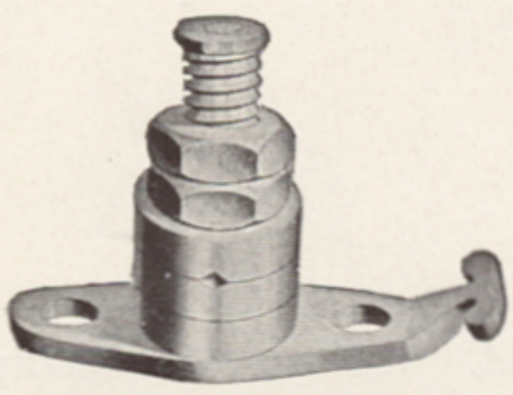

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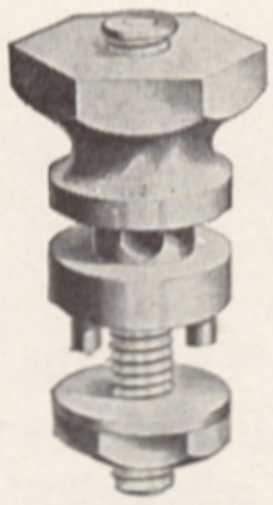

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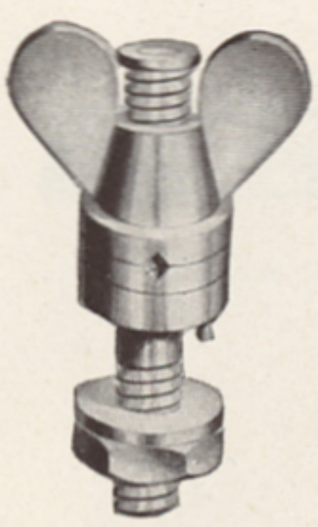

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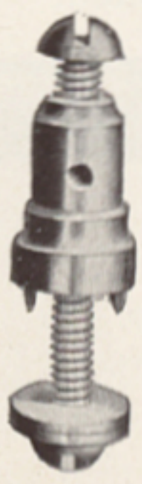

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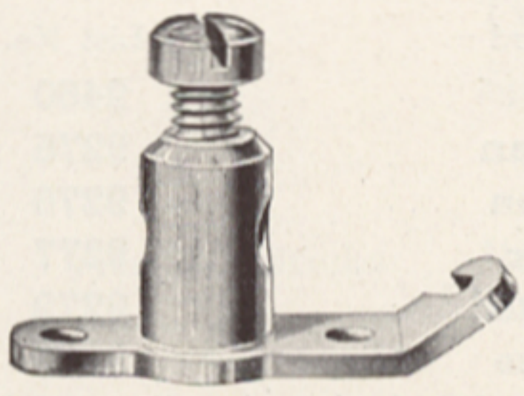
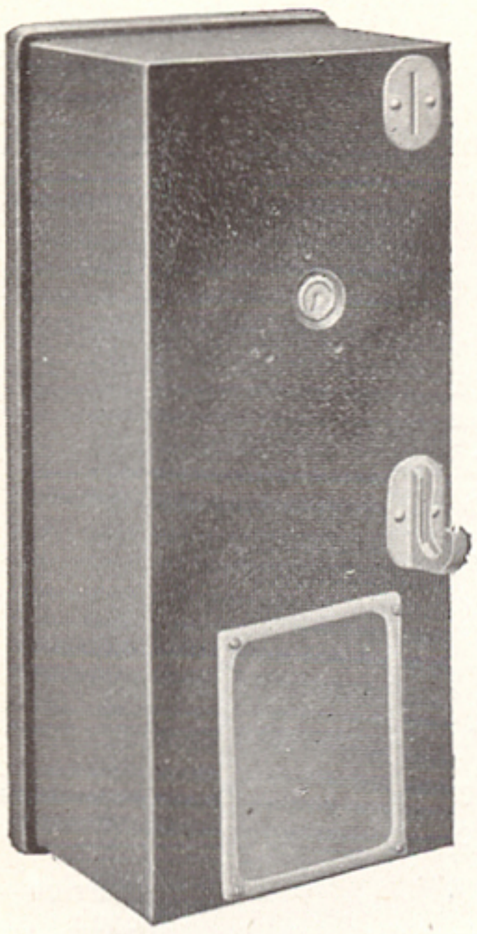


No. 20-C

| Code No. | Finish | List Price each |
|---|---|---|
| 1-A | Brass | $0.15 |
| 1-B | Brass | .12 |
| 2-A | Nickel plate | .06 |
| 2-D | Nickel plate | .06 |
| 2-E | Brass | .075 |
| 3-A | Nickel plate | .09 |
| 3-E | Nickel plate | .105 |
| 9-A | Brass | .2025 |
| 9-B | Brass | .225 |
| 16-A | Nickel plate | .0425 |
| 20-C | Nickel dip | .0825 |

WRITE FOR LIBERAL DISCOUNTS



No. 7-E

## Coin Collectors—Continued

| Code No. | Arranged for | Dimensions inches Length | Width | Depth | List Price each |
|---|---|---|---|---|---|
| **7-E** | Nickels | $11\frac{1}{2}$ | $5\frac{1}{4}$ | $3\frac{13}{32}$ | **$6.40** |

The No. 7-E has a larger coin box than the No. 7-A.


No. 13-A

### FOR CENTRAL BATTERY OR MAGNETO TELEPHONES

This is arranged so that any coin dropped into the chute falls directly into the coin box when the lever is rotated. It has but a single coin slot into which may be inserted, one at a time, nickels, dimes or quarters. It is necessary for the operator to listen on the line while the coins are being deposited, since the signal is given on a gong, a nickel giving one, a dime two and a quarter three strokes.

| Code No. | Arranged for | Dimensions inches Length | Width | Depth | List Price each |
|---|---|---|---|---|---|
| **13-A** | Nickels, dimes and quarters | $9\frac{3}{4}$ | $4\frac{3}{4}$ | 4 | **$9.75** |

# CONDENSERS


No. 21-D

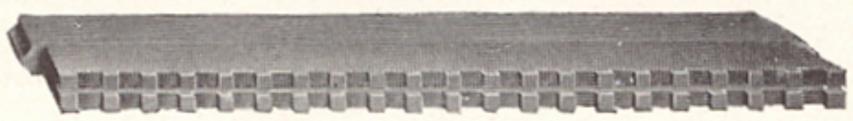
These are of small size and made of selected material. Except as noted in the list, they are designed to withstand a potential of 500 volts direct current, and are rated at the minimum capacity.

They may be mounted in any desired position by means of a condenser strap (P-43065) and two wood screws. The No. 21-E is usually mounted by means of strap WM-2381.

| Code No. | Capacity micro-farads | Style of terminal | Size of case inches | Use | List Price each |
|---|---|---|---|---|---|
| **21-D** | 2 | Bent | $4\frac{13}{32} \times 1\frac{3}{4} \times 1\frac{5}{8}$ | For telephone sets | **$1.15** |
| **21-E** | 2 | Straight | $4\frac{13}{32} \times 1\frac{3}{4} \times 1\frac{5}{8}$ | For switchboards and for general use | **1.15** |
| **21-F** | 1 | Bent | $4\frac{13}{32} \times 1\frac{3}{4} \times 1\frac{5}{16}$ | For telephone sets | **.70** |
| **21-H** | 0.1 | Bent | $4\frac{13}{32} \times 1\frac{3}{4} \times 1\frac{5}{16}$ | For No. 84 type interrupter—designed to stand 1000 volts alternating current | **.60** |

## Designation Strips—Continued

These are of the same type as the No. 1, except that in place of a No. 8 type designation strip a hard rubber face milled out and drilled for 20 No. 4 or No. 31 number plates is used.



No. 2-C

| Code No. | Width inches | Finish | Used with Switchboard | List Price each |
|---|---|---|---|---|
| **2-C** | $\frac{7}{16}$ | Black | No. 49 jack, No. 1 | **$ 0.90** |
| **50-A** | $\frac{7}{16}$ | Black | No. 10 | **.98** |

No. 7-A

No. 8

These are of the same type as the No. 1, except that in place of a card holder a strip of printed figures is held in place by a transparent celluloid face fastened to the base by nickel plated screws.

| Code No. | Width inches | Finish | Used with Switchboard | List Price each |
|---|---|---|---|---|
| **7-A** | $\frac{7}{16}$ | Celluloid face | No. 49 jack, No. 1 | **$ 0.20** |
| **7-B** | $\frac{1}{4}$ | Celluloid face | No. 49 jack, No. 1 | **.20** |
| **7-D** | $\frac{3}{8}$ | Celluloid face | No. 49 jack, No. 1 | **.20** |
| **13-A** | $\frac{3}{8}$ | Celluloid face | No. 92 jack, No. 1 | **.20** |
| **48-A** | $\frac{7}{16}$ | Celluloid face | No. 10 | **.23** |

These consist of a metal card holder and a thin transparent celluloid strip for protecting a strip of printed paper.

| Code No. | Width inches | Length inches | Finish | Used for | List Price per foot |
|---|---|---|---|---|---|
| **8-A** | $\frac{7}{16}$ | As specified | Nickel plate | Keyshelf and miscellaneous numbering..... | **$ 0.18** |
| **8-B** | $\frac{3}{8}$ | As specified | Nickel plate | Keyshelf and miscellaneous numbering..... | **.18** |
| **8-D** | $\frac{1}{4}$ | As specified | Nickel plate | Keyshelf and miscellaneous numbering..... | **.18** |
| **8-E** | $\frac{1}{4}$ | As specified | Black | Keyshelf and miscellaneous numbering..... | **.18** |
| **43-A** | $\frac{7}{16}$ | $1\frac{1}{2}$ | Black | Test boards ..... | **.09** each |
| **43-B** | $\frac{3}{64}$ | $1\frac{1}{2}$ | Black | Test boards ..... | **.075** each |
| **43-C** | $\frac{3}{64}$ | $1\frac{1}{4}$ | Black | Test boards..... | **.075** each |

# DESK STANDS

### WITH TRANSMITTERS, RECEIVERS AND CORDS

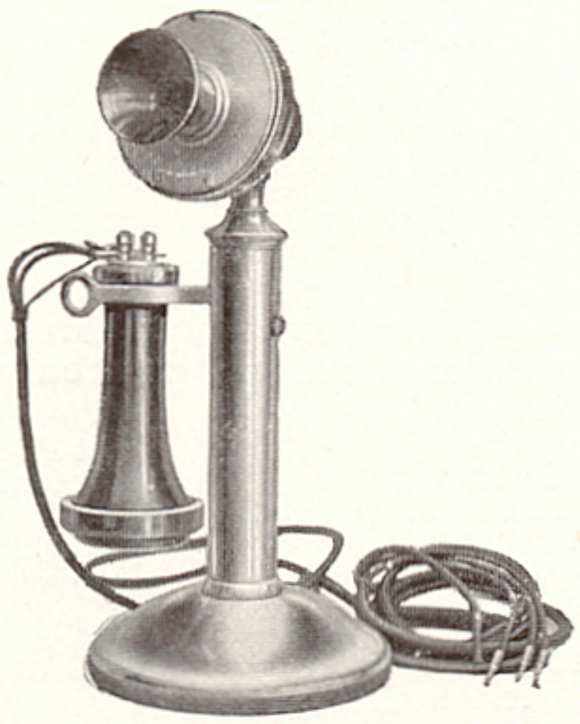
No. 1020-B

The No. 122-W receiver and standard high resistance transmitter are furnished with these desk stands, as specified below. Others will be furnished if ordered.

| Code Co. | Description | Finish | List Price each |
|---|---|---|---|
| **1020-B** | For regular local battery bridging or central battery service.<br>Includes: 1 No. 20-B desk stand.<br>1 No. 229-W transmitter.<br>1 No. 122-W receiver.<br>1 No. 234 cord. | Nickel plate | **$ 6.90** |
| **1020-C** | For operator's telephone set with cordless private exchange.<br>Includes: 1 No. 20-C desk stand.<br>1 No. 229-W transmitter.<br>1 No. 122-W receiver.<br>1 No. 293 cord | Nickel plate | **7.15** |

## Desk Stands—Continued

| Code No. | Description | Finish | List Price each |
|---|---|---|---|
| **1020-F** | For central battery service, used with No. 7 type coin collector.<br>Includes: 1 No. 20-F desk stand.<br>1 No. 229-W transmitter.<br>1 No. 122-W receiver.<br>1 No. 232 cord. | Nickel plate | **$7.05** |
| **1020-H** | For intercommunicating service.<br>Includes: 1 No. 20-H desk stand.<br>1 No. 229-W transmitter.<br>1 No. 122-W receiver.<br>1 No. 289 cord. | Nickel plate | **7.60** |



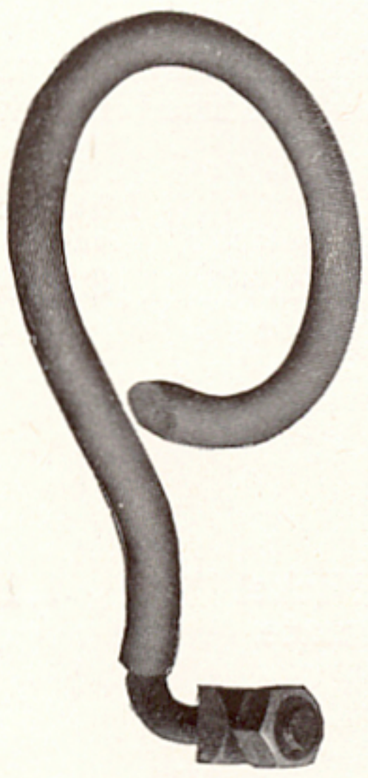
No. 1020-M

| Code No. | Description | Finish | |
|---|---|---|---|
| **1020-J** | For operator's telephone set, using No. 128-W receiver. No switchhook<br>Includes: 1 No. 20-J desk stand.<br>1 No. 229-W transmitter.<br>1 No. 128-W receiver.<br>1 6 ft. No. 178 cord.<br>1 6 ft. No. 10 cord.<br>1 9 in. No. 179 cord. | Nickel plate | **6.90** |
| **1020-M** | For central battery service using transmitter cutout button.<br>Includes: 1 No. 20-M desk stand.<br>1 No. 229-W transmitter.<br>1 No. 122-W receiver.<br>1 No. 234 cord. | Nickel plate | **7.15** |
| **1020-P** | For local battery bridging or central battery service, using insulated transmitter.<br>Includes: 1 No. 20-P desk stand.<br>1 No. 271-W transmitter.<br>1 No. 122-W receiver.<br>1 No. 331 cord. | Nickel plate | **7.05** |
| **1020-S** | For regular local battery bridging or central battery service.<br>Includes: 1 No. 20-S desk stand.<br>1 No. 229-W transmitter.<br>1 No. 122-W receiver.<br>1 No. 234 cord. | Black enamel | **6.90** |

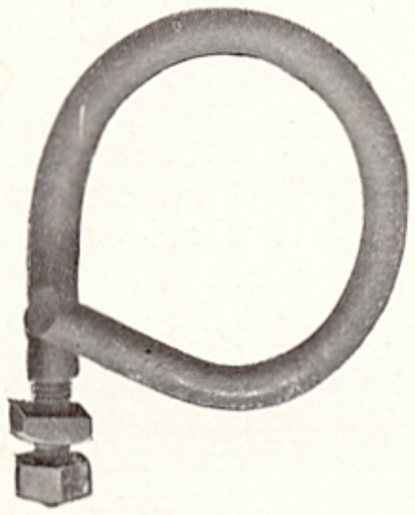
## WITHOUT TRANSMITTERS, RECEIVERS OR CORDS

These are similar to those listed above except that the transmitters, receivers and cords are omitted

| Code No. | Service | Finish | List Price each |
|---|---|---|---|
| **20-B** | Regular local battery bridging, or central battery | Nickel plate | **$ 2.25** |
| **20-C** | Operator's telephone set, cordless private exchange | Nickel plate | **2.35** |
| **20-F** | Central battery for use with No. 7 coin collector | Nickel plate | **2.55** |
| **20-H** | Intercommunicating systems | Nickel plate | **2.50** |
| **20-J** | Operator's telephone set without switch hook | Nickel plate | **1.75** |
| **20-M** | Central battery with transmitter cut-out button | Nickel plate | **2.50** |
| **20-P** | Local battery bridging or central battery for insulated transmitter | Nickel plate | **2.35** |
| **20-S** | Regular local battery bridging, or central battery | Black enamel | **2.25** |



No. 1

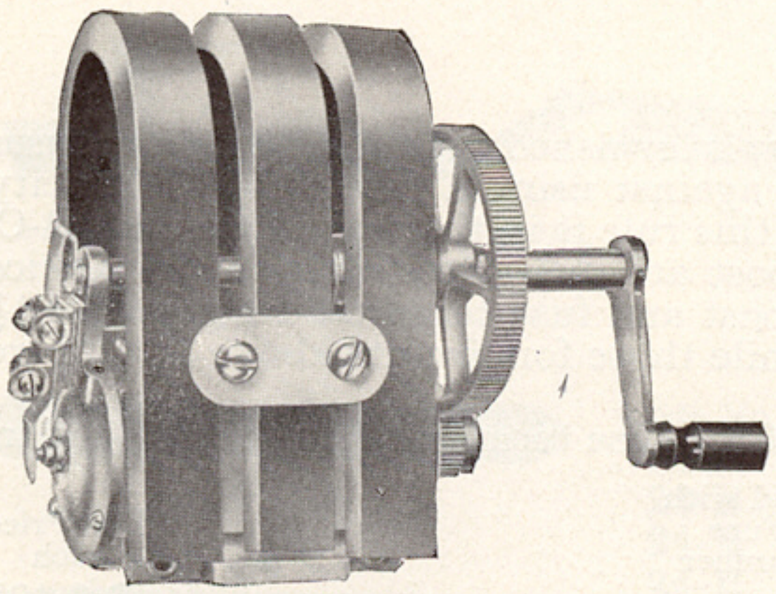


No. 3

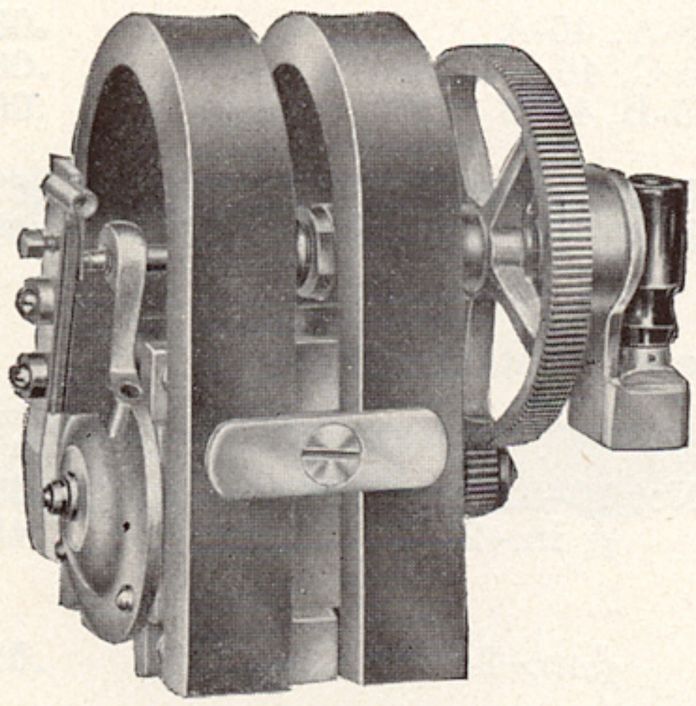
## DISTRIBUTING RINGS

These are made from a steel rod covered with vulcanized rubber tubing which is very substantial.

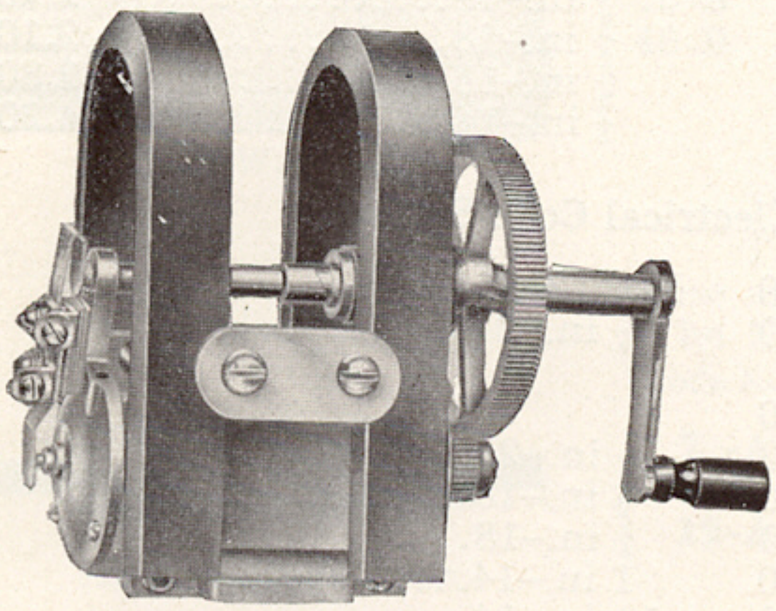
| Code No. | Inside Diameter inches | Used for | List Price each |
|---|---|---|---|
| **1** | 2 7/8 | Main and intermediate distributing frames | **$ 0.27** |
| **3** | 3 | Intermediate distributing frame No. 10 switchboard | **.27** |



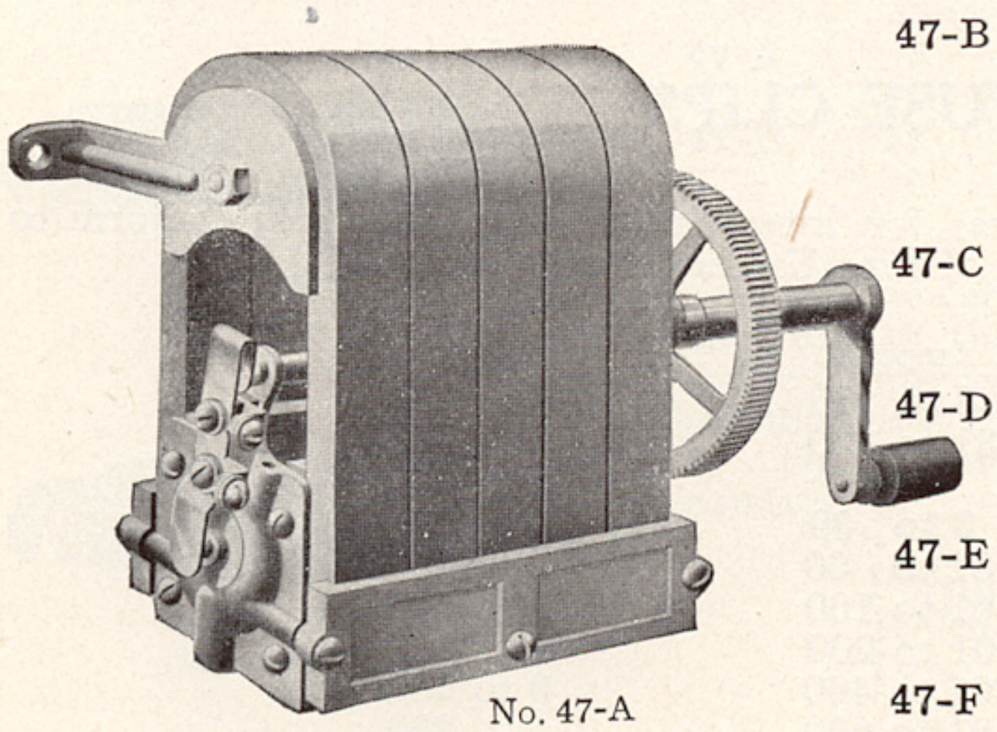
No. 22-A



No. 29-A



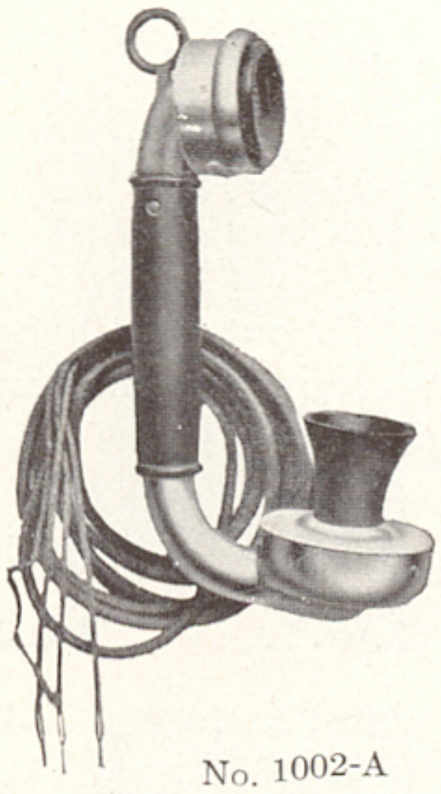
No. 22-E



No. 47-A

# HAND GENERATORS

| Code Number No. of Bars | Current | Open or Closed Circuit | Used in | List Price each |
|---|---|---|---|---|
| **22-A** 3 | Alternating | Open | Magneto telephone sets and switchboards | **$ 3.15** |
| **22-B** 3 | Alternating | Closed | 1006–D and 1006–E test sets | **3.15** |
| **22-D** 3 | Pulsating | Open or Closed | Magneto telephone sets and switchboards | **3.15** |
| **22-K** 3 | Alternating | Closed | 90510 and 90530 test sets | **3.15** |
| **22-N** 3 | Alternating | Closed | 90511 and 90512 test sets | **3.15** |
| **43-B** 3 | Alternating | Open | 1302-A telephone set | **4.50** |
| **29-A** 2 | Alternating | Open | 1006–A, 1006–B, 1006–C and 1017–A test sets | **3.00** |
| **22-E** 2 | Alternating | Open | Magneto telephone sets | **3.15** |
| **20-B** 5 | Alternating | Open | 1280–A telephone set | **5.65** |
| **47-A** 5 | Alternating | Open | Magneto telephone sets and switchboards 1101, 1102, 1006 | **6.00** |
| **47-B** 5 | Pulsating and alternating | Open | Magneto telephone sets and switchboards 1101, 1102, 1006 | **7.00** |
| **47-C** 5 | Alternating | Open | Switchboards 1005 1010, 1011 | **6.00** |
| **47-D** 5 | Pulsating and alternating | Open | Switchboards 105, 1005 | **7.00** |
| **47-E** 5 | Pulsating and alternating | Open | Switchboard 106 | **7.00** |
| **47-F** 5 | Alternating | Open | Switchboard 1012 | **6.00** |

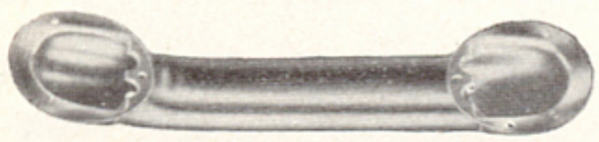


No. 1002-A

## Hand Sets—Continued

| Code No. | Description | List Price each |
|---|---|---|
| 1002-A | For use in place of a regular local battery bridging or central battery desk stand or transmitter arm. Includes No. 141-W receiver, No. 267-W transmitter and No. 319 cord ..... | $ 6.35 |

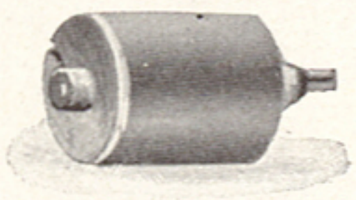
## HAND SET HANDLES



No. 1

| Code No. | Description | List Price each |
|---|---|---|
| 1 | For use with street railway telephone sets and lineman's hand set No. 1001. It is suitable for the No. 244-W transmitter and No. 131-W receiver..... | $ 1.50 |

## HEAT COILS

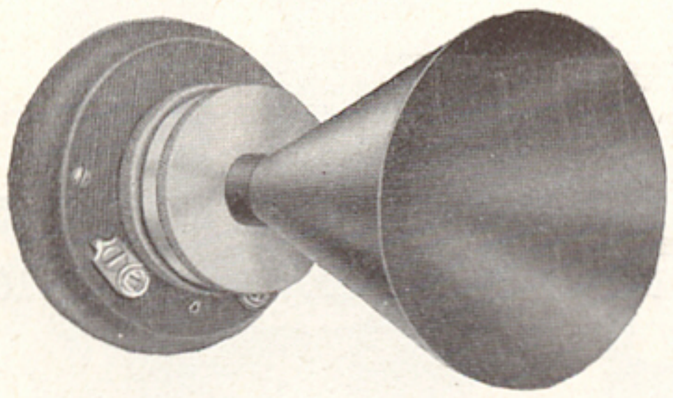


No. 4-A

No. 66

| Code No. | Description | Used with Protectors numbers | List Price each |
|---|---|---|---|
| 4-A | Black shell for magneto equipments. | 4–A, 65–A, 78–A, 84–A | $ 0.105 |
| 41 | Red shell for central battery equipments. | 4–C 65–B, 78–B, 84–B | .105 |
| 66 | Brass dummy. | 4–A, 4–C, 65–A, 65–B, 78–A, 78–B, 84–A, 84–B | .0075 |

## HOWLER

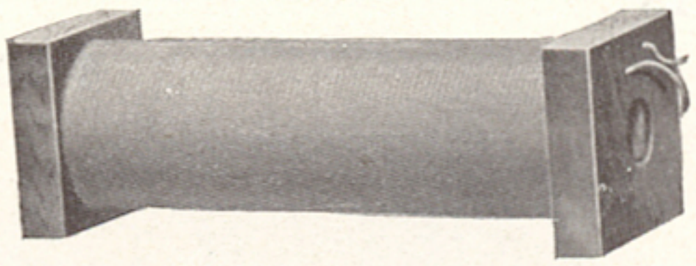


No. 1-A

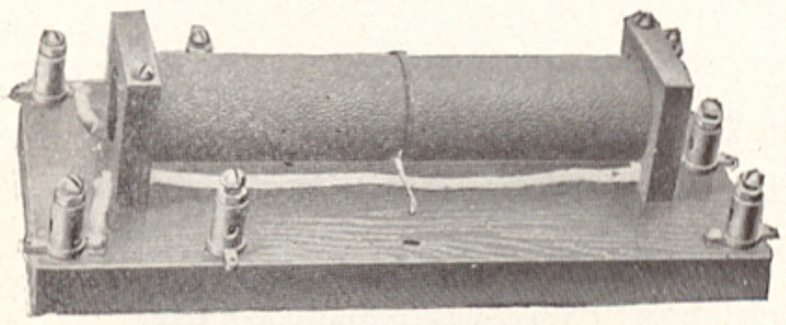
Used in place of a bell for railway composite systems when signalling is accomplished by means of a high frequency interrupter.

| Code No. | Description | List Price* each |
|---|---|---|
| 1-A | Mounted on wood base for use with No. 1312–A telephone set ..... | $ 9.40 |
| 1-B | With iron bracket for mounting in No. 1314–A telephone set ..... | 9.10 |

## INDUCTION COILS



No. 5



No. 10

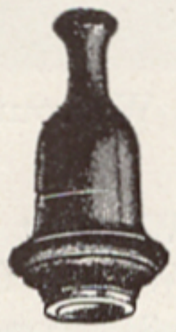
The Nos. 10, 23 and 24 induction coils are mounted on wooden bases, the others are unmounted, unless otherwise specified.

| Code No. | Size inches | Used with | List Price each |
|---|---|---|---|
| 5 | $4\frac{3}{4}$x$1\frac{5}{8}$ | Nos. 1312-A and 1314-A railway composite telephone sets | $ 1.50 |
| 10 | $8\frac{5}{8}$x$3\frac{3}{4}$ | Operator's telephone sets in the following switchboards: Nos. 105, 1005, 1006, 1010, 1011, 1101, 1102..... | 2.00 |

## Push Buttons—Continued

No. 9703

No. 2890



No. 9675.

**Diameter, 1 in. at base**

| Code Word | List No. | Finish |
|---|---|---|
| Bloomville | 9703 | Oak |
| Blodgett | 9704 | Ash |
| Boca | 9705 | Walnut |
| Bodan | 9706 | Mahogany |
| Boise | 9707 | Rosewood |

### NEW MITE PUSH

The smallest push made. Fits in ½ in. hole, is ⅝ in. deep and has a face ⅝ in. in diameter. Held in place by side springs. Centers will not turn. Wire connectors will take any size wire.

| Code Word | List No. | Finish |
|---|---|---|
| Famelict | 2889 | Light or dark pearl center. |
| Fames | 2890 | Black or white celluloid center. |
| Organiscos | 23695 | Red or blue celluloid center. |

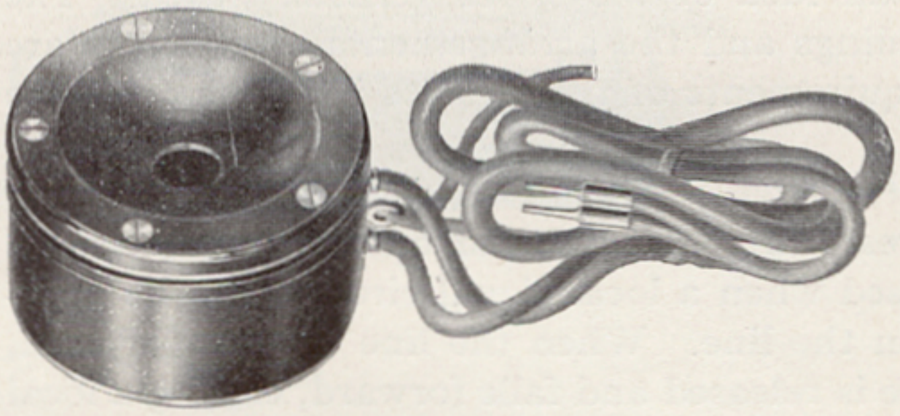
### PEAR PUSHES

| | | |
|---|---|---|
| Biddeford | 9675 | Oak |
| Bigelow | 9676 | Cherry |
| Billin | 9677 | Walnut |

No. 122-W

## RECEIVERS

| Code No. | Description | Used with | | List Price each |
|---|---|---|---|---|
| 122-W | Standard bipolar hand receiver, hard rubber case. | Telephone sets, desk stands, transmitter arms, etc. | Without cord<br>With 3 ft. No. 92 cord..... | $ 1.52<br>1.65 |

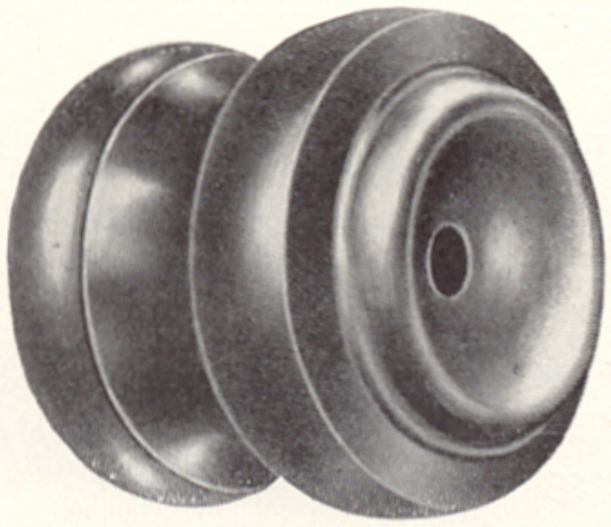


No. 125-W

| Code No. | Description | Used with | | List Price each |
|---|---|---|---|---|
| 125-W | Lineman's receiver, hard rubber case, metal front and back. Includes a 3 ft. No. 15 cord. | No. 1006 type test sets... | With cord | $ 3.45 |

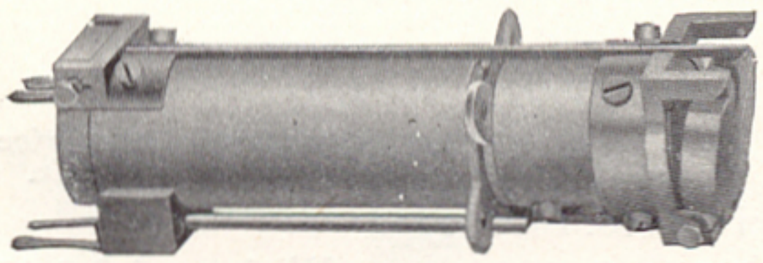
No. 128-W

| Code No. | Description | Used with | | List Price each |
|---|---|---|---|---|
| 128-W | Standard bipolar head receiver, hard rubber case. This receiver used in combination with the No. 234 transmitter takes a No. 87 cord; when used with a No. 85 plug it takes a No. 30 cord. | Operator's telephone set all switchboards... | Without cord<br>With 6 ft. No. 87 cord.....<br>With 6 ft. No. 30 cord..... | $ 1.95<br>2.70<br>2.31 |

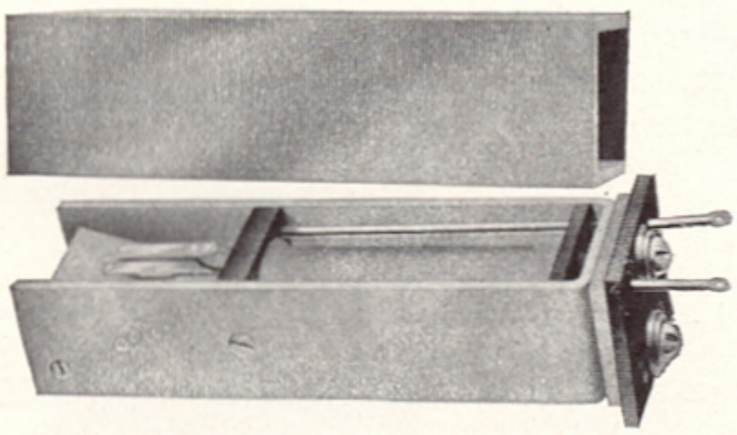


No. 133-W

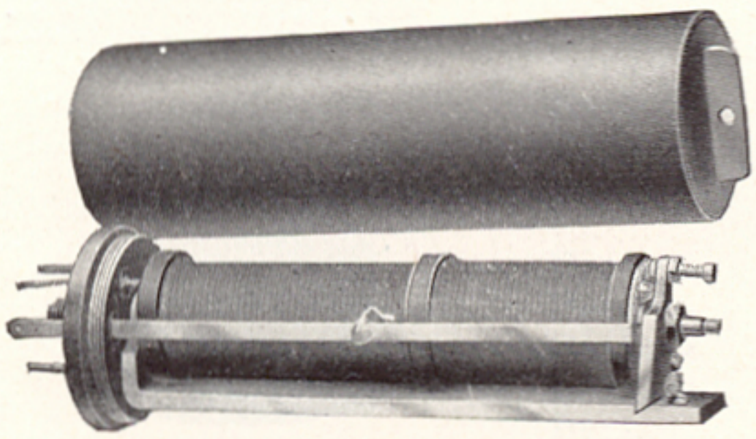
No. 143-W



No. 44-A



No. 87-A



No. 89-A

## Receivers—Continued

| Code No. | Description | Used with | | List Price each |
|---|---|---|---|---|
| **131-W** | Metal case bipolar receiver. | No. 1 hand set handle, No.1001 hand set..... | Without cord | **$ 2.30** |
| **133-W** | Insulated bipolar hand receiver, hard rubber case | No. 1302 and 1314 telephone sets..... | Without cord<br>With 3 ft. No. 311 cord..... | **1.90**<br>**2.24** |
| **141-W** | Small metal case bipolar receiver | No. 1002-A hand set..... | Without cord.. | **1.90** |
| **143-W** | Concealed binding post hand receiver composition case. This receiver will be furnished in hard rubber case if desired. | Telephone sets, desk stands, transmitter arms, etc..... | Without cord..<br>With 3 ft. No. 92 cord.....<br>Without cord..<br>With 3 ft. No. 92 cord..... | **1.20**<br>**1.33**<br>**1.52**<br>**1.65** |

## RELAYS

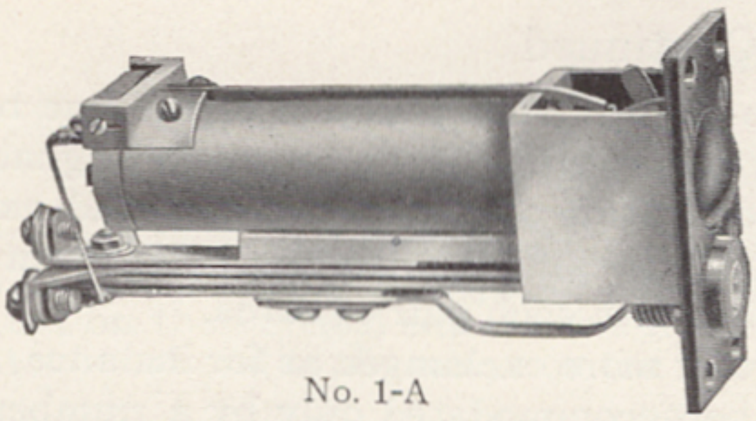
The wide range of types and resistances of our relays makes it impracticable to catalogue them all here. The following views are shown to convey an idea of the types generally used. The resistances of the windings and the arrangements of contacts are varied to meet the requirements of the circuits in which they are placed.

**No. 44 Type** Is self-restoring. Has a line operating coil and a restoring coil. Used when a local signal circuit is to be operated by ringing on the line. When the line coil is energized, the front armature is released and falls forward, closing a local contact. When the restoring coil is energized, the front armature is restored to the vertical position. Makes one contact when operated.

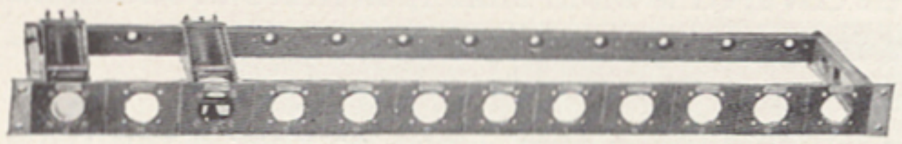
**No. 87 Type** Closes a local circuit only while the line is being rung upon. Has flexible contact springs and a heavy armature sluggish action so that the local circuit remains closed as long as there is ringing current on the line. Used in trunk circuits between central offices. Has a cross-talk proof cover. Makes one contact when operated.

**No. 89 Type** Has an operating coil and a locking coil. Made to respond to ringing current and to close a circuit through its armature contact and locking coil so that the relay remains in the operated position after ringing has ceased. Used for toll line signalling and in toll cord supervisory circuits. Has cross-talk proof cover. Makes one contact when operated.

PRICES ON REQUEST



No. 1-A



No. 62

## Signals—Continued

**The No. 1–A Combination Jack and Signal** is used as a line signal for the Nos. 1101 and 1102 magneto switchboards. It is designed for magneto switchboards when the jack is to be mounted adjacent to the signal. The signal is restored automatically by inserting a plug in the associated jack.

| Code No. | Description | Resistance ohms | List Price each |
|---|---|---|---|
| **1-A** | Combination jack and signal | 500 | **$ 2.65** |

# SIGNAL MOUNTINGS

The following are the principal mountings used with the signals described above.

| Code No. | For Signals number | Number of Signals per Strip | Size of Face Plate inches | List Price |
|---|---|---|---|---|
| **2** | 4 | 10 | $15 \times \frac{9}{16}$ ..... | The price of the signal mounting is included in the price of the signal if the strip is fully equipped |
| **29** | 34, 39, 41 | 5 | $7\frac{1}{2} \times 1\frac{3}{8}$ ..... | |
| **60** | 34, 39, 41 | 15 | $24\frac{9}{16} \times 1\frac{3}{8}$ ..... | |
| **61** | 34, 39, 41 | 20 | $24\frac{9}{16} \times 1\frac{3}{8}$ ..... | |
| **62** | 34, 39, 41 | 12 | $21 \times 1\frac{3}{8}$ ..... | |
| **77** | 42 | 10 | $9\frac{3}{16} \times \frac{7}{8}$ ..... | |
| **78** | 42 | 10 | $7\frac{23}{32} \times \frac{7}{8}$ ..... | |
| **79** | 42 | 20 | $9\frac{3}{16} \times \frac{7}{8}$ ..... | |

# CENTRAL BATTERY SWITCHBOARDS

## No. 1 SUBSCRIBER AND TRUNK SWITCHBOARDS

The No. 1 switchboard is a central battery lamp signal and lamp supervisory switchboard arranged for positive supervision, and is recommended for use for all equipments where a central battery exchange of more than 1600 lines is desired, or for a smaller equipment, where the liability of growth within a few years to a system exceeding 1600 lines is calculated.

For small central battery exchanges we recommend the No. 9 or the No. 10 switchboards which are described herein.

The No. 1 switchboard is a multiple board, the multiple jacks being bridged across the line, and appearing once in each section, so that every operator has a multiple jack of each subscriber's line within her reach.

These boards are furnished in various standard sizes from 3000 to 9600 lines; the commonly used of these being the 3000 line, 4900 line and 9600 line boards. Any equipment desired may be provided with the original installation, as the equipment is so arranged that additions may be installed at any time without interrupting the service.

The 3000 line section is a five panel board, arranged for two operators' positions, 400 answering jacks, 300 outgoing trunk multiple and is 6 ft. 6 in. high, 4 ft. $3\frac{1}{4}$ in. long and 3 ft. $7\frac{1}{4}$ in. deep from the front of the keyshelf to the rear curtain.

The 4900 line section has seven panels, is arranged for three operators' positions, 560 answering jacks, 500 outgoing trunk multiple and is 6 ft. 10 in. high, 5 ft. $11\frac{3}{4}$ in. long and 4 ft. $\frac{1}{4}$ in. deep from the front of the keyshelf to the rear curtain.

The 9600 line section has eight panels, is arranged for three operators' positions, 640 answering jacks, 600 outgoing trunk multiple, and is 7 ft. $8\frac{1}{2}$ in. high, 5 ft. 8 in. long and 4 ft. $4\frac{5}{8}$ in. deep from the front of the keyshelf to the rear curtain.

The first two of these boards are what are commonly known as the No. 49 jack boards, on account of their being arranged for No. 49 jacks, and the latter is known as the No. 92 jack board, because it is arranged for No. 92 jacks.

The No. 49 and No. 92 jacks are similar with the exception that the No. 92 is smaller and is assembled on a metal mounting, while the No. 49 jack is assembled on a hard rubber mounting. The No. 92 jacks being smaller are mounted on closer centers, and for this reason are used in place of the No. 49 jacks where large multiple equipments are necessary.

It will be understood from the above that the plugs and cords, as well as the various other pieces of apparatus used in these sections, will be different. These differences, however, are only in dimensions, and do not in any way affect the operation, strength and efficiency of the equipment.

PRICES ON REQUEST

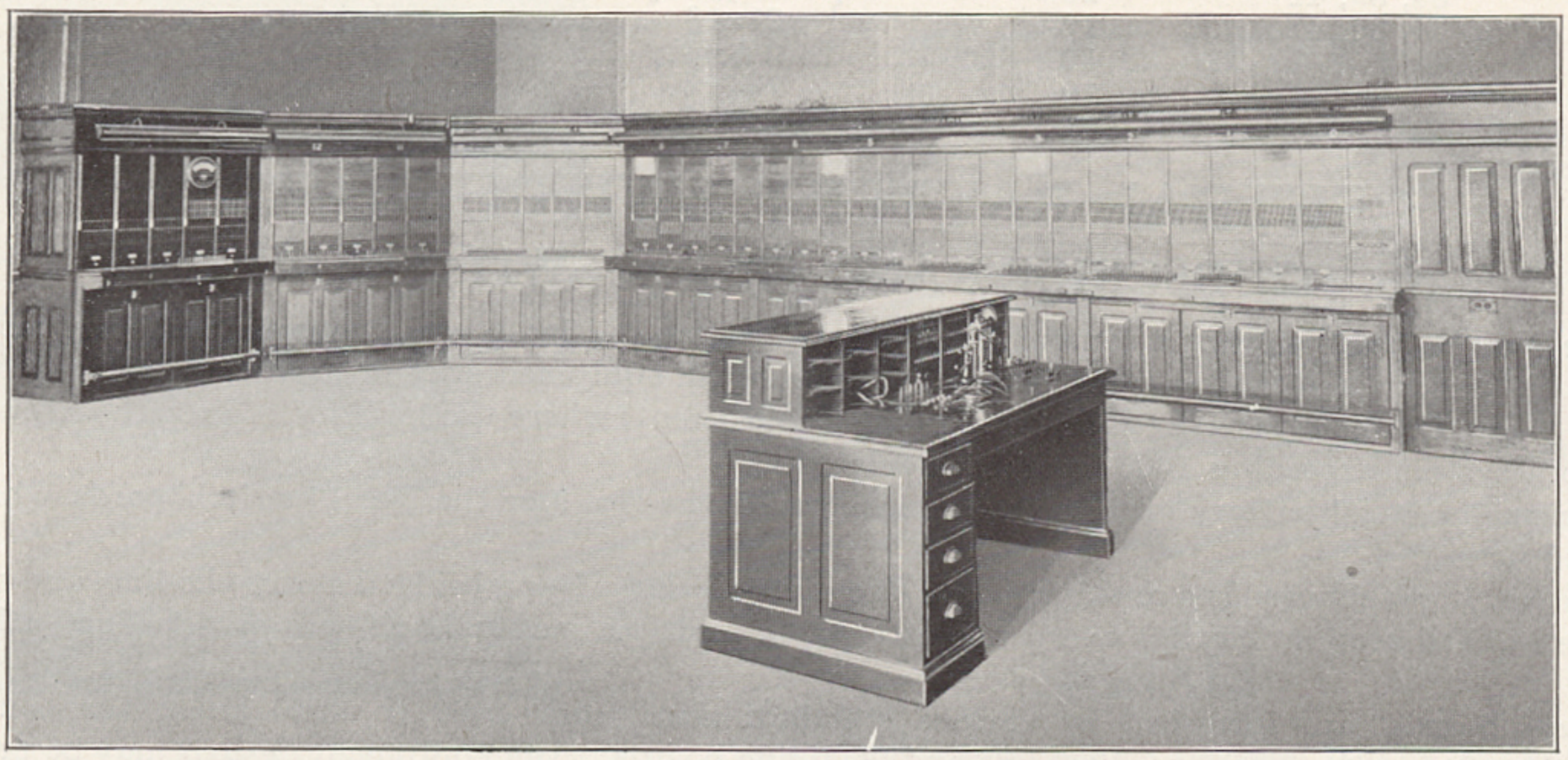
## Central Battery Switchboard—Continued

Line and cut-off relays are provided for each subscriber line circuit. The function of the line relay being to operate when a subscriber takes the receiver off the hook, thus lighting the line lamp and signalling the operator. The cut-off relay operates when the call is answered, cutting off the line battery and extinguishing the line lamp. From this point on during a conversation, the talking battery is taken from the cord circuit through the repeating coil, separate coils being provided with each pair of cords.

In multiple office districts, i.e., in districts where there are two or more exchanges, as for instance, in a large city where the number of subscribers is such that they can be accommodated only by a number of central offices, instead of by only one exchange, or where the area covered is such that it is more economical to install several exchanges than to try to handle the business from one point, trunk sections are recommended for use in conjunction with the No. 1 subscriber board.

In these trunk sections appear multiple jacks, bridged across the subscribers' lines, so that a multiple jack of each line is within the reach of every one of the trunk operators.

In cases of this kind, trunk equipments are provided, terminating in jacks at the subscriber board and in incoming trunks, consisting of plugs and cords with the necessary repeating coils, relays, resistances, lamps and keys at a distant exchange. These incoming trunks are placed in the trunk sections, and when a subscriber connected to one exchange desires to converse with a subscriber connected to another exchange,



Operating Room

the operator at the subscriber board where the call originates, has a trunk assigned over a call wire, by the trunk operator at the distant exchange, who then makes connection with the trunk multiple jack of the subscriber's line with which the calling subscriber desires connection.

The trunk sections are in large exchanges placed in a separate line from the subscriber sections, but in exchanges where the number of trunks is not large the sections may be placed in the same line with the subscriber board. Subscriber sections may be readily converted into trunk sections by merely changing the equipment.

The frames of these sections are made of steel to give them strength and rigidity. All the woodwork on the front of the boards is of selected mahogany, and is very carefully fitted and finished. The rear of the board is provided with rolling wooden curtains. Lighting equipment is provided with each section.

These switchboards, both subscriber and trunk, are equipped with the necessary miscellaneous circuits, such as night bell, auxiliary signal, instruction, supervisors, tone test, etc.

# FRAMES AND RACKS, USED WITH No. 1 SWITCHBOARD

### MAIN DISTRIBUTING FRAME

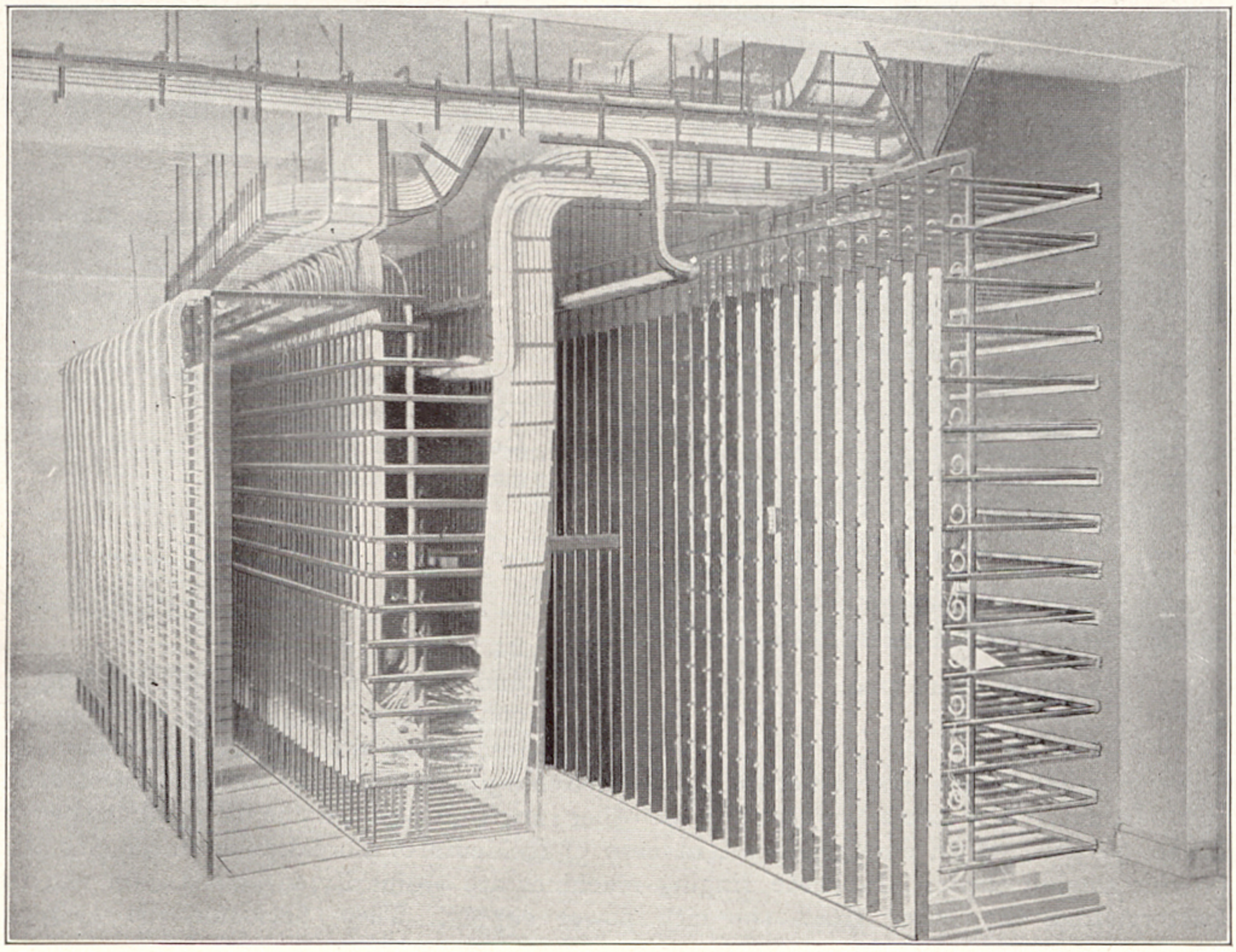
A main frame of iron construction is provided with this board, to one side of which the outside lines are connected, the other side being connected by cable to the intermediate frame. On it are mounted protectors, consisting of heat coils and carbon block arresters. Adequate provision is made for cross connecting.

PRICES ON REQUEST

## Frames and Racks—Continued

### INTERMEDIATE FRAME

An intermediate distributing frame of iron construction is provided, on the horizontal side of which are mounted terminal strips, to which the cables from the main frame are soldered. Terminal strips are placed on the vertical side of this frame, and from these the cables are run to the answering jacks in the switchboard and to the relays on the relay rack. Ample provision is made on this frame for cross connecting.



Terminal Room

### RELAY RACK

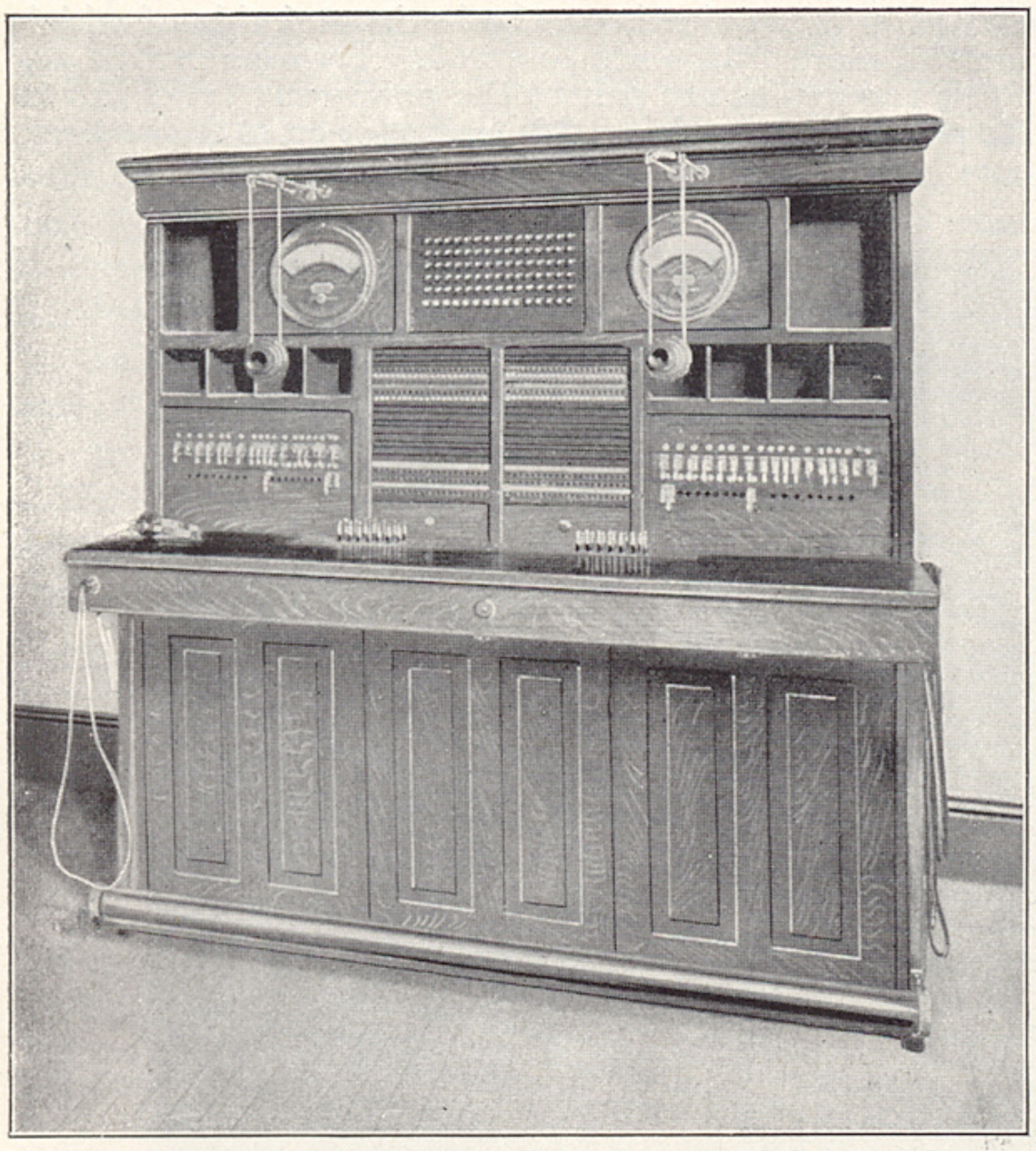
A relay rack of iron construction is provided on which to mount the line relays and the incoming trunk relays in case trunking equipment is necessary. In a very large exchange a separate relay rack is provided for the trunk relays.

### COIL RACK

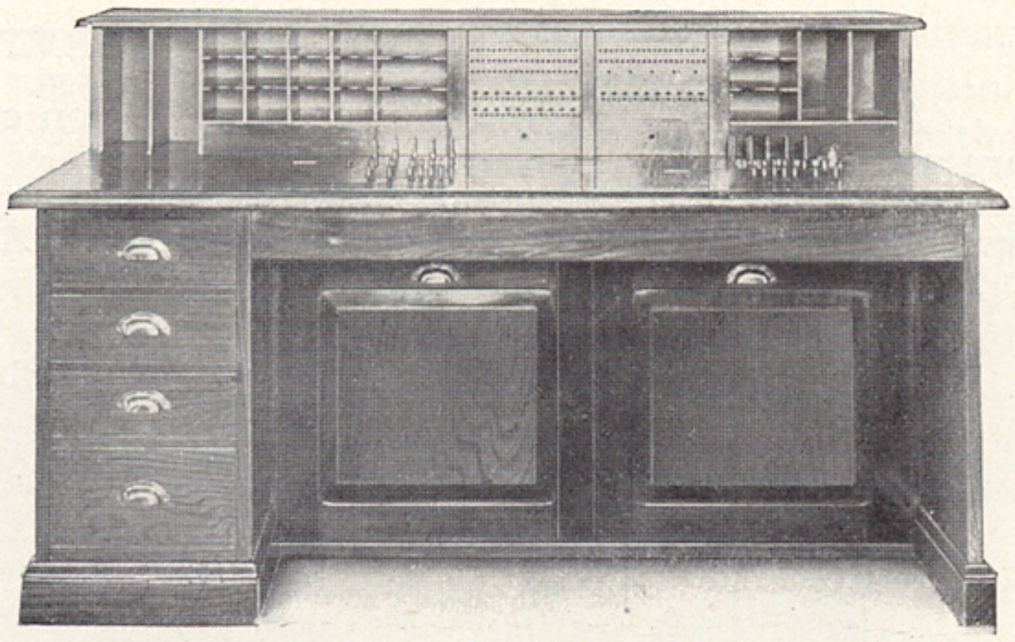
A coil rack of iron construction is provided on which the repeating coils, wired in the cord circuits, are mounted. These coils are connected to the cord circuits by cable run from the coil rack to the switchboard sections.

### FUSE PANEL

At the end of the coil rack is placed a fuse panel of slate 1¼ in. thick, on which are mounted the fuses for the cord circuits and operators' sets, as well as the line fuses and other fuses necessary to protect the miscellaneous circuits. This fuse panel is generally arranged for alarm type fuses, so that when the fuse blows, a connection is made with an alarm fuse bus-bar closing a circuit through a bell, thus giving the signal that one of the fuses has burned out. (This fuse panel is separate from the power fuse panel on which the fuses used in the power circuits are mounted.)



No. 9 Wire Chief's Desk



No. 2 Chief Operator's Desk

## DESKS

The necessary desks, such as Wire Chief's, Chief Operator's, Manager's and Information Desks, will be provided with the multiple switchboard.

## POWER PLANT

The power plant is laid out on the basis of 24 volt battery supply for local connections and 48 volt supply for toll and long distance connections. For charging the storage batteries, it is considered desirable to have duplicate sources of power and the usual arrangement is to have two charging sets entirely independent of each other, one to operate from the city power supply and the other run from a gas engine installed at the exchange, the latter is to be used as an emergency set in case of accidents, or a breakdown in the city plant.

To provide ringing current, duplicate ringing machines are ordinarily furnished, one run from the storage battery and the other from the city power supply. These sets may be equipped with interrupters for tone, trouble and busy test service.

# No. 9 SWITCHBOARD

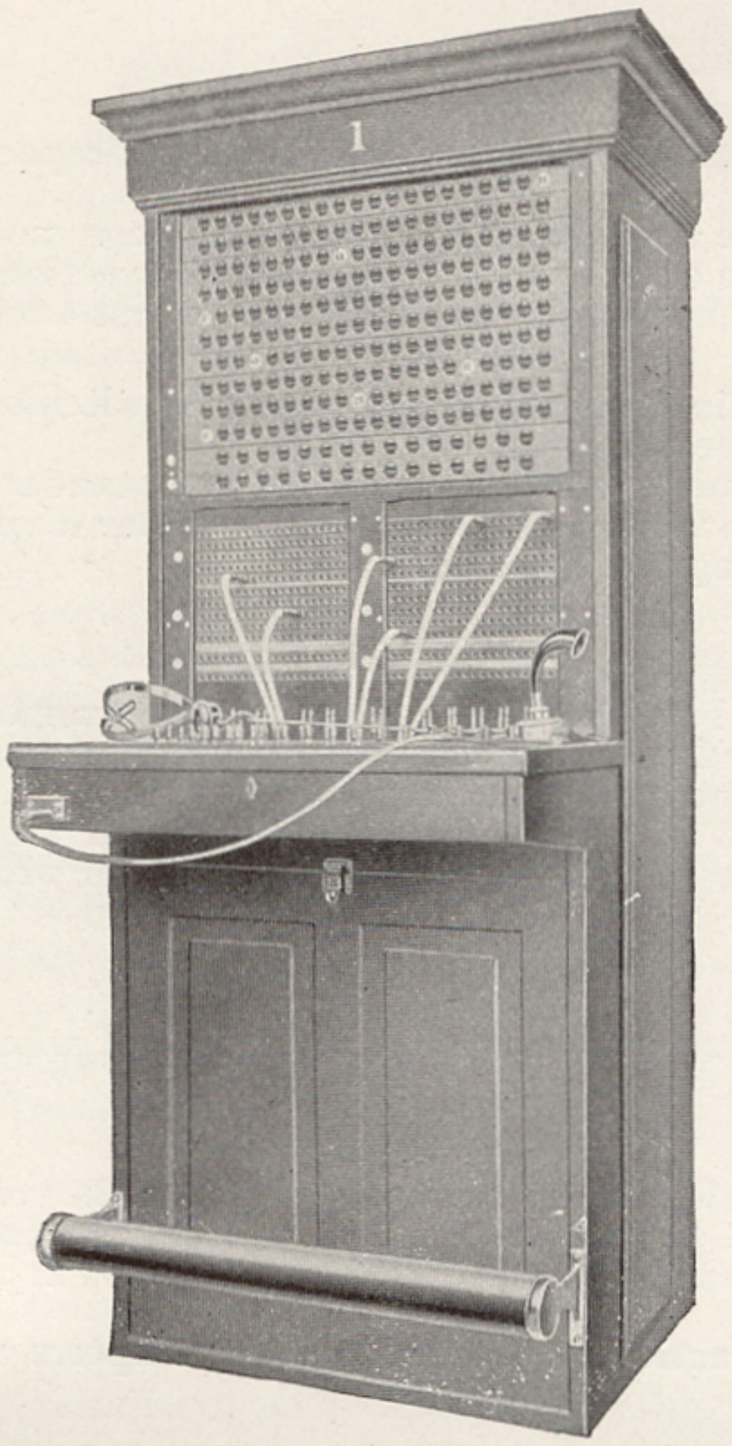
The No. 9 switchboard is used in offices up to 800 lines capacity. Two types of this board are furnished, one for use in offices to handle only local and toll traffic and the other in offices such as those in the vicinity of large telephone centers, where calls will be trunked to other exchanges. These are known as the No. 9-D and No. 9-C switchboards respectively, and differ principally in that the No. 9-D is arranged for 24 and the No. 9-C for 38 volt battery supply.

These switchboards are furnished with magnetic line and supervisory signals, and are arranged for negative supervision.

The cord circuits on the subscriber section are equipped with condensers, and those on the toll sections with repeating coils. The toll cord circuits are universal, i.e., they are entirely automatic, being arranged so that either toll to toll or toll to local connections can be made without any additional work by the operator, no keys or switching devices, other than the regular listening and ringing keys, being necessary.

The board is self-contained, terminal strips and connecting rack being mounted on the rear to provide for cross-connecting the multiple jacks and line signals.

This section is a two-panel single operator's section with a capacity for 400 multiple jacks and 200 line signals. The lines are multipled every second section, making a total multiple capacity of 800 lines.



No. 9 Switchboard

## No. 9 Switchboard—Continued

The following gives the capacity of the subscriber, trunk, toll and combination subscriber and toll sections:

### Subscriber Section

| | Capacity |
|---|---|
| Operator's position | 1 |
| Subscriber Multiple jacks—20 per strip | 400 |
| Trunk Multiple jacks—10 per strip | 40 |
| Subscriber line signals (see note) | 200 |
| Ring down trunk drops | As specified |
| Subscriber cord circuits | 15 |
| Operator's telephone circuit | 1 |
| Auxiliary signal circuit | 1 |
| Ringing circuit | 1 |
| Call wire circuits | 8 |
| Night bell circuit | 1 |
| Test lines to wire chief | 2 |

Note.—When a section is equipped with No. 22-A drops for ring down trunks the subscriber's line signal capacity will be reduced by 20 for each 15 of these trunks.

### Incoming Call Wire Trunk Section

| | Capacity |
|---|---|
| Operator's position | 1 |
| Subscriber multiple jacks—20 per strip | 400 |
| Trunk multiple jacks—10 per strip | 30 |
| Busy back jacks—10 per strip | 10 |
| Incoming call wire trunks | 28 |
| Trunk operator's telephone circuit | 1 |
| Call wire signal circuit | 1 |
| Ringing circuits | 2 |
| Call wire circuits | 8 |

### Toll Section

| | Capacity |
|---|---|
| Operator's position | 1 |
| Subscriber multiple jacks—20 per strip | 400 |
| Toll and trunk multiple jacks—10 per strip | 40 |
| Central battery toll line signals | As specified |
| Magneto toll line drops | As specified |
| Through toll line drops | As specified |
| Recording trunks drops | As specified |
| Universal toll cord circuits (see note) | 7 |
| Operator's telephone circuit | 1 |
| Auxiliary signal circuit | 1 |
| Ringing circuit | 1 |
| Call wire circuits | 4 |
| Night alarm circuit | 1 |
| Test lines to wire chief | 2 |

Note:—The toll cord circuits shall all be wired so that they can be used for either magneto or common battery and local subscriber's lines, and with the repeating coil out on through toll connections or in on all connections. The standard arrangement is to leave the repeating out on the first 5 cords and in on the last 2.

### Combination Subscriber and Toll Section

| | Capacity |
|---|---|
| Operator's position | 1 |
| Subscriber multiple jacks—20 per strip | 400 |
| Toll and trunk multiple jacks—10 per strip | 40 |
| Subscriber line signals (see note No. 1)<br>Central battery toll line signals | 120 |
| Magneto toll line drops<br>Through toll line drops<br>Recording trunk drops | 20 |
| Universal toll cord circuits (see note No. 2) | 5 |
| Operator's telephone circuit | 1 |
| Auxiliary signal circuit | 1 |
| Call wire circuits | 4 |
| Night alarm circuit | 1 |
| Test line to wire chief | 2 |

PRICES ON REQUEST

## No. 9 Switchboard—Continued

Notes:—

1. If a section is equipped with No. 22-A drops for ring down trunks the subscriber line signal capacity will be reduced by 20 for each 15 of these trunks.
2. The toll cord circuits shall all be wired so that they can be used for either magneto or common battery toll and local subscriber's lines, and with the repeating coil out on through toll connections or in on all connections. The standard arrangement is to leave the repeating coil out on the first 4 toll cords and in on the last cord.

In addition to these sections we have standard rural and combination subscriber and toll switching trunk sections. We will furnish complete information on any of these upon request.

The frame of this board is made of birch, finished to match mahogany. The dimensions of the standard sections are as follows: 6 ft. 3 in. high; 2 ft. 5 in. wide; 2 ft. 9 in. deep, from front of key shelf to rear door.

The equipment in the rear of the section is accessible by removing the rear door.

### MAIN DISTRIBUTING FRAMES

The main distributing frame is of iron construction, and may be either the wall type, or arranged to mount separately. In the wall type the lower portion is designed to carry the protectors, consisting of heat coils and carbon block arresters, while the upper portion of the frame carries the fuses

The separate type is designed so that one vertical may be added at a time, the vertical side carrying the protectors, consisting of heat coils and carbon block arresters, the horizontal side being equipped with terminal strips for connecting the outside lines.

### DESKS

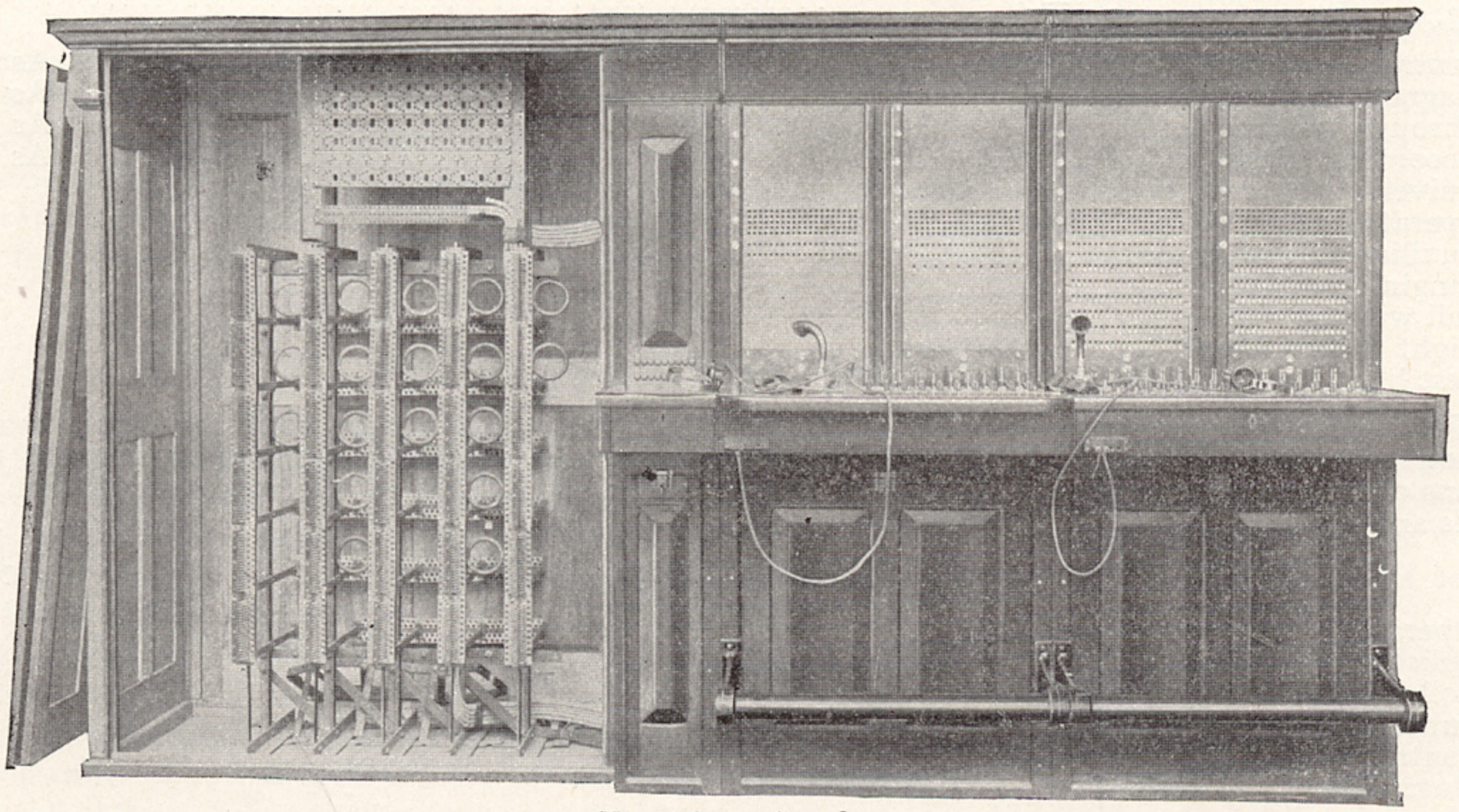
A wire chief's desk and chief operator's desk are provided for use with the No. 9 switchboard when necessary.

### POWER PLANT

The power plants of the No. 9-D and No. 9-C switchboards are planned on the basis of 24 and 38 volt battery supply respectively. There is supplied a storage battery (usually E-7 cells), motor, charging generator, together with a power switchboard, on which are mounted the necessary instruments, such as voltmeter, ammeter, switches, fuses, etc.

A ringing machine is not ordinarily used, as it is the usual practice to provide two interrupters to supply the ringing current.

## No. 10 SWITCHBOARD



No. 10 Switchboard

The No. 10 switchboard is used in offices up to 1600 lines capacity. In general, it may be said that the No. 10 switchboard possesses the operating and transmitting features of the No. 1 switchboard, it being provided with repeating coils in the cord circuits, and the functions of the cut-off relay being performed by a cut-off jack. The supervisory signals are controlled by back contact relays.

The board is provided with answering jacks and associated lamp signals and lamp supervising signals arranged for positive supervision. It is designed for both single and multi-office districts.

PRICES ON REQUEST

## No. 10 Switchboard—Continued

This board is self-contained, except that an intermediate distributing frame is provided for cross connecting. The section is a two panel single operator's section with a capacity for 800 multiple and 120 answering jacks per panel. The lines are multipled every second section, making a total multiple capacity of 1600 lines. The equipment is arranged as flexible as possible, with a view of meeting all usual requirements shown by careful study.

The following gives the capacity of the subscriber, toll and combination subscriber and toll sections:

| Subscriber Section | Capacity |
|---|---|
| Operator's position | 1 |
| Subscriber multiple jacks, 20 per strip | 800 |
| Trunk multiple jacks, 20 per strip | 80 |
| Subscriber line equipment jacks, 20 per strip | 240 |
| Subscriber cord circuits | 15 |
| Subscriber operator's telephone circuit | 1 |
| Ringing circuit | 1 |
| Call wire circuits | 32 |
| Auxiliary signal circuits | 2 |
| Night alarm circuit | 1 |
| Tone test cords | 2 |

| Toll Section | Capacity |
|---|---|
| Operator's position | 1 |
| Subscriber multiple jacks, 20 per strip. | 800 |
| Trunk multiple jacks, 20 per strip | 80 |
| Magneto toll line jacks, 10 per strip | 10 |
| Common battery toll line jacks, 20 per strip | 20 |
| Universal toll cord circuits: | |
| Repeating coil in on all connections | 2 |
| Repeating coil out on through connections | 8 |
| Toll operator's telephone circuit | 1 |
| Ringing circuit | 1 |
| Call wire circuits | 4 |
| Auxiliary signal circuit, magneto toll | 1 |
| Auxiliary signal circuit, common battery toll | 1 |
| Night alarm circuit | 1 |

| Combination Toll and Subscriber Section | Capacity |
|---|---|
| Operator's position | 1 |
| Subscriber multiple jacks, 20 per strip | 800 |
| Trunk multiple jacks, 20 per strip | 80 |
| Subscriber or common battery toll lines, jacks 20 per strip | 120 |
| Magneto toll lines, jacks 10 per strip | 10 |
| Subscriber cord circuits | 10 |
| Universal toll cord circuits: | |
| Repeating coil in on all connections | 1 |
| Repeating coil out on through connections | 4 |
| Operator's telephone circuit | 1 |
| Ringing circuit | 1 |
| Call wire circuits | 4 |
| Auxiliary signal circuit, magneto toll | 1 |
| Auxiliary signal circuit, subscriber or common battery toll | 1 |
| Night alarm circuit | 1 |

In addition to these sections we have a standard recording, trunk, toll trunk, rural, combination subscriber and toll trunk, combination subscriber and rural sections, and subscriber sections arranged for rural cords. We will furnish complete information on any of these upon request.

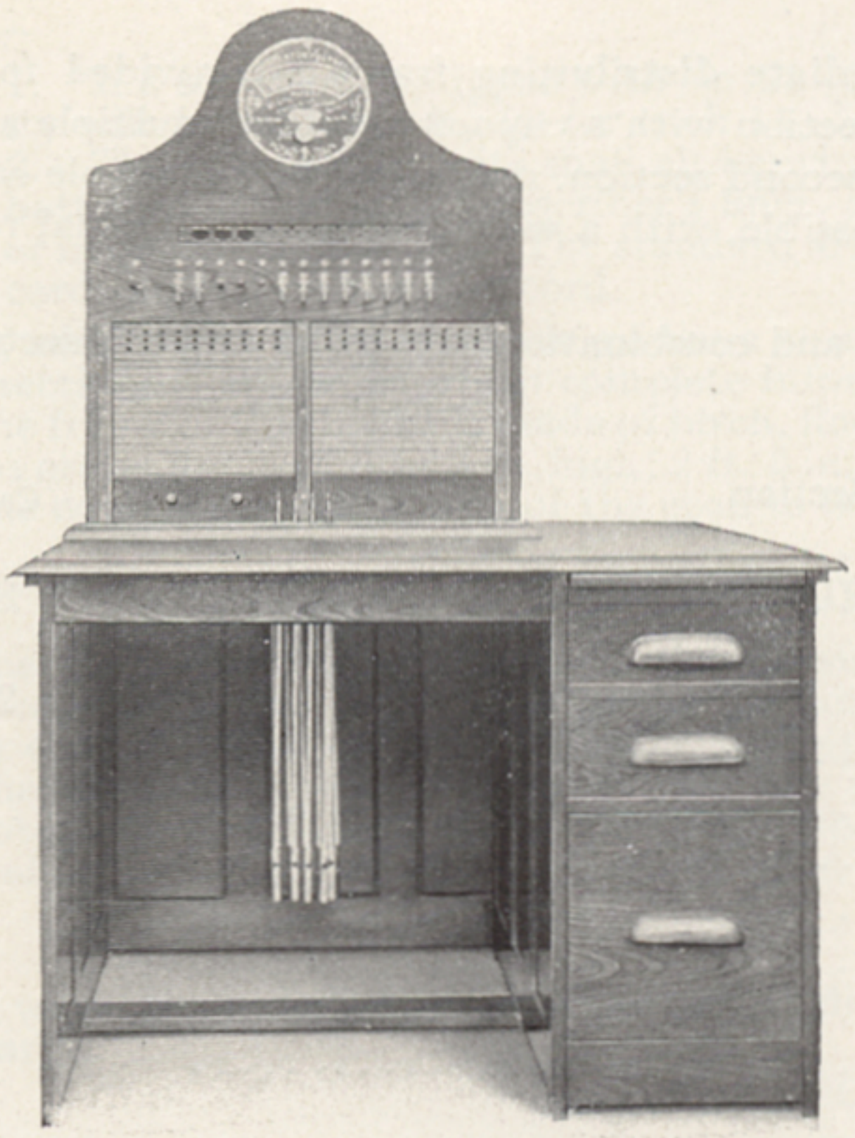
The frame of this board consists of steel enclosed in wood, all the woodwork on the front of the board having a mahogany finish.

The dimensions of the standard section are as follows:—5 ft. 10 $\frac{3}{8}$ in. high; 2 ft. 5 in. wide; 2 ft. 10 $\frac{1}{8}$ in. deep, from front of keyshelf to rear door.

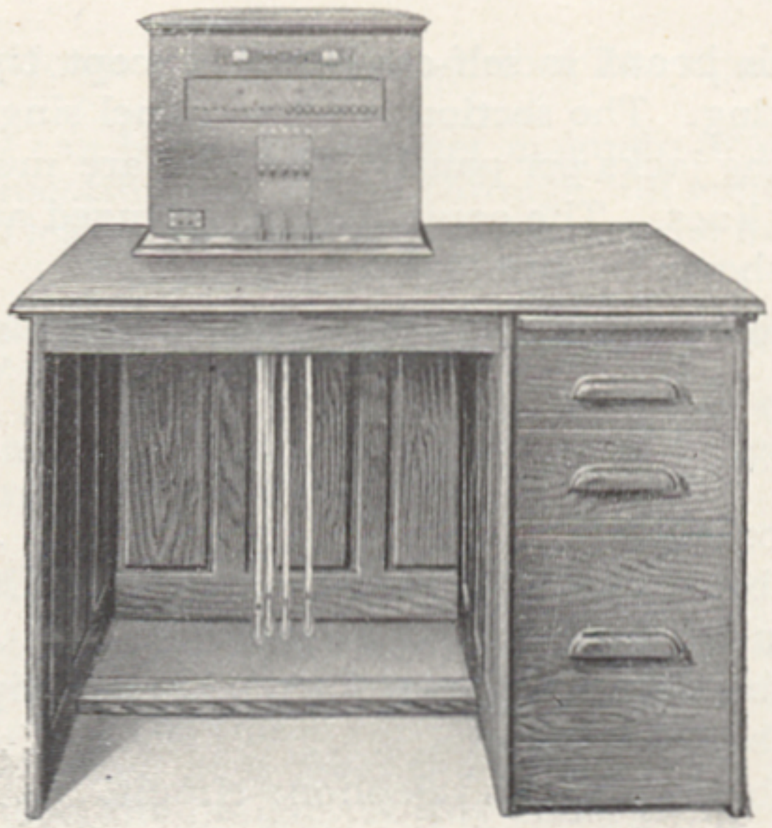
The line relays are arranged in the board and are accessible by removing the rear door.

PRICES ON REQUEST

## No. 10 Switchboard—Continued



No. 10 Wire Chief's Desk



No. 10 Chief Operator's Desk

### DESKS

A wire chief's desk and chief operator's desk are provided for use with the No. 10 switchboard when necessary.

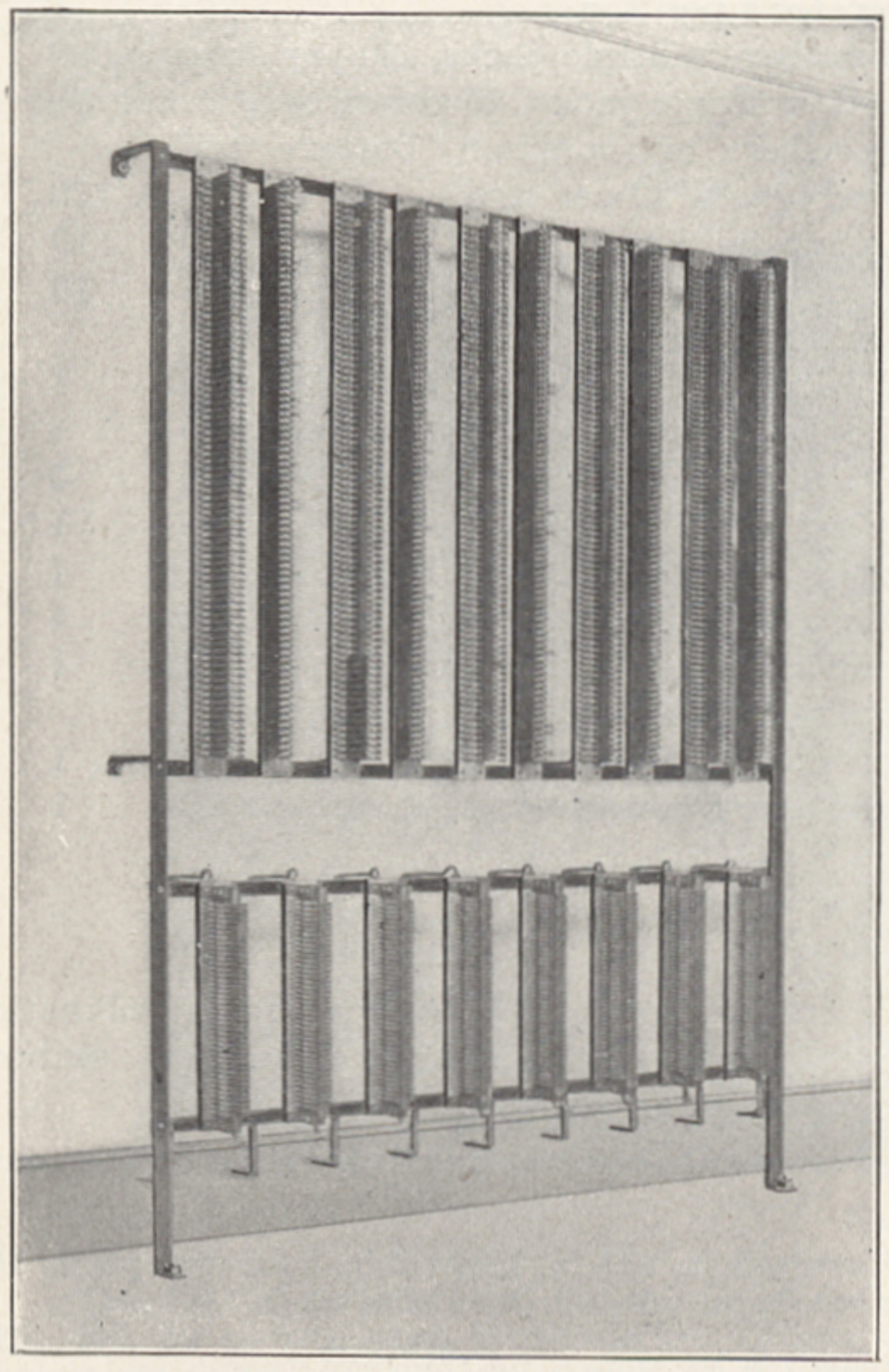
### FRAMES AND RACKS

An intermediate distributing frame of iron construction is provided for cross connecting, and can be placed either at the end of the first section, or on a separate floor if desired. This frame is so designed that additions may be made in units of one vertical. When placed in line with the boards it is enclosed in a casing, finished to match the board.

The main frame is of iron construction, and may be either the wall type or arranged to mount separately.

In the wall type the lower portion is designed to carry the protectors, consisting of heat coils and carbon block arresters, while the upper portion of the frame carries the fuses.

The separate type is designed so that one vertical may be added at a time, the vertical side carrying the protectors, consisting of heat coils and carbon block arresters, the horizontal side being equipped with terminal strips for connecting the outside lines.



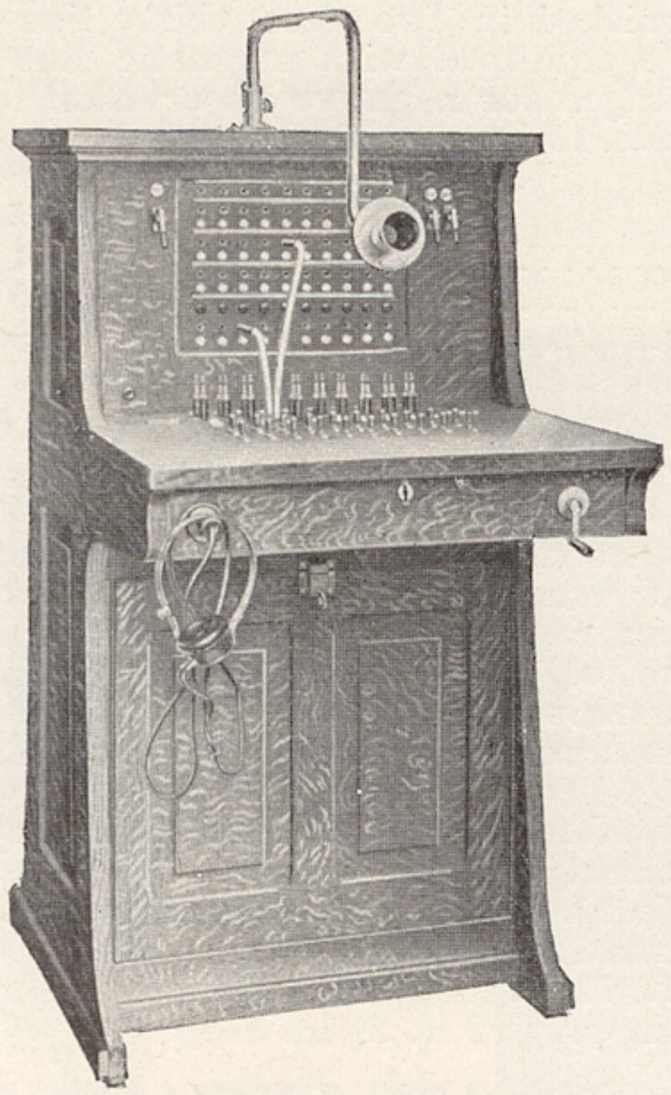
Main Distributing Frame
Wall Type

### POWER PLANT

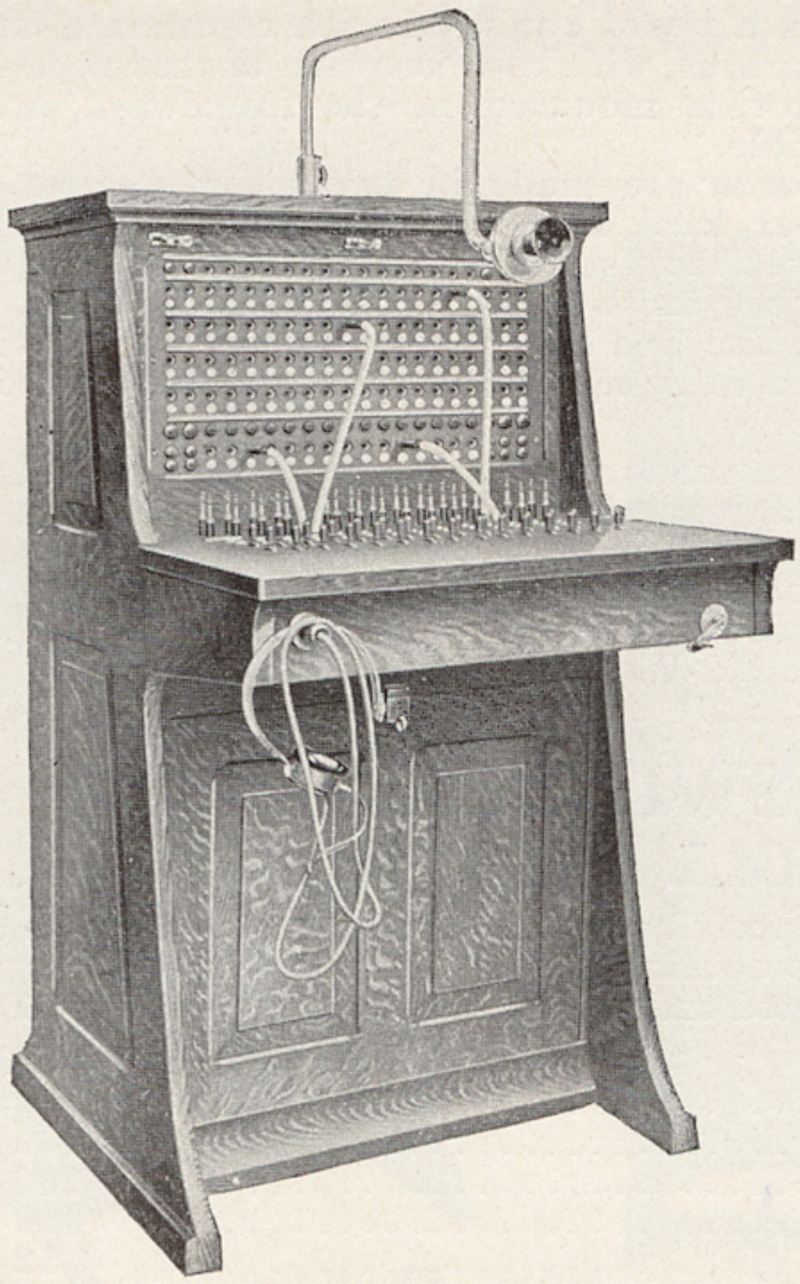
The power plant for the No. 10 switchboard is planned on the basis of a 24-volt battery supply for local connections, and a 48-volt battery supply for toll connections. The equipment is similar to the No. 1 power plant, except that it is smaller.

Standard power plant equipments, with the exception of storage batteries and miscellaneous material, are carried in stock.

PRICES ON REQUEST



30 Line Section



80 Line Section

# No. 4 PRIVATE EXCHANGE SWITCHBOARDS

In the past few years there has been an increased demand for a private exchange, which will employ lamp signals, provide high efficiency in transmission and conform closely to the standard methods of operation employed in the No. 1 switchboard. This has led to the development of the No. 4 private exchange.

These boards are of the central battery lamp signal type, giving positive supervision. All of the apparatus necessary for their operation is mounted in the framework. Two or more sections may be readily lined up together, thus increasing the capacity of the exchange.

The cord circuits are so arranged that they can be used either for local connections or connections with trunks to a central battery exchange. Any of the subscriber lines may be connected by means of trunk lines direct to the central office, where calls during the night or at other times when the operator is absent, can be handled.

These boards are furnished in two sizes, 30- and 80-line, the capacities of these sections being as follows:

| Capacity | 30-line | 80-line |
|---|---|---|
| Subscriber lines | 30 | 80 |
| Trunk lines | 10 | 15 |
| Cord circuits | 10 | 15 |
| List price of one section fully equipped | $ 509.65 | $ 797.50 |

If the board is connected to a central battery exchange it will with few exceptions be unnecessary to install a storage battery at the private exchange, as the talking and signalling current may be supplied over cable pairs from the central office. If, however, it should be found necessary to install a storage battery, it may be charged over trunks from the central office; two trunk lines in the 30-line board and 3 trunk lines in the 80-line board are wired to permit the addition of the necessary relays.

The 30- and 80-line boards are carried in stock in two finishes,—quarter sawed oak and birch stained to match mahogany. Other finishes than these can be furnished with but a slight increase in cost and delay in delivery. If a special finish is desired a sample should accompany the order.

Either a No. 229 W. transmitter with an arm or the chest type (No. 234) can be furnished. Unless otherwise specified, the board will be arranged for the transmitter arm.

The buzzer circuit can be arranged to operate from either two cells of dry battery or from the ringing current. It will be arranged to operate from the dry battery unless otherwise specified.

The dimensions of these sections are as follows:

30-line board: 3 ft. 8½ in. high; 1 ft. 11½ in. long; 2 ft. 2½ in. deep, from front of keyshelf to rear door.

80-line board: 3 ft. 10 in. high: 2 ft. 1 in. long; 2 ft. 5¼ in. deep, from front of keyshelf to rear door.

Orders for these boards should give the following information:

Capacity
- Subscriber lines

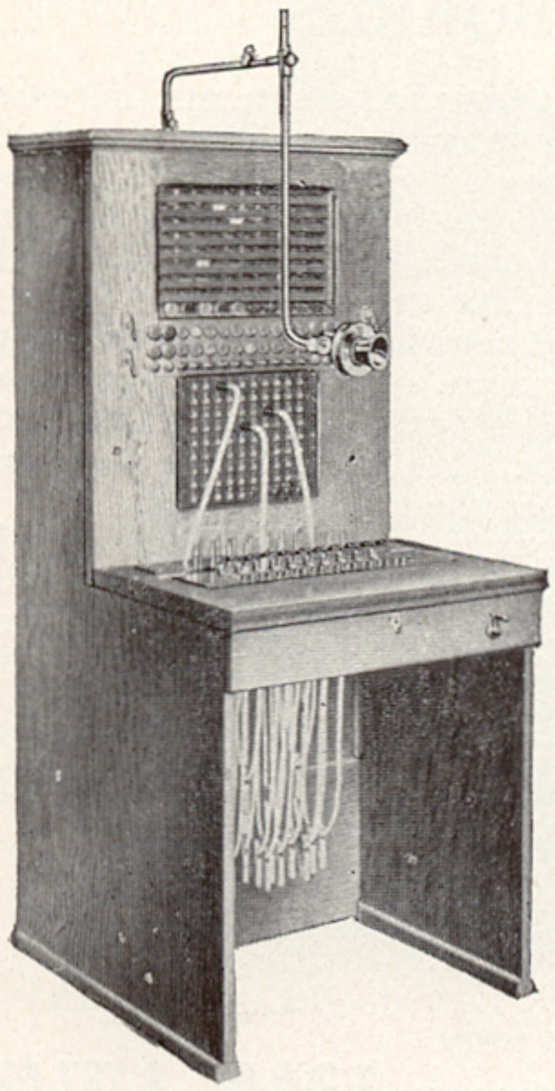
Equipment
- Subscriber lines
- Cord circuits
- Trunk lines
- Trunk lines arranged for storage battery

Will suspended or chest transmitter be used

Will buzzer circuit be connected to dry cells or ringing current

Finish

# Nos. 101 AND 102 PRIVATE EXCHANGE SWITCHBOARDS



No. 102

These switchboards are furnished in two sizes, thirty line and eighty line capacity. They are equipped with magnetic line and supervisory signals and are arranged for negative supervision. The trunk circuits are equipped with No. 19 drops. The capacities of these sections is as follows:—

| Capacity | No. 101 | No. 102 |
|---|---|---|
| Position | 1 | 1 |
| Subscriber lines | 30 | 80 |
| Subscriber cord circuits | 10 | 15 |
| Trunk circuits | 10 | 10 |
| List price of one section fully equipped | **$ 350.05** | **$ 573.00** |

If desired two sections may be lined up together, thus increasing the capacity of the exchange.

The cord circuits are arranged so that they can be used either for local connections or connections with trunks to a central battery exchange. Any of the subscriber lines may be connected by means of trunk lines direct to the central office where calls during the night or at other times when the operator is absent can be handled.

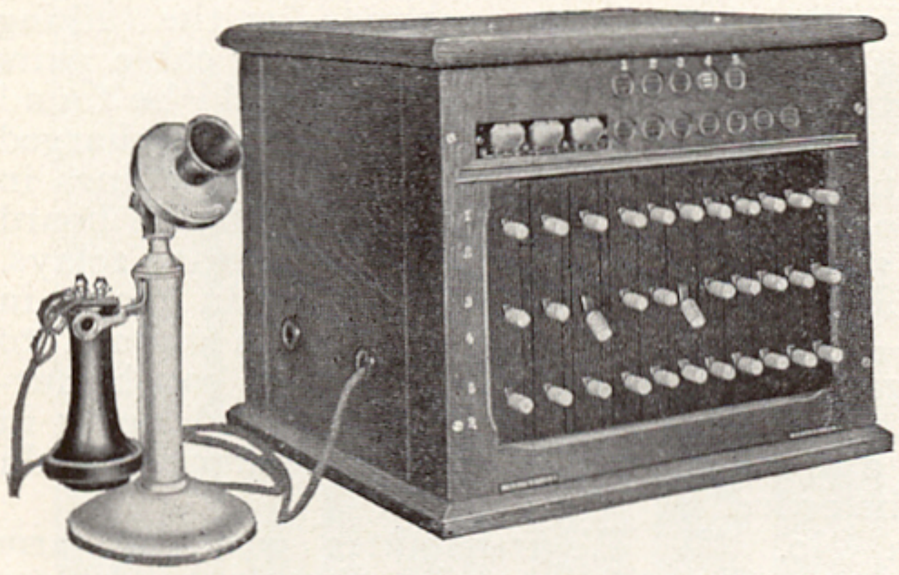
The standard finish of these sections is birch stained to match mahogany or oak.

In case writing space is desired for the operator, a shelf may be provided and attached to the section.

The No. 229-W transmitter with the No. 23 transmitter arm is used on these sections. The dimensions are as follows:—

No. 101—4 ft. 2 in. high; 1 ft. 11 in. long; 2 ft. 2¼ in. deep.

No. 102—5 ft. high; 2 ft. 1 in. long; 2 ft. 2¼ in. deep.



For 3 trunks and 7 local lines

For 2 trunks and 4 local lines

# CORDLESS PRIVATE EXCHANGE SWITCHBOARDS

The cordless private exchange is particularly well adapted for use as a private exchange in small offices, factories, stores, etc. It is very compact and requires less space than a board equipped with connecting cords. All of the apparatus, with the exception of that necessary for the operator, is mounted in the framework, and is readily accessible.

These boards are made in two sizes, one for two trunks and four local stations, and the other for three trunks and seven local stations.

The standard finish is oak.

The local line and supervisory circuits are provided with No. 32 magnetic signals, and the trunks with No. 19 drops.

The connections are made in this board by means of keys, any two local lines or any trunk and any local line may be connected together. The necessary keys are provided in the smaller board for 3 and in the other for 5 simultaneous connections.

The operator's set consists of a No. 20-C desk stand with No. 229-W transmitter, No. 122-W receiver and cord.

List price, smaller, fully equipped, **$ 84.45**; larger, **$ 149.20**

# TOLL SWITCHBOARDS

## No. 1 TOLL SWITCHBOARD

This is designed especially for large toll centers, and the cord circuits are arranged to obtain the best possible transmission over long toll lines. The section has an iron framework with selected mahogany on the front of the board.

The capacity is as follows:

| | Capacity |
|---|---|
| Operator's positions per section | 2 |
| Trunk multiple | 400 |
| Toll line multiple | 200 |
| Toll answering jacks | 100 |
| Toll cord circuits, per position | 12 |

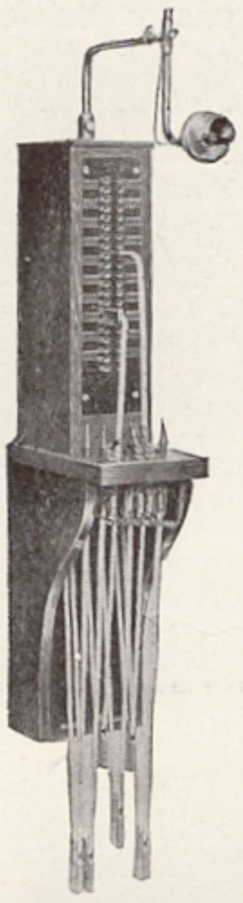
The section is 4 ft. 1 in. high; 4 ft. 3¼ in. long; 3 ft. ¾ in. deep, from front of keyshelf to rear door.

The board is arranged for all miscellaneous circuits necessary for the proper operation of the exchange, such as night alarm ringing, auxiliary signal, supervisors, instruction circuits, etc.

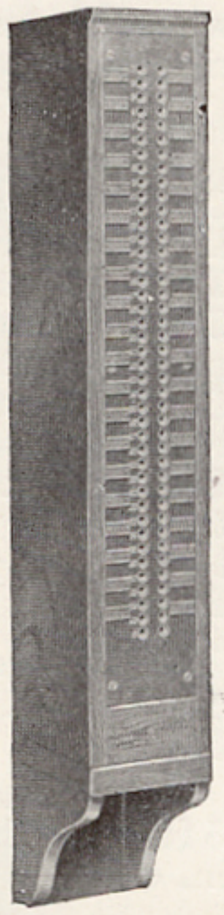
# No. 2 TOLL SWITCHBOARD

This is the regular subscriber framework equipped with toll line and toll cord circuits and is arranged to line up with the No. 1 subscriber board, with which it is used. When additions are necessary, adjacent subscriber sections may be converted with very little trouble to toll sections by merely changing the equipment. The subscriber lines will be multipled through the toll sections. Universal toll cord circuits are provided. These cord circuits are entirely automatic being arranged so that either toll to toll or toll to local connections may be made without any additional work by the operator, no keys or switching devices other than the regular listening and ringing keys being necessary.

This board is arranged with the necessary miscellaneous circuits for its proper operation.



No. 21 Wire toll test board



No. 41 Wire extension

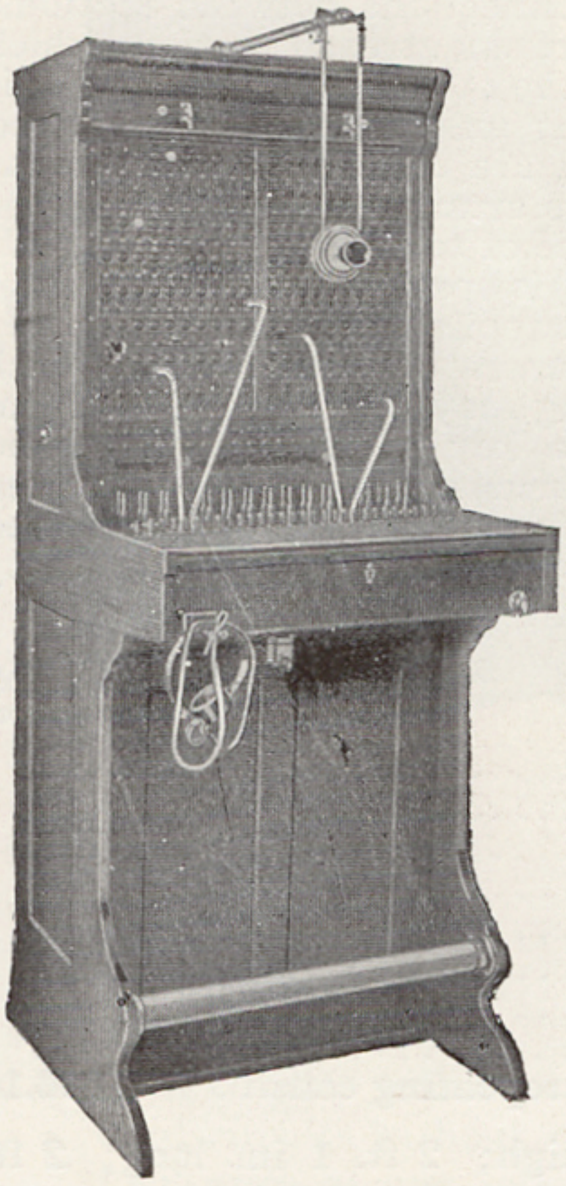
## TOLL TEST BOARDS

These are made in twenty-one and forty-one wire capacities and are used as test boards in test stations and small exchanges. The jacks are mounted on a hard rubber panel either in two or four rows as desired. Designation strips are provided so that the jacks may be properly numbered. A telephone and cord circuit are provided and arrangements made for talking and ringing in either direction. The framework is made of mahogany and is arranged to mount on the wall, or on the end of the switchboard.

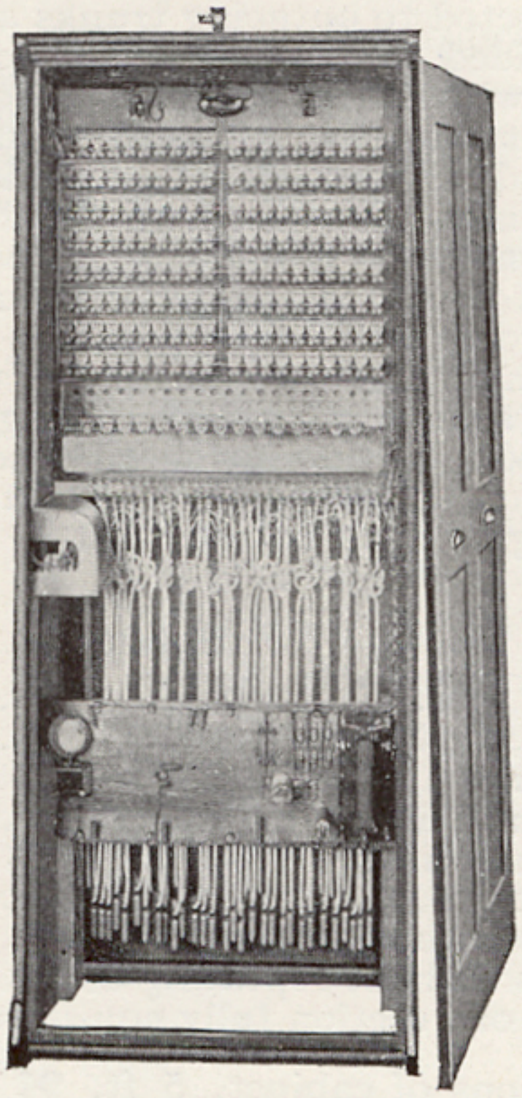
## TOLL TEST BOARD EXTENSIONS

These are furnished in twenty-one and forty-one wire capacities and are similar to the toll test boards, except that they are provided with jacks only, no cord or telephone circuits being provided.

# MAGNETO SWITCHBOARDS



No. 1102—Front



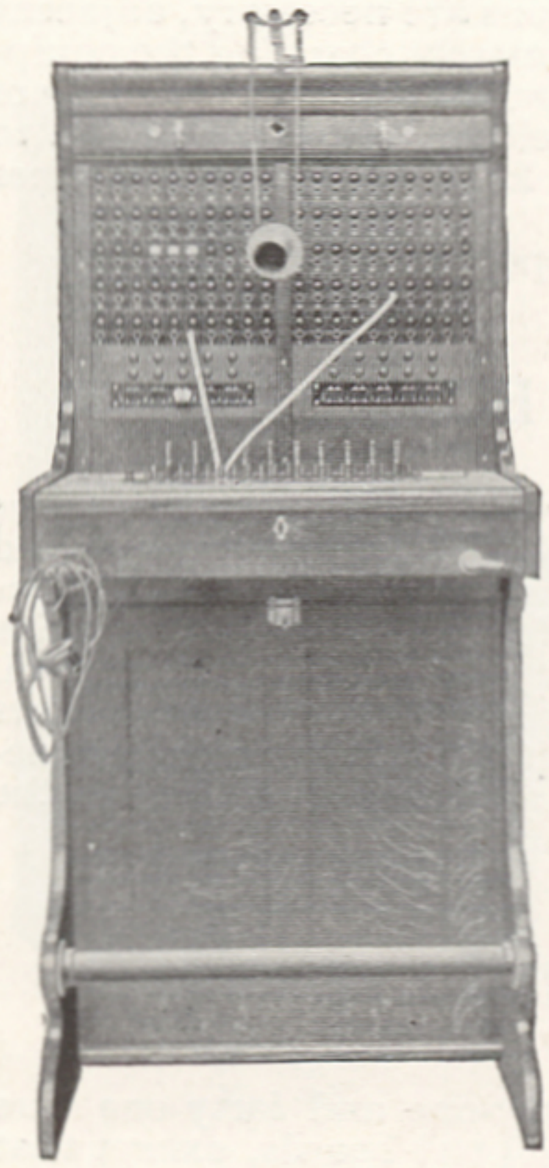
No. 1102—Rear

## Nos. 1101 AND 1102 SWITCHBOARDS

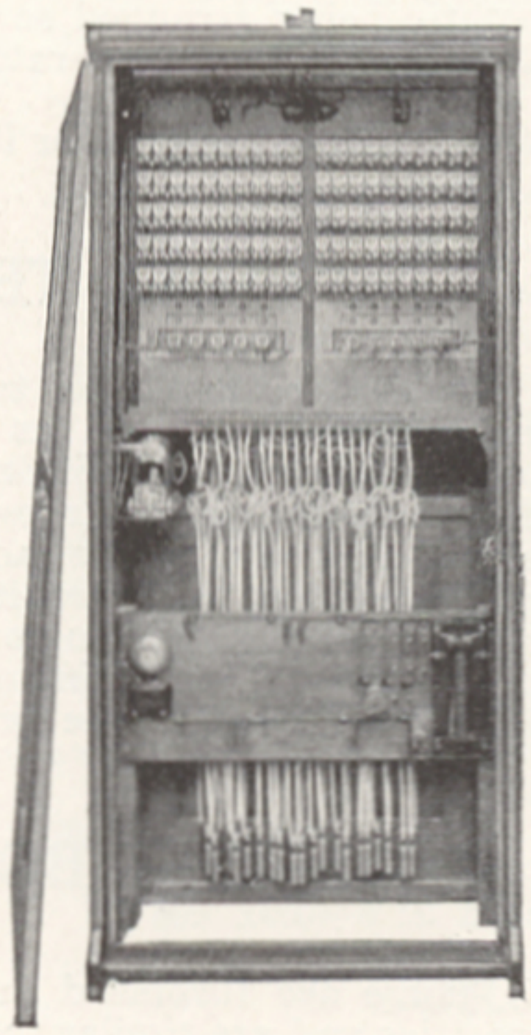
The cabinets are made in two sizes, 100- and 160-line, and are of quarter sawed oak with a dark finish. Two or more may be lined up without any change in the woodwork. Each signal is mechanically associated with its jack so that it is automatically restored when the operator plugs into the jack. The line circuit may be used for either toll or local work. The trunk circuits have lamp signals and are arranged for connection in either direction between sections. Wiring is always provided for the repeating coils, but unless otherwise specified the circuits with which they may be used are equipped the same as those without the coils. All cord circuits are arranged for ringing on the answering and calling cords. A suspended type of transmitter (No. 232-W) is provided unless the chest type (No. 234-W) is specified. A head receiver is always furnished. A night alarm bell is supplied, together with a key to cut it out of service. A five-bar hand generator is mounted in each section. Two or four party selective ringing may be provided. A generator switch-

PRICES ON REQUEST

## Nos. 1101 and 1102 Switchboards—Continued



No. 1101—Front



No. 1101—Rear

ing circuit is arranged with a key to throw in the hand generator or some other source of ringing current. Cable for the equipment ordered is provided sufficient to extend fifteen feet from the base of the section.

In ordering specify the number of circuits to be equipped in each section, the type of the transmitter, and whether two or four party selective ringing is to be provided.

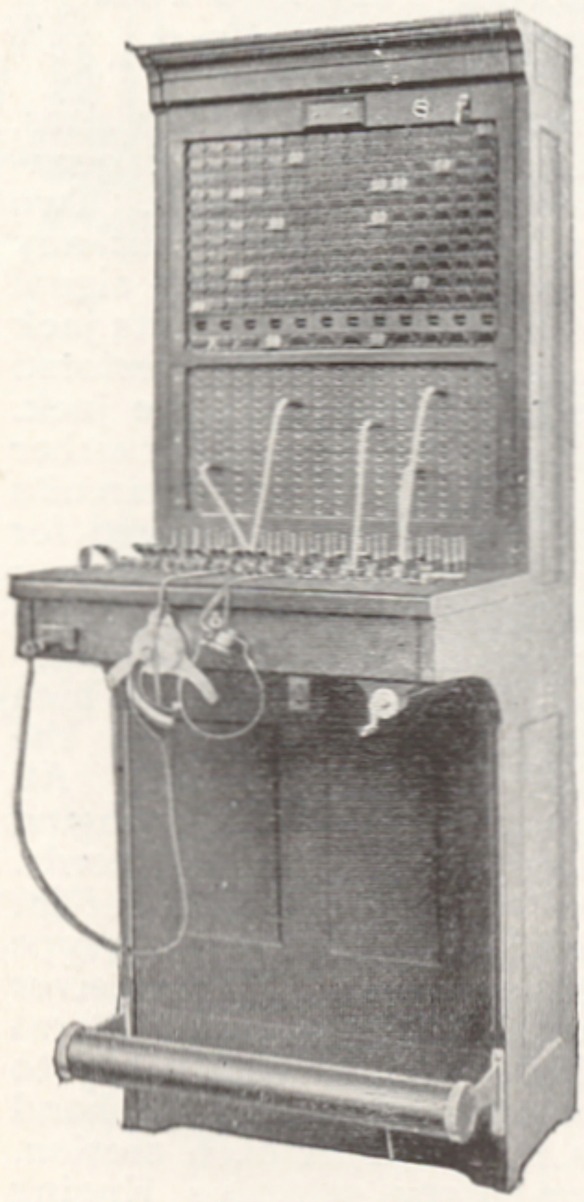
| Capacity | No. 1101 Section | No. 1102 Section |
|---|---|---|
| Operator's position | 1 | 1 |
| Line circuits | 100 | 160 |
| Trunk circuits | 10 | 20 |
| Cord circuits with repeating coil | 3 | 5 |
| Cord circuits without repeating coil | 7 | 10 |
| List price of one section fully equipped less repeating coils | **$436.97** | **$664.23** |

Dimensions of No. 1101 cabinet 5 ft. $1\frac{1}{4}$ in. high; 2 ft. $2\frac{7}{8}$ in. long; 2 ft. 3 in. deep.

Dimensions of No. 1102 cabinet 5 ft. $8\frac{7}{8}$ in. high; 2 ft. $2\frac{7}{8}$ in. long; 2 ft. 3 in. deep.

## No. 105 SWITCHBOARD

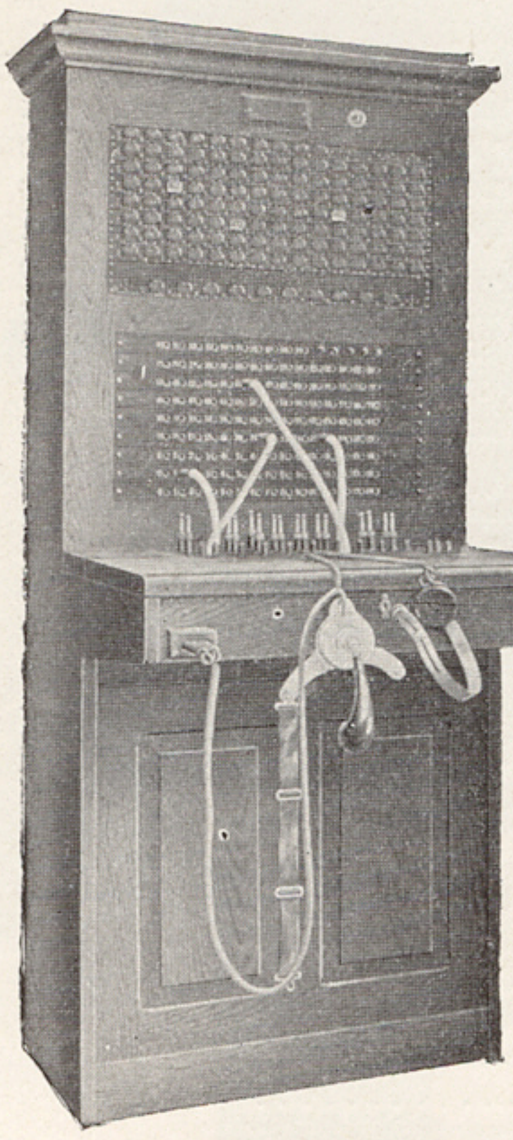
The face of the cabinet is made of mahogany and the unexposed parts of a lighter wood with a mahogany finish. Two or more may be lined up without any change in the woodwork. The trunk circuits are of the call wire type and are arranged for connections between sections. Provision is therefore made for incoming trunks at each section, which will be connected to outgoing trunks at all the other sections. Wiring is always provided for the repeating coils but unless otherwise specified the circuits with which these may be used are equipped the same as those without the coils. All cord circuits are arranged for ringing on the answering and calling cords. A suspended type of transmitter (No. 232-W) is provided unless the chest type (No. 234-W) is specified. A head receiver is always furnished. A night alarm bell is supplied, together with a key to cut it out of service. A five-bar hand generator is mounted in each section. Two or four party selective ringing may be provided. A generator switching circuit is arranged with a key to throw in the hand generator or some other source of ringing current. No cable is provided unless ordered. In ordering specify the number of circuits to be equipped in each section, the type of transmitter and whether two or four party selective ringing is to be provided.



No. 105

| Capacity | No. 105 Section |
|---|---|
| Position | 1 |
| Toll lines | 15 |
| Subscriber lines | 150 |
| Incoming trunk lines | 12 |
| Outgoing trunk lines | 45 |
| Call wire circuits | 5 |
| Cord circuits with repeating coil | 5 |
| Cord circuits without repeating coil | 7 |
| List price of one section fully equipped less repeating coils | **$506.14** |

Dimensions of cabinet, 5 ft. $9\frac{3}{8}$ in. high; 2 ft. 1 in. long; 2 ft. $1\frac{1}{16}$ in. deep.



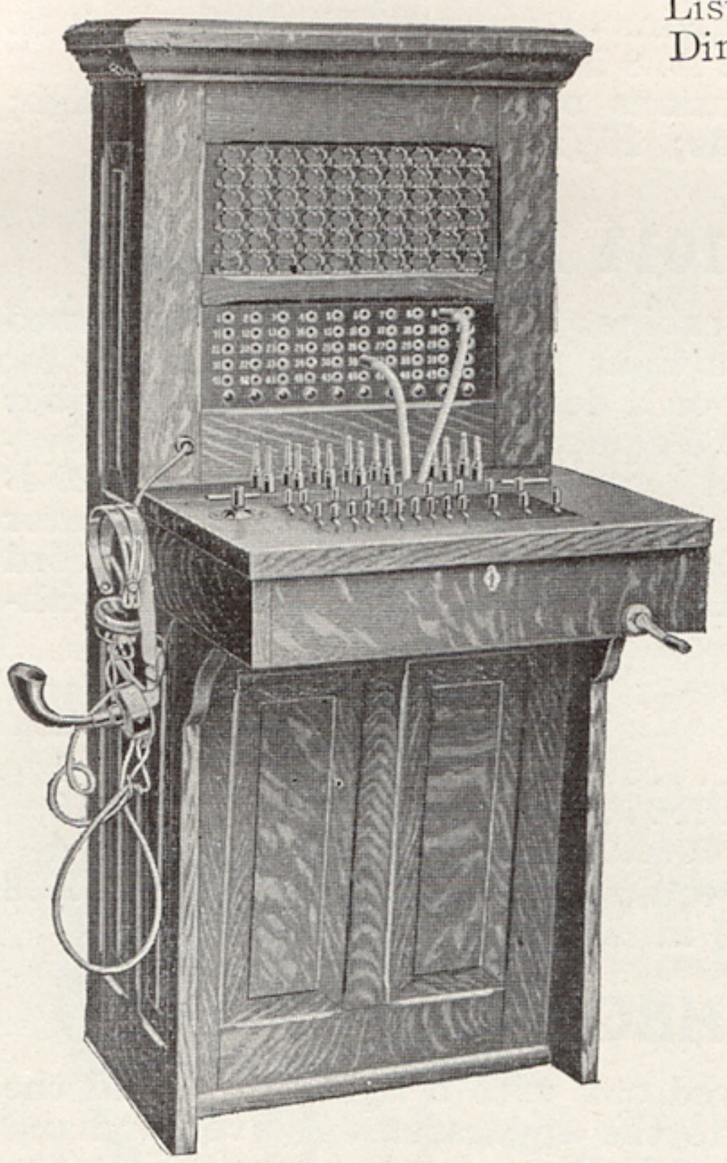
No. 1005.

## No. 1005 SWITCHBOARD

The cabinet is made of selected oak with a light finish. Two or more may be lined up to increase the capacity of an exchange. The board is very similar to the No. 105, except that it is designed for smaller exchanges when it is desired to secure an equipment at a low cost. Trunk jacks may be placed in each section to be connected to drops or signals in the others. No provision is ordinarily made for repeating coils. The cord circuits are designed for ringing on the calling cords only. A suspended type transmitter (No. 232-W) is furnished, unless the chest type (No. 234-W) is specified. A head receiver is always furnished. A night alarm bell is supplied, together with a key to cut it out of service. A five-bar hand generator is mounted in each section. Two or four party selective ringing may be provided. A generator switching circuit is arranged with a key to throw in the hand generator or some source of ringing current. No cable is provided unless ordered. In ordering, specify the number of circuits to be equipped in each section, the type of transmitter, and whether two or four party selective ringing is to be provided.

| Capacity | No. 1005 Section |
|---|---|
| Position | 1 |
| Toll lines | 15 |
| Subscriber lines | 100 |
| Trunk jacks | 15 |
| Cord circuits | 10 |
| List price of one section fully equipped | $ 272.90 |

Dimensions of cabinet, 4 ft. 10 $\frac{9}{16}$ in. high; 2 ft. 3 in. wide; 2 ft. 1 $\frac{7}{8}$ in. deep.



No. 1006

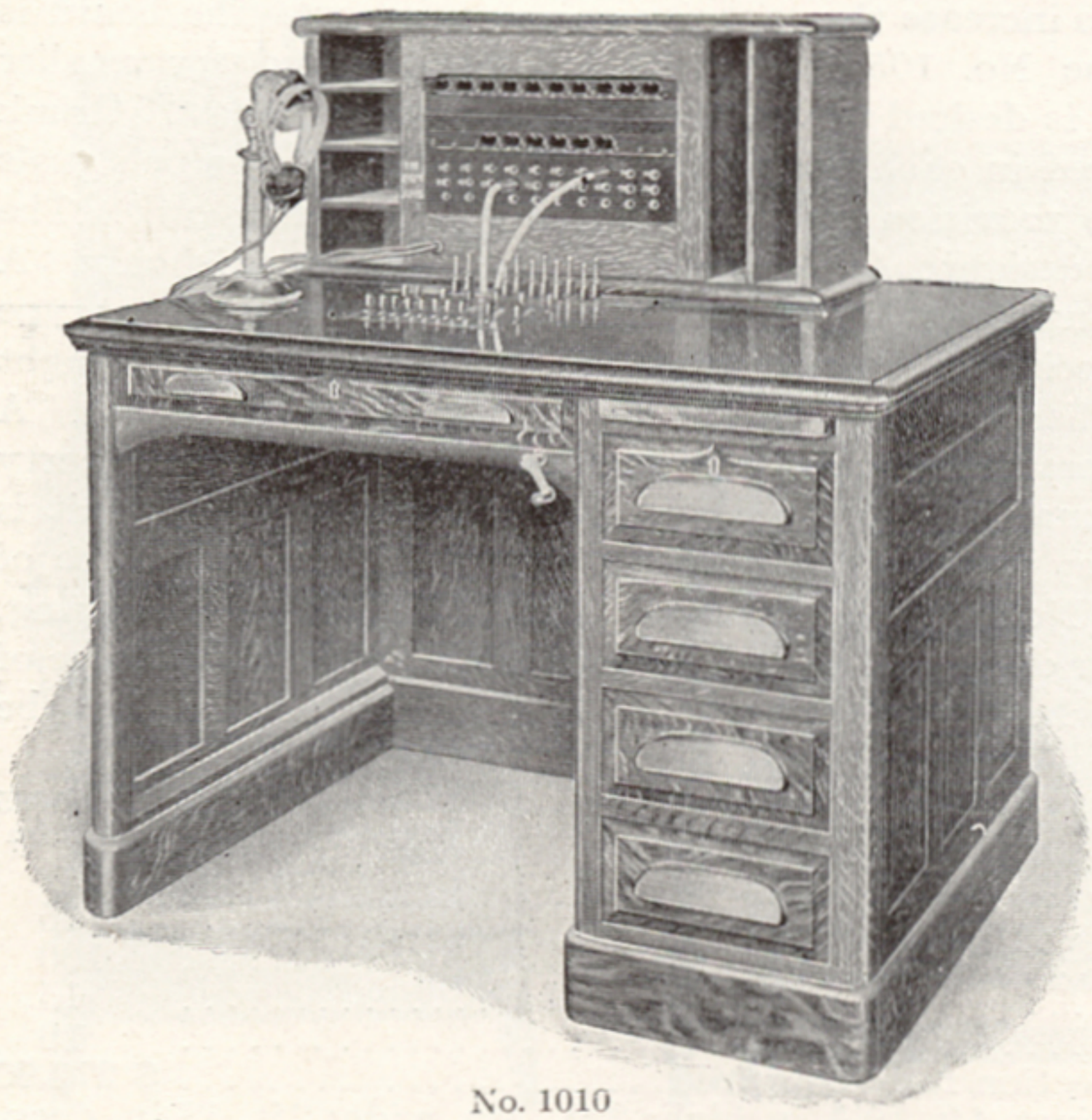
## No. 1006 SWITCHBOARD

The cabinet is made of quarter sawed oak with a light finish. Two or more may be lined up to increase the capacity of an exchange. The board is very similar to the No. 105 except that it is designed for a smaller exchange. Any subscriber line may be equipped for toll service. Trunk jacks may be placed in each section to be connected to drops in the others. Wiring is always provided for the repeating coils, but unless otherwise specified the circuits with which these may be used are equipped the same as those without the coils. All cord circuits are arranged for ringing on the answering and calling cords. A suspended type transmitter (No. 232-W) is provided unless a chest type (No. 234-W) is specified. A head receiver is always furnished. A night alarm bell is supplied together with a key to cut it out of service. A five-bar hand generator is mounted in each section. Two or four party selective ringing may be provided. No generator switching key is ordinarily furnished. No cable is provided unless specified. In ordering specify the number of circuits to be equipped in each section, the type of transmitter, and whether two or four party selective ringing is to be provided.

| Capacity | No. 1006 Section |
|---|---|
| Position | 1 |
| Subscriber lines | 50 |
| Trunk jacks | 10 |
| Cord circuits with repeating coils | 4 |
| Cord circuits without repeating coils | 4 |
| List price of one section fully equipped less repeating coils | $ 164.38 |

Dimensions of cabinet: 4 ft. 4 in. high; 1 ft. 9 $\frac{7}{8}$ in. wide; 2 ft. 1 in. deep.

# No. 1010 SWITCHBOARD



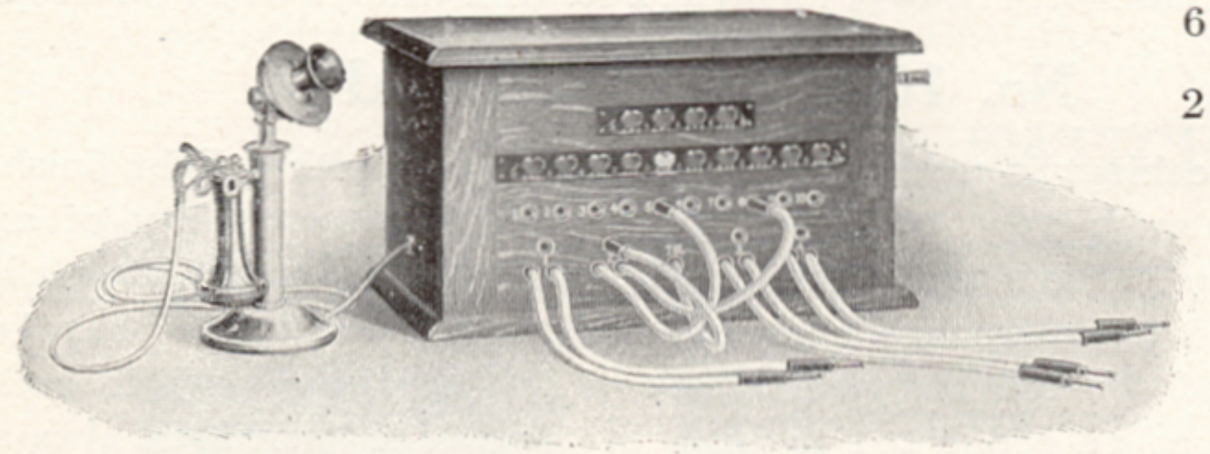
No. 1010

The desk and cabinet are made of oak with a light finish. Any subscriber line may be equipped for toll service. No provision is made for trunks. Wiring is always provided for the repeating coils, but unless otherwise specified the circuits with which these may be used are equipped the same as those without the coils. All cord circuits are arranged for ringing on the answering and calling cords. A No. 1020-J desk stand is provided. A head receiver is furnished in all cases. A night alarm bell is supplied together with a key to cut it out of service. A five-bar hand generator is mounted in each desk. No provision is ordinarily made for selective ringing. No generator switching key or cable is furnished unless specified. In ordering specify the number of circuits to be equipped in each section and the type of transmitter.

| Capacity | No. 1010 Section |
|---|---|
| Position | 1 |
| Subscriber lines | 30 |
| Cord circuits with repeating coils | 3 |
| Cord circuits without repeating coils | 3 |
| List price of one section fully equipped less repeating coils. | **$ 140.79** |

Dimensions of desk: 2 ft. 4 in. high; 3 ft. 6 in. wide; 2 ft. 8 in. deep.

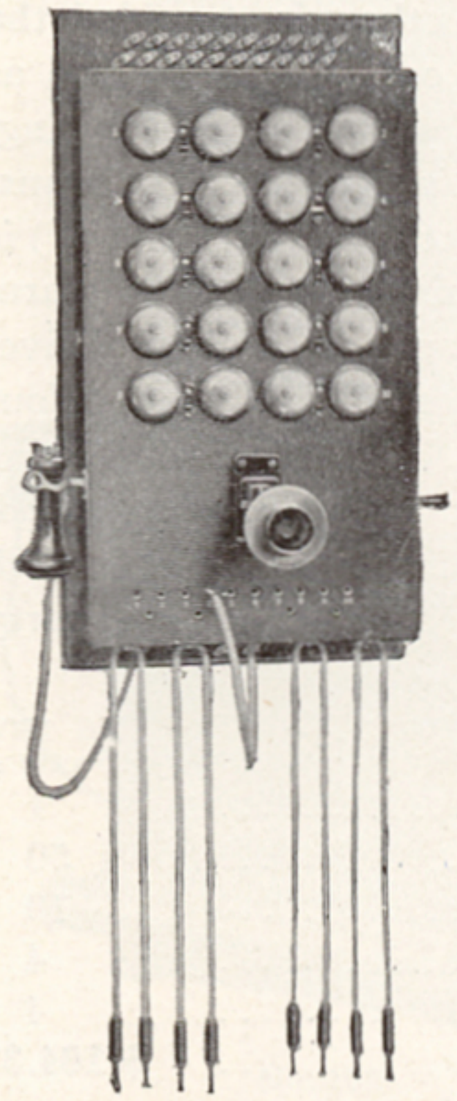
Dimensions of cabinet: 1 ft. ¾ in. high; 2 ft. 6 in. wide; 10½ in. deep.



No. 1011

# No. 1011 SWITCHBOARD

The cabinet is made of quarter sawed oak with a light finish, and is designed for mounting on a desk or shelf. Any subscriber line may be equipped for toll service. A five-bar hand generator and No. 1020-B desk stand are furnished. The operator answers, listens in and rings with a cord provided for the purpose. Connections are made by the other cords without the use of keys.



No. 1012

| Capacity | No. 1011 Section |
|---|---|
| Position | 1 |
| Subscriber lines | 10 |
| Cord circuits | 4 |
| List price of one section fully equipped | **$ 51.03** |

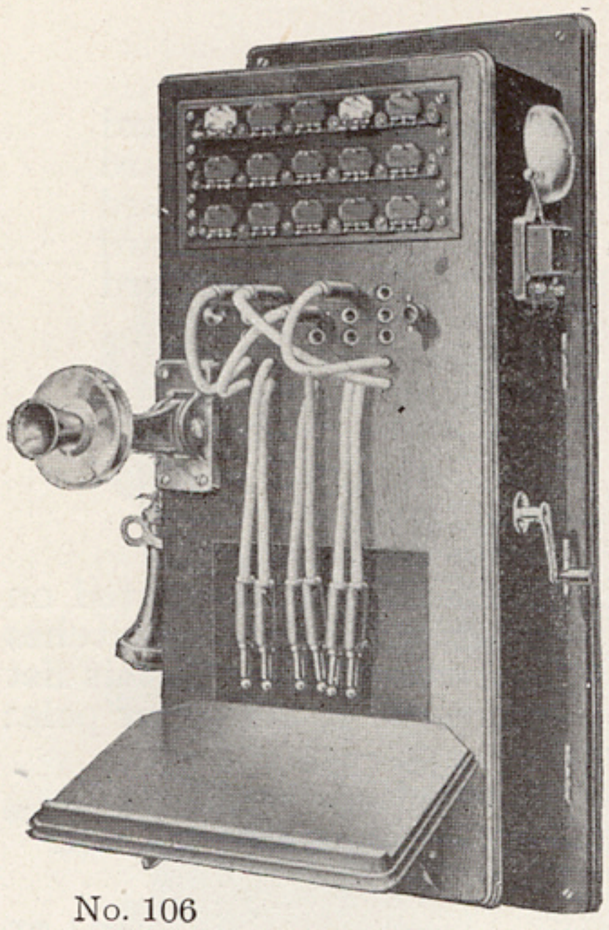
Dimensions of cabinet: 1 ft. high; 1 ft. 7¾ in. wide; 10¾ in. deep.

# No. 1012 SWITCHBOARD

The cabinet is made of quarter sawed oak with a light finish, and the front is hinged to allow of easy access to the apparatus. A five-bar hand generator, No. 250-W transmitter and No. 122-W receiver are furnished. The ringers are of 1000 ohms resistance, unless otherwise ordered, and are equipped with indicators to show which line is calling. The operator answers, listens in and rings with a cord provided for the purpose. Connections are made by the other cords without the use of keys.

| Capacity | No. 1012 Section |
|---|---|
| Position | 1 |
| Line circuits | 10 |
| Cord circuits | 4 |
| List price, one section fully equipped | **$ 57.36** |

Dimensions of cabinet: 2 ft. 5⅞ in. high; 1 ft. 3½ in. wide; 6⅞ in. deep.



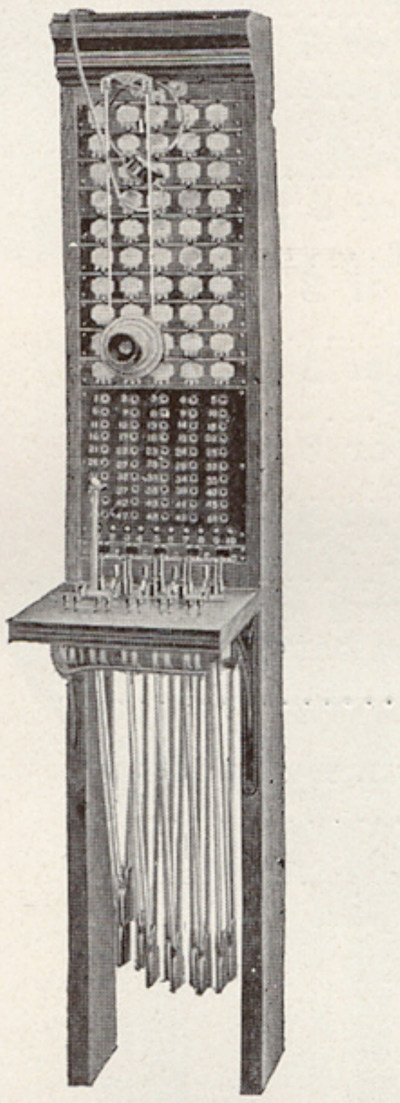
No. 106

## No. 106 SWITCHBOARD

The cabinet is made of black walnut and the front is hinged to allow of easy access to the apparatus. The cabinet has a capacity of ten subscriber lines, 1 toll line and 4 cord circuits. A five-bar hand generator, night alarm circuit, No. 250-W transmitter and No. 122-W receiver are furnished. The drops are 500 ohms resistance and are bridged across the line. They may be of the No. 19 type to operate whenever one subscriber calls another on the same line or, the No. 57 type may be furnished, the latter operating only when a subscriber wishes to signal central office. If the latter service is desired the telephone sets must be equipped with a key and wired so that normally alternating current is delivered, which will ring the bells of the other telephone sets bridged across the line, but will not operate the drop at the central office. When the key is operated, pulsating current is delivered; this will not ring the bell of the telephone sets, but will operate the central office drop. The operator answers, listens in and rings with either of two duplicate cords provided for that purpose, connections are made by the other cords without the use of keys. Four boards are made differing only in the equipment.

In ordering specify only the code numbers.

| | |
|---|---|
| **No. 106-A** has 10 subscriber lines equipped with No. 19 drops, 0 toll lines and 4 cord circuits | $ 63.46 |
| **No. 106-B** has 10 subscriber lines equipped with No. 19 drops, 1 toll line and 4 cord circuits | 69.89 |
| **No. 106-C** has 10 subscriber lines equipped with No. 57 drops, 0 toll lines and 4 cord circuits | 86.75 |
| **No. 106-D** has 10 subscriber lines equiped with No. 57 drops, 1 toll line and 4 cord circuits | 93.17 |



No. 1002



No. 1023

## Nos. 1001, 1002 AND 1003 SWITCHBOARDS

These switchboards are of uniform type, varying only in size and capacity; the various capacities being 25, 50 and 100 lines.

The cherry frame is simple in design, and strongly constructed. Each section is equipped with a suspended transmitter, head receiver, hand generator and night alarm circuit. The 100-line switchboard (No. 1001), is equipped with ten pairs of connecting cords; the 50-line switchboard (No. 1002) and the 25-line switchboard (No. 1003) each have five pairs of cords. Any of the subscriber lines may be equipped as toll lines.

In each section space is provided for trunking jacks, the No. 1001 switchboard being drilled for 20, the No. 1002 switchboard for 10, and the No. 1003 switchboard for 5. Two or more of these sections may be easily lined up if desired.

In ordering these boards, it will only be necessary to specify the code number and the number of grounded and metallic lines.

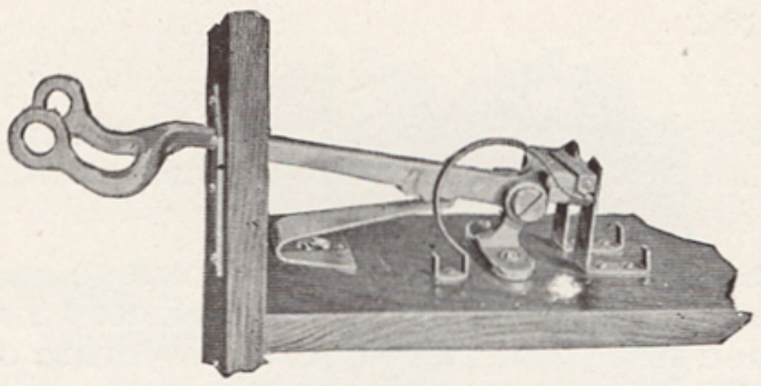
## PONY SWITCHBOARDS

The "Pony" switchboards, made in sizes from two to twenty lines, are very simple and inexpensive; and are designed for equipments where it is desired to connect only a few lines; and where the initial expense is an important consideration.

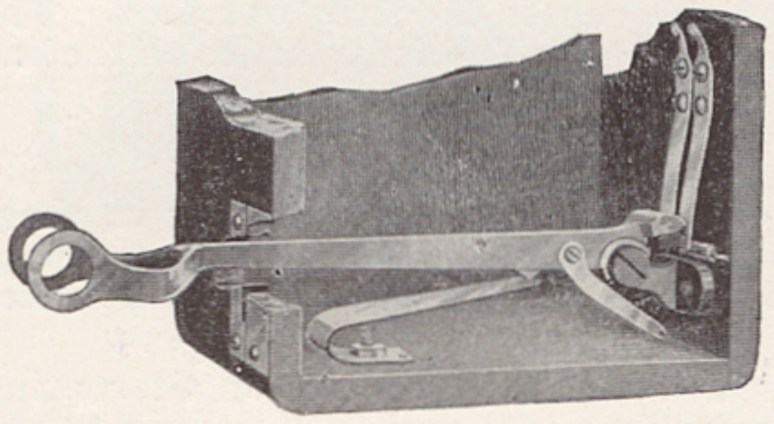
The cabinet is made of black walnut, and is equipped with binding posts on the top, to which the line wires are to be connected.

The board is equipped for either metallic or grounded circuits.

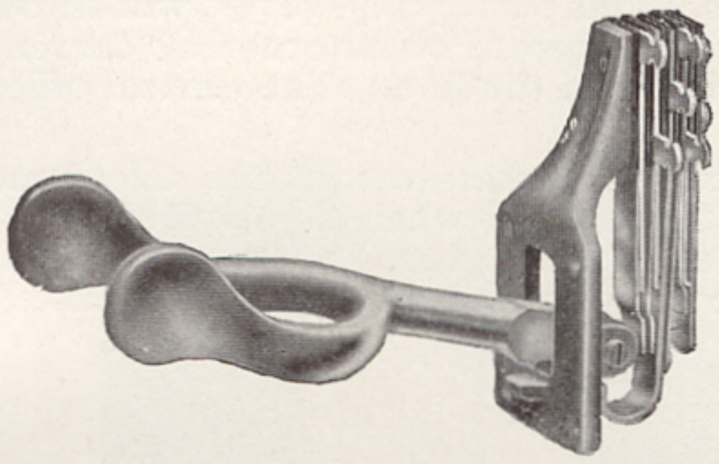
The board is equipped with a night alarm circuit, but not with an operator outfit, as it is intended for use with a seperate telephone set, for which a cord and plug are provided.



No. 120-A



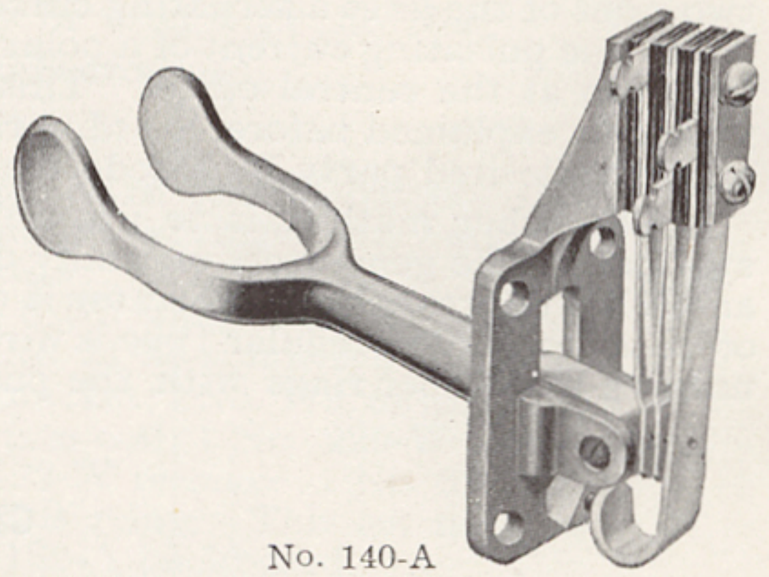
No. 121-A



No. 140-H

# SWITCH HOOKS

| Code No. | Description | Contacts | List Price each |
|---|---|---|---|
| **120-A** | Long lever, restoring spring mounted separately, horizontal mounting | 2 front | **$ 0.75** |
| **121-A** | Long lever, restoring spring mounted separately, vertical mounting | 2 front | **.70** |
| **140-A** | Short lever, self-contained, vertical mounting | 2 front | **.75** |
| **140-B** | Short lever, self-contained, vertical mounting | 2 front<br>1 back opens | **.90** |
| **140-H** | Short lever, self-contained, vertical mounting | 2 front<br>1 passing ground | **1.05** |
| **140-F** | Short lever, self-contained, vertical mounting | 1 front<br>1 back | **.70** |
| **141-A** | Brass wire hook threaded at one end and provided with a cap staked on. For use with No. 1002-A hand set | | **.03** |



No. 140-A

# SIGNALLING SYSTEMS

We give below a brief description of the signalling systems commonly used for giving magneto and central battery telephone service.

## MAGNETO SYSTEMS

**Code Ringing.** In this system a large number of parties may be connected to one line, all of the ringers at the telephone stations and the central office drop being bridged across the line. The ringers are unbiased, and the drop at the central office of the usual type, which is operated by alternating current supplied by the subscribers' hand generators. Whenever a party on the line calls, all of the ringers and the central office drop are operated. When central office rings on the line, likewise, all of the bells are sounded. The proper party is called by a code system made up of various numbers of long and short rings.

**2 Party Selective Ringing.** In this system two subscribers may be connected to one line. The ringers at the telephone stations are biased and wired to ground, one from each side of the line. The drop at the central office is bridged and operated by alternating current supplied by the subscribers' hand generators. The generators in the subscriber stations are of the two-bar type, and not heavy enough to ring the two bells on the line since these are biased and in series, as far as the ringing current supplied by the hand generator is concerned. The generator, however, is heavy enough to throw the drop at the central office.

Whenever one party calls or is being called the other ringer is not operated. It is impossible for one subscriber to call the other on the same line, except through the central office operator.

The cord circuits at the central office are wired so that alternating ringing current may be sent out on either side of the line to ground by means of a key for each cord circuit, or a master key for all of the cord circuits in a position.

**4 Party Selective Ringing.** This system is precisely the same as the 2 party selective system, except that there are wired to ground from each side of the line two sets. Both of these sets are biased, and one is so connected to the line that it is operated by positive pulsating current, while the other is operated by negative pulsating current. The cord circuits at the central office are so wired

## Signalling Systems—Continued

that positive and negative pulsating current may be sent out over either side of the line to ground by means of a party line ringing key for each cord circuit or a master key for all of the cord circuits in the position.

**Center Checking.** This system is used on toll lines where it is desired to have several stations on one line, and yet require all of them to secure connections entirely through one office. The ringers at the stations are all biased and bridged across the line in one way, that is, they either operate on alternating current or on pulsating current in one direction only. The generators at the stations are all arranged to furnish pulsating current of the polarity which does not ring the bells; and accordingly it is impossible for one party on the line to call another, except through the center checking operator. The central office has a bridged drop, operated by the pulsating current, and rings the different parties on the line by means of a code system.

**Central Office Selective Signalling.** This is just the reverse of the center checking system, that is, there may be placed a large number of subscribers on one line, and they can call one another without signalling central office; or they can call central office without notifying the other parties on the line. This is accomplished in two ways.

The first method is to bridge across the line bells which are biased so that they operate on alternating or pulsating current in one direction. The hand generators in the telephone sets normally deliver tc the two sides of the lines alternating current; but when a button is depressed there is delivered to the two sides of the line pulsating current of a polarity which will not operate the bells. This current, however, will throw the drop at the central office. This drop is arranged so that it will not operate on alternating current which, as explained before, is ordinarily used to signal the other subscribers on the line. The central office rings the desired party by a code system.

The other method is to use unbiased ringers and alternating current generators at the telephone stations. The generators normally deliver current to the two sides of the line but when a push button at any set is depressed the generator is connected between one side of the line and ground. At the central office a drop of the regular type is wired from one side of the line to ground and accordingly is not operated unless a subscriber rings with the push button in his set depressed.

## CENTRAL BATTERY SYSTEMS

**Code Ringing.** Several parties may be connected to one line in the central battery system, the bells all being bridged across the line and biased. The line at the central office is wired the same as for single party line service. One party cannot call another on the same line, except through the central office operator, and central office calls the desired party by a code system of ringing.

**2 Party Selective Ringing.** With this system two parties may be connected to one line, the two bells being biased and connected to ground, one from each side of the line. The line at the central office is wired the same as for single party line service, and the cord circuits are arranged so that alternating current may be sent out over either side of the line by means of a key for each cord circuit, or a master key for all of the cord circuits in the position.

**4 Party Selective Ringing.** Four parties may be connected to one line, and the line arranged so that any party may be called without signalling the others. There is bridged across the line at each station a high impedance relay, from the local contacts of which the four ringers are wired to ground. These relays are arranged so that when they operate they connect to ground the four ringers, two from each side of the line. These ringers are biased and wired so that one of the pair on each side of the line operates on positive pulsating and the other operates on negative pulsating current. One party cannot call another on the same line, except through the central office operator.

The line circuit at the central office is wired the same as for single party line service. The cord circuits are arranged so that the operator may ring over one side of the line to ground with either positive or negative pulsating current. With either of these currents all four relays on the line operate, connecting to ground all four bells. As the operator rings on only one side of the line with pulsating current of one polarity, only the bell on that side of the line which is connected to respond to that polarity will sound. During conversation all ground connections are open at the substations.

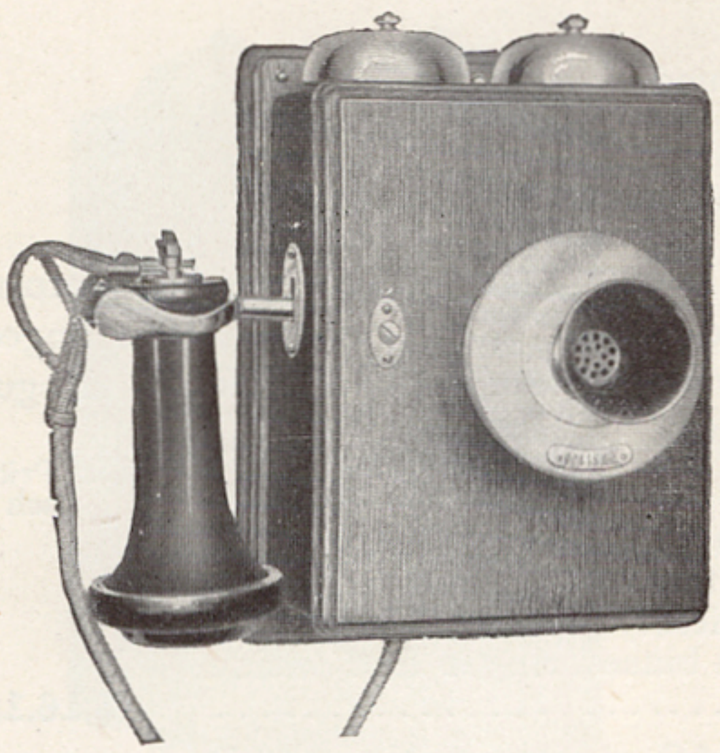
**4 Party Semi-Selective Ringing.** This is the same as the two party selective system, except that there are connected to ground two stations from each side of the line. The operator thus can ring either pair of bells without operating the other pair. The operator uses a code system of ringing to distinguish between the two parties which form a pair connected to each side of the line.

PRICES ON REQUEST

# TELEPHONE SETS

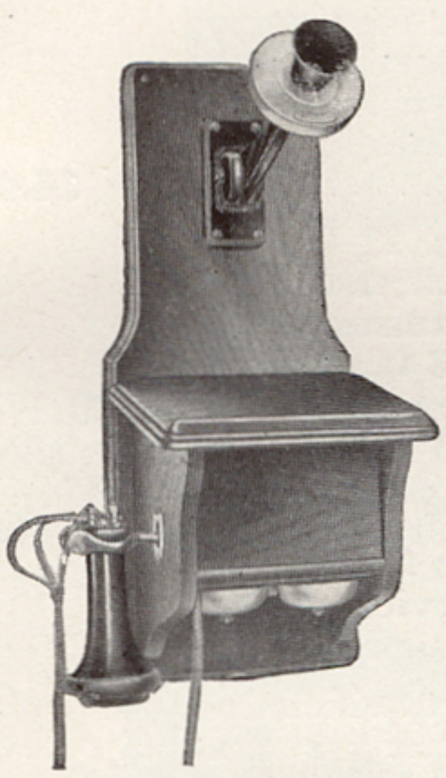
## CENTRAL BATTERY WALL TYPE

Regularly furnished in oak or walnut. The No. 122-W receiver and standard high resistance transmitter are furnished with these sets, others will be supplied if ordered.

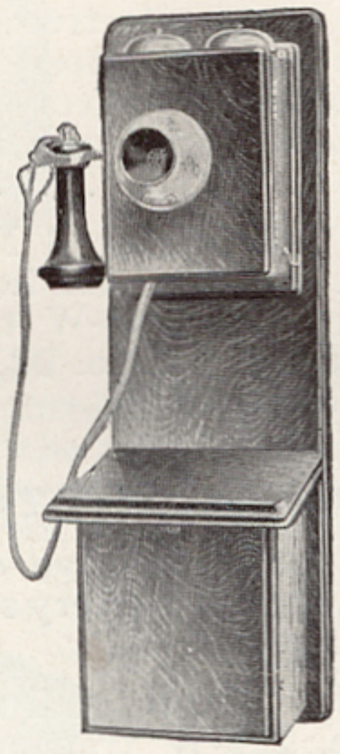


No. 1293-A

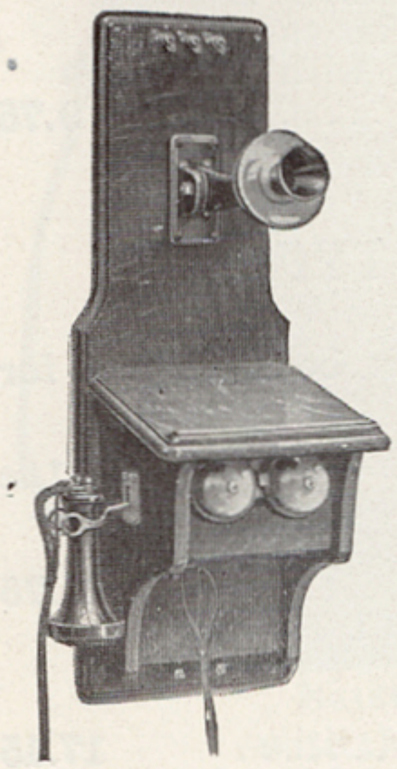
| Code No. | | List Price each |
|---|---|---|
| **1293-A** | For direct, two party selective or four party semi-selective central battery service. 1000-ohm biased ringer and inside binding posts | **$ 10.05** |
| | Includes: 1 No. 8-AG ringer; 1 No. 21-D condenser; 1 No. 3-A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 140-A switchhook; 1 No. 20 induction coil; 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. This set may be used with the Nos. 132-A or 134-A backboards | |
| **1296-A** | For four party selective central battery service. 2500-ohm biased ringer, relay and inside binding posts | **14.25** |
| | Includes: 1 No. 8-BG ringer; 1 No. 140-A switchhook; 1 No. 21-D condenser; 1 No. 3-A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 20 induction coil; 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 No. 85-B relay. This set may be used with the 132-A backboard. | |
| **1293-Y** | For local battery talking and central battery signalling service. 1000-ohm biased ringer and inside binding posts. No provision made for dry cells, but backboard or No. 1 battery box may be provided for them | **9.80** |
| | Includes: 1 No. 8-AG ringer; 1 No. 140-A switchhook; 1 No. 21-D condenser; 1 No. 3-A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 13 induction coil; 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. This set may be used with Nos. 132-A, 134-A or 136-B backboards. | |
| **1294-A** | For direct, two party selective or four party semi-selective central battery service. 1000-ohm biased ringer and inside binding posts | **11.05** |
| | Includes: 1 No. 7-AG ringer; 1 No. 21-D condenser; 1 No. 140-A switchhook; 1 No. 20 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. | |
| **1098-A** | For four party selective central battery service. 2500-ohm biased ringer and relay | **10.15** |
| | Includes: 1 No. 7-BG ringer; 1 No. 120-A switch hook; 1 No. 5-A condenser; 5 No. 2-A binding posts; 2 No. 3-A binding posts; 1 No. 20 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 No. 85-A relay. | |



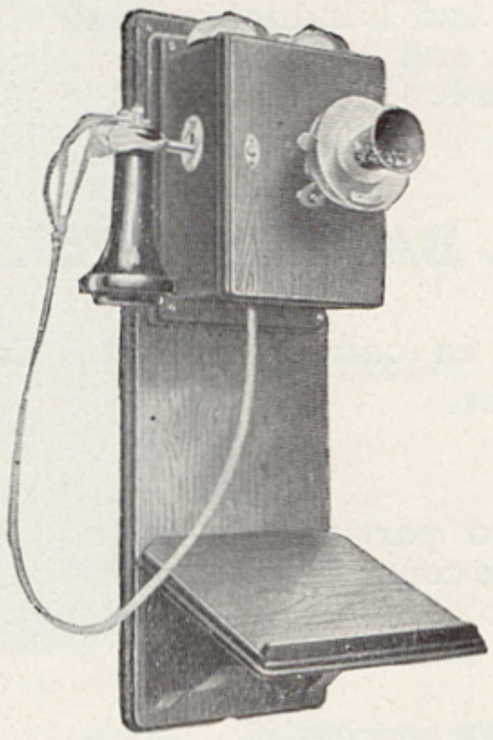
No. 1294-A



No. 1293-Y
On No. 136-B Backboard

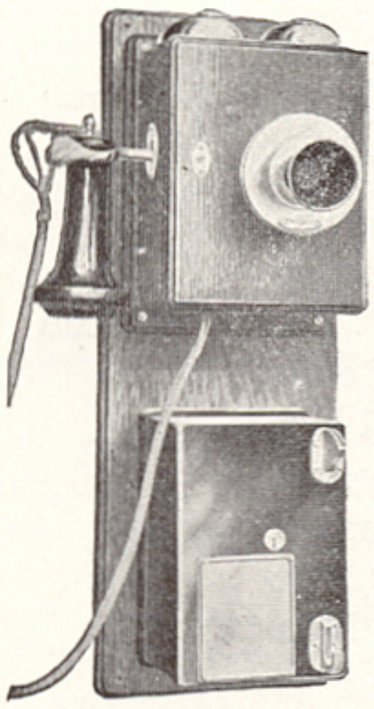


No. 1098-A

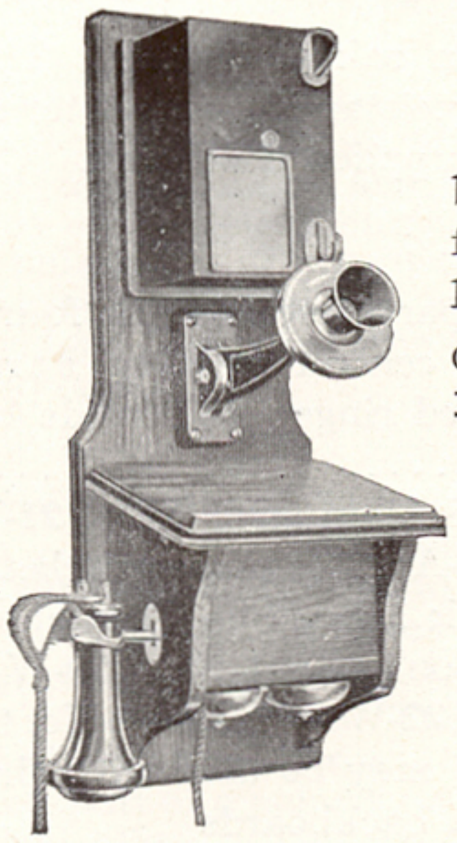


No. 1293-A
On No. 132-A Backboard

## Telephone Sets—Continued
### Central Battery Wall Type—Continued



No. 1293-J



No. 1294-H

#### With No. 7 Type Coin Collectors

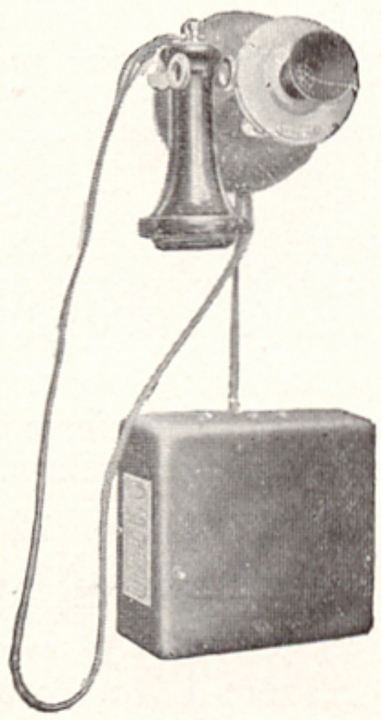
These are equipped with No. 7–A (for nickels) coin collectors, but others will be furnished if desired. Coin collector sets arranged for four party selective service will be furnished, if specified. Regularly furnished in oak or walnut.

| Code No. | | List Price each |
|---|---|---|
| **1293-J** | For direct, two party selective or four party semi-selective central battery service with No. 7 type electrically operated coin collector. 1000-ohm biased ringer and inside binding posts ..... | **$ 16.15** |
| | Includes: 1 No. 8-AG ringer; 1 No. 140-B switch hook; 1 No. 21-D condenser; 1 No. 3–A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 20 induction coil; 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 No. 7-A coin collector; 1 No. 133-A backboard. | |
| **1294-H** | For direct, two party selective or four party semi-selective central battery service with electrically operated coin collector No. 7–A, 1000-ohm biased ringer and inside binding posts ..... | **16.45** |
| | Includes: 1 No. 7-AG ringer; 1 No. 21-D condenser; 1 No. 140-B switch hook; 1 No. 20 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 No. 7-A coin collector. | |

No. 2000

#### Metal Case Wall Type

| | | |
|---|---|---|
| **2002** | For direct, two party selective or four party semi-selective central battery service. 1000-ohm biased ringer | |
| | Consists of: 1 No. 1130-A wall set, which includes: 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 179, 5½ in. cord; 1 No. 196, 3 ft. cord; 1 No. 202, 6 ft. cord and 1 switchhook and 1 No. 1131-J. Desk Set Box, which includes: 1 No. 17-A ringer, 1 No. 21 E condenser, and 1 induction coil. The cases are metal, and regularly furnished with a black finish ..... | **9.75** |



No. 2002

## CENTRAL BATTERY DESK TYPE

Regularly furnished in oak or walnut. Can be furnished for four party selective service.

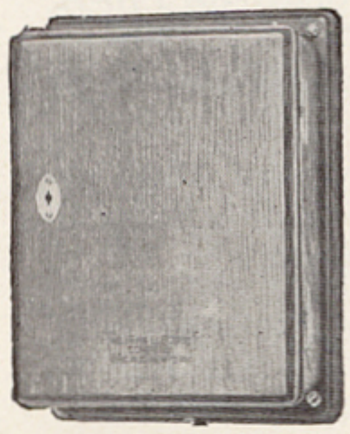
| Code No. | | Price List each |
|---|---|---|
| **2000** | For direct, two party selective or four party semi-selective central battery service ..... | **11.75** |
| | Includes: 1 No. 1295-A desk set box, 1 No. 1020–B desk stand. | |
| **2001** | For coin collector service ..... | **17.45** |
| | Includes: 1 No. 1295-A desk set box, 1 No. 7-A coin collector, 1 No. 1020-F desk stand. | |

Telephone Sets—Continued

## CENTRAL BATTERY DESK SET BOXES

These do not include transmitters and receivers, but are intended for use with desk stands, transmitter arms, or hand sets. Furnished regularly in oak or walnut.

No. 1295-A



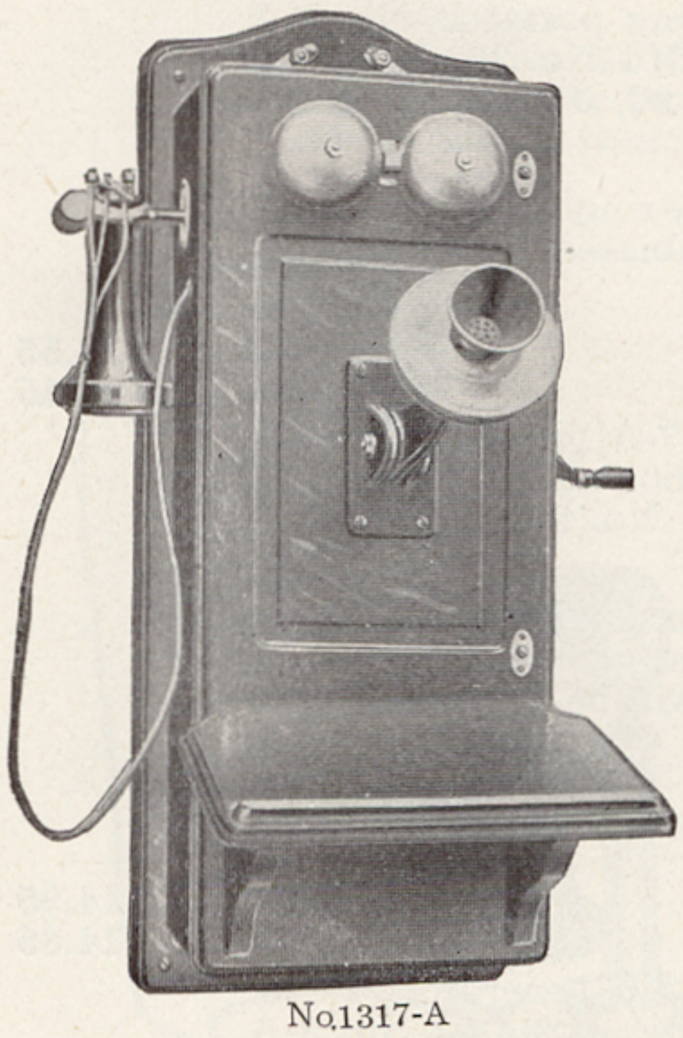
No. 1295-AC

| Code No. | | List Price each |
|---|---|---|
| **1131-J** | For direct, two party selective or four party semi-selective central battery service. This is used with the No. 1130-A wall set, forming the No. 2002 wall telephone set. . . . . Includes: 1 No. 17-A ringer, 1 No. 21-E condenser, 1 No. 20 induction coil. | **$ 3.35** |
| **1295–A** | For direct, two party selective or four party semi-selective central battery service. May be used either with or without the No. 7 type electrically operated coin collector. 1000-ohm biased ringer and inside binding posts . . . . Includes: 1 No. 8-AG ringer, 1 No. 21-D condenser, 1 No. 20 induction coil. | **4.85** |
| **1297-A** | For four party selective central battery service. 2500-ohm biased ringer, relay and inside binding posts . . . . . Includes: 1 No. 8-BG ringer, 1 No. 21-D condenser,1 No. 20 induction coil, 1 No. 85-B relay. | **9.15** |
| **1295-AA** | For local battery talking and central battery signalling service. 1000-ohm biased ringer and inside binding posts . . . . . Includes: 1 No. 8-AG ringer, 1 No. 21-D condenser, 1 No. 13 induction coil. | **4.60** |
| **1295-AC** | For extension to a main telephone set on a direct, two party selective or four party semi-selective central battery system. No ringer, inside binding posts . . . . . Includes: 1 No. 21-D condenser, 1 No. 20 induction coil. | **3.35** |

## MAGNETO WALL TYPE

These are regularly furnished in oak, and arranged to accommodate 3 standard size dry cells; but the cells are not included in the telephone set, and when desired they should be ordered separately.

The No. 122-W receiver and standard high resistance transmitter are furnished with these sets. Others will be supplied if ordered.

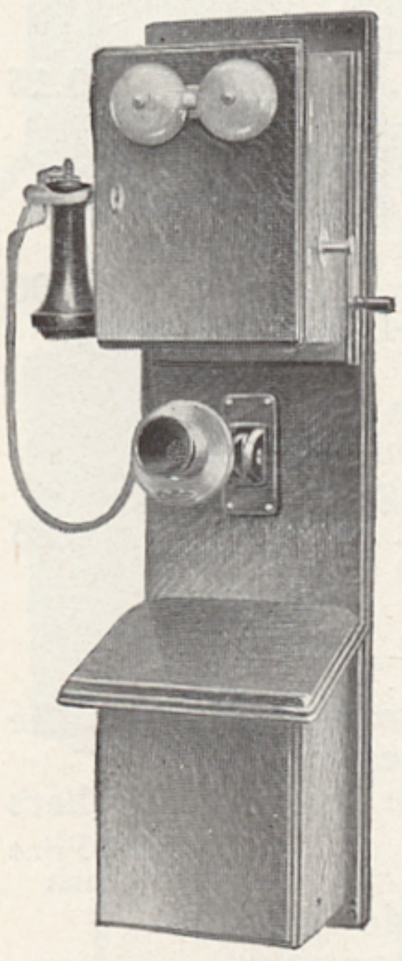


No.1317-A

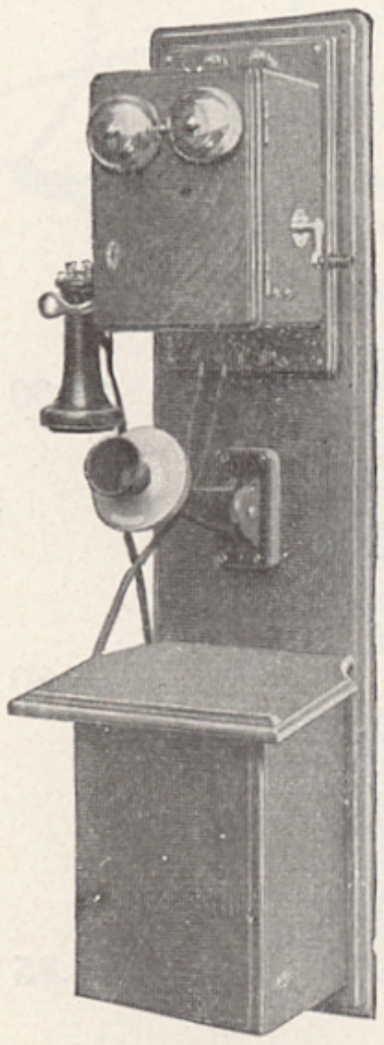
| Code No. | Description | List Price each |
|---|---|---|
| **1317-H** | For light load bridging service where code ringing is employed. 3-bar A.C. generator and 1000-ohm unbiased ringer . . . . . Includes: 1 No. 2-AG ringer; 1 No. 22-A generator: 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. This telephone set may be equipped with a condenser wired in the receiver circuit, and will be so furnished if specified on the order. | **$ 12.15** |
| **1317-A** | For moderate load rural service where code ringing is employed. 5-bar A.C. generator and 1600-ohm unbiased ringer . . . . . Includes: 1 No. 2-FG ringer; 1 No. 47-A generator; 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. | **15.60** |
| **1317-E** | For heavy load rural service where code ringing is employed. 5-bar A.C. generator and 2500-ohm unbiased ringer . . . . . Includes: 1 No. 2-BG ringer; 1 No. 47-A generator; 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. | **15.60** |
| **1317-F** | For moderate load rural service where code ringing is employed. Condenser in series with the receiver. 5-bar A.C. generator and 1600-ohm unbiased ringer . . . . . Includes: 1 No. 2-FG ringer; 1 No. 47-A generator; 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 condenser. | **16.35** |

## Telephone Sets—Continued

| Code No | Description | List Price each |
|---|---|---|
| **1317-G** | For heavy load rural service where code ringing is employed. Condenser in series with receiver. 5-bar A.C. generator and 2500-ohm unbiased ringer ..... Includes: 1 No. 2-BG ringer; 1 No. 47-A generator; 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 condenser. | **$ 16.35** |
| **1317-J** | For two or four party selective service. 2-bar A.C. generator and 2500-ohm biased ringer ..... Includes: 1 N. 6-BG ringer; 1 No. 22-E generator; 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. | **12.75** |
| **1317-K** | For heavy load center checking service. 5-bar pulsating and A.C. generator and 2500-ohm biased ringer ..... Includes: 1 No. 6-BG ringer; 1 No. 47-B generator; 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. | **16.60** |
| **1317-L** | For heavy load rural line where selective central office signalling service and code ringing are employed. 5-bar pulsating and A.C. generator and 2500-ohm biased ringer ..... Includes: 1 No. 6-BG ringer; 1 No. 47-B generator; 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 92, 3 ft. cord; 1 push button; 1 No. 250-W transmitter; 1 No. 122-W receiver. This telephone set may be obtained with a ringer of 1000 or 1600 ohms resistance and with a 3-bar generator and will be furnished with these if specified on the order. | **17.05** |
| **1317-M** | For series line. 3-bar A.C. generator and 80-ohm unbiased ringer. Includes: 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 No. 13 induction coil. These are arranged to accommodate 3 standard size dry cells. Regularly furnished in oak or walnut. | **11.70** |
| **1240-A** | For light load bridging service where code ringing is employed. 3-bar A.C. generator and 1000-ohm unbiased ringer. Includes: 1 No. 2-AG ringer; 1 No. 22-A generator; 1 No. 121-A switch hook; 4 No. 2-A binding posts; 2 No. 3-A binding posts; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 No. 111-C backboard. | Walnut **14.15**<br>Oak **14.05** |
| **1298-A** | For heavy load rural service where code ringing is employed. 5-bar A.C. generator, 2500-ohm unbiased ringer and inside binding posts. Includes: 1 No. 2-BG ringer; 1 No. 47-A generator; 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 No. 138-A backboard. This telephone set may also be obtained with a 1600-ohm ringer in place of the 2500-ohm ringer, or with a condenser wired in the receiver circuit, and will be furnished with these if specified on the order. | Walnut **16.55**<br>Oak **16.45** |
| **1240-E** | For two or four party selective service. 2-bar A.C. generator and 2500-ohm biased ringer. Includes: 1 No. 6-BG ringer; 1 No. 22-E generator; 1 No. 121-A switch hook; 5 No. 2-A binding posts; 2 No. 3-A binding posts; 1 No. 13 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 No. 111-C backboard. | Walnut **14.95**<br>Oak **14.85** |



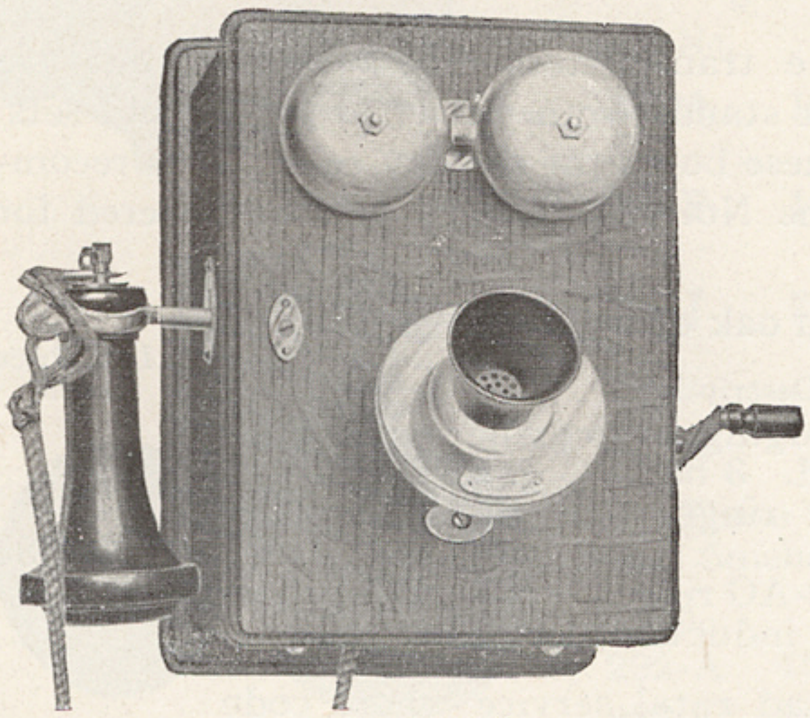
No. 1298-A



No. 1240-A

## Telephone Sets—Continued

### Magneto Wall Type—Continued

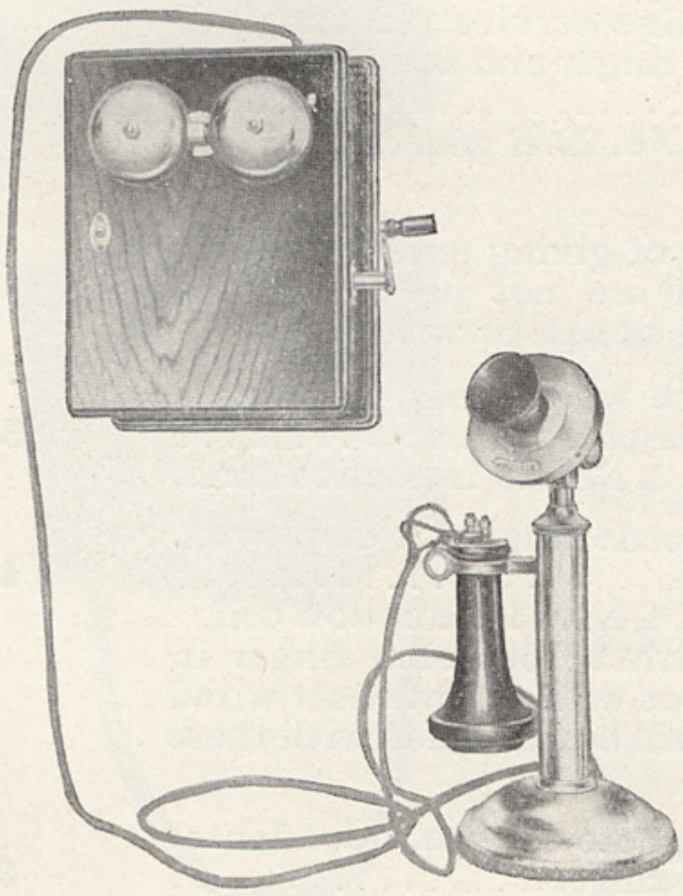


No. 1305-A.

These are not arranged to accommodate the necessary dry cells. It is recommended that the No. 1-A battery box be ordered for this purpose.

Regularly furnished in oak or walnut.

| Code No. | Description | List Price each |
|---|---|---|
| **1305-G** | For light load bridging service where code ringing is employed. 3-bar A.C. generator, 1000-ohm unbiased ringer and inside binding posts..... Includes: 1 No. 2-AG ringer; 1 No. 22-A generator; 1 No. 140-A switch hook; 1 No. 3-A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 13 induction coil; 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. This telephone set may be equipped with a condenser wired in the receiver circuit, and will be so furnished if specified on the order. | **$ 12.30** |
| **1305-H** | For moderate load rural service where code ringing is employed. 5-bar A.C. generator, 1600-ohm unbiased ringer and inside binding posts..... Includes: 1 No. 2-FG ringer; 1 No. 47-A generator; 1 No. 140-A switch hook; 1 No. 13 induction coil; 1 No. 3-A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. | **15.75** |
| **1305-A** | For heavy load rural service where code ringing is employed. 5-bar A. C. generator, 2500-ohm unbiased ringer and inside binding posts..... Includes: 1 No. 2-BG ringer; 1 No. 47-A generator; 1 No. 140-A switch hook; 1 No. 3-A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 13 induction coil; 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. | **15.75** |
| **1305-J** | For moderate load rural service where code ringing is employed. Condenser in series with the receiver. 5-bar A.C. generator, 1600-ohm unbiased ringer and inside binding posts..... Includes: 1 No. 2-FG ringer; 1 No. 47-A generator; 1 No. 140-A switch hook; 1 No. 3-A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 13 induction coil; 1 No. 229-W transmitter, 1 No. 122-W receiver, 1 No. 92, 3 ft. cord; 1 condenser. | **16.50** |
| **1305-K** | For heavy load rural service where code ringing is employed. Condenser in series with the receiver. 5-bar A.C. generator, 2500-ohm unbiased ringer and inside binding posts..... Includes: 1 No. 2-BG ringer; 1 No. 47-A generator; 1 No. 140-A switch hook; 1 No. 3-A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 13 induction coil; 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 condenser. | **16.50** |



No. 2004

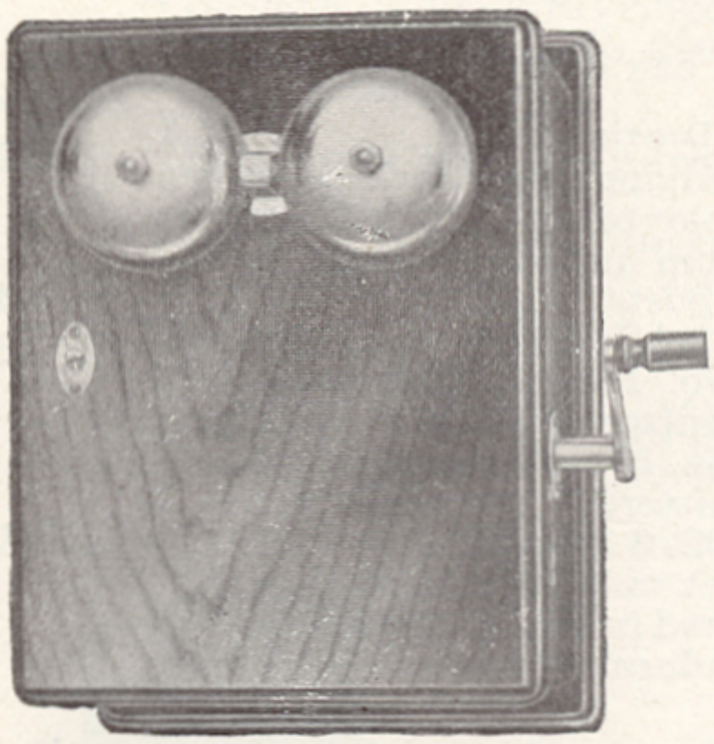
| Code No. | | |
|---|---|---|
| **1305-L** | For two or four party selective service. 2-bar A.C. generator, 2500-ohm biased ringer and inside binding posts..... Includes: 1 No. 6-BG ringer; 1 No. 22-E generator; 1 No. 140-A switch hook, No. 3-A transmitter bracket; 1 No. 179, 5½ in. cord; 1 No. 13 induction coil; 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord. | **12.90** |
| **1305-F** | For series line. 3-bar A. C. generator and 80-ohm unbiased ringer..... Includes: 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 No. 13 induction coil; 1 No. 92, 3 ft. cord. Regularly furnished in oak or walnut. | **11.85** |

## MAGNETO DESK TYPE

| | | |
|---|---|---|
| **2003** | For light load service..... Includes: 1 No. 1315-A desk set box, 1 No. 1020-B desk stand. | **13.75** |
| **2004** | For heavy load service..... Includes: 1 No. 1300-A desk set box, 1 No. 1020-B desk stand. | **17.35** |

Telephone Sets—Continued

## MAGNETO DESK SET BOXES



No 1315-A

These do not include transmitters and receivers, but are intended for use with desk stands, transmitter arms or hand sets. No provision is made in these boxes for the dry cells. It is recommended, however, that the No. 1-A battery box be ordered for this purpose.

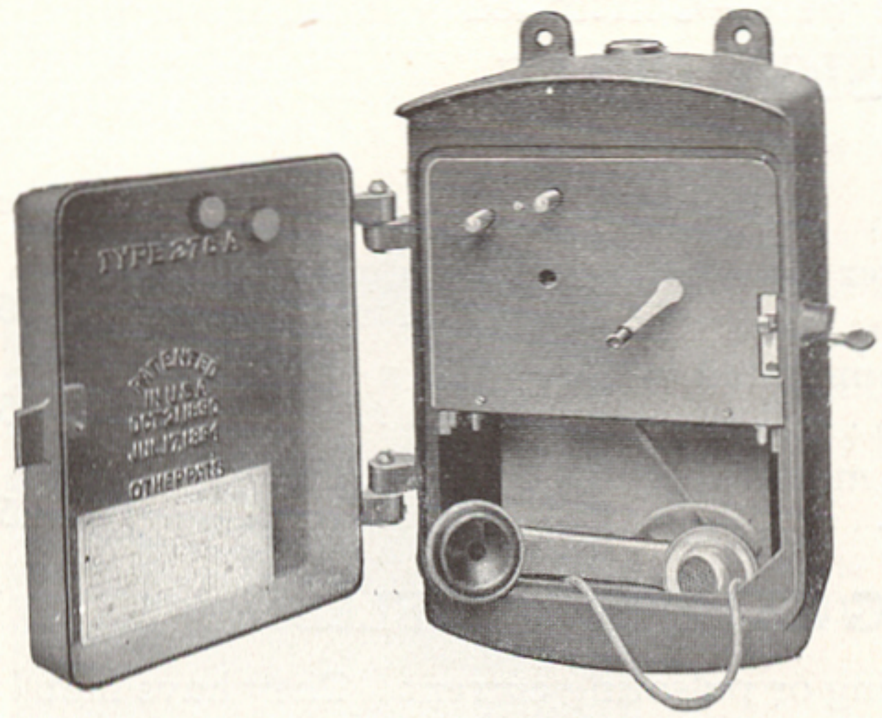
Regularly furnished in oak or walnut.

| Code No. | Description | List Price each |
|---|---|---|
| **1315-A** | For light load bridging service where code ringing is employed. 3 bar A.C. generator, 1000-ohm unbiased ringer and inside binding posts. Includes: 1 No. 2-AG ringer, 1 No. 22-A generator, 1 No. 13 induction coil. | $ 6.85 |
| **1300-F** | For moderate load rural service where code ringing is employed. 5-bar A.C. generator, 1600-ohm unbiased ringer and inside binding posts. Includes: 1 No. 2-FG ringer, 1 No. 47-A generator, 1 No. 13 induction coil. | 10.45 |
| **1300-A** | For heavy load rural service where code ringing is employed. 5-bar A.C. generator, 2500-ohm unbiased ringer and inside binding posts. Include: 1 No. 2-BG ringer, 1 No. 47-A generator, 1 No. 13 induction coil. | 10.45 |
| **1300-G** | For moderate load rural service where code ringing is employed. Condenser in series with the receiver. 5-bar A.C. generator, 1600-ohm unbiased ringer and inside binding posts. Includes: 1 No. 2-FG ringer, 1 No. 47-A generator, 1 No. 13 induction coil, 1 condenser. | 11.20 |
| **1300-H** | For heavy load rural service where code ringing is employed. Condenser in series with the receiver. 5-bar A.C. generators, 2500-ohm unbiased ringer and inside binding posts. Includes: 1 No. 2-BG ringer, 1 No. 47-A generator, 1 No. 13 induction coil, 1 condenser. | 11.20 |
| **1315-E** | For two or four party selective service. 2-bar A.C. generator, 2500-ohm biased ringer and inside binding posts. Includes: 1 No. 6-BG ringer, 1 No. 22-E generator, 1 No. 13 induction coil. | 7.45 |

These are intended for the purpose of giving extension service to main telephone sets, and are not provided with generators. Regularly furnished in oak or walnut.

No. 1295-S

| | | |
|---|---|---|
| **1295-S** | For light load bridging service where code ringing is employed. 1000-ohm unbiased ringer. Includes: 1 No. 4-AG ringer, 1 No. 13 induction coil. | 3.70 |
| **1295-Y** | For heavy load service where code ringing is employed. 2500-ohm biased ringer. Includes: 1 No. 8-BG ringer, 1 No 13 induction coil. This set may be obtained with a 1600-ohm ringer in place of a 2500-ohm ringer, or with a condenser wired in the receiver circuit, and will be furnished with these if specified on the order. | 4.10 |
| **1295-AB** | For all classes of bridging magneto service. Condenser in series with receiver. No ringer. Includes: 1 No. 13 induction coil, 1 condenser. | 3.10 |



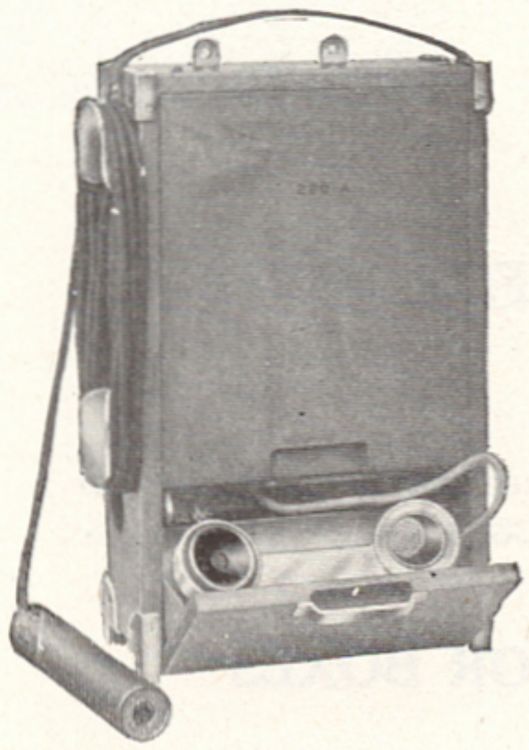
No. 1278-A

## LOCAL BATTERY TELEPHONE SETS FOR STREET RAILWAYS

These are particularly well adapted to street railway work where the telephone lines are strung with the trolley and feed wires (on the same poles) and where the need of the best known protective devices is apparent.

### Pole Type

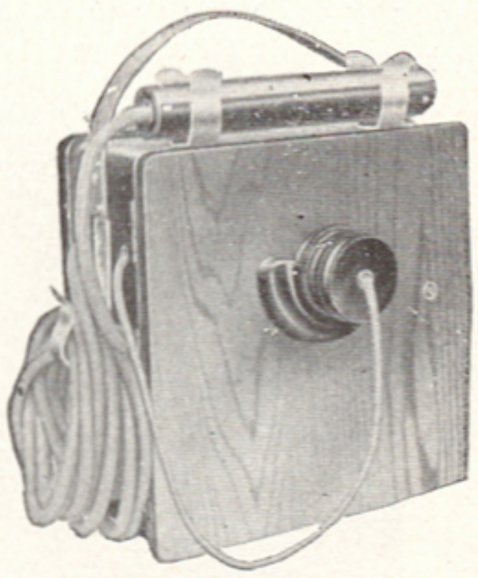
| Code No. | Description | List Price each |
|---|---|---|
| **1278-A** | Includes: 1 No. 47-G, 5-bar generator; 1 No. 25-E repeating coil; 2, 1-amp. fuses; 2 carbon cutouts; 1 No. 13 induction coil; 1 No. 244-W transmitter; 1 No. 131-W receiver; 1 No. 1 hand-set handle; 1 No. 242, 18 in. cord, 1 No. 243, 8 in. cord; 2 switches for automatically opening the line and battery circuits when the door is closed. Arranged for 2 Blue Bell dry cells, but these are not furnished unless specified..... | **$ 43.75** |



No. 1280-A

### Portable Type

| | | |
|---|---|---|
| **1280-A** | Includes: 1 No. 20-B, 5-Bar generator, 1 No. 34-A repeating coil; 1 No. 126 plug; 1 No. 309, 15 ft. cord; 1 No. 70-A protector; 1 No. 13 induction coil; 1 No. 244-W transmitter; 1 No. 131-W receiver; 1 No. 1 hand-set handle; 1 No. 285, 18 in. cord; 1 No. 243, 8 in. cord; 1 switch for automatically opening the battery circuit when the set is closed. Arranged for 2 Blue Bell dry cells, but these are not furnished unless specified. Weight, 33 lbs..... | **43.10** |



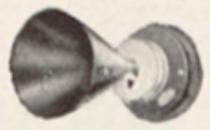
No. 1302-A

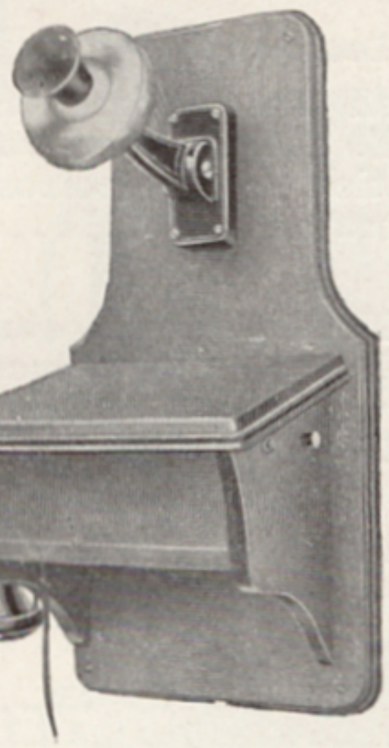
| | | |
|---|---|---|
| **1302-A** | Includes: 1 No. 43-B, 5-bar generator; 1 No. 25-E repeating coil; 1 No. 126 plug; 1 No. 309, 15 ft. cord; 1 No. 70-A protector; 1 No. 13 induction coil; 1 No. 228-W transmitter; 1 No. 133-W receiver; 1 No. 179, 5½ in. cord; 1 No. 311, 3 ft. cord; 1 switch for automatically opening the battery circuit when the receiver is placed in holder. Arranged for 2 Blue Bell dry cells, but these are not furnished unless specified. Weight, 27 lbs..... | **29.00** |

## TELEPHONE SETS FOR USE ON "RAILWAY COMPOSITE" LINES

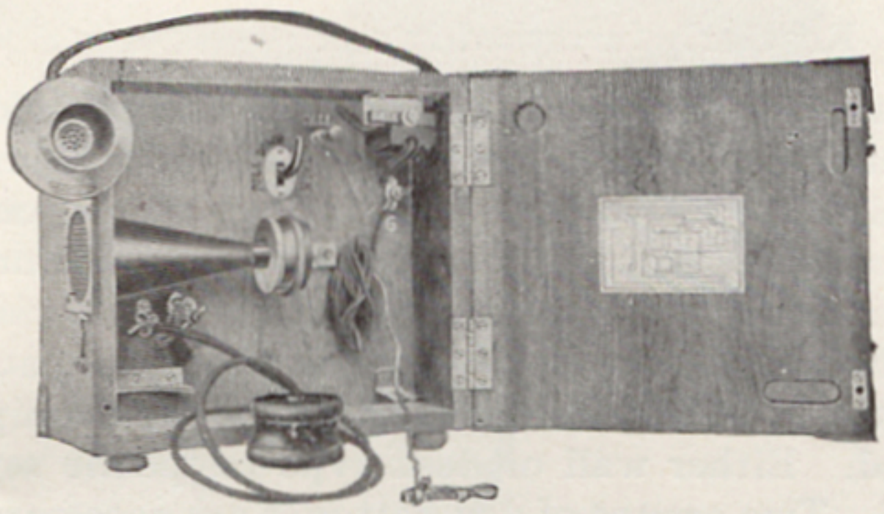
Special telephone sets used in railway systems for simultaneous telephony and telegraphy. These are arranged to signal by means of high frequency current which operates a howler, producing a loud tone.

In equipping a line for this service it is necessary to install at each terminal telephone station a differentiator known as the No. 28-B condenser; at each intermediate telegraph station a No. 27-B condenser and No. 31-A resistance coil.

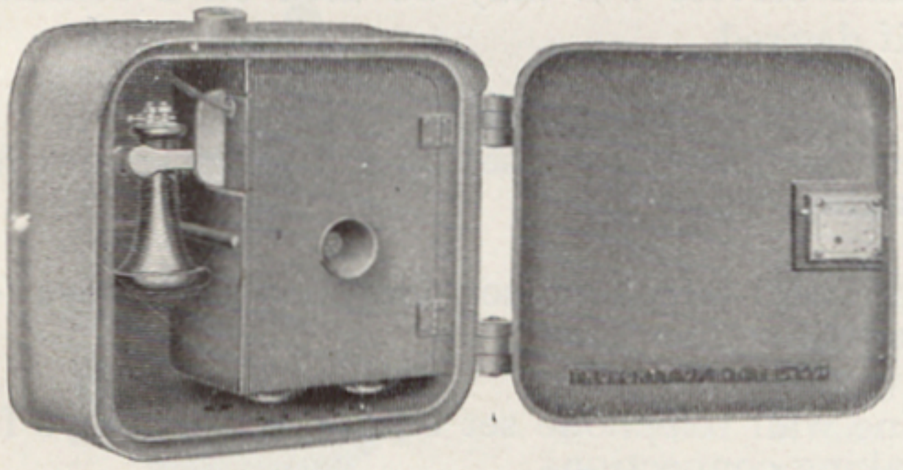




No. 1312-A



No. 1314-A



No. 1320-A Open


No. 1320-A Closed

## Telephone Sets—Continued

### Telephone Sets for use on "Railway Composite" Lines—Continued

#### Wall Type

| Code No. | Description | List Price each |
|---|---|---|
| **1312-A** | Includes: 1 No. 12-G retardation coil; 1 No. 21-D condenser; 1 No. 21-U condenser; 1 No. 21-H condenser; 1 No. 140-B switch hook; 1 No. 1-A howler; 1 No. 5 induction coil; 1 No. 250-W transmitter; 1 No. 122-W receiver; 1 No. 92, 3 ft. cord; 1 No. 390-B key..... | **$ 28.80** |

#### Portable Type

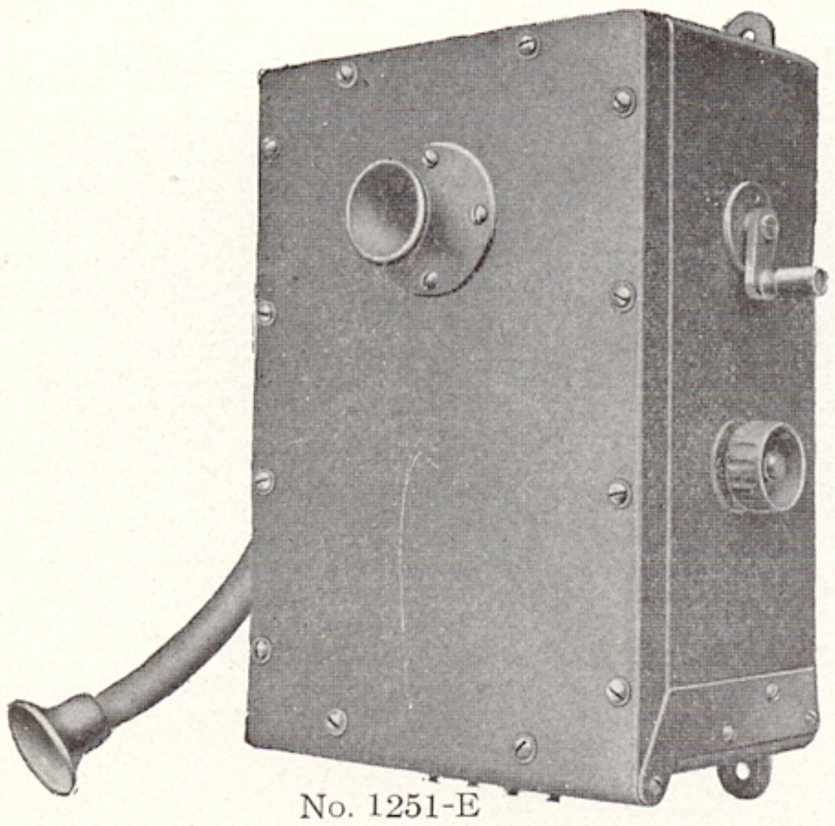
| | | |
|---|---|---|
| **1314-A** | Includes: 1 No. 12-M retardation coil; 1 No. 140-F switch hook; 1 No. 390-B key; 1 No. 21-D condenser; 1 No. 21-U condenser; 1 No. 1-B howler; 1 No. 3-B binding post; 3 No. 3-C binding posts; 1 No. 311, 3 ft. cord; 1 No. 179, 5½ in. cord; 1 No. 267, 10 ft. cord, 1 No. 2 line pole; 1 No. 228-W transmitter; 1 No. 133-W receiver; 1 No. 5 induction coil; 4 Blue Bell dry cells; 1 rail clamp..... | **47.45** |

## TELEPHONE SETS FOR POLICE SERVICE

This is a central battery telephone set enclosed in a cast iron case about 12 in. x 12 in. x 6½ in. and especially adapted to police patrol service. The lettering on the case can be arranged as ordered. All the telephone parts are mounted on a frame which can be removed as a unit from the case. The door is flanged to make it weather proof and is provided with a strong spring lock of special design.

| Code No. | Description | List Price each |
|---|---|---|
| **1320-A** | Furnished with all the necessary apparatus.<br>Includes: 1, 1000-ohm unbiased ringer; 1 No. 21-D condenser; 1 No. 20 induction coil; 2 No. 3-A binding posts; 2 No. 2-A binding posts; 1 No. 92, 12 in. cord, 1 No. 229-W transmitter; 1 No. 122-W receiver; 1 switch hook..... | **$ 40.25** |

Telephone Sets—Continued



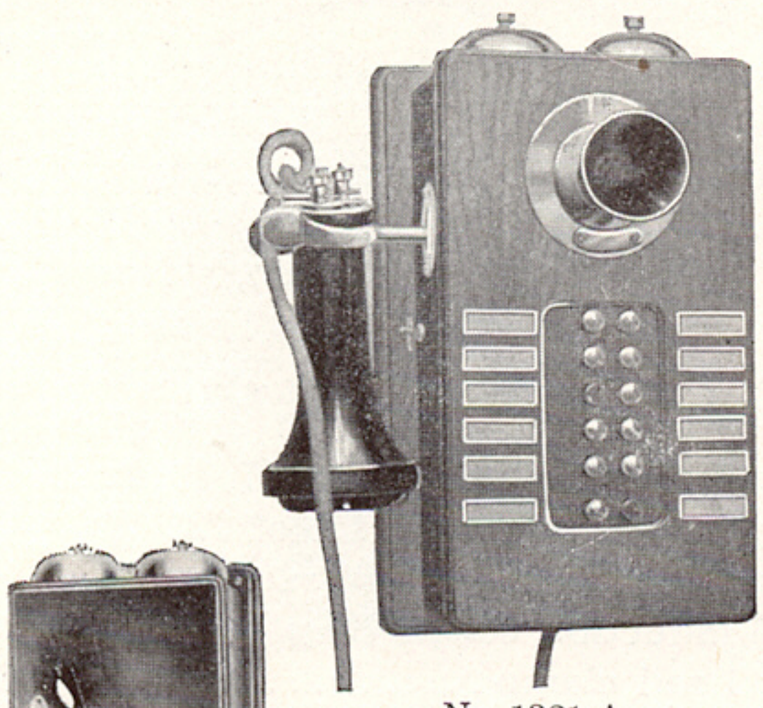
No. 1251-E

## TELEPHONE SETS FOR USE IN MINES

| Code No. | Description | List Price each |
|---|---|---|
| **1251-E** | This contains all the apparatus except the extension bell. The case is covered with lead as a protection against corrosion and decay, 5 bar generator..... | **$ 35.00** |

Includes: 1 No. 20-A generator, 1 key for battery ciruit, 1 No. 13 induction coil, 1 No. 228-W transmitter, 1 No. 128-W receiver less head band and cap.

The No. 283-A extension bell is used with this set.

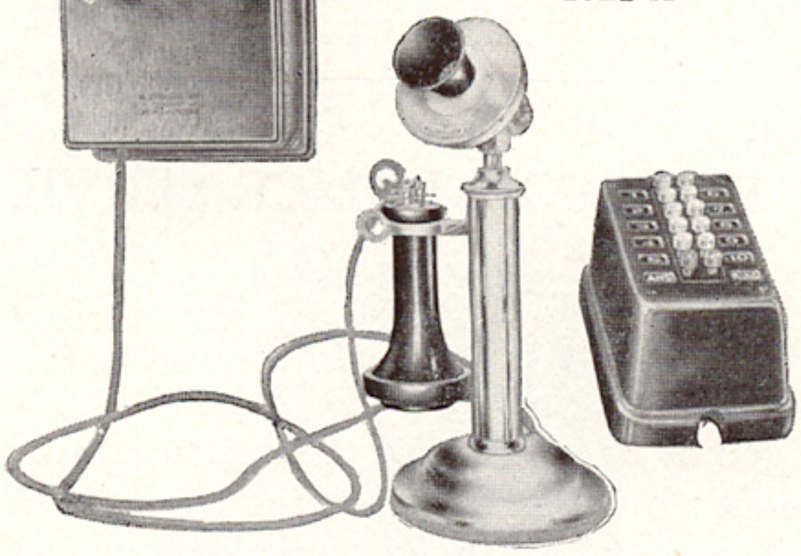


No. 1321-A

## INTER-COMMUNICATING TELEPHONE SETS

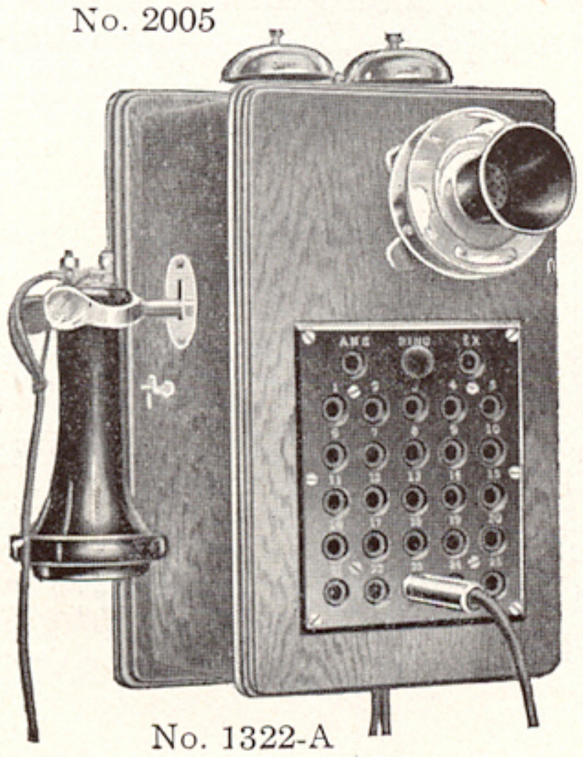
Regularly furnished in oak

These sets are designed for inter-communicating service between different rooms or departments in the same building or adjoining buildings. They are built in two styles, one being equipped with keys for making the desired connections and the other with jacks and a cord and plug. The former is furnished in three sizes, ten, twenty and thirty line capacities and the latter in twenty four line capacity with equipment as specified. Either wall or desk type telephone sets can be furnished. Two groups of dry batteries are necessary, one for ringing and the other for talking. These sets are wired for metallic service but may be used on a common return system if desired.



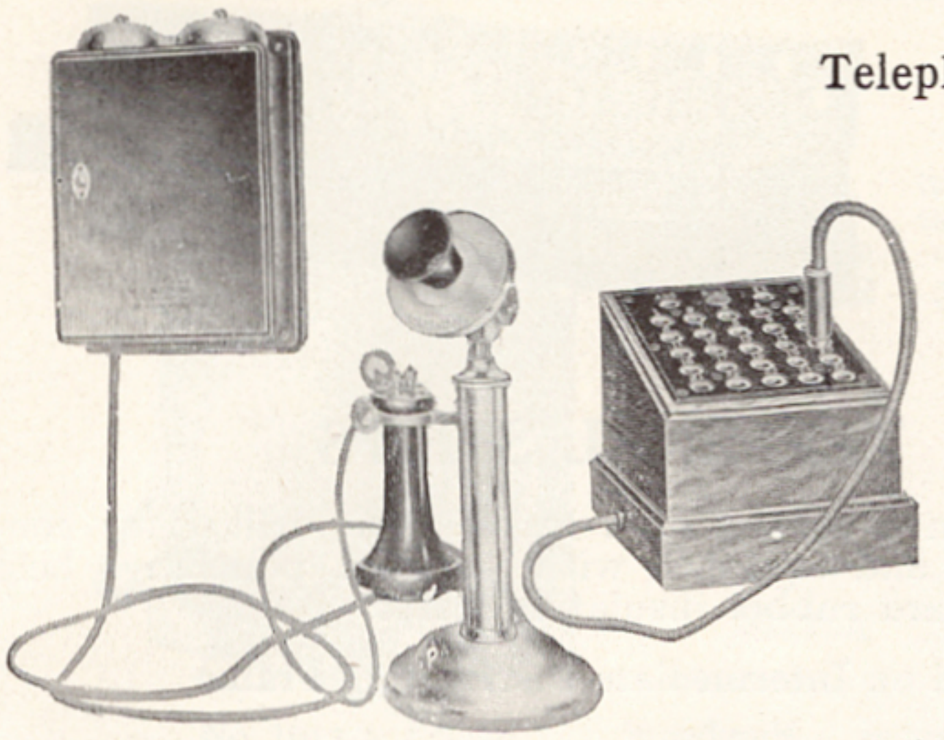
No. 2005

| Code No. | Description |
|---|---|
| **1321-A** | 10 line wall telephone set equipped with keys for making connections |
| **1321-E** | 20 line wall telephone set equipped with keys for making connections |
| **1321-F** | 30 line wall telephone set equipped with keys for making connections |
| **2005** | 10 line desk telephone set with keys for making connections. Includes 1 desk set box, 1 No. 1020-H desk stand, 1 No. 371-A key |
| **2006** | 20 line desk telephone set with keys for making connections. Includes 1 desk set box, 1 No. 1020-H desk stand, 1 No. 371-B key |
| **2007** | 30 line desk telephone set with keys for making connections. Includes 1 desk set box, 1 No. 1020-H desk stand, 1 No. 371-C key |
| **1322-A** | 24 line wall telephone set equipped with jacks and plug and cord for making connections. Equipment of jacks to be specified. |



No. 1322-A

PRICES ON REQUEST

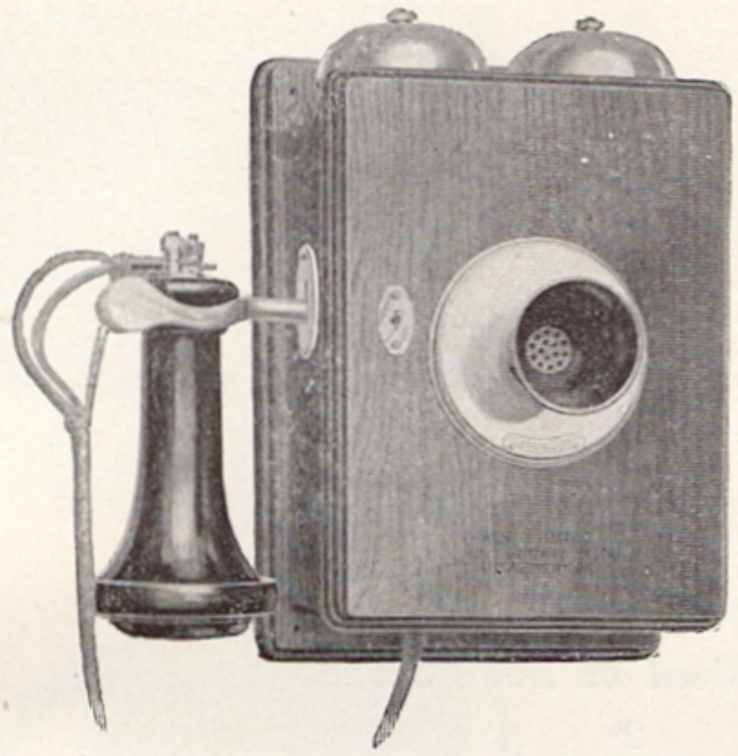


No. 2008

## Telephone Sets—Continued

### Inter-Comunicating Telephone Sets—Continued

| Code No. | Description |
|---|---|
| **2008** | **24** line desk telephone set with jacks, plug and cord for making connections. Includes 1 desk set box, 1 No. 1020-H desk stand, 1 jack box. Equipment of jacks to be specified. |



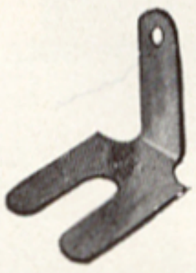
No. 1293-AB

## PRIVATE LINE TELEPHONE SET

This set is suitable for use on short lines connecting different rooms or departments in the same building, or for connecting house and stable, only two wires between stations being necessary. More than two stations may be connected to the line if desired. The batteries are located at each station and signalling is accomplished by means of a push button which operates direct current ringers at the other stations.

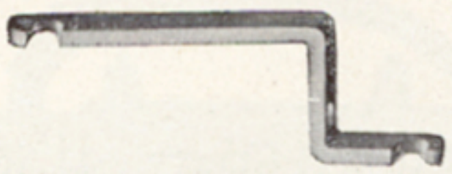
| Code No. | |
|---|---|
| **1293-AB** | Furnished in oak or walnut as specified. |

## TERMINAL PUNCHINGS



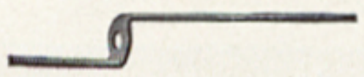
No. 3

No. 6



No. 8

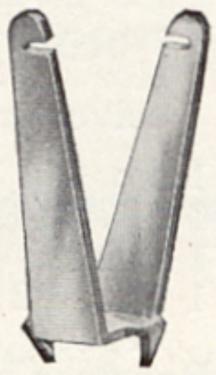
No. 9



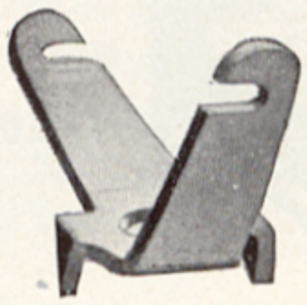
No. 13-A

No. 14

| Code No. | Description | List Price per hundred |
|---|---|---|
| **3** | German silver, used on fuse posts and fuse blocks | $ 0.45 |
| **6** | Brass, used for the ground side of the ringing leads | .90 |
| **8** | Heavy brass, used on double sided connecting racks | 2.25 |
| **9** | Brass, used on No. 10 switchboard | .85 |
| **13-A** | Brass, used on double sided connecting racks | 1.15 |
| **13-B** | Brass, used on double sided connecting rack, similar to No. 13-A only longer | 1.15 |
| **14** | Brass, screw connection | 2.65 |
| **15-A** | Brass, used on one sided connecting racks | 1.30 |
| **16** | Brass, used on repeating coils and retardation coils | .45 |
| **17-A** | Brass, used on induction coils and telephone sets | .55 |

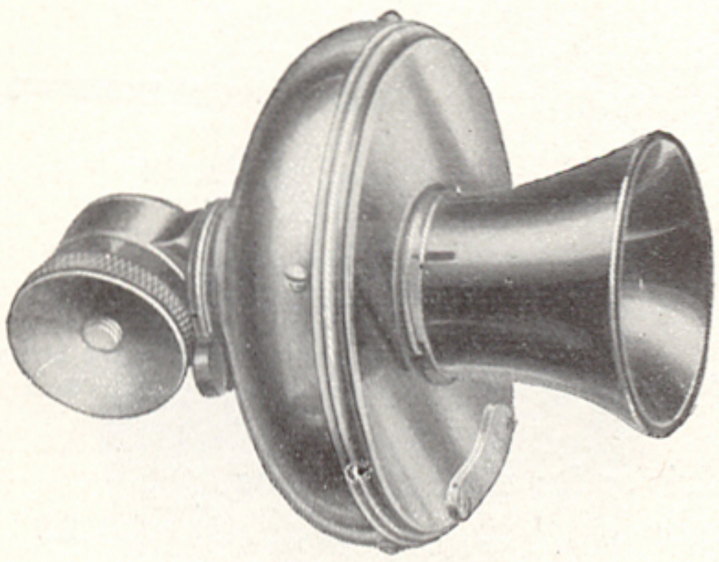


No. 15

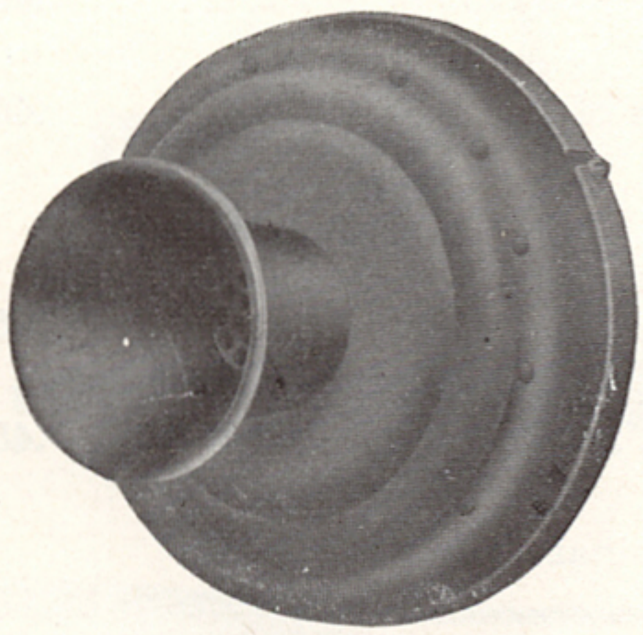


No. 16

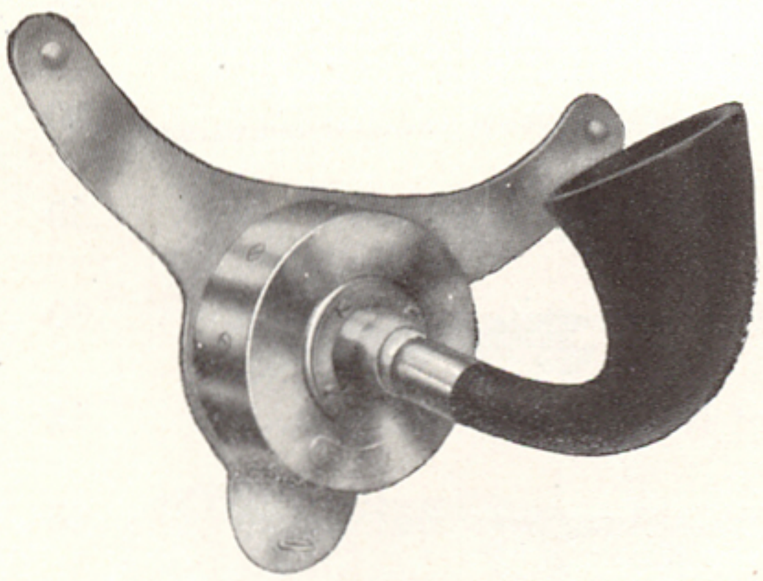
No. 17-A



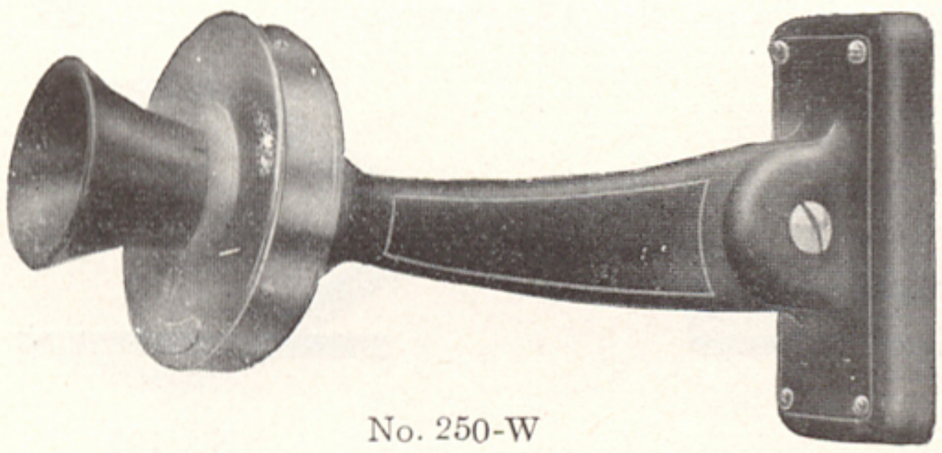
No. 229-W



No. 232-W



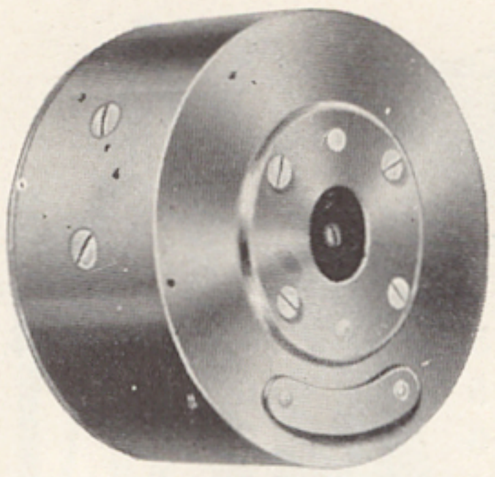
No. 234-W



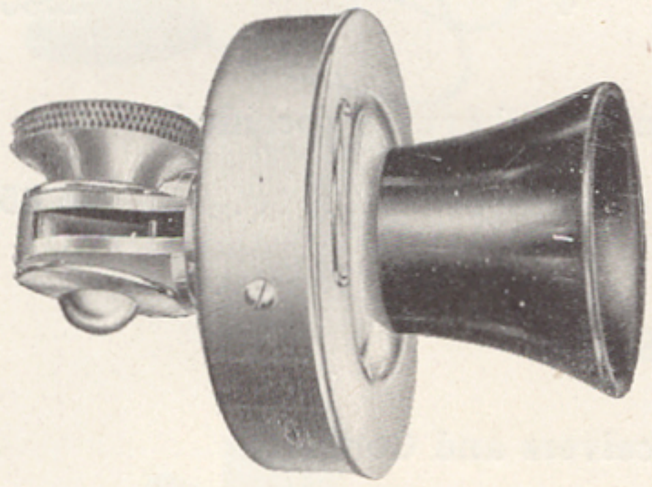
No. 250-W

# TRANSMITTERS

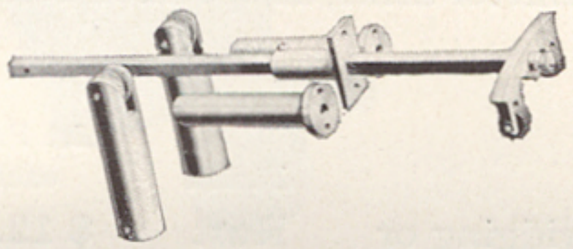
| Code No. | Description | Used with | List Price each |
|---|---|---|---|
| **226-W** | Low resistance transmitter without lug. | | **$ 1.40** |
| **227-W** | Low resistance transmitter with lug. | | **2.00** |
| **228-W** | High resistance transmitter without lug. | Nos. 1251-E, 1302-A and 1314-A telephone sets..... | **1.40** |
| **229-W** | High resistance transmitter with lug. | Desk stands, transmitter arms and small telephone sets | **2.00** |
| **232-W** | High resistance transmitter arranged to be suspended by two cords entering side of case. | Nos. 7 and 19 transmitter arms for switchboards..... | **2.55** |
| **234-W** | Operator's chest transmitter arranged to be supported by a band around the operator's neck. This attachment is not furnished with the transmitter. | Switchboards as operator's transmitter. No. 3 type of transmitter attachment used as support..... | **2.95** |
| **244-W** | Transmitter arranged to be fixed to No. 1 hand set handle. | No. 1001 hand set .. | **2.25** |
| **250-W** | High resistance bracket type transmitter. | All wall telephone sets that require bracket type transmitter..... | **2.40** |



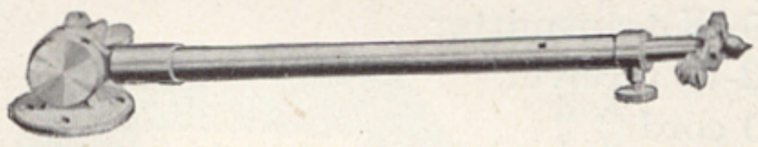
No. 266-W



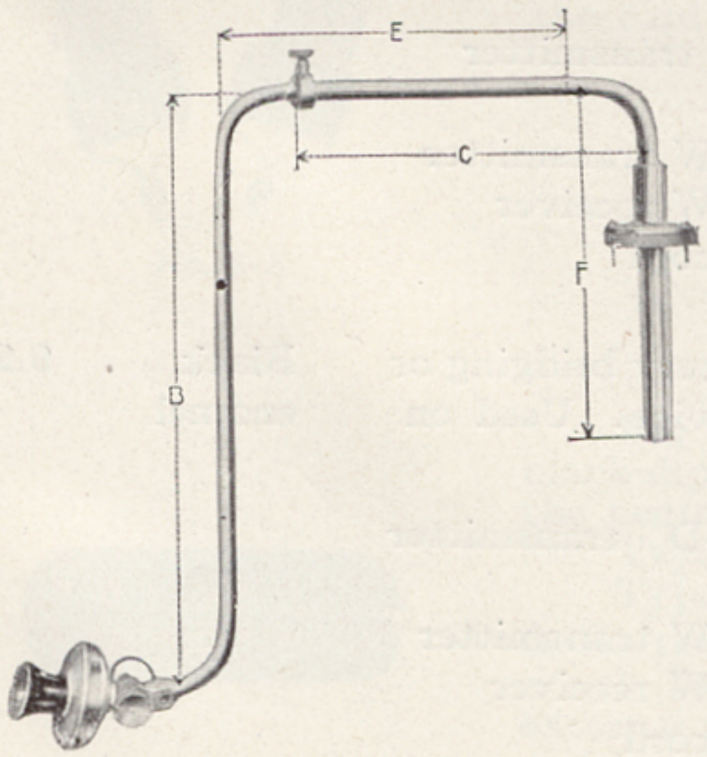
No. 269-W



No. 7-A



No. 19-A




No. 11

## Transmitters—Continued

| Code No. | Description | Used with | List Price each |
|---|---|---|---|
| 251-W | Low resistance bracket type transmitter. | | $ 2.40 |
| 266-W | Transmitter to be fastened inside case. | No. 1017-A test set | 1.30 |
| 267-W | Transmitter arranged to be fixed to No. 2 type hand set handle. | No. 1002-A hand set..... | 1.55 |
| 269-W | High resistance transmitter having small insulated case. | Intercommunicating wall telephone sets | 2.00 |
| 270-W | High resistance transmitter of the bracket type having insulated case. | All wall telephone sets that require bracket type transmitter ..... | 2.40 |
| 271-W | High resistance transmitter having insulated case with lug. | No. 1020-P desk stand..... | 2.00 |
| 272-W | High resistance transmitter having insulated case with lug, and equipped with two 5½ in. No. 329 cords. | Wall telephone sets (except intercommunicating) that require transmitter with lug..... | 2.00 |

# TRANSMITTER ARMS

## FOR SWITCHBOARDS

The code number does not include transmitter, receivers or cords.

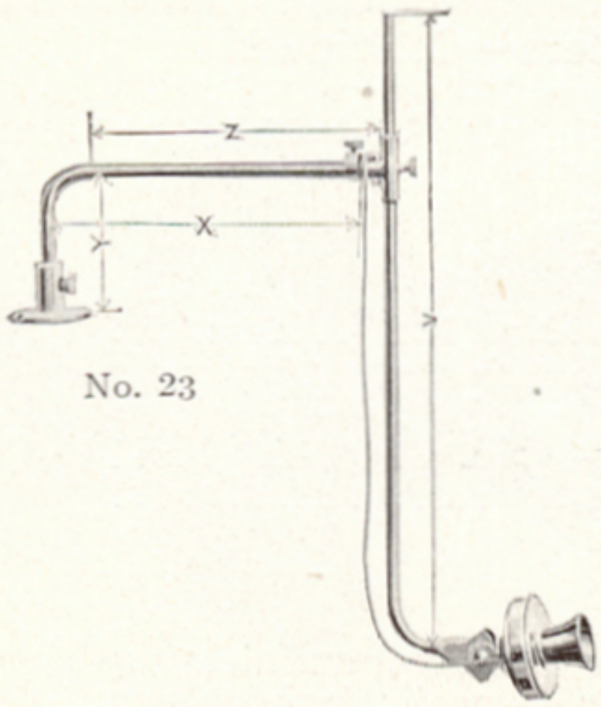
### Using Suspended Transmitter

| Code No. | Description | List Price each |
|---|---|---|
| 7-A | This includes the two cord escutcheon tubes, hanger and two No. 103 cord weights. Furnished in brass finish unless otherwise specified. In ordering, state whether the tubes through which the cord runs shall be 7 or 13 inches long..... | $ 4.90 |
| 19-A | Nickel plated unless otherwise specified..... | 5.65 |

### Using Transmitter with Lug

No. 11 type is nickel plated unless otherwise specified.

| | Dimensions in inches | | | | |
|---|---|---|---|---|---|
| | B | C | E | F | |
| 11-A | 19 | 12 | 12 | 12 | $ 5.85 |
| 11-B | 12 | 11 | 11 | 12 | 5.85 |
| 11-C | 18 | 12 | 12 | 16 | 5.85 |
| 11-D | 12 | 16 | 16 | 15 | 5.85 |
| 11-E | 6 | 12 | 12 | 11 | 5.85 |



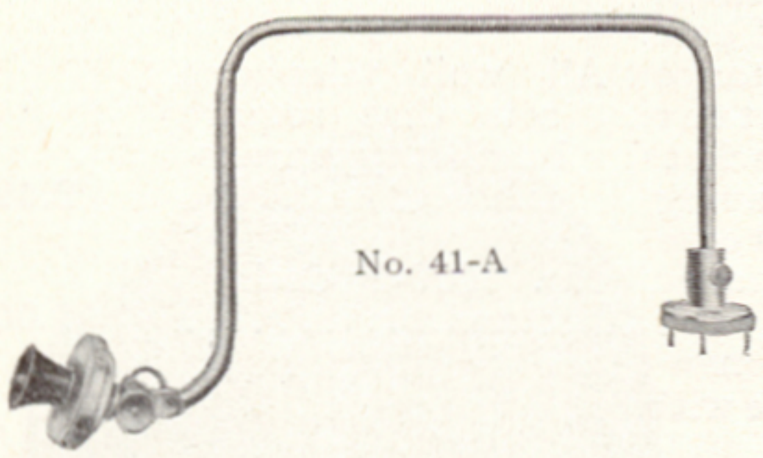

No. 23

## Transmitter Arms—Continued

### For Switchboards—Continued

No. 23 type is nickel plated unless otherwise specified.

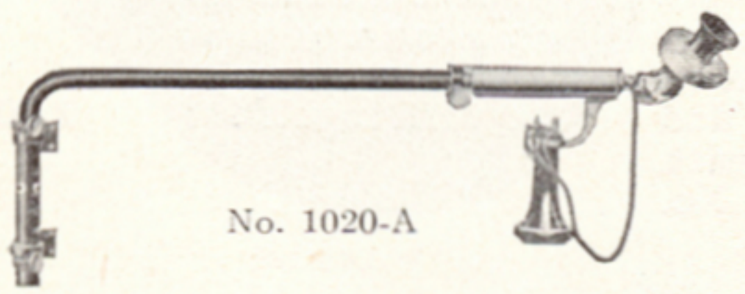
| Code No. | Dimensions, inches V | X | Y | Z | List Price each |
|---|---|---|---|---|---|
| **23-A** | 27 | 11 | 5 | 10 | **$ 3.60** |
| **23-B** | 18 | 11 | 5 | 10 | **3.60** |
| **23-C** | 12 | 8 | 6 | 7 | **3.60** |
| **23-D** | 20 | 14 | 4 | 13 | **3.60** |
| **23-E** | 12 | 14 | 8 | 13 | **3.60** |
| **23-F** | 8 | 14 | 4 | 13 | **3.60** |



No. 41-A

No. 41 type is nickel plated unless otherwise specified.

**41-A** Used with No. 4 private exchanges..... **5.65**



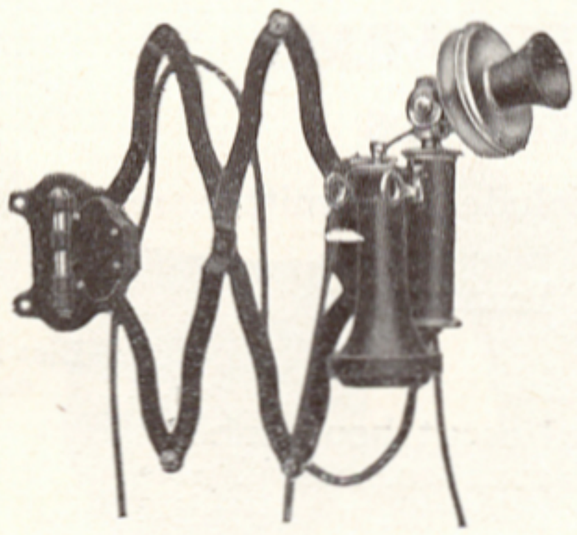
No. 1020-A

## FOR DESKS

### With Transmitters, Receivers and Cords

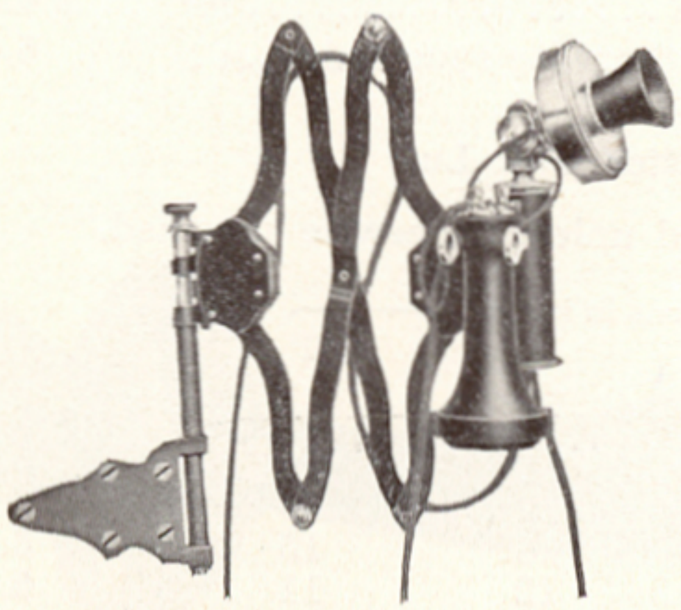
The No. 122-W receiver and standard high resistance transmitter are furnished with these transmitter arms, as specified below. Others will be furnished if ordered.

| Code No. | Description | Finish | List Price each |
|---|---|---|---|
| **1020-A** | For regular local battery bridging or central battery service. Used on flat top desks.<br>Includes: 1 No. 20-A transmitter arm<br>1 No. 229-W transmitter<br>1 No. 122-W receiver<br>1 No. 310 cord | Rust proof dull black | **$ 12.35** |



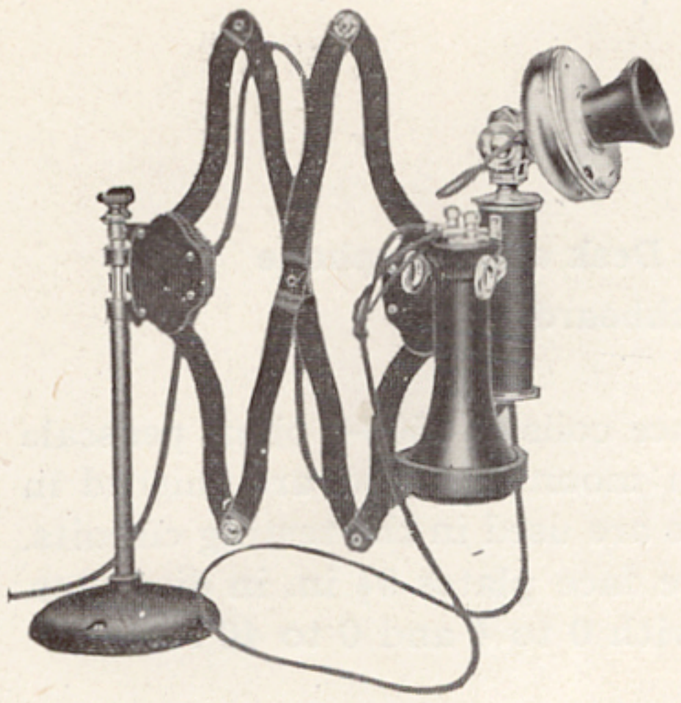
No. 1040-B

| | | | |
|---|---|---|---|
| **1040-B** | For regular local battery bridging or central battery service. Mounts on wall.<br>Includes: 1 No. 40-B transmitter arm<br>1 No. 229-W transmitter<br>1 No. 122-W receiver<br>1 No. 308 cord | Black enamel | **9.05** |



No. 1040-D

| | | | |
|---|---|---|---|
| **1040-D** | For regular local battery bridging or central battery service. Used on roll top desks.<br>Includes: 1 No. 40-D transmitter arm<br>1 No. 229-W transmitter<br>1 No. 122-W receiver<br>1 No. 308 cord | Black enamel | **9.20** |



No. 1040-F

## Transmitter Arms—Continued

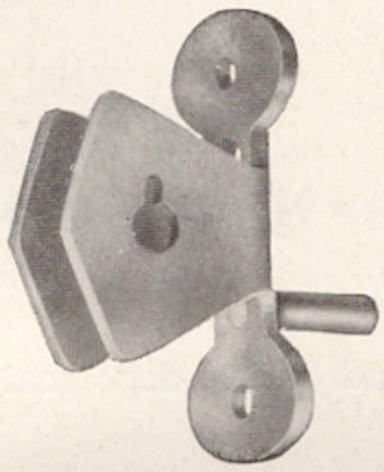
### For Desks—Continued

| Code No. | Description | Finish | List Price each |
|---|---|---|---|
| **1040-F** | For regular local battery bridging or central battery service. Used on flat top desks.<br>Includes: 1 No. 40-F transmitter arm<br>1 No. 229-W transmitter<br>1 No. 122-W receiver<br>1 No. 308 cord | Black enamel | **$ 9.15** |

### Without Transmitters, Receivers or Cords

These are similar to those listed above except that the transmitters, receivers and cords are omitted.

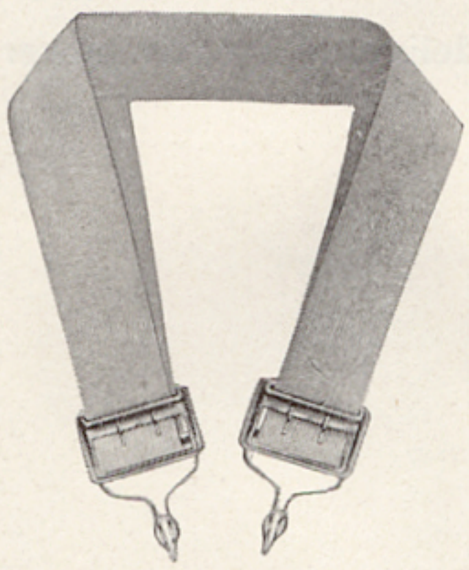
| Code No. | Description | Finish | List Price each |
|---|---|---|---|
| **20-A** | Regular local battery bridging or central battery service. Used on flat top desks. | Rust proof dull black | **$ 7.50** |
| **40-B** | Regular local battery bridging or central battery service. Mounts on wall. | Black enamel | **4.35** |
| **40-D** | Regular local battery bridging or central battery service. Used on roll top desks. | Black enamel | **4.50** |
| **40-F** | Regular local battery bridging or central battery service. Used on flat top desks. | Black enamel | **4.50** |



No. 3-A

## TRANSMITTER BRACKET

| Code No. | Description | List Price each |
|---|---|---|
| **3-A** | Nickel plated bracket for mounting transmitter on front of telephone set ..... | **$ 0.18** |



No. 3-A

## TRANSMITTER ATTACHMENTS

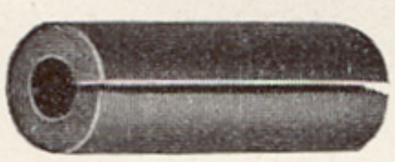
### Used to Support the Operator's "Chest" Transmitter

| Code No. | Description | List Price each |
|---|---|---|
| **2-A** | Buckle only ..... | **$ 0.08** |
| **3-A** | Buckles and slate colored tape ..... | **.24** |
| **3-B** | Buckles and black colored tape ..... | **.24** |
| **3-C** | Buckles and white tape ..... | **.24** |

## TROUBLE CAPS

These are split fibre tubes for placing over a plug to designate trouble in the cord circuit apparatus.

| Code No. | Color | To be used on Plugs number | List Price each |
|---|---|---|---|
| **1-A** | Black | 109 ..... | **$ 0.0225** |
| **1-B** | Red | 109 ..... | **.0225** |
| **2-A** | Black | 110 ..... | **.0225** |
| **2-B** | Red | 110 ..... | **.0225** |



No. 1-A

## WESTON AMMETERS

For power switchboards; flush mounting; finished in polished copper and black dip; provided with external shunt, scales may have zero at left or at the center as ordered.

Type "F" has a face plate $9\frac{1}{2}$ in. in diameter

Type "K" has a face plate $7\frac{3}{4}$ in. in diameter

Order thus:

1 Type "F" Weston 200 – 0 – 200 scale ammeter, flush mounted; with external shunt provided with leads .... feet long; finished in polished copper and black dip.