



## Telephone Apparatus and Accessories

CATALOG BULLETIN NO. 12.

SEPT. 1, 1912

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	Transmitters

## 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 originally.

### 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	No. 1240 Telephone Sets	33 $\frac{1}{8}$ x8 $\frac{1}{8}$ x7 $\frac{3}{4}$	
		Walnut.....		\$1.60
		Oak.....		1.50
132-A	Writing Shelf	Nos. 1293 and 1296 Telephone Sets	22 $\frac{1}{4}$ x7 $\frac{1}{2}$ x7 $\frac{3}{4}$	
		Oak.....		1.05
133-A	Plain	No. 1293 Telephone Sets	21x7 $\frac{1}{2}$	
		Oak.....		.53
133-B	Plain	No. 1293 Telephone Sets when No. 7-E Coin Collector is used.	24 $\frac{3}{4}$ x7 $\frac{1}{2}$	
		Oak.....		.57
134-A	Plain	No. 1293 Telephone Sets	9 $\frac{1}{8}$ x6 $\frac{1}{4}$	
		Oak.....		.24
136-B	Battery box for 3 dry cells	No. 1293 Telephone Sets	26x8 $\frac{1}{2}$ x7 $\frac{3}{4}$	
		Oak.....		1.45
138-A	Battery box for 3 dry cells	No. 1305 Telephone Sets	30 $\frac{3}{4}$ x8 $\frac{1}{8}$ x7 $\frac{1}{4}$	
		Walnut.....		1.60
		Oak.....		1.50

#### Metal Type

143-A Metal, with writing shelf Nos. 1330 and 1360 Telephone Sets 8 $\frac{1}{2}$ x7 $\frac{1}{2}$ x6 $\frac{3}{4}$  .45  
 The use of the No. 143-A Backboard in connection with either the No. 1330 or 1360 type telephone sets is recommended in place of the No. 132-A Backboard and No. 1293 or 1296 type sets.



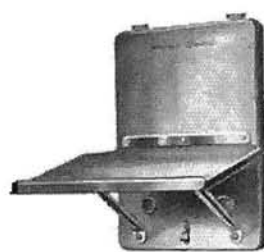
No. 132-A



No. 133-A



No. 134-A



No. 143-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 $\frac{3}{8}$ x3 $\frac{1}{2}$ x7 $\frac{1}{4}$	\$0.75

Information and prices on Battery boxes and Cabinets of larger size for Interrupter equipments furnished on request.



No. 1-A—Battery Box  
 Telephone Apparatus  
 and Accessories

## PRIMARY BATTERIES

### Western Electric Blue Bell Dry Battery

#### For Telephone Work

There are no conditions under which dry batteries are used where reliability, high efficiency and long life are of greater importance than those met in telephone service.

A general service battery will not stand up under the severe conditions required of a battery for telephone use.

The Blue Bell was designed by the best telephone engineers in the country, especially for telephone service.

Price on request.

List No.	Size	Std. Pkg.	Weight
100028	2½ x 6	125	300 lbs.



No. 100028

### Oval Columbia Dry Battery

#### For Portable Telephones

For use with portable telephones. This cell is equipped with a screw connection.

List No.	Mfr. No.	Size of Zinc Cans inches	Weight of 100 Packed for Shipment	List Price Each
102140	0-4	1¼ x 2¼ x 4	80 lbs.	\$0.25



No. 102140

### "Eveready" Guaranteed Tungsten Battery

#### For No. 1017 Type Test Sets

List No.	Mfr. No.	Used with No. 1017 Test Sets	Size Over All				Net Wt. ozs.	List Price each
			No. of Cells	Height inches	Width inches	Depth inches		
105612	703		3	2½	2¾	¾	4½	\$0.40



No. 105612

### Samson No. 1 Battery

List No.	Size over all, 7¼ x 4 x 4 inches	Std. Pkg.	List Price each
10060	Complete, regular.....	50	\$1.50
10061	Complete, with special zinc.....	50	1.50
10062	Carbon Vase.....	50	.90
10063	Cover.....	50	.14
10064	Depolarizing Compound.....	100	.10
10065	Jar.....	50	.18
10066	Rubber Fender, Style "F".....	100	.06
10067	Rubber Plugs (set of 3).....	100	.12
10068	Rubber Rings, Style "R".....	100	.04
96316	Sal-Ammoniac.....	100	.08
97437	Zinc, Regular.....	50	.30
97438	Zinc, Special.....	50	.30



No. 1 Samson Battery

### Standard Gravity Batteries

5 x 7

List No.		List Price each
10250	Cell, complete.....	\$1.00
10251	Jar, Glass, 5 x 7.....	.40
10252	Zinc.....	.55
10253	Copper.....	.14

6 x 8

101466	Cell, complete.....	\$1.20
105852	Jar, Glass, 6 x 8.....	.50
101467	Zinc.....	.70
101469	Copper.....	.16

Blue vitriol not included in above. Prices on application.



No. 101466 Gravity Battery  
 Telephone Apparatus and Accessories

## \* Edison-BSCO Primary Batteries

## RENEWALS AND SEPARATE PARTS



Type 403

Type	403	305	305	206	208
Capacity, Ampere Hours.....	400	300	300	200	200
Complete Cell.....	\$3.60	\$3.20	\$3.50	\$2.40	\$2.20
Complete Renewal.....	2.00	1.80	1.80	1.50	1.50

## Renewal Parts

Zinc-Oxide, assembled.....	\$1.90	\$1.70	\$1.70	\$1.40	\$1.40
1 Can Caustic Soda.....	.24	.20	.20	.16	.16
1 Bottle Special Battery Oil.....	.06	.06	.06	.06	.06

## Permanent Parts

Porcelain Jar, Round.....	\$1.00	\$0.90	.....	\$0.60	\$0.60
Heat-resisting Glass Jar, Round.....	.....	.....	\$1.20	.....	.....
Porcelain Cover.....	.50	.45	.45	.40	.35
One Set Nuts and Washers for Binding Post, per Cell.....	.25	.25	.25	.25	.25
Rubber Gasket Ring.....	.....	.....	.....	.25	.....

## Miscellaneous Separate Parts

Large Wing Nuts, each.....	\$0.10
Brass Washers, each.....	.05
Hexagon Jamb Nuts, each.....	.05
Double Connectors with Thumb Screws, each.....	.10



Type 305

## Edison Primary Batteries

## RENEWALS AND SEPARATE PARTS



Type BB

Type	BB	Q	V-P	RR	AA-P
Capacity, Ampere Hours.....	100	150	150	300	300
Complete Cell.....	\$2.00	\$2.20	\$2.40	\$3.30	\$3.70
Complete Renewal.....	.90	1.00	1.10	1.70	1.80

## Renewal Parts

1 Chg. Copper-oxide Plate or Plates.....	\$0.40	\$0.50	\$0.50	\$0.85	\$0.85
1 Chg. Zinc Plate or Plates.....	.40	.40	.50	.70	.80
1 Chg. Caustic Soda.....	.14	.16	.16	.24	.24
1 Chg. Special Battery Oil.....	.05	.06	.06	.06	.06

## Permanent Parts

Porcelain Jar.....	\$0.50	\$0.60	\$0.60	\$1.00	\$1.00
Porcelain Cover.....	.25	.30	.30	.50	.50
Copper Frames complete with Nuts and Insulators.....	.45	.45	.45	.45	.45
Long Brass Bolt and Nuts for Zincs.....	.....	.15	.....	.15	.....
Rubber Gasket Ring.....	.....	.....	.25	.....	.25
Brass Air Vent and Nut.....	.....	.....	.10	.....	.10

## Miscellaneous Separate Parts

Copper Frame Sides (2 per cell).....	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20
Copper Frame Bolts with Nuts (each \$0.10).....	.10	.10	.10	.10	.10
Hard Rubber Insulators (each \$0.05).....	.10	.10	.10	.10	.10
Wire Connections, each.....	\$0.05	.....	.....	.....	.....
Leather Washers, each.....	.01	.....	.....	.....	.....
Nuts, all sizes, each.....	.05	except large BSCO wing nuts.			

\* NOTE.—We recommend Edison-BSCO cells in preference to older types of Edison or other cells for all purposes to which this class of primary battery is adaptable, because of higher efficiency, greater effective capacity, lower maintenance cost and better mechanical construction.



Type RR

Telephone Apparatus  
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## BATTERY GAUGES

### No. 35 Type

Code  
 No.  
 35

#### Description

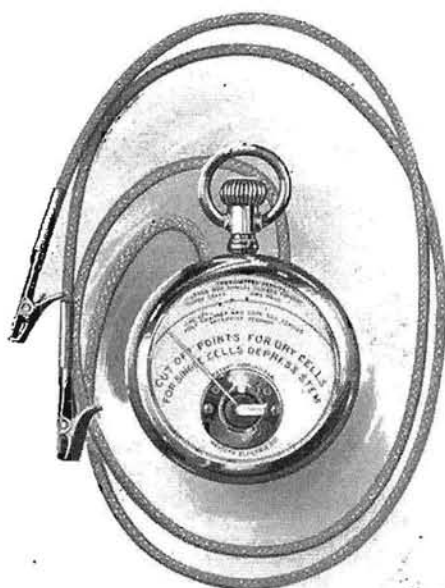
Designed expressly for testing dry batteries used in connection with Western Electric or other high resistance telephone transmitters.

Single cells or three in series can be tested. When two cells are used a test can be made by testing each cell separately.

The "cut-off point" is the point at which it has been determined a dry cell should be removed from service, where it is desired to secure maximum transmission results.

This gauge can also be used for testing dry cells used in interrupter or pole changer, and coin-collector service. . . . . \$6.00

List  
 Price  
 each



No. 35 Battery Gauge

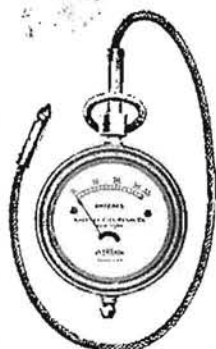
### "Eveready" Pocket Meters

These meters have a small number of working parts and are not liable to get out of order. The hand comes to an instant and positive stop without vibration, giving a quick reading and saving the battery. Will work in either direction of current. Each instrument furnished in a chamois leather case.

List No.	Mfr. No.
101498	1002
101499	1003
101500	1005
101501	1007
101502	1008

Ammeter 0-35 amperes. . . . .	
Voltammeter 0-35 amperes, 0-14 volts. . . . .	
Voltmeter 0-10 volts. . . . .	
Coil Testing Meter; 0-3 amperes in tenths. . . . .	
Battery and Coil Meter 0-30 amperes; 0-3 amperes in tenths. . . . .	

List Price  
 each  
 \$3.00  
 4.00  
 3.00  
 3.00  
 4.00



No. 1003

### Type "B" Automatic Volt-Ammeter

This instrument is used for testing batteries in connection with telephones, gasoline automobiles, launches, and for any other use of like capacity.

A flexible cord of ample capacity is provided with each instrument.

Reads both volts and amperes. No change is made in the connection to the battery for the two readings, as the ampere reading is obtained by pressing the button.

A heavy leather case is furnished with each instrument.

List No.		List Price each
96305	0- 5 Volts, 0-20 Amperes. . . . .	\$6.00
96306	0- 6 Volts, 0-30 Amperes. . . . .	6.00
96307	0-10 Volts, 0-20 Amperes. . . . .	7.00
96308	0-10 Volts, 0-30 Amperes. . . . .	7.00
96309	0-15 Volts, 0-20 Amperes. . . . .	7.00
96310	0-15 Volts, 0-30 Amperes. . . . .	7.00

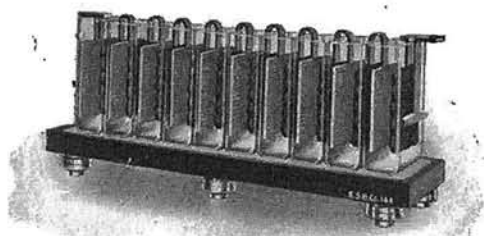


No. 96305

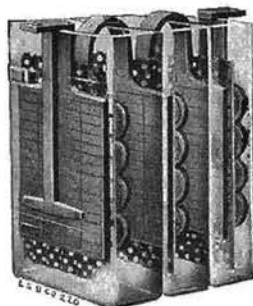
Telephone Apparatus  
 and Accessories

## STORAGE BATTERIES

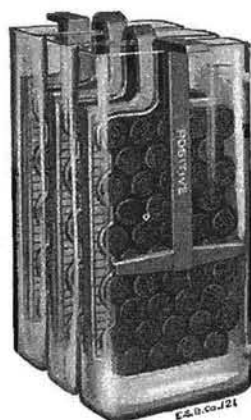
### "Chloride Accumulator"



10 Cells of Type CT on Sand Tray



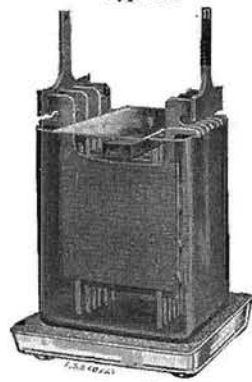
Type BT



Type PT



Type ET



Type "D"

#### COUPLES

Type	BT	CT	PT	ET
Size of plate, in inches.....	4x3	5x5	8 $\frac{3}{4}$ x5	7 $\frac{3}{4}$ x7 $\frac{3}{4}$
Number of plates.....	2	2	2	2
Discharge in amperes for:				
8 hours.....	$\frac{3}{4}$	1 $\frac{1}{2}$	3	4 $\frac{1}{2}$
5 hours.....	1	2	4 $\frac{1}{4}$	6 $\frac{1}{2}$
3 hours.....	1 $\frac{1}{2}$	3	6	9
Normal charge rate.....	$\frac{3}{4}$	1 $\frac{1}{2}$	3	4 $\frac{1}{2}$
Outside dimensions of glass jar, in ins.:				
Length.....	1 $\frac{3}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{4}$
Width.....	3 $\frac{3}{4}$	6 $\frac{1}{4}$	6	8 $\frac{3}{4}$
Height.....	6 $\frac{3}{4}$	8	12	11
Height of cell from bottom of jar to top of strap, in inches.....	7	8 $\frac{1}{4}$	12 $\frac{1}{2}$	11 $\frac{5}{8}$
Weight of electrolyte in glass jar, in pounds.....	1	2 $\frac{1}{4}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$
Weight of cell complete, with electrolyte in glass jar, in pounds.....	3 $\frac{1}{2}$	7 $\frac{1}{2}$	13 $\frac{1}{2}$	22
Price, element only.....	\$0.90	\$1.75	\$2.60	\$3.50
Price, glass jar, extra.....	.25	.50	.75	.95
Price, glass cover, extra.....	.12	.14	.14	.30

#### Type "D"

##### Size of Plates, 6 x 6 Inches

Number of plates.....	3	5	7	9	11	13
Discharge in amperes for:						
8 hours.....	2 $\frac{1}{2}$	5	7 $\frac{1}{2}$	10	12 $\frac{1}{2}$	15
5 hours.....	3 $\frac{1}{2}$	7	10 $\frac{1}{2}$	14	17 $\frac{1}{2}$	21
3 hours.....	5	10	15	20	25	30
Normal charge rate.....	2 $\frac{1}{2}$	5	7 $\frac{1}{2}$	10	12 $\frac{1}{2}$	15
Outside dimensions of glass jar, in inches:						
Length.....	3 $\frac{1}{4}$	4 $\frac{3}{4}$	6 $\frac{1}{2}$	8 $\frac{3}{4}$	8 $\frac{3}{4}$	11
Width.....	7 $\frac{7}{8}$	7 $\frac{7}{8}$	7 $\frac{7}{8}$	8	8	8 $\frac{3}{4}$
Height.....	9 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$
Outside dimensions of rubber jar, in inches:						
Length.....	1 $\frac{3}{4}$	2 $\frac{3}{4}$	3 $\frac{7}{8}$	5	6 $\frac{1}{8}$	7 $\frac{1}{4}$
Width.....	6 $\frac{1}{2}$	6 $\frac{1}{2}$	6 $\frac{1}{2}$	6 $\frac{1}{2}$	6 $\frac{1}{2}$	6 $\frac{1}{2}$
Height, Standard Type.....	9	9	9	9	9	9
Height, Yacht Type.....	...	11 $\frac{1}{2}$	11 $\frac{1}{2}$	11 $\frac{1}{2}$	...	...

Telephone Apparatus  
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## STORAGE BATTERIES

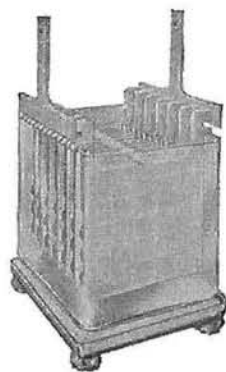
### Type "D" (Continued)

Height of cell from bottom of jar to top of strap, in inches:						
In glass jars.....	18	18	18	18	18	18
In standard rubber jars.....	10½	10½	10½	10½	10½	10½
In Yacht type rubber jars.....	...	13	13	13	...	...
Weight of electrolyte in glass jar, in pounds.....	7½	10½	15	17¾	17¾	21
Weight of electrolyte in rubber jar, in pounds....	2½	3¾	5¼	6¾	7¾	10
Weight of cell complete, with electrolyte in glass jar, in pounds.....	20	28	38	48	53	63
Weight of cell complete, with electrolyte in rub- ber jar, in pounds.....	12	18½	24½	32½	39¾	47¼
Price, element only, for glass jar.....	\$3.25	\$5.00	\$6.75	\$8.50	\$10.25	\$12.00
Price, element only, for standard rubber jar....	3.55	5.60	7.65	9.70	11.75	13.80
Price, element only, for Yacht type rubber jar..	...	5.60	7.65	9.70	...	...
Price, glass jar, extra.....	.85	1.00	1.35	1.70	1.70	2.25
Price, standard rubber jar and cover, extra....	1.45	1.70	1.90	2.70	3.10	3.95
Price, Yacht type rubber jar and cover, extra...	...	2.40	2.90	3.45	...	...

### Type "E"

#### Size of Plates, 7 3-4 x 7 3-4 Inches

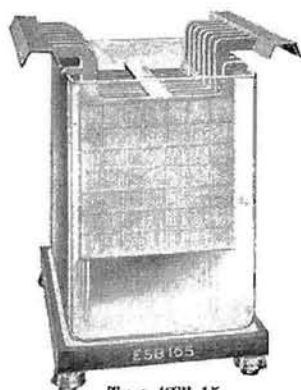
Number of plates.....	5	7	9	11	13	15
Discharge in amperes for:						
8 hours.....	10	15	20	25	30	35
5 hours.....	14	21	28	35	42	49
3 hours.....	20	30	40	50	60	70
1 hour.....	40	60	80	100	120	140
Normal charge rate.....	10	15	20	25	30	35
Outside dimensions of glass jar, in inches:						
Length.....	5½	6¾	8	8½	11	11
Width.....	9½	9½	9½	9½	9½	9½
Height.....	11¾	11¾	11¾	11¾	11¾	11¾
Outside dimensions of rubber jar, in inches:						
Length.....	2¾	3¾	5	6½	8½	8½
Width.....	8½	8½	8½	8½	8½	8½
Height Standard Type	11	11	11	11	11	11
Height Yacht Type.	14	14	14	14	14	14



Type "E"

Height of cell from bottom of jar to top of strap, in inches:						
In glass jar.....	20	20	20	20	20	20
In standard rubber jar.....	12½	12½	12½	12½	12½	12½
In Yacht type rubber jar.....	15½	15½	15½	15½	15½	15½
Weight of electrolyte, in pounds:						
In glass jar.....	18½	20	24½	26	35	34
In rubber jars.....	5½	8	10½	12	17	18½
Weight of cell complete with electrolyte, in pounds:						
In glass jar.....	40	60	74	86½	104	112
In rubber jars.....	29½	40½	52	63	77	87
Price, element only, for glass jar.....	\$8.25	\$11.75	\$15.25	\$18.75	\$22.25	\$25.75
Price, element only, for standard rubber jar....	9.30	13.30	17.35	21.35	25.35	29.40
Price, element only, for Yacht type rubber jar..	9.30	13.30	17.35	21.35	25.35	29.40
Price, glass jar, extra.....	1.50	1.70	1.85	2.05	2.90	2.90
Price, standard rubber jar and cover, extra....	2.90	3.25	3.75	5.05	5.75	6.10
Price, Yacht type rubber jar and cover, extra...	3.40	3.95	4.55	6.00	6.90	7.25

Telephone Apparatus  
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Type "F" 15

## Type "F"

Size of Plates, 11 x 10 1-2 Inches

	9	11	13	15	17	19	21	23	25	27
Number of Plates.....										
Discharge in amperes for:										
8 hours.....	40	50	60	70	80	90	100	110	120	130
5 hours.....	56	70	84	98	112	126	140	154	168	182
3 hours.....	80	100	120	140	160	180	200	220	240	260
1 hour.....	160	200	240	280	320	360	400	440	480	520
Normal charge rate.....	40	50	60	70	80	90	100	110	120	130
Outside dimensions of style										
"A" glass jar, in inches:										
Length.....	9	10 $\frac{5}{8}$	10 $\frac{5}{8}$	12	Old type jars 15 $\frac{1}{2}$ " high can be furnished for renewals.					
Width.....	12 $\frac{5}{8}$	12 $\frac{5}{8}$	12 $\frac{5}{8}$	12 $\frac{5}{8}$						
Height.....	17	17	17	17						
Outside dimensions of style										
"B" glass jar, in inches:										
Length.....	..	..	14 $\frac{1}{8}$	..	17 $\frac{3}{8}$	..	20 $\frac{3}{4}$	..	..	..
Width.....	..	..	13 $\frac{1}{8}$	..	13 $\frac{1}{8}$	..	13 $\frac{1}{8}$	..	..	..
Height.....	..	..	18	..	18	..	18	..	..	..
Clearance between glass jars, 2 $\frac{1}{4}$ and 3 $\frac{3}{4}$ ins.	..	..	..	..	..	..	..	..	..	..
Outside dimensions of lead- lined wood tanks, in inches:										
Length.....	13 $\frac{3}{8}$	15 $\frac{1}{8}$	16 $\frac{3}{4}$	18 $\frac{3}{8}$	20	21 $\frac{3}{4}$	23 $\frac{3}{8}$	25	26 $\frac{5}{8}$	28 $\frac{3}{8}$
Width.....	15	15	15	15	15	15	15	15	15	15
Height.....	20 $\frac{1}{4}$	20 $\frac{1}{4}$	20 $\frac{1}{4}$	20 $\frac{1}{4}$	20 $\frac{1}{4}$	20 $\frac{1}{4}$	20 $\frac{1}{4}$	20 $\frac{1}{4}$	20 $\frac{1}{4}$	20 $\frac{1}{4}$
Clearance between wood tanks, 2 inches.	..	..	..	..	..	..	..	..	..	..
Height of cell, in style "A" glass jar, from bottom of insulators to top of strap, in inches.....	27 $\frac{3}{4}$	27 $\frac{3}{4}$	27 $\frac{3}{4}$	27 $\frac{3}{4}$	..	..	..	..	..	..
Height of cell, in style "B" glass jar, from bottom of insulator to top of bus bar, in inches.....	..	..	23 $\frac{1}{4}$	..	23 $\frac{1}{4}$	..	23 $\frac{1}{4}$	..	..	..
Height of cell, in wood tank, from floor to top of bus bar (double insula- tion), in inches.....	33 $\frac{1}{4}$	33 $\frac{1}{4}$	33 $\frac{1}{4}$	33 $\frac{1}{4}$	33 $\frac{1}{4}$	33 $\frac{1}{4}$	33 $\frac{1}{4}$	33 $\frac{1}{4}$	33 $\frac{1}{4}$	33 $\frac{1}{4}$
Weight of electrolyte, in pounds:										
In style "A" glass jar...	63	69	67	79	..	..	..	..	..	..
In style "B" glass jar...	..	..	97	..	121	..	143	..	..	..
In wood tank.....	86	99	111	123	133	145	156	168	180	191
Weight of cell complete with electrolyte, in lbs.:										
In style "A" glass jar...	174 $\frac{1}{2}$	206	227	260	..	..	..	..	..	..
In style "B" glass jar...	..	..	279	..	352	..	423	..	..	..
In wood tank.....	250	292	332	372	511	452	492	532	573	615
Price, element only.....	\$30.00	\$37.50	\$45.00	\$52.50	\$60.00	\$67.50	\$75.00	\$82.50	\$90.00	\$97.50
Price, style "A" glass jar, extra.....	4.40	5.05	5.05	6.25	..	..	..	..	..	..
Price, style "B" glass jar, extra.....	..	..	6.75	..	7.75	..	11.50	..	..	..
Price, lead-lined wood tank extra.....	13.00	13.85	14.70	15.55	16.40	17.25	18.10	18.95	19.80	20.65

Telephone Apparatus  
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## BATTERY UTENSILS

### Hard Rubber Battery Syringe

List No.	List Price
	each
10490 Hard Rubber, capacity 12 ozs.....	\$4.00
10491 Extra Nozzles.....	.60



No. 10490

### Bulb Syringe

For filling and equalizing the acid in batteries. Heavy, quick-acting rubber bulb, capacity 8 ozs., furnished with a straight and bent nozzle. Complete, in wooden box.

List No.	List Price
	each
23965 Bulb Syringe, complete, in wooden box.....	\$1.50
109752 Extra Bulb, with fitting.....	1.00
109753 Extra Nozzles.....	.35



Nos. 109767-109768

### Battery Knife

List No.	List Price
	each
10498 Heavy Chipping Knife.....	\$1.00

### Brush

List No.	List Price
	per Doz.
103105 Wire Brush for cleaning battery terminals.....	\$3.00

### Hydrometer Jars

List No.	List Price
	each
109767 6 inch x 1 inch Hydrometer Jars.....	\$0.30
109768 12 inch x 2 inch Hydrometer Jars.....	.90

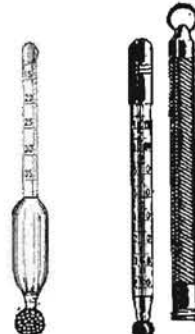
### Thermometers

#### Pocket Style

List No.	List Price
	each
109769 Pocket, nickel case, porcelain scale, 5½ inches long, 20° to 120° F.....	\$1.00

#### Standard Chemical

109770 Chemical, engraved scale, 10 inches long, 20° to 220° F.....	1.50
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No. 10495

No. 109769

### Acid Hydrometers

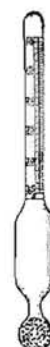
For liquids heavier than water.

#### For Gravity Battery

List No.	List Price
	each
10495 Small Hydrometer for gravity batteries, 4½ inches long; Baume and specific gravity scale, 15° to 35°, 1,100 to 1,300, 4½ inches long.....	\$0.40

#### For Storage Battery

102496 Standard Storage Battery Hydrometer, shot bulb, 5 inches long, double scale, 10 to 40 Baume, 1,050 to 1,400 Sp. G., with glass jar in polished box....	.75
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No. 102496



No. 109770

Telephone Apparatus  
 and Accessories



No. 96552

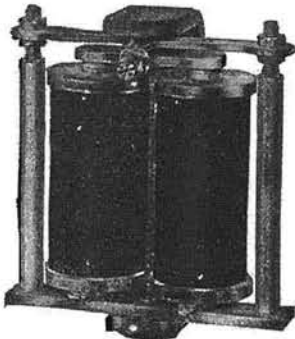
**BELLS**

**For Direct Current**

List No.	Standard Size of Gong Inches	List Price each
101506	2½	\$0.54
101507	3	.56
100931	4	.70

**Bells for Alternating Current**

(See Extension Bells)



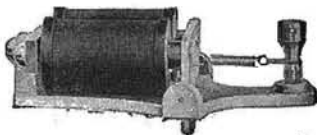
No. 1 A

**BUZZERS**

**For Alternating Current**

The No. 1 type is made from a standard ringer, the gongs, gong posts and clapper wire being omitted.

The No. 2 type has an armature spring and screw adjustment.



No. 2 A

Code No.	Resistance Ohms	Used in	List Price each
1-A	1000	Telephone Sets	\$1.35
1-B	2500	Telephone Sets	1.95
2-A	100	Nos. 1006-A, 1006-D, test sets	.70
2-B	250	No. 1006-B test set	.70
2-C	1000	.....	.90
2-D	100	No. 1017-A or B test set	.70



No. 2 D

**For Direct Current**

List No.	List Price each
100947 A high class adjustable buzzer with cast iron cover and frame finished in black japan. Has non-turning binding and contact posts.....	\$0.52

## BINDING POSTS

### Self Mounting, Screw Type

Code No.	Finish	List Price each
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#### THUMB SCREW CONNECTIONS

##### No Soldering Terminal

1-A	Brass.....	\$0.15
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#### SCREW CONNECTIONS

##### One Front Soldering Terminal

1-B	Brass.....	.12
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No. 1-A



No. 1-B

### Screw Mounting Type

#### LOCK NUT CONNECTIONS

##### One Back Soldering Terminal

2-A	Nickel plate.....	.06
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No. 2-A



No. 2-D

#### LOCK NUT CONNECTIONS

##### No Soldering Terminal

2-D	Nickel plate.....	.06
-----	-------------------	-----

#### LOCK NUT CONNECTIONS

##### One Front Soldering Terminal

2-E	Brass.....	.075
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No. 2-E



No. 3-A

#### LOCK NUT CONNECTIONS

##### One Back Soldering Terminal

##### Stud Drilled and Washer Slotted

3-A	Nickel plate.....	.09
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#### LOCK NUT CONNECTIONS

##### One Front Soldering Terminal

##### Stud Drilled and Washer Slotted

3-E	Nickel plate.....	.105
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No. 3-E



No. 9-A

### Bolt and Nut Mounting Type

#### HEXAGONAL NUT CONNECTIONS

##### Stud Drilled

9-A	Brass.....	.2025
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#### WING NUT CONNECTIONS

##### Stud Drilled and Washer Slotted

9-B	Nickel plate.....	On request
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No. 9-B

Telephone Apparatus  
and Accessories

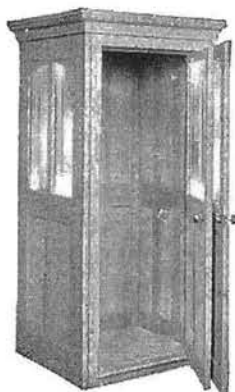


## TELEPHONE BOOTHS

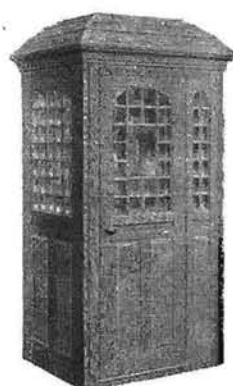
### Sound Proof



S-23



S-20



S-16

All Western Electric Telephone Booths have double interchangeable walls, and are made of selected and kiln-dried lumber. Two standard styles, in various sizes and designs, are furnished, the two styles differing principally in the method of swinging the doors.

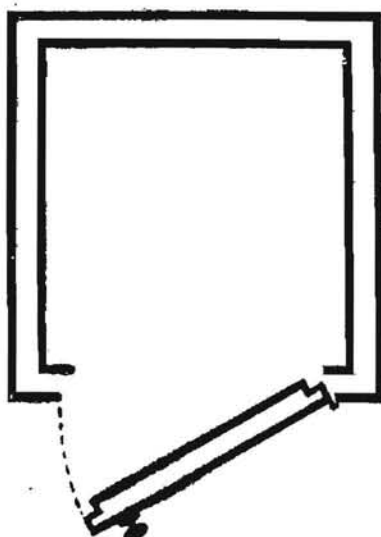
Style S-1 is equipped with a door having its two walls fastened rigidly together, and swinging on one pair of hinges.

Style S-2 is equipped with a double door, each wall swinging on its own separate hinges. One set of knobs only being necessary, however. Style S-2 booths are made of heavier lumber, and have more expensive construction and design throughout. Oak booths are regularly furnished unless otherwise specified.

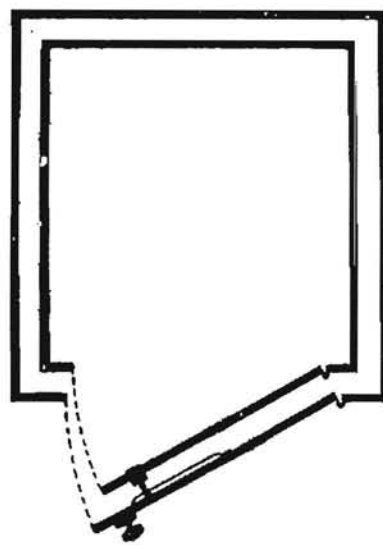
Doors are made to swing to right or left, but unless otherwise specified right-hand doors will be supplied.

The glass side panels are interchangeable so that when only one is ordered it can be placed either to the right or left of the door.

Bulletin No. 1083, describing our entire line of booths, furnished upon request.



Style No. S-1



Style No. S-2

# TELEPHONE BOOTHS (Continued)

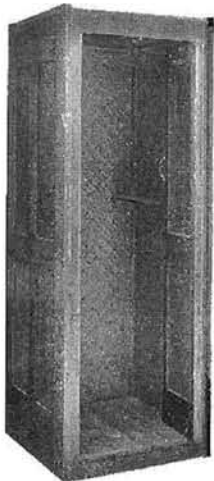
## Specifications and Prices

Type Number	DIMENSIONS		Style	DESCRIPTION				Weight, Crated, Lbs.	Net Prices, Oak Booths Complete		
	Outside	Inside		Top	Sash	Panels	Glass		Glass in door only	Glass in door and one side	Glass in door and two sides
S-51	30 x 30	25½ x 25½	S-1	Flat	Square	Vertical	Plain	425	\$40.00	\$42.00	\$44.00
S-23	33 x 33	28½ x 28½	S-1	Flat	Square	Horizontal	Plain	475	42.00	45.00	48.00
S-24	36 x 30	31½ x 25½	S-1	Flat	Segment	Vertical Raised	Plain	475	47.40	50.40	53.40
S-25	36 x 30	31½ x 21½	S-1	Flat	Square	Horizontal	Plain	475	42.00	45.00	48.00
S-25-A*	36 x 30	31½ x 25½	S-1	Flat	Square	Horizontal	Plain	475	42.00	45.00	48.00
S-26	36 x 30	31½ x 25½	S-1	Flat	Square	Vertical	Plain	475	45.00	48.00	51.00
S-27	36 x 30	31½ x 25½	S-1	Flat	Segment	3 Panel Raised	Plain	475	47.40	50.40	53.40
S-28	36 x 30	31½ x 25½	S-1	Dome	Segment	3 Panel Raised	Plain	500	51.40	54.40	57.40
S-31	36 x 30	31½ x 25½	S-1	Flat	Square	3 Panel Raised	Small Panes	475	54.45	58.45	62.45
S-32	36 x 30	31½ x 25½	S-1	Dome	Square	3 Panel Raised	Small Panes	500	58.45	62.45	66.45
S-52	36 x 36	31½ x 31½	S-1	Flat	Square	Vertical	Plain	500	45.00	48.00	51.00
S-20	36½ x 33	32 x 26	S-2	Flat	Segment	Vertical	Plain	500	55.50	60.00	64.50
S-20-A*	39 x 30½	32 x 26	S-2	Flat	Segment	Vertical	Plain	500	55.50	60.00	64.50
S-33	36½ x 33	32 x 26	S-2	Dome	Segment	Vertical Raised	Plain	500	66.00	72.00	78.00
S-33-A*	39 x 30½	32 x 26	S-2	Dome	Segment	Vertical Raised	Plain	550	66.00	72.00	78.00
S-15	42½ x 33	38 x 26	S-2	Dome	Segment	Vertical Raised	Plain	600	93.75	105.00	116.25
S-16	42½ x 33	38 x 26	S-2	Dome	Segment	Vertical Raised	Small Panes	600	102.50	112.50	122.50
S-21	43 x 39	38 x 32	S-2	Flat	Segment	Vertical	Plain	625	64.50	69.40	74.25
S-10	43 x 39	38 x 32	S-2	Flat	Segment	Vertical Raised	Plain	625	85.00	96.00	105.00
S-12	43 x 39	38 x 32	S-2	Flat	Segment	Vertical Raised	Small Panes	625	93.75	105.00	116.25
S-30*	49 x 40½	42 x 36	S-2	Dome	Segment	Vertical Raised	Small Panes	700	125.25	138.00	150.75
S-40	49 x 43	43 x 36	S-2	Flat	Segment	Vertical Raised	Small Panes	650	107.25	120.00	132.75
S-22	49 x 43	43 x 36	S-2	Flat	Segment	Vertical	Plain	650	73.50	78.75	84.00
S-C-1	27 x 27	25 x 25	Single	Flat	None	Vertical Raised	Plain	250	37.50	39.00	40.50
S-C-2	50 x 30	46 x 28	Wall	Flat	None	Vertical Raised	Plain	500	64.00	67.00	.....

NOTE 1.—All booths have the door on the wide side except when type numbers are followed by "A," which indicates a booth with the door on the narrow end.

NOTE 2.—No. S-30 booth has the door on the narrow end.

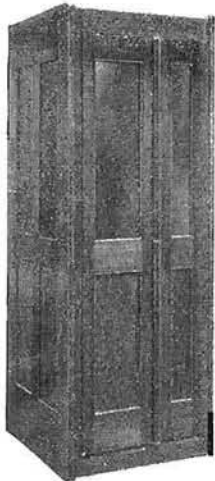
TELEPHONE BOOTHS (Continued)



Door Open

Folding Door Type

A very desirable booth to instal when space is limited. The folding door requires only four (4) inches of space beyond the front of the booth for its operation. The sides, back, and ceiling are lined inside with sheet steel. The doors only are equipped with glass panels, plate glass being used. Can be easily fastened together by means of screws to form a compartment booth. No latches or catches are used, as the door always stays open or closed without their use.



Door Closed

"French" Folding Door Telephone Booth

	Dimensions	Width	Height
Outside.....	31¼ inches	30½ inches	85¼ inches
Inside.....	29 "	27¾ "	78 "

Interior lined with sheet steel. Plate glass panels in door only. Equipped with a handle only. Door always hinged on right-hand side (facing booth).

Prices on application.

Booth Accessories

STOOLS

	Net Price
Standard stools with iron bases and oak seats, each.....	\$2.70
Swinging stools with iron bases and oak seats, each.....	3.75

RUGS

	Net Price		
	Wilton	Brussels	Plain Linoleum
For No. S-3.....	\$10.20	....	\$2.40
For Nos. S-10 and S-12.....	7.80	....	1.65
For Nos. S-15 and S-16.....	6.45	....	1.35
For Nos. S-22, S-30, and S-40.....	9.30	\$6.45	1.80
For Nos. S-20, S-20-A, and S-25.....		3.90	1.35

CURTAINS

	Net Price
Standard Silk Curtains, per pair.....	\$3.45
Standard Silk Curtains for side window.....	1.20

## SWITCHBOARD CABLE

## Lead Taped

## Cable with Dry Core

The conductors are provided with double silk and single cotton insulation, which is colored in such a way that each pair and each single wire can be identified. The cable is protected from injury by a layer of lead tape and a heavy braiding which encloses the conductors. The cable is given a heavy coat of gray fireproof paint.

Code No.	Number of Conductors	Number of Pairs	Number of Singles	Size Inches	Shape	List Price per Foot
16	64	20-No. 22	20-No. 22	$\frac{3}{32} \times \frac{7}{16}$	Oval	\$0.22
24	43	20-No. 22	.....	$\frac{11}{16} \times \frac{11}{32}$	Oval	.15
35	53	25-No. 22	.....	$\frac{3}{4} \times \frac{11}{32}$	Oval	.19
50	34	10-No. 22	10-No. 22	$\frac{13}{32} \times \frac{11}{32}$	Oval	.13
59	71	34-No. 22	.....	$\frac{3}{16} \times \frac{13}{32}$	Oval	.24
60	75	36-No. 22	.....	$\frac{1}{8} \times \frac{13}{32}$	Oval	.25
62	63	30-No. 22	.....	$\frac{3}{16} \times \frac{13}{32}$	Oval	.22
65	53	25-No. 19	.....	$\frac{7}{8} \times \frac{1}{8}$	Oval	.23½
66	103	50-No. 22	.....	$\frac{3}{8} \times \frac{1}{8}$	Round	.34
70	83	40-No. 22	.....	$\frac{7}{8} \times \frac{1}{8}$	Oval	.28
72	11	.....	10-No. 19	$\frac{11}{32} \times \frac{3}{8}$	Round	.07
74	21	.....	20-No. 22	$\frac{3}{8} \times \frac{3}{8}$	Round	.08½
79	23	10-No. 22	.....	$\frac{1}{2} \times \frac{1}{8}$	Oval	.09
81	13	6-No. 22	.....	$\frac{7}{8} \times \frac{3}{32}$	Oval	.06
84	64	20-No. 22	20-No. 22	$1 \frac{1}{8} \times \frac{1}{4}$	Flat	.26½
87	35	16-No. 22	.....	$\frac{11}{32} \times \frac{11}{32}$	Oval	.13½
89	86	39-No. 22	4-No. 16 } 2-No. 14 }	$\frac{1}{8} \times \frac{1}{8}$	Oval	.33
90	154	60-No. 22	8-No. 22 } 9-No. 16 } 6-No. 14 }	$1 \frac{1}{4} \times \frac{3}{32}$	Oval	.51
95	41	11-No. 22	.....	$\frac{7}{8} \times \frac{7}{8}$	Oval	.26½
96	100	32-No. 22	32-No. 22	$\frac{1}{2} \times 1$	Oval	.32½
97	132	64-No. 22	.....	$\frac{5}{8} \times 1 \frac{1}{8}$	Oval	.42
98	166	64-No. 22	32-No. 22	$\frac{3}{4} \times 1 \frac{1}{4}$	Oval	.52½
100	84	40-No. 24	.....	$\frac{1}{8} \times \frac{11}{16}$	Oval	.24
102	103	40-No. 24	20-No. 24	$\frac{1}{2} \times \frac{1}{8}$	Oval	.28½
103	42	20-No. 24	.....	$\frac{3}{8} \times \frac{1}{8}$	Oval	.13
104	48	22-No. 22	4-No. 16	$\frac{3}{8} \times \frac{11}{16}$	Oval	.18
106	103	40-No. 22	20-No. 22	$1 \times \frac{1}{8}$	Oval	.33
107	104	39-No. 22	19-No. 22 } 4-No. 16 }	$1 \frac{1}{2} \times \frac{1}{8}$	Oval	.36
108	94	36-No. 22	19-No. 22 } 24-No. 19 }	$1 \times \frac{1}{2}$	Oval	.31
111	42	3-No. 22	8-No. 16 } 12-No. 22 }	$\frac{1}{2} \times \frac{3}{4}$	Oval	.24
113	47	11-No. 22	.....	$\frac{7}{8} \times \frac{3}{4}$	Oval	.22½
115	64	20-No. 19	20-No. 22	$\frac{1}{8} \times \frac{7}{8}$	Oval	.28½
116	43	20-No. 19	.....	$\frac{1}{8} \times \frac{3}{8}$	Oval	.22½
117	83	20-No. 19 } 20-No. 22 }	.....	$\frac{3}{4} \times \frac{1}{2}$	Oval	.34½
119	103	50-No. 19	.....	$\frac{3}{4} \times 1 \frac{1}{8}$	Oval	.52
120	64	20-No. 24	20-No. 24	$\frac{3}{8} \times \frac{3}{32}$	Oval	.19
121	53	10-No. 19 } 10-No. 22 }	10-No. 22	$\frac{7}{8} \times \frac{3}{4}$	Oval	.22
122	25	10-No. 22 } 1-No. 14 }	.....	$\frac{7}{8}$	Round	.12
123	45	20-No. 22 } 1-No. 14 }	.....	$\frac{11}{16}$	Round	.19
124	65	30-No. 22 } 1-No. 14 }	.....	$\frac{5}{8}$	Round	.25
125	23	10-No. 19	.....	$\frac{1}{2} \times \frac{1}{8}$	Oval	.13
126	43	10-No. 19 } 10-No. 22 }	.....	$\frac{3}{8} \times \frac{3}{4}$	Oval	.19
127	33	10-No. 19	10-No. 22	$\frac{3}{8} \times \frac{3}{32}$	Oval	.16



No. 123



No. 84

## Cable with Beeswaxed Core

39	35	16-No. 22	.....	$\frac{3}{32} \times \frac{11}{32}$	Oval	.13½
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## SWITCHBOARD CABLE (Continued)

## Cable with Beeswaxed Core

## NOT LEAD TAPED

The conductors are provided with double silk and single cotton insulation, which is colored in such a way that each pair and each single wire can be identified. The cable is then impregnated with beeswax and is covered with servings of paper and a heavy braiding, which is given a heavy coat of fireproof paint.

Code No.	Number of Conductors	Number of Pairs	Number of Singles	Size Inches	Shape	List Price per Foot
134	18	6-No. 22 2-No. 14	.....	$\frac{1}{2}$	Round	\$0.11 $\frac{1}{4}$
136	54	24-No. 22 2-No. 14	.....	$\frac{1}{6}$	Round	.23 $\frac{1}{4}$
137	28	11-No. 22 2-No. 14	.....	$\frac{1}{6}$	Round	.14 $\frac{1}{4}$
138	48	21-No. 22 2-No. 14	.....	$\frac{1}{2}$	Round	.21
139	56	25-No. 22 2-No. 14	.....	$\frac{1}{6}$	Round	.24
140	68	31-No. 22 2-No. 14	.....	$\frac{5}{8}$	Round	.27
141	30	12-No. 22 2-No. 14	.....	$\frac{1}{6}$	Round	.14 $\frac{1}{4}$
143	43	20-No. 22	.....	$\frac{1}{2} \times \frac{1}{2}$	Oval	.15 $\frac{3}{4}$
144	63	30-No. 22	.....	$\frac{3}{4} \times \frac{1}{6}$	Oval	.23 $\frac{1}{4}$
145	103	50-No. 22	.....	$\frac{3}{4}$	Round	.36
146	205	100-No. 22	.....	$\frac{1}{2}$	Round	.67 $\frac{1}{2}$
147	83	40-No. 22	.....	$\frac{1}{8} \times \frac{1}{2}$	Oval	.30
157	38	16-No. 22 2-No. 14	.....	$\frac{1}{2}$	Round	.17 $\frac{1}{4}$
158	46	20-No. 22 2-No. 14	.....	$\frac{1}{6}$	Round	.20 $\frac{1}{4}$
161	8	.....	7-No. 22	$\frac{1}{16}$	Round	.05 $\frac{1}{4}$
162	12	.....	11-No. 22	$\frac{1}{12}$	Round	.06 $\frac{1}{4}$

## Green Braid Covered Cable with Beeswaxed Core

## NOT LEAD TAPED

The conductors are provided with double silk and single cotton insulation, which is colored in such a way that each pair and each single wire can be identified. The cable is then impregnated with beeswax and is covered with servings of paper and a heavy braiding of green glazed cotton.

Code No.	Number of Conductors	Number of Pairs	Number of Singles	Size Inches	Shape	List Price per Foot
142	7	.....	7-No. 22	5/16	Round	\$0.04 $\frac{1}{2}$
155	18	6-No. 22 2-No. 14	.....	13/32	Round	.12
156	30	12-No. 22 2-No. 14	.....	7/16	Round	.17 $\frac{1}{2}$

## LEAD TAPED

The conductors are provided with double silk and single cotton insulation, which is colored in such a way that each pair and each single wire can be identified. The cable is then impregnated with beeswax and is covered with a serving of sheet lead and a heavy braiding of green glazed cotton.

Code No.	Number of Conductors	Number of Pairs	Number of Singles	Size Inches	Shape	List Price per Foot
148	28	11-No. 22 2-No. 14	.....	7/16	Round	\$0.145
149	48	21-No. 22 2-No. 14	.....	17/32	Round	.205
150	56	25-No. 22 2-No. 14	.....	9/16	Round	.235
151	68	31-No. 22 2-No. 14	.....	5/8	Round	.265
152	30	12-No. 22 2-No. 14	.....	7/16	Round	.145
159	38	16-No. 22 2-No. 14	.....	37/64	Round	.195
160	26	20-No. 22 2-No. 14	.....	7/16	Round	.22 $\frac{1}{2}$
163	12	.....	11-No. 22	25/64	Round	.09
165	12	2-No. 14	6-No. 22	13/32	Round	.12

## CALCULAGRAPHS

Furnished in case. Style A, style B, or style C, as specified.



No. 52041  
 Style A  
 On No. 93478  
 Pedestal

List No.	Description	List Price each
52041	Model 6 calculates and prints elapsed time in minutes and quarter minutes, has visible dial, and records the time of day.....	\$100.00
May be obtained to calculate and print elapsed time in hours and minutes and the day of month and year.		



Style B No. 52041

List No.	Description	List Price each
93478	Pedestal for calculagraph for use with the style A case, height adjustable from 26 to 40 inches from floor to ticket plate.....	\$10.00
93486	Ribbon for calculagraph, unless otherwise ordered, blue is shipped. Other colors made to order.....	.50



Style C No. 52041

## CHAIRS

For telephone switchboard operators. The chairs are furnished in birch with a mahogany finish. They can be furnished with leather over cane, and with castors or rubber tips.

The first measurement indicates the distance of seat from floor when the seat is in its lowest position, while the second indicates the highest.

List No.	Height, inches	List Price each
52032	18 to 22.....	\$6.90
52033	24 to 31.....	8.04
52034	28 to 35.....	8.51



No. 52033

## COIN COLLECTORS

### Electrically Operated No. 7 Type

#### For Central Battery Telephones

These are arranged so that a coin placed in the coin chute remains under control of the central office operator, who may refund or deposit it in the coin box. The coin collector is ordinarily connected to the telephone line so that it is necessary to drop a coin of the proper denomination into the box to signal central office. This saves considerable time on the part of the operator. It may be wired so that the coin need not be deposited until the operator requests it.

All electrical circuits are insulated from the case. The case has a heavy black japanned finish.

Code No.	Arranged for	Dimensions inches			List Price each
		Length	Width	Depth	
7-A	Nickels	7 $\frac{3}{4}$	5 $\frac{1}{4}$	3 $\frac{1}{2}$	\$5.25
7-E	Nickels	11 $\frac{1}{2}$	5 $\frac{1}{4}$	3 $\frac{1}{2}$	6.40

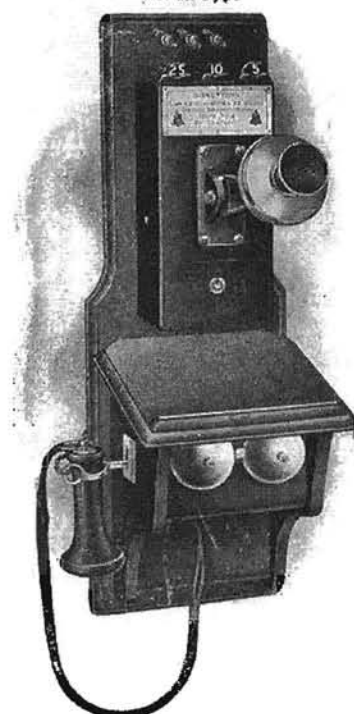
The No. 7-E has a larger coin box than the No. 7-A.



No. 7-A  
 Telephone Apparatus  
 and Accessories



No. 11 Type



No. 7 Type



No. 50-A  
 Telephone Apparatus  
 and Accessories



No. 14 Type



Gray Registers

## COIN COLLECTORS (Continued)

### The Gray Automatic Pay Station

These coin collectors may be used on either local battery or central battery lines. The signals are given automatically on dropping the coin into the slot. No electrical connections are required.

Code No.	Type	Coins Arranged for	Size inches	Net Price each
7	Wall	Nickel, Dime, Quarter	9 x 4 1/2 x 3	\$8.00
8-A	Wall	Nickel	7 x 3 3/8 x 3 1/8	3.50
11	Wall	Nickel, Dime, Quarter	9 x 4 1/2 x 3	8.00
13-A	Desk	Nickel	9 1/2 x 3 3/8 x 3 1/4	5.50
14	Desk	Nickel, Dime, Quarter	9 x 4 1/2 x 3	11.00
20	Desk	Nickel, Dime, Quarter	9 x 4 1/2 x 3	10.50

Code No.	Type	Coins Arranged for	Size inches	List Price each
50-A	....	Nickel, Dime, Quarter	18 1/2 x 7 x 5 1/2	\$27.75

This is a complete central battery wall set except for transmitter, receiver, and receiver cord. It may also be mounted on a desk by means of the No. 139-A Backboard.

Above prices F.O.B. Hartford, Conn.

### Gray Registers

Code No.	Net Price each
3	Can be used on either a wall or desk telephone. Operating the plunger lever registers the call and sounds a gong. No electrical connection necessary.....
	Mounting plate for desk stand.....
	.....

Above prices F.O.B. Hartford, Conn.



## CONDENSERS

### Unmounted

These are of small size and made of selected material.

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 sometimes mounted by means of strap P-43121.

Code No.	Capacity Micro- farads	Style of Terminal	Size of Case Inches	Use	List Price each
21-D	2	Bent	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{5}{8}$	For telephone sets....	\$1.15
21-E	2	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{5}{8}$	For switchboards and for general use....	1.15
21-F	1	Bent	$4\frac{7}{8} \times 1\frac{3}{4} \times \frac{1}{8}$	For telephone sets....	.70
21-H	0.1	Bent	$4\frac{7}{8} \times 1\frac{3}{4} \times \frac{1}{8}$	For No. 84 type Inter- rupter.....	.60
21-J	0.3	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{1}{8}$	For 3 terminals.....	.75
21-K	1	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times \frac{1}{8}$	For general use.....	.70
21-L	2	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{5}{8}$	For mounting on coil racks.....	1.15
21-M	1	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times \frac{1}{8}$	For mounting on coil racks.....	.70
21-N	1	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{5}{8}$	For mounting on coil racks 3 terminals...	1.05
21-R	0.1	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times \frac{1}{8}$	For general use.....	.40
21-S	0.125	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{5}{8}$	For telegraph work 4 terminals.....	1.05
	0.250				
	0.500				
21-U	.05	Bent	$4\frac{7}{8} \times 1\frac{3}{4} \times \frac{1}{8}$	For railway composite telephone set.....	.45
21-W*	1	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times \frac{1}{8}$	For receiver circuit, magneto telephone sets	.70
21-Y	0.25	Bent	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{5}{8}$	For telegraph work...	1.20
21-AA	1	.....	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{5}{8}$	.....	1.50
21-AB	0.125	.....	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{5}{8}$	.....	1.50
	0.25				
	0.5				
21-AC	0.5	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times \frac{1}{8}$	For No. 1200 switch- board.....	.70
21-AD	1	Straight	$4\frac{7}{8} \times 1\frac{3}{4} \times 1\frac{5}{8}$	Composite sets.....	1.20
	1				
31-A	0.05	Wire	$4\frac{1}{2} \times 1\frac{5}{8} \times \frac{1}{8}$	For general use 4 ter- minals.....	.75
	0.05				
35-A	2	.....	.....	For mining sets.....	4.95
	2				

\*Equipped with two flexible leads

### Mounted

These are designed for mounting on the coil rack, either on the same shelves with the repeating coils, or grouped on shelves by themselves, and consist of No. 21 type condensers mounted on a wood base  $10\frac{3}{4}$  ins. long by  $1\frac{7}{8}$  ins. wide.

Code No.	Condensers Used	Capacity of Each No. 21 Type Condenser Microfarads	List Price each
33-A	2 No. 21-L	2	\$2.50
33-B	1 No. 21-L	2	1.35
33-C	2 No. 21-M	1	1.60
33-D	1 No. 21-M	1	.90
33-E	2 No. 21-N	1.0	2.35
		0.5	
33-G	2 No. 21-AD	1	2.85
		1	



No. 21-D



No. 21-J



No. 21-U



No. 33-A

## CONDENSER STRAPS

Code No.		List Price per 100
P-43121	Bent iron strap for use with No. 21-E condenser.....	\$3.00
P-43065	Straight iron strap for use with No. 21 type condensers, per 100.....	1.20

Telephone Apparatus  
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No. 1-A—Connecting Block



No. 7-A



No. 8-A



No. 6-D—Connecting Block

## CONNECTING BLOCKS

Code No.	No. of Binding Posts	Style	Size Inches	Base	List Price each
1-A	3	Lock nut.....	2 1/4 x 3 1/2	Composition	\$0.12
1-D	5	Lock nut.....	3 1/8 x 3 1/4	Hard Rubber	.38
1-E	10	Lock nut.....	6 1/8 x 3 1/4	Hard Rubber	.68
1-F	20	Lock nut.....	13 3/4 x 3 1/4	Hard Rubber	1.28
5-A	3	For cord tip.....	3 1/8 x 3 1/4	Wooden	1.75
6-A	7 prs.	Lock nut.....	5 5/8 x 1 7/8	Composition	.53
6-B	11 prs.	Lock nut.....	8 5/8 x 1 7/8	Composition	.71
6-C	16 prs.	Lock nut.....	12 3/8 x 1 7/8	Composition	.98
6-D	21 prs.	Lock nut.....	16 1/8 x 1 7/8	Composition	1.35
6-E	26 prs.	Lock nut.....	19 7/8 x 1 7/8	Composition	1.65
7-A	2	Lock nut with cover	2 3/8 x 1	Composition	.14
8-A	6	For cord tip.....	5 x 1	Ebonzld. Wood	.23
8-B	3	For cord tip.....	2 3/4 x 1	Ebonzld. Wood	.15
8-E	8	Screw.....	5 5/8 x 1 3/8	Wooden	.70
8-F	12	Screw.....	8 1/8 x 1 3/8	Wooden	.85
9-A	3	Lock nut with cover	2 1/8 x 1 3/8	Composition	Price on request.
10-A	7 prs.	Solder and lock nut	4 1/4 x 1 1/8	Composition	1.05
10-B	11 prs.	Solder and lock nut	6 3/4 x 1 1/8	Composition	1.35
10-C	16 prs.	Solder and lock nut	9 1/8 x 1 1/8	Composition	1.75
10-D	21 prs.	Solder and lock nut	12 3/8 x 1 1/8	Composition	2.20
10-E	26 prs.	Solder and lock nut	15 1/8 x 1 1/8	Composition	2.80

## CORDS

## For Switchboard Equipment

It is customary to use 4 ft. switchboard and 6 ft. operator's telephone cords on small magneto and private exchanges, and 6 ft. switchboard and operator's telephone cords on other boards.

These lengths are carried in stock, but others will be furnished on request. The switchboard cords are regularly made in three colors, red, white, and green. The white cords are furnished unless the color is specified.

In ordering, specify the code number, length, color, and if plugs are to be attached, give the code number of the plugs. No extra charge is made for attaching plugs to cords.

Code No.	Description	Used with	Standard Length Feet	List Price each
10	2 conductor tinsel cord, green silk covering.	Operator's head telephone when connected to binding posts.....	6	\$0.31
26	Single conductor stranded copper and tinsel cord, green silk covering.	Suspended switchboard transmitter and No. 7 transmitter arm.....	6	.12
30	2 conductor tinsel cord, green silk covering.	Operator's head telephone when connected to No. 85 plug.....	4 1/2	.30
87	4 conductor tinsel cord, green silk covering.	Operator's head telephone and chest transmitter when attached to No. 103 or 112 plug.....	6	.35 3/4
129	4 conductor stranded copper cord, green glazed cotton covering.	Neither end equipped with tips, but there may be connected to one end a No. 124, 128, or 132 plug, for testing on protectors or terminal strips.....	6	.75
152	3 conductor steel switchboard cord, glazed cotton covering.	No. 110 plug.....	10	.87
153	4 conductor stranded copper cord, green glazed cotton covering.	No. 124, 128, or 132 plug....	6	.87
155	3 conductor steel switchboard cord, glazed cotton covering.	No. 109 plug.....	10	.90
156	2 conductor steel switchboard cord, glazed cotton covering.	No. 47 plug.....	6	.87
225	2 conductor steel switchboard cord, glazed cotton covering.	.....	4	.50 1/2
254	2 conductor tinsel cord, green silk covering.	Operator's head telephone, when connected to No. 103 plug.....	6	.63
				.60
				.36

No. 152

## CORDS

## For Switchboard Equipment (Continued)

Code No.	Description	Used with	Standard Length Feet	List Price each
264	2 conductor stranded copper cord, green glazed cotton covering.	One end equipped with spring clips for testing on terminal strips.....	6	\$0.75
265	Single conductor tinsel switchboard cord, glazed cotton covering.	No. 116 plug.....	4	.29
338	Single conductor stranded copper cord, rubber covered.	For connecting dry cells....	4"	.03¾
369	2 conductor tinsel cord, green silk covering.	Operator's head telephone when connected to No. 136 plug.....	4½	.30
386	3 conductor tinsel switchboard cord, glazed cotton covering.	No. 109 plug.....	6' 3"	.81
387	3 conductor tinsel switchboard cord, glazed cotton covering.	No. 110 plug.....	6' 3"	.81
401	2 conductor tinsel switchboard cord, glazed cotton covering.	No. 47 plug.....	4 6	.225 .285

Method of Stranding Tinsel  
Switchboard Cord

## For Telephone Sets

NOTE.—The length of all cords except combination cords should be specified on the order.

Code No.	Description	Used with	Standard Length Feet	List Price each
10	2 conductor tinsel cord, green silk covering.	Receiver on wall set.....	3	\$0.19½
15	2 conductor stranded copper cord, red worsted covering.	Receiver on No. 1008 test set (included with No. 125-W receiver).....	3	.22½
92	2 conductor tinsel cord, red and blue worsted covering.	Receiver on wall set.....	3	.13
178	2 conductor tinsel cord, green silk covering.	Receiver on desk stand or transmitter arm.....	2½ 3	.18¼ .20
179	Single conductor tinsel cord, green silk and cotton covering.	Transmitter on desk stand or transmitter arm.....	5½" 8" 9½" 12"	.04½
180	3 conductor tinsel cord, silk covering....	Desk stand transmitter arm or No. 1130 wall set as extension cord.....	6	.45
196	2 conductor tinsel cord, green silk covering.	Receiver No. 1130 wall set and part of No. 293 cord.....	3	.20
231	4 conductor tinsel cord, green silk covering.	Desk stand as extension cord; part of No. 232 cord.....	6	On request
247	Single conductor copper cord, green cotton covering.	No. 250-W transmitter.....	9½"	.04½
287	6 conductor tinsel cord, green silk covering.	No. 1020 desk stands.....	6	.87
289	Combination of 6 ft. 287; 2½ ft. 196; 9½" 179.	No. 1020 desk stands.....	..	1.11
310	Combination of 8½ ft. 180; 2½ ft. 178; 11" 179.	No. 1020 transmitter arms.....	..	.84
313	3 conductor tinsel cord, green silk covering.	Transmitter arm as extension cord; part of No. 308 cord.....	6	.45
317	Single conductor tinsel cord, green silk and cotton covering.	No. 1002 hand set; part of No. 319 cord.....	9½"	.06

Telephone Apparatus  
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## CORDS

### For Telephone Sets (Continued)

Code No.	Description	Used with	Standard Length Feet	List Price each
318	3 conductor tinsel cord, green silk covering.	No. 1002 hand set; part of No. 319 cord.....	4½	\$0.39
319	Combination of 4½" 336; 9½" 317; 4½ ft. 318.	No. 1002 hand set.....	...	.50
325	5 conductor tinsel cord, green silk covering.	No. 1020 desk stands; part of No. 326 cord.....	6	.69
326	Combination of 6 ft. 325; 3 ft. 178; 8 in. 179.	No. 1020 desk stands.....	5½"	.93
329	Single conductor tinsel cord, green silk and cotton covering.	Telephone sets.....	5½"	.07½
		No. 1020 desk stands.....	9"	.07½
330	Single conductor tinsel cord, green silk and cotton covering. Yellow tracer.	No. 1020 desk stands.....	9½"	.07½
331	Combination of 3 ft. 178; 6 ft. 180; 9" 329; 9½" 329.	No. 1020 desk stands.....	..	.80
336	Single conductor tinsel cord, green silk and cotton covering.	No. 1002 hand set.....	4½"	.06
337	2 conductor steel cord, glazed cotton covering.	No. 1017 test set for receiver.....	24"	.32
338	Single conductor cord, rubber covering..	For connecting dry cells.....	4"	.03¾
348	2 conductor with testing clips.....	No. 1001 hand set.....	3	.58
382	Single conductor tinsel cord, green silk and cotton covering. Double yellow tracer.	No. 1020 desk stands.....	9"	.06
389	2 conductor tinsel cord, green silk covering.	Receiver on desk stand.....	2½ 3	.17½ .19½
390	Single conductor tinsel cord, green silk covering.	Desk stands.....	9½"	.04½
392	Combination of 6 ft. 180; 3 ft. 389; 9½" 390.	No. 1020 desk stands.....	..	.69
406	2 conductor tinsel cord, green silk covering.	No. 1020 desk stands.....	6	.30¾
418	Combination of 6 ft. 406; 3 ft. 389; 9½" 329; 9½" 330.	No. 1020 desk stands.....	..	.65½
419	2 conductor tinsel cord, red and blue worsted covering.	Receiver on wall sets.....	2½ 3	.11½ .12¾
450	Combination of 6 ft. 180; 3 ft. 389; 9½" 330; 9½" 382.	No. 1020 desk stands.....	..	.78
451	Combination of 6 ft. 406; 3 ft. 389; 9½" 330.	No. 1020 desk stands.....	..	.59
454	2 conductor tinsel cord, red and blue worsted covering; similar to No. 92 cord except for tips.	Receiver wall set.....	2½ 3	On request "
460	2 conductor tinsel cord, green silk covering; similar to No. 10 cord except for tips.	Receiver on wall set.....	2½ 3	.18 .195
461	3 conductor tinsel cord, green silk covering; similar to No. 180 cord except for tips.	No. 1020 desk stands.....	6	.57¾
396	2 conductor weatherproof cord, cotton covering.	No. 138 plug.....	6	.375

**CORD FASTENERS**

Code No.

9 Used on cord shelves with all types of switchboard cords.....

List Price  
each

\$0.03



No. 9

**CORD HOOKS**

The two types of cord hooks shown will meet all requirements. The No. 3 is the screw hook type, and can be mounted in any desired location. The No. 7 is designed for placing on the rear edge of cord shelves, and consists of a flat strip of brass  $\frac{1}{16}$  in. thick by  $\frac{3}{4}$  in. wide, the hooks being punched out at various spacings as listed in the following table. Hooks of this type are strong and efficient, and present a neat appearance and occupy a minimum amount of space.



No. 3



No. 7-L

Code No.	Number per strip	Spacing Inches	Length Inches	List Price per Gro.
3	Single	..	....	\$0.37½
Code No.	Number per strip	Spacing Inches	Length Inches	List Price each
7-A	9	$\frac{3}{8}$	$7\frac{1}{2}$	\$0.27
7-B	10	$\frac{1}{2}$	$4\frac{1}{2}$	.24
7-C	10	$\frac{3}{4}$	$7\frac{1}{2}$	.29
7-D	18	$\frac{3}{8}$	$7\frac{1}{2}$	.27
7-E	11	$\frac{3}{8}$	$6\frac{1}{2}$	.27
7-F	18	$\frac{1}{2}$	$7\frac{1}{2}$	.29
7-G	19	$\frac{1}{2}$	10	.30
7-H	8	$1\frac{1}{2}$	9	.27
7-J	10	$\frac{3}{8}$	$3\frac{3}{4}$	.23
7-K	7	$\frac{3}{4}$	$5\frac{1}{4}$	.23
7-L	3	$\frac{3}{4}$	$2\frac{3}{8}$	.14



No. 103 Cord Pulley

**CORD PULLEYS**

These have brass wheels about  $\frac{9}{32}$  in. wide, except the No. 109, which has a rubber wheel. They are for use with our standard switchboard or telephone cords as the case may require.

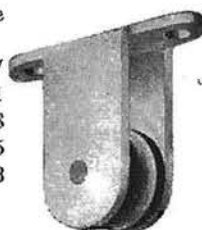


No. 105



No. 106

Code No.	Width Inches	List Price each
103	$\frac{18}{32}$	\$0.27
105	$\frac{2}{16}$	.21
106	$\frac{18}{32}$	.18
109	$\frac{7}{16}$	.15
111	$\frac{3}{8}$	.23



No. 109



No. 111

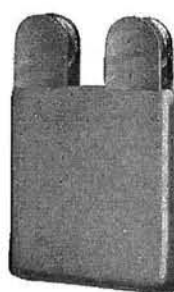
Telephone Apparatus  
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## CORD WEIGHTS

Code No.	Style	Used with	List Price each
103	Brass, 14 oz.	Suspended transmitter and No. 7 transmitter arm.....	\$0.60
108	Lead, 28 oz.	Switchboard cords when pulley is used.....	.55
116	Lead, 9½ oz.	Switchboards.....	.25



No. 103



No. 108

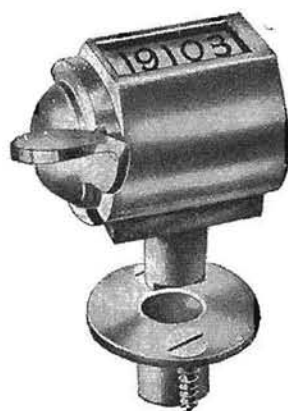


No. 116

## COUNTER

For counting the number of telephone calls handled at one switchboard position or by one operator as the case may be. The socket is permanently mounted, flush with the keyshelf of the switchboard, and the counter can be placed and removed at will. This counter is designed to make the taking of "peg counts" much more easy than by former methods. Counts to 99,999 and then repeats.

List No.	Mfr. No.		List Price each
760928	8	Counter complete with socket plate.....	\$3.00
760929	..	Socket plate only.....	.40
760930	9	Counter complete, lever designed for left hand operation.....	4.00



No. 760928 Counter

## CUT-IN STATIONS

Used at an intermediate station in a toll line to cut the line off in either direction. It is used in connection with a separate telephone which is wired to the cord and plug. When the plug is inserted in either the left or right hand jacks the telephone is connected to that portion of the line, and the opposite portion cut off and connected to the bell of the "cut-in station."

When the plug is removed the line is connected through and the bell bridged across the line.

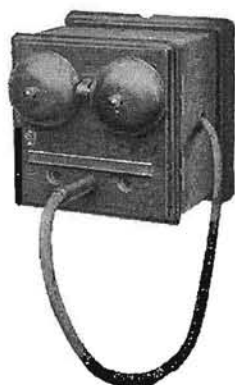
By inserting the plug in the middle jack the telephone is bridged across the line.

Regularly furnished in oak.

### For Magneto Bridging Service

Code No.	Description	List Price each
319-E	1,000-ohm unbiased ringer.....	\$5.30
319-F	1,600 " " ".....	5.90
319-G	2,500 " " ".....	5.90

Telephone Apparatus  
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No. 319 Type

## DESIGNATION STRIPS

### No. 1 Type

These consist of a wooden mounting with a No. 8 type designation strip mounted on the face, and are for use in designating outgoing trunk jacks, etc.

The Nos. 6-B and 6-F are the same as the No. 6-A and the No. 6-E respectively, except that they mount flush with the face of the jack mountings, while the No. 6-A and No. 6-B project slightly.



No. 1-A

Code No.	Width Inches	Finish	Used with Switchboard	List Price each
1-A	$\frac{1}{4}$	Nickel	No. 1 No. 193 jack,	\$0.23
1-B	$\frac{1}{4}$	Nickel	No. 1 No. 193 jack,	.23
1-C	$\frac{1}{4}$	Black	No. 1 No. 193 jack,	.23
1-D	$\frac{3}{8}$	Black	No. 1 No. 193 jack,	.23
6-A	$\frac{3}{8}$	Nickel	No. 1 No. 92 jack,	.23
6-B	$\frac{3}{8}$	Nickel	No. 1 No. 92 jack,	.23
6-E	$\frac{3}{8}$	Black	No. 1 No. 92 jack,	.23
6-F	$\frac{3}{8}$	Black	No. 1 No. 92 jack,	.23
10-B	$\frac{1}{2}$	Nickel	No. 9	.23
10-C	$\frac{1}{2}$	Nickel	No. 9	.23

### No. 2 Type

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	$\frac{1}{4}$	Black	No. 1 No. 193 jack,	\$0.90
50-A	$\frac{1}{4}$	Black	No. 10	.98

### No. 7 Type

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.



No. 7-A

Code No.	Width Inches	Finish	Used with Switchboard	List Price each
7-A	$\frac{1}{4}$	Celluloid face	No. 193 jack, No. 1	\$0.20
7-B	$\frac{1}{4}$	Celluloid face	No. 193 jack, No. 1	.20
7-D	$\frac{3}{8}$	Celluloid face	No. 193 jack, No. 1	.20
13-A	$\frac{3}{8}$	Celluloid face	No. 92 jack, No. 1	.20
48-A	$\frac{1}{4}$	Celluloid face	No. 10	.23

### No. 8 Type

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



No. 8 Type

Code No.	Width Inches	Length Inches	Finish	Used for	List Price per foot
8-A	$\frac{1}{4}$	As specified	Nickel plate	Key shelf and miscellaneous numbering	\$0.18
8-B	$\frac{3}{8}$	As specified	Nickel plate	Key shelf and miscellaneous numbering	.18
8-D	$\frac{1}{4}$	As specified	Nickel plate	Key shelf and miscellaneous numbering	.18
8-E	$\frac{1}{4}$	As specified	Black	Key shelf and miscellaneous numbering	.18

Code No.	Width Inches	Length Inches	Finish	Used for	List Price each
43-A	$\frac{1}{4}$	$1\frac{1}{2}$	Black	Test Boards	\$0.09
43-B	$\frac{3}{8}$	$1\frac{1}{2}$	Black	Test Boards	.075
43-C	$\frac{3}{8}$	$1\frac{1}{4}$	Black	Test Boards	.075



## DESK STANDS

### With Transmitters, Receivers and Cords

Code No.	Description	Finish	List Price each
1020-C	For operator's telephone set, with cordless private exchange. Includes: 1 No. 20-C desk stand, 1 No. 229-W transmitter, 1 No. 143-W receiver, 1 No. 293 cord.	Nickel	\$6.80
1020-J	For operator's telephone set, using No. 128-W head receiver. No switchhook.... Includes: 1 No. 20-J desk stand, 1 No. 229-W transmitter, 1 No. 128-W receiver, 1 No. 178, 6 ft. cord, 1 No. 10, 6 ft. cord, 1 No. 179, 9½ in. cord.	Nickel	6.90
1020-BC	For regular local battery bridging or central battery service. Includes: 1 No. 20-BC desk stand, 1 No. 229-W transmitter, 1 No. 143-W receiver, 1 No. 392 cord.	Nickel	6.55
1020-SC	For regular local battery bridging or central battery service. Includes: 1 No. 20-SC desk stand, 1 No. 229-W transmitter, 1 No. 143-W receiver, 1 No. 392 cord.	Black	6.55
1020-MC	For central battery service, using transmitter cutout button. Includes: 1 No. 20-MC desk stand, 1 No. 229-W transmitter, 1 No. 143-W receiver, 1 No. 392 cord.	Nickel	6.80
1020-AK	For series central battery service. Includes: 1 No. 20-AK desk stand, 1 No. 293-W transmitter, 1 No. 171-W receiver, 1 No. 451 cord.	Nickel	6.30
1020-AM	For series central battery service. Includes: 1 No. 20-AM desk stand, 1 No. 293-W transmitter, 1 No. 171-W receiver, 1 No. 451 cord.	Black	6.30
1020-PC	For regular local battery bridging and central battery service. Insulated transmitter. Includes: 1 No. 20-PC desk stand, 1 No. 291-W transmitter, 1 No. 143-W receiver, 1 No. 450 cord.	Nickel	6.90
1020-AI	For regular local battery bridging and central battery service. Insulated transmitter. Includes: 1 No. 20-AI desk stand, 1 No. 291-W transmitter, 1 No. 143-W receiver, 1 No. 450 cord.	Black	6.90
1020-AG	For series central battery service. Insulated transmitter. Includes: 1 No. 20-AG desk stand, 1 No. 291-W transmitter, 1 No. 171-W receiver, 1 No. 418 cord.	Nickel	6.55
1020-AH	For series central battery service. Insulated transmitter. Includes: 1 No. 20-AH desk stand, 1 No. 291-W transmitter, 1 No. 171-W receiver, 1 No. 418 cord.	Black	6.55



No. 1020-BC



No. 1020-SC



No. 1020-MC

## DESK STANDS (Continued)

### Without Transmitters, Receivers or Cords

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

Code No.	Service	Finish	List Price each
20-C	Operator's telephone set, cordless private exchange.....	Nickel	\$2.35
20-J	Operator's telephone set without switch hook.....	"	1.75
20-MC	Central battery with transmitter cut-out button.....	"	2.50
20-BC	Regular local battery bridging or central battery.....	"	2.25
20-SC	Regular local battery bridging or central battery.....	Black	2.25
20-AK	Series central battery.....	Nickel	2.25
20-AM	Series central battery.....	Black	2.10
20-PC	Regular local battery bridging or central battery. Insulated transmitter..	Nickel	2.35
20-AL	Regular local battery bridging or central battery. Insulated transmitter..	Black	2.35
20-AG	Series central battery. Insulated transmitter.....	Nickel	2.25
20-AH	Series central battery. Insulated transmitter.....	Black	2.25

## DESK SET BOXES—Central Battery

### Induction Coil Type

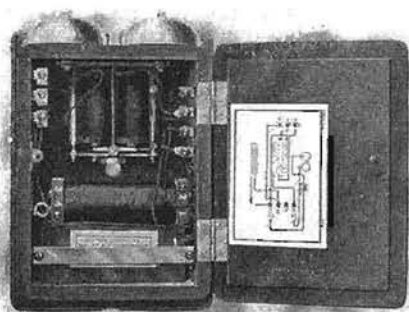
FOR SINGLE, TWO-PARTY SELECTIVE, OR FOUR-PARTY SEMI-  
SELECTIVE SIGNALING SERVICE

Can be used with Desk Stands Nos. 1020-AL, 1020-BC, 1020-MC, 1020-PC, and 1020-SC; Telephone Arms Nos. 1020-A, 1046-AA, 1046-AB, 1046-AC, 1048-AA, 1048-AB, and 1048-AC; Hand Set No. 1002-A, or Subscriber's Set No. 1130-A.

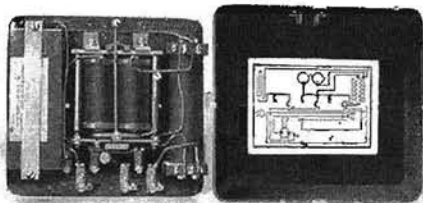


No. 295 Type Desk Set Box

Code No.	Description	List Price each
295-A	Wooden box, containing 1 No. 8-AG, 1000-ohm biased ringer, 1 No. 21-D condenser, 1 No. 20 induction coil.....	\$4.85
131-J	Metal box, containing 1 No. 17-A 1000-ohm biased ringer, 1 No. 21-D condenser, 1 No. 20 induction coil.....	4.35
334-A	Metal box, containing 1 No. 8-AG 1000-ohm biased ringer, 1 No. 21-D condenser, 1 No. 20 induction coil.....	4.85
358-A	Semi-flush metal wall box, containing 1 No. 16-BG 2500-ohm biased ringer, 1 No. 21-D condenser, 1 No. 20 induction coil.....	7.45



No. 295 Type Desk Set Box—Open



No. 131-J Desk Set Box with Cover Removed



No. 358 Type Desk Set Box



No. 334 Type Desk Set Box  
Telephone Apparatus  
and Accessories

**DESK SET BOXES—Central Battery (Continued)****Series Type****FOR SINGLE, TWO-PARTY SELECTIVE, OR FOUR-PARTY SEMI-SELECTIVE SIGNALING SERVICE****Can be used with Desk Stands Nos. 1020-AG, 1020-AH, 1020-AK, or 1020-AM**

Code No.	Description	List Price each
295-A1	Wooden box, containing 1 No. 8-AG 1000-ohm biased ringer, 1 No. 21-F condenser . . . .	\$4.50
334-N	Metal box, containing 1 No. 6-AG 1000-ohm biased ringer, 1 No. 21-F condenser . . . . .	3.55
358-C	Semi-flush metal wall box, containing 1 No. 16-BG 2500-ohm biased ringer, 1 No. 21-P condenser . . . . .	On request

**Induction Coil Type****FOR HARMONIC SELECTIVE SIGNALING SERVICE****Can be used with Desk Stands Nos. 1020-AL or 1020-PC**

Code No.	Description	List Price each
295-AM	Wooden box, containing 1 No. 41-SG 33 $\frac{1}{3}$ -cycle ringer, 1 No. 21-D condenser, 1 No. 20 induction coil . . . . .	\$6.40
295-AN	Wooden box, containing 1 No. 41-TG 50-cycle ringer, 1 No. 21-D condenser, 1 No. 20 induction coil . . . . .	6.40
295-AP	Wooden box, containing 1 No. 41-UG 66 $\frac{2}{3}$ -cycle ringer, 1 No. 21-D condenser, 1 No. 20 induction coil . . . . .	6.40
295-AR	Wooden box, containing 1 No. 41-RG 16 $\frac{3}{4}$ -cycle ringer, 1 No. 21-D condenser, 1 No. 20 induction coil . . . . .	6.75
334-E	Metal box, containing 1 No. 41-SG 33 $\frac{1}{3}$ -cycle ringer, 1 No. 21-D condenser, 1 No. 20 induction coil . . . . .	6.40
334-F	Metal box, containing 1 No. 41-TG 50-cycle ringer, 1 No. 21-D condenser, 1 No. 20 induction coil . . . . .	6.40
334-G	Metal box, containing 1 No. 41-UG 66 $\frac{2}{3}$ -cycle ringer, 1 No. 21-D condenser, 1 No. 20 induction coil . . . . .	6.40
334-H	Metal box, containing 1 No. 41-RG 16 $\frac{3}{4}$ -cycle ringer, 1 No. 21-D condenser, 1 No. 20 induction coil . . . . .	6.75

**Series Type****FOR HARMONIC SELECTIVE SIGNALING SERVICE****Can be used with Desk Stands Nos. 1020-AG or 1020-AH**

Code No.	Description	List Price each
295-AW	Wooden box, containing 1 No. 41-SG 33 $\frac{1}{3}$ -cycle ringer, 1 No. 21-F condenser . . . . .	\$5.20
295-AY	Wooden box, containing 1 No. 41-TG 50-cycle ringer, 1 No. 21-F condenser . . . . .	5.20
295-BA	Wooden box, containing 1 No. 41-UG 66 $\frac{2}{3}$ -cycle ringer, 1 No. 21-F condenser . . . . .	5.20
295-BB	Wooden box, containing 1 No. 41-RG 16 $\frac{3}{4}$ -cycle ringer, 1 No. 21-F condenser . . . . .	5.55
334-J	Metal box, containing 1 No. 41-SG 33 $\frac{1}{3}$ -cycle ringer, 1 No. 21-F condenser . . . . .	5.50
334-K	Metal box, containing 1 No. 41-TG 50-cycle ringer, 1 No. 21-F condenser . . . . .	5.50
334-L	Metal box, containing 1 No. 41-UG 66 $\frac{2}{3}$ -cycle ringer, 1 No. 21-F condenser . . . . .	5.50
334-M	Metal box, containing 1 No. 41-RG 16 $\frac{3}{4}$ -cycle ringer, 1 No. 21-F condenser . . . . .	5.85

**DESK SET BOXES—Magneto****FOR SERIES SERVICE**

Can be used with Desk Stand No. 1020-H

Code No.	Description	List Price each
315-G	For series service. Includes 1 No. 38-JG 50-ohm ringer, 1 No. 22-B 3-bar A. C. generator, 1 No. 13 induction coil.....	\$6.75

**FOR BRIDGING SERVICE--CODE RINGING**

Can be used with Desk Stands Nos. 1020-AL, 1020-BC, 1020-MC, 1020-PC, 1020-SC; Telephone Arms Nos. 1020-A, 1046-AA, 1046-AB, 1046-AC, 1048-AA, 1048-AB, 1048-AC; Hand Set No. 1002-A; or Subscriber's Set No. 1130-A.

Code No.	Description	List Price each
315-H	For light load service. Includes 1 No. 38-AG 1000-ohm ringer, 1 No. 22-A 3-bar A. C. generator, 1 No. 13 induction coil.....	\$6.85
300-L	For moderate load service. Includes 1 No. 38-FG 1600-ohm ringer, 1 No. 48-A 5-bar A. C. generator, 1 No. 13 induction coil.....	10.45
300-M	For moderate load service. Differs from the No. 300-L in being equipped with a condenser. Includes 1 No. 38-FG 1600-ohm ringer, 1 No. 48-A 5-bar A. C. generator, 1 No. 21-W condenser, 1 No. 13 induction coil.....	11.30
300-K	For heavy load service. Includes 1 No. 38-BG 2500-ohm ringer, 1 No. 48-A 5-bar A. C. generator, 1 No. 13 induction coil.....	10.45
300-N	For heavy load service. Differs from the No. 300-K in being equipped with a condenser. Includes 1 No. 38-BG 2500-ohm ringer, 1 No. 48-A 5-bar A. C. generator, 1 No. 21-W condenser, 1 No. 13 induction coil.....	11.30



No. 315 Type Desk Set Box

**FOR SINGLE-, TWO-, OR FOUR-PARTY SELECTIVE RINGING USING PULSATING CURRENT**

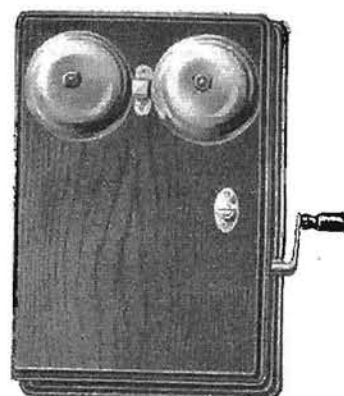
Can be used with same Desk Stands, Telephone Arms, etc., as under Bridging Service

Code No.	Description	List Price each
315-J	Includes 1 No. 46-BG 2500-ohm ringer, 1 No. 22-E 2-bar A. C. generator, 1 No. 13 induction coil....	\$7.45

**FOR HARMONIC SELECTIVE RINGING**

Can be used with Desk Stands Nos. 1020-AL or 1020-PC

Code No.	Description	List Price each
354-A	33 $\frac{1}{3}$ cycles. Includes 1 No. 41-SG 460-ohm ringer, 1 No. 22-T 3-bar A. C. generator, 1 No. 21-F condenser, 1 No. 13 induction coil.....	\$9.10
354-E	50 cycles. Includes 1 No. 41-TG 460-ohm ringer, 1 No. 22-T 3-bar A. C. generator, 1 No. 21-F condenser, 1 No. 13 induction coil.....	9.10
354-F	66 $\frac{2}{3}$ cycles. Includes 1 No. 41-UG 460-ohm ringer, 1 No. 22-T 3-bar A. C. generator, 1 No. 21-F condenser, 1 No. 13 induction coil.....	9.10
354-G	16 $\frac{2}{3}$ cycles. Includes 1 No. 41-RG 1800-ohm ringer, 1 No. 22-T 3-bar A. C. generator, 1 No. 21-F condenser, 1 No. 13 induction coil.....	9.45



No. 300 Type Desk Set Box

## DESK SET BOXES—Magneto (Continued)

### FOR BRIDGING SERVICE—CODE RINGING

The following Magneto Desk Set Boxes are intended for furnishing extension service to main telephone sets, and are not provided with generators.



No. 295 Type Desk Set Box

295-S	For light load bridging service where code ringing is employed. Includes 1 No. 4-AG 1000-ohm unbiased ringer, 1 No. 13 induction coil.....	\$3.70
295-Y	For heavy load service where code ringing is employed. Includes 1 No. 8-BG 2500-ohm biased ringer, 1 No. 13 induction coil.....	4.10
295-AB	For all classes of bridging magneto service with condenser in series with receiver. No ringer is provided. Includes 1 No. 13 induction coil, 1 No. 21-D condenser .....	3.10

## DISTRIBUTING RINGS

These are made from steel, covered with vulcanized rubber tubing, which is very durable.



No. 1

No. 3

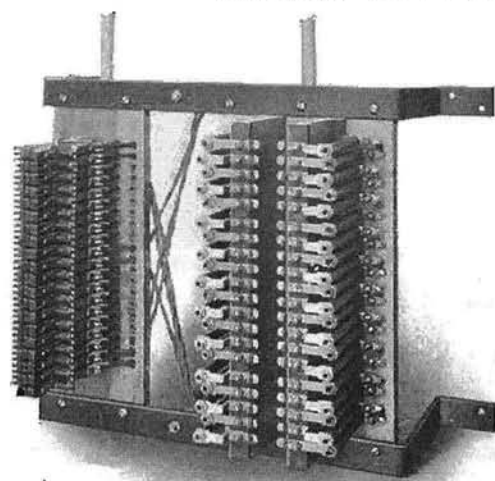
Code No.	Inside Diameter Inches	Used for	List Price each
1	2 7/8	Main and intermediate distributing frames .....	\$0.27
3	3	Intermediate distributing frame No. 10 switchboard .....	.27

## CENTRAL OFFICE MAIN DISTRIBUTING FRAMES

These distributing frames have been designed to meet the requirements of small central offices where simple and compact protective equipment is desired.

They are constructed of steel and given a coat of black metallic paint to prevent rust and give them a pleasing appearance.

### No. 1431--20-Line Type Distributing Frame



No. 1431-A—20-Line Main Distributing Frame  
 Telephone Apparatus  
 and Accessories

This frame has been designed to satisfy a demand for a small capacity, inexpensive, and yet thoroughly reliable distributing and protective equipment.

It is especially suitable for the small rural exchange owning and operating a No. 1800 or other switchboard, equipped for from ten to forty lines, with little prospect of immediate growth.

Where more than twenty lines are to be accommodated, two of these frames can be lined up, one above the other. Cross connection facilities are provided by rings on the back of the frame.

This frame is designed for mounting against the wall. The drilling is so arranged that our standard protector groups described on Page 61 can be used.

In ordering this frame it will be necessary to specify the Protector groups desired, consulting the following table:

## DISTRIBUTING FRAMES (Continued)

### No. 1430 Type Distributing Frame

These Frames are built in units of two verticals, one vertical for supporting the terminal apparatus of the outside lines, and the other vertical for supporting the terminal apparatus of the inside lines.

Facilities for cross-connection between the inside and outside lines are provided by the distributing rings on the back of each protector group. These frames are designed to be supported by the switchboard sections.

Each unit will accommodate 100 metallic telephone lines by using the protector groups described and illustrated on Page 61.

(See table following for ordering data.)

These Frames have the following important features:

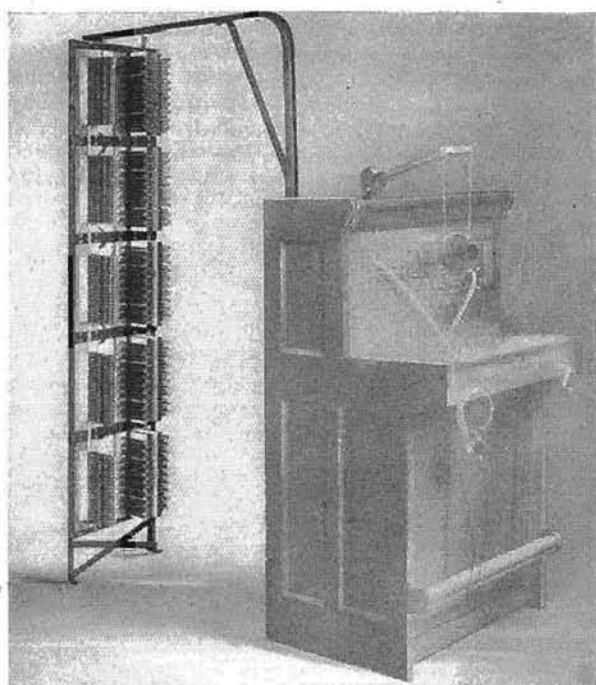
1. **Steel framework.** The framework is of steel, forming a rigid support for the apparatus.

2. **Ease of Access.** The framework is so constructed that cross-connections and inspections can be easily made.

3. **Unit Type.** The framework is built in 100-line units and is so arranged that several units may be lined up to form a frame of larger capacity. It is only necessary to purchase enough frame to handle your present requirements, and increase your frame capacity as your number of lines increases.

4. **Universal Design.** All of the vertical mounting irons are arranged so that our standard protector group described on Page 61 can be mounted upon them. By the addition of a small steel supporting bracket, the No. 1430 type frame can be converted into the No. 1420 wall type frame described later.

5. **Minimum Floor Space.** Due to their compact design, these frames occupy very little floor space.



No. 1430-D, E, or F or No. 1420-B—Main Distributing Frame

### No. 1420 Type Distributing Frame

This Frame is identical in construction to the No. 1430 type, differing only in the supporting bracket, which is arranged to secure the frame to the wall instead of to the switchboard.

#### INFORMATION AND PRICES ON NOS. 1431, 1430, AND 1420 MAIN DISTRIBUTING FRAMES

Code No.	Switchboard to which it is adapted	Protector Group used for outside lines	Protector Group used for inside lines	Line Capacity:		List Price each
				Outside	Inside	
1431-A	Any of small line capacity	1435-L or 1435-M	1435-J or 1435-K	20	20	\$3.00
1430-C	No. 1200 to No. 1209	1435-L or 1435-M	1435-J or 1435-K	100	100	9.60
1430-D	No. 1220 to No. 1239	1435-L or 1435-M	1435-J or 1435-K	100	100	9.60
1430-E	No. 1240 to No. 1259	1435-L or 1435-M	1435-J or 1435-K	100	100	9.60
1420-B	Any switchboard	1435-L or 1435-M	1435-J or 1435-K	100	100	7.50

NOTE.—The prices given cover the frame only. The Protector Groups should be ordered separately by referring to Page 61.



## DROPS

In the following list the Nos. 3 and 4 types of Drops are equipped with two electro-magnet spools each. The Nos. 19, 22, 35, and 56 are single spool drops with tubular iron shells and are cross-talk proof. The No. 19 type is employed especially on long bridging lines, toll lines, cord circuits, etc.

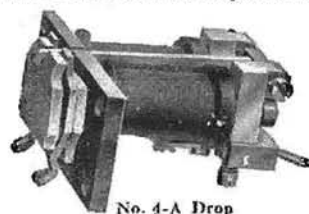
All Drops are equipped with night bell contacts. The contacts of the No. 19-F and No. 56-F are made only while the drop is energized by the ringing current. In all the other drops listed below, the night bell contact remains closed until the drop is restored.

All drops will operate on alternating ringing current.

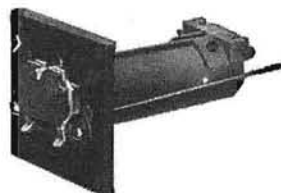
The No. 22 type drop is equipped with an extra winding for restoring the shutter when the call is answered.

The No. 35 type drop is equipped with two windings, one front and one back, and is adapted for selective central office signaling by grounding the middle of the winding and one side of the calling generator.

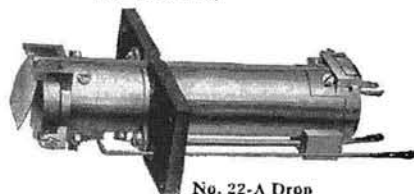
The Nos. 55 and 56 drops are similar to the No. 19, except that they are arranged to mount on 1½ and 1 inch centers respectively, instead of 1¼ inch.



No. 4-A Drop



No. 19-A Drop



No. 22-A Drop



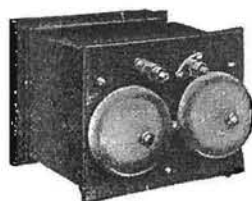
No. 58 Drop Mounting

Code No.	Total Resistance ohms	List Price each
3-A	80	\$1.05
3-B	500	1.15
3-C	1,000	1.20
4-A	80	.90
4-B	100	.90
4-C	1,000	1.15
4-D	500	1.00
19-A	525	1.45
19-B	600	1.50
19-C	1,000	1.65
19-D	800	1.60
19-E	10	1.30
19-F	525	1.65
35-A	300-300	1.75
35-B	500-500	1.80
55-B	600	1.50
56-A	525	1.45
56-B	600	1.50
56-C	1,000	1.65
56-D	800	1.60
56-E	10	1.30
56-F	525	1.65
56-G	100	1.35
56-H	40	1.35
56-J	285-285	1.95
22-A	Line 600, restoring 45	3.70
22-B	Line 1,000, restoring 450	4.05
22-D	Line 900, restoring 45	3.90

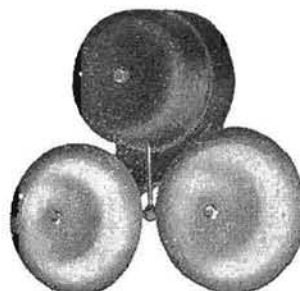
## DROP MOUNTINGS

Code No.	Number per Strip	Centers Inches	Size of Plate Inches	For Drops Number	Used on Switchboards Number	List Price each
2	10	1 3/8	15 x1	4, 19, 35, 42	101, 102, 1006, 1010, 1011	\$0.60
51	3	1 3/8	4 1/2 x1	19	Cordless private exch.	.18
56	20	1 1/8	24 1/2 x1	55, 56	9	1.20
57	15	1 3/8	24 1/2 x1	4, 19, 35, 42, 44, 46, 51, 52, 55, 56	1102	.90
58	15	1 3/8	21 3/4 x1	4, 19, 35, 42, 44, 46, 51, 52, 55, 56	105, 1005	.85
59	12	1 3/4	21 3/4 x1	4, 19, 35, 42, 44, 46, 51, 52, 55, 56	105, 1005	.75
64	5	1 1/2	8 1/2 x1	19	106	.40
65	5	1 1/2	8 1/2 x1 1/2	4, 19, 35, 51, 55, 56, 57	106, 1101	.40
69	10	1	11 1/2 x1	56	10	1.30
70	10	1 3/8	15 x1	4, 19, 35, 51, 55, 56	1200	.62
71	15	1 1/4	21 3/4 x1	55, 56	1200	1.15
72	15	1 1/4	23 1/2 x1	55, 56	1200	1.20
73	10	1 1/2	17 3/4 x1	4, 19	1200	1.00
74	15	1 1/4	17 3/4 x1	56	1200	1.15
75	10	1 3/8	15 1/2 x1	4, 19, 35, 55, 56	1800	.90
76	4	1 1/2	7 1/2 x1	4, 19, 35, 55, 56	1200	.45
77	6	1 1/2	10 1/2 x1	4, 19, 35, 55, 56	1800	.60
78	20	1	21 3/4 x1	56	1200	1.50
79	8	1 1/4	21 3/4 x1	55, 56	1200	.90
80	10	1 1/4	21 3/4 x1	55, 56	1200	.90
81	8	1 1/4	23 1/2 x1	55, 56	1200	.90
82	10	1 1/4	23 1/2 x1	55, 56	1200	.85



**EXTENSION BELLS****For Alternating, Pulsating, and Harmonic Currents**

No. 43 and 127 Types



No. 292 Type Extension Set

These Extension Bells are intended for auxiliary use in connection with wall, desk, or telephone arm telephones. They consist of a ringer on a suitable mounting and two line terminals or binding posts.

They are suitable for magneto or local battery service only, unless equipped with a two microfarad condenser wired in series with the ringer.

Code No.	Description	Use	List Price each
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**No. 43 Type**

43-A	1000-ohm unbiased ringer No. 2-AG mounted in a wooden box with two outside binding posts.	Bridging Non-selective Service	\$2.55
43-F	1000-ohm long biased ringer No. 6-AG mounted in wooden box with two outside binding posts.	Bridging Selective Service...	2.55
43-H	1600-ohm unbiased ringer No. 2-FG mounted in wooden box with two outside binding posts.	Bridging Non-selective Service	3.15
43-J	2500-ohm biased ringer No. 6-BG mounted in wooden box with two outside binding posts.	Bridging Selective Service...	3.15
43-P	80-ohm unbiased ringer No. 1-AG mounted in a wooden box with two outside binding posts.	Series Service.....	2.05
43-W	33 $\frac{1}{3}$ -cycle 460-ohm harmonic ringer No. 41-SG mounted in wooden box with two outside binding posts.	Harmonic Selective Service...	4.15
43-Y	50-cycle 460-ohm harmonic ringer No. 41-TG mounted in wooden box with two outside binding posts.	Harmonic Selective Service...	4.15
43-AA	66 $\frac{2}{3}$ -cycle 460-ohm harmonic ringer No. 41-UG mounted in wooden box with two outside binding posts.	Harmonic Selective Service...	4.15
43-AB	16 $\frac{2}{3}$ -cycle 1800-ohm harmonic ringer No. 41-RG mounted in wooden box, with two outside binding posts.	Harmonic Selective Service...	4.50

**No. 127 Type**

127-E	1000-ohm high efficiency ringer No. 38-AG mounted in wooden box, with two outside binding posts.	Bridging Non-selective Service	2.65
127-F	2500-ohm high efficiency ringer No. 38-BG mounted in wooden box, with two outside binding posts.	Bridging Non-selective Service	3.25
127-G	1600-ohm high efficiency ringer No. 38-FG mounted in wooden box, with two outside binding posts.	Bridging Non-selective Service	3.25
127-II	88-ohm high efficiency ringer No. 43-NG mounted in wooden box, with two outside binding posts.	Intended for use in Railway Simplex Block Circuits.	2.95

**No. 292 Type**

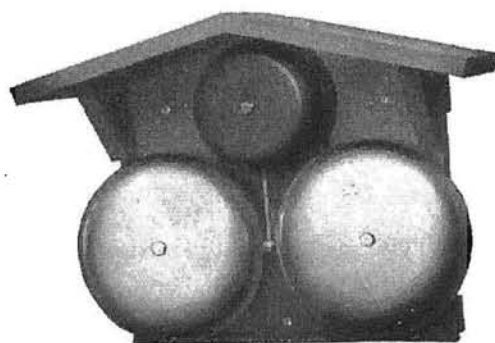
292-A	1000-ohm loud ringing extension bell having a metal base and cover, 6 $\frac{1}{8}$ -in. gongs. Base and cover black finish; gongs nickel plated.	Bridging Non-selective Service	5.25
292-E	2500-ohm loud ringing extension bell having a metal base and cover, 6 $\frac{1}{8}$ -in. gongs. Base and cover black finish; gongs nickel plated.	Bridging Non-selective Service	5.65

EXTENSION BELLS  
No. 292 Type (Continued)

Code No.	Description	Use	List Price each
292-J	1000-ohm loud ringing biased bell having a metal base and cover, 6½-in. gongs. Base and cover black finish; gongs nickel plated.	Bridging Selective or Non-selective Service.	\$5.55
292-K	2500-ohm loud ringing biased bell having a metal base and cover, 6½-in. gongs. Base and cover black finish; gongs nickel plated.	Bridging Selective or Non-selective Service.	5.95
292-S	1600-ohm loud ringing bell having a metal base and cover, 6½-in. gongs. Base and cover black finish; gongs nickel plated.	Bridging Non-selective Service	5.65
292-T	1000-ohm loud ringing bell having a metal base and cover, 6½-in. gongs. Base and cover black finish; gongs galvanized. All parts are treated effectively to resist the action of moisture and fumes.	In mines and other places exposed to moisture or the weather. Bridging Service.	5.25
292-U	2500-ohm loud ringing bell having a metal base and cover, 6½-in. gongs. Base and cover black finish; gongs galvanized. All parts are treated effectively to resist the action of moisture and fumes.	In mines and other places exposed to moisture or the weather. Bridging Service, Non-selective.	5.65
292-W	1000-ohm loud ringing biased bell having a metal base and cover, 6½-in. gongs. Base and cover black finish; gongs galvanized. All parts are treated effectively to resist the action of moisture and fumes.	In mines and other places exposed to moisture or the weather. Bridging Service, Selective.	5.55
292-Y	2500-ohm loud ringing biased bell having a metal base and cover, 6½-in. gongs. Base and cover black finish; gongs galvanized. All parts are treated effectively to resist the action of moisture and fumes.	In mines and other places exposed to moisture and the weather. Bridging Service, Selective.	5.95
292-AA	1600-ohm loud ringing bell having a metal base and cover, 6½-in. gongs. Base and cover black finish; gongs galvanized. All parts are treated effectively to resist the action of moisture and fumes.	In mines and other places exposed to moisture or the weather. Bridging Service, Non-selective.	5.65
292-AB	1000-ohm loud ringing bell having a metal base and cover, 8-in. gongs. Base and cover black finish; gongs galvanized. All parts are treated effectively to resist the action of moisture and fumes.	In mines and other places exposed to moisture or the weather. Bridging Service, Non-selective.	8.65
292-AC	2500-ohm loud ringing bell having a metal base and cover, 8-in. gongs. Base and cover black finish; gongs galvanized. All parts are treated effectively to resist the action of moisture and fumes.	In mines and other places exposed to moisture or the weather. Bridging Service, Non-selective.	9.75

## No. 342 Type

342-A	1000-ohm loud ringing bell No. 292-AB mounted on a backboard with sloping roof to protect bell against dripping of water. All parts are treated effectively to resist the action of moisture and fumes.	In mines and other places exposed to moisture or the weather. Bridging Service, Non-selective.	10.90
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No. 342 Type—Extension Bell

342-E	2500-ohm loud ringing bell No. 292-AC mounted on a backboard with sloping roof to protect the bell against the dripping of water. All parts are treated effectively to resist the action of moisture and fumes.	In mines and other places exposed to moisture or the weather. Bridging Service, Non-selective.	12.00
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## FUSES

These will blow on 50 per cent. increase in current above rating. In ordering, specify the code number and ampere rating.

### Plain Mica Fuses

Will Mount on 1 Inch Centers

Code No.	Carrying Capacity for Sers.		List Price per 100	Code No.	Carrying Capacity for Sers.		List Price per 100
	Amperes	Number			Amperes	Number	
24-A	1½	10	\$1.15	24-B	3	6	\$1.15
24-B	½	6	1.15	24-B	4	6	1.15
24-B	1½	6	1.15	24-B	5	6	1.15
24-B	2	6	1.15	24-C	2	10	1.15



No. 24 Type Fuse

### Alarm Fuses

Will Mount on 1 1-4 Inch Centers

These have a spring which makes contact with an auxiliary bus bar and gives a signal when the fuse blows.

Code No.	Carrying Capacity for Sers.		List Price per 100	Code No.	Carrying Capacity for Sers.		List Price per 100
	Amperes	Number			Amperes	Number	
45-A	1½	10	\$3.90	45-B	4	6	\$3.90
45-B	1½	6	3.90	45-B	5	6	3.90
45-B	2	6	3.90	45-C	2	10	3.90
15-B	3	6	3.90				

### Indicator Alarm Fuses

Will Mount on 1 1-4 Inch Centers

These are similar to the alarm type, but in addition have a head which gives a prominent visual signal when a fuse operates.

Code No.	Carrying Capacity for Sers.		List Price per 100	Code No.	Carrying Capacity for Sers.		List Price per 100
	Amperes	Number			Amperes	Number	
49-A	1½	10	\$6.10	49-B	3	6	\$6.10
49-B	1½	6	6.10	49-B	4	6	6.10
49-B	2	6	6.10	49-C	2	10	6.10

### Tubular Fuses

With Fiber Shell

These are made in 1, 2, 3, 4, 5, 6, 7, and 8 amperes capacity.

The No. 7-A fuse is furnished in 7 amperes capacity, and the No. 11 fuse and the No. 12 fuse in 7 amperes capacity, unless otherwise specified. The No. 12 fuse contains a heat coil.

Code No.	Used with Protectors Nos.	List Price each
7-A	7-A, 7-D, 51-A, 77-B	\$0.09
11-C	58-A, 58-B, 59-A, 79-A	.135
12-A	12-A	.30

No. 24-A



No. 7-A



No. 11-C



No. 12-A



### Tubular Fuses

With Porcelain Shell

Code No.	Capacity Amperes	Used	List Price each
47-A	7	At telephone stations as an outside fuse in connection with No. 60-A protector.	\$0.105
47-B	14	At telephone stations as an outside fuse in connection with No. 79-A protector.	.105



No. 2



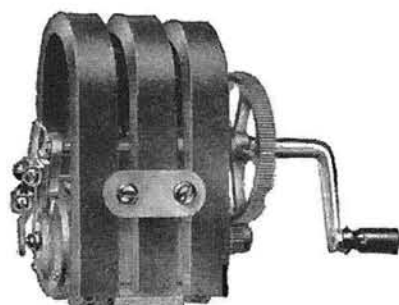
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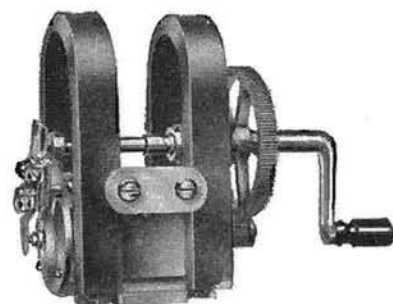
No. 5-A



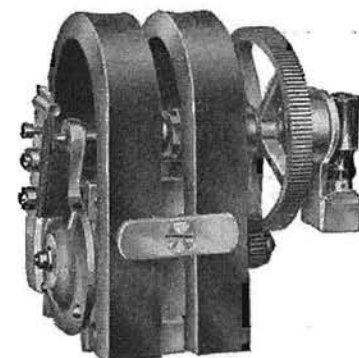
No. 11



No. 22-A



No. 22-E



No. 29-B

Telephone Apparatus  
and Accessories

## FUSE POSTS

## For Mica and Alarm Fuses

These are furnished with two sizes of fuse screw. The larger screw is furnished with small capacity fuses and the smaller screw for those of large capacity. This is to guard against using a fuse of high capacity in a circuit designed for one of low capacity. The only exception to this rule is in the case of the No. 24-C, No. 45-C, and No. 46-C fuses (2 amperes), which with the No. 5-B post are to be used only in the service meter circuits. To further guard against using the wrong fuse, the post and fuse terminal designed for  $1\frac{1}{4}$  ampere capacity circuits are nickel plated and tinbed respectively, while those for circuits above  $1\frac{1}{4}$  amperes capacity are copper plated.

In replacing a fuse it should therefore be noted that the finish of the fuse terminals and post is similar.

Code No.	Finish	Screw Number	Used with Fuse Number	List Price each
2	Nickel plate	10	24-A	\$0.105
3	Copper plate	6	24-B	.105
5-A	Nickel plate	10	24-A, 45-A, 49-A	.085
5-B	Copper plate	10	24-C, 45-C, 49-C	.085
6	Brass	6	24-B, 45-B, 49-B	.085
7-A	Brass	10	24-A	.07
7-B	Brass	10	49-A	.07
7-C	Brass	6	49-B	.07

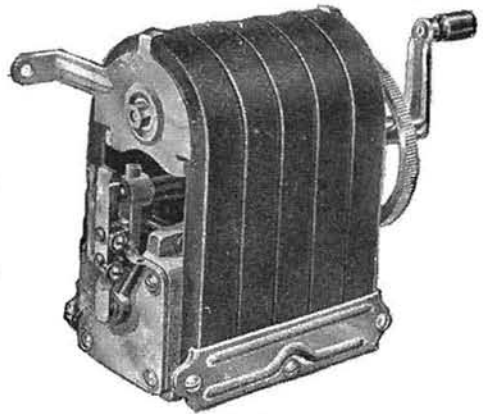
## GENERATORS

## Hand Generators

Code No.	Number 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	Nos. 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	Nos. 90510 and 90530 test sets.....	3.15
22-N	3	Alternating	Closed	Nos. 90511 and 90512 test sets.....	3.15
22-T	3	Alternating	Open	Magneto harmonic telephone sets.....	3.85
29-A	2	Alternating	Closed	Nos. 1006-A, 1006-B, 1006-C test sets. (This generator is the same as the No. 29-B except that the handle is not the folding type)	3.00
29-B	2	Alternating	Closed	No. 1017-A test set.....	3.25
29-C	2	Alternating	Closed	No. 1017-C test set.....	5.25
22-E	2	Alternating	Open	Magneto telephone sets..	3.15

**GENERATORS****Hand Generators (Continued)**

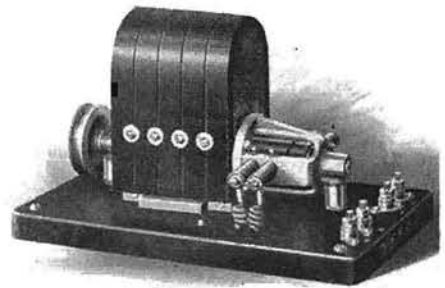
Code No.	Num-ber of Bars	Current	Open or Closed Circuit	Used in	List Price each
4S-A	5	Alternating	Open	Magneto telephone sets.....	\$6.00
4S-B	5	Pulsating and Alternating	Open	Magneto telephone sets and switchboards.....	7.00
4S-C	5	Alternating	Open	Magneto mining sets.....	6.60
4S-H	5	Alternating	Open	Switchboards.....	5.85



No. 48-A

**Power Generators**

16-A	5	Pulsating and Alternating	Open	Telephone central offices to furnish power ringing. Mounted on a wood base 7" x 11". Height 7". Delivers 106 volts A.C. and 72 volts pulsating at a speed of 1000 r.p.m.....	18.00
				Diameter of pulley, 2".	



No. 16-A

**No. 48-A Generator Parts**

These parts are listed for convenience in ordering only and are subject to change at any time.

Piece Part No.	Description	Piece Part No.	Description
P-106855	Rubber insulating strip used with contact springs.	P-42986	Screw bolt for holding mounting brackets to magnets.
P-103130	Contact spring engaging armature shaft.	P-41140	Screws for holding heads to pole pieces.
P-10471	Inside spring with platinum point and connecting screw.	P-101492	Spring collar for large pinion.
P-106222	Connecting screw.	P-18377	Spring for large pinion.
P-101472	Connecting plate used with thin contact spring.	P-39656	Screw for fastening inside collar to shaft.
P-101736	Thin German silver contact spring with platinum point.	P-101462	Inside collar.
P-101468	Long "U"-shaped contact spring with platinum point.	P-101450	Plate for holding magnets to pole pieces.
P-107605	Clamping plate for holding springs to frame.	P-30443	Screw for fastening magnet plate to pole pieces.
P-39624	Machine screw for clamping springs to mounting plate.	P-101464	Large pinion.
P-106897	Bushing to insulate mounting screw.	P-110578	Small pinion.
P-101467	Center magnet.	P-108254	Cotter pin.
P-106117	Other magnets.	P-110577	Plate on armature shaft engaging small pinion.
P-101456	Right-hand mounting bracket.	P-42072	Spring in small pinion.
P-101457	Left-hand mounting bracket.	P-108765	Armature.
P-101556	Nut to go on screw bolt.	P-22779	Machine screw for mounting generator on shelf.
		P-18680	Mounting screw washer.
		P-41519	Generator crank and handle.
		P-110578	Small pinion.

**HAND GENERATOR BOXES**

Regularly furnished in oak.

Code No.	Description	List Price each
299-F	5-bar A. C. Generator No. 48-A mounted in box 8 in. x 9 in. x 5 $\frac{3}{4}$ in.....	\$7.30
299-G	5-bar Pulsating and A. C. Generator No. 48-B mounted in box 8 in. x 9 in. x 5 $\frac{3}{4}$ in.....	8.25
303-A	3-bar A. C. Generator No. 22-A mounted in box 6 $\frac{1}{2}$ in. x 8 $\frac{1}{2}$ in. x 4 $\frac{1}{2}$ in.....	4.35



No. 299-A

Telephone Apparatus  
and Accessories

GONGS  
For Ringers

No. 1



No. 3



No. 6



No. 10



No. 16



No. 3 Gong Mounting

Code No.	Description	Diameter inches	Height inches	Finish	List Price each
1	Telephone set gong.....	2½	2½	Nickel plate	\$0.07
3	Cow gong.....	2 x 1½	1½	Nickel plate	.21
6	Large sleigh gong.....	1¾	1½	Nickel plate	.30
10	Large tea gong.....	2½	1½	Nickel plate	.45
16	Standard telephone set gong..	2½	¾	Nickel plate	.07
17	Standard telephone set gong..	3	1	Nickel plate per pair	.21
18	Steel gong for loud ringing extension bell.....	6½	½	Galvanized	.27
19	Steel gong for loud ringing extension bell.....	6½	½	Nickel plate	.27
20	Telephone set gong.....	3	1	Black finish	.12
22-A	Thin brass gong for No. 40 type ringer.....	1½	¾	Nickel plate	.06
22-B	Thin steel gong for No. 40 type ringer.....	1½	¾	Nickel plate	.05½
22-C	Heavy brass gong for No. 40 type ringer.....	1½	¾	Nickel plate	.06½
22-D	Heavy steel gong for No. 40 type ringer.....	1½	¾	Nickel plate	.11½
22-E	Slotted brass gong for No. 40 type ringer.....	1½	¾	Nickel plate	.05½
22-F	Slotted steel gong for No. 40 type ringer.....	1½	¾	Nickel plate	.10

## GONG MOUNTINGS

Each of the code numbers in the following list includes a pair of gong mountings and No. 2 includes also the necessary screws for fastening the gongs to the mountings. The gong nuts listed below must be ordered separately, for example:

1—No. 3 gong mounting

2—P-19097 gong nuts

Code No.	Length of Post Inches	Used with Gongs	Gong Nuts	Finish	List Price each
2	¾	No. 6	.....	Nickel plate	\$0.15
3	1¼	Nos. 3 and 10	P-19097	Nickel plate	.165

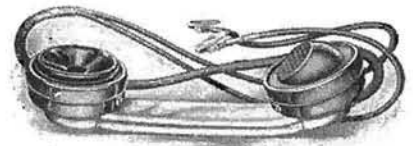
## GONG NUTS

Code No.	List Price
P-19097 Per 100.....	\$2.65



**HAND SETS**

Code No.	Description	List Price each
1001-A	Includes No. 1-A hand set handle, No. 244-W transmitter, No. 131-W receiver, and 3 ft. two conductor cord, code No. 348 which has two spring clips for lineman's testing.....	\$7.30
1001-C	For use with portable magneto telephone sets. Includes No. 1-C hand set handle, No. 285-W transmitter, No. 131-W receiver, 6 ft. No. 366 cord.....	9.60
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....	7.90



No. 1001-A



No. 1002-A

**HEAT COILS**

Code No.	Description	Used with Pro- tectors Nos.	List Price each
66	Brass dummy.....	4-A, 4-C, 65-A, 65-B, 78-A, 78- B, 84-A, 84-B....	\$0.00¾
67	Red shell for central battery equipments.....	4-C, 65-B, 78-B, 84-B, 57-B, 73- A, 75-A.....	.10½
69-A	Black shell for magneto equip- ments.....	4-A, 65-A, 78-A, 84-A, 57-A....	.10½
70-A	Black fiber dummy.....	4-A, 4-C, 65-A, 65-B, 78-A, 78- B, 84-A, 84-B, per 100.....	1.75



No. 66



No. 69-A

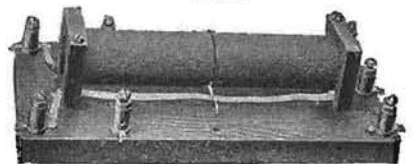


No. 5

**INDUCTION COILS**

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	4¾x1½	Magneto telephone sets.....	\$1.50
10	8½x3¾	Operator's telephone set in switch- boards.....	2.00
13	3¼x1	Magneto telephone sets.....	.47
20	4¼x1¾	Central battery telephone sets.....	.70
23	4¼x1½	Operator's telephone set in switch- boards: Nos. 9, 10; and in private exchanges, Nos. 4, 101, 102.....	1.20
24	6¾x3¼	Operator's telephone set in No. 1 switchboard.....	1.50
33	1¾x6	Operator's telephone set in No. 1200 magneto switchboard.....	1.20



No. 10



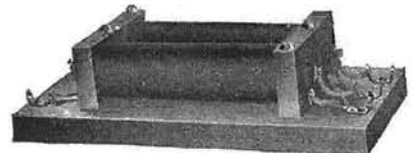
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No. 20



No. 23



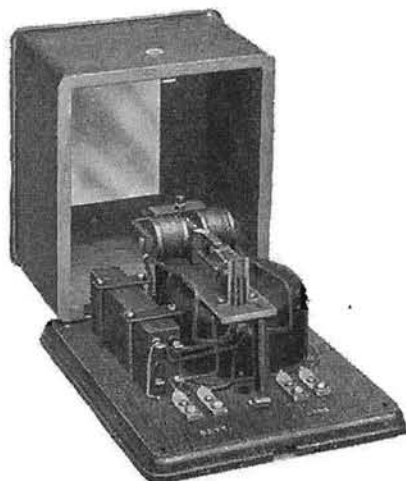
No. 24



## INTERRUPTERS

(Sometimes called Pole Changers)

### No. 62 Type



No. 62-A—Open

Code No.	Description and Use	List Price each
62-A*	An electrically operated interrupter for furnishing alternating current. Designed particularly for Railway Telephone service or where a comparatively small number of telephone bells connected on a line of low resistance are to be rung. Operates on current furnished by five cells of dry battery, and only when the ringing key is closed. Size of case, $6\frac{7}{8}$ " wide, $8\frac{3}{4}$ " high, $5\frac{1}{8}$ " deep.....	\$30.00

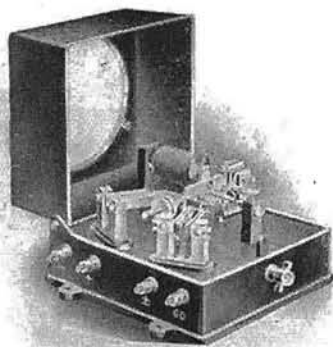
### No. 84 Type



No. 84-A—Closed

84-A*	An electrically operated pole changer, producing alternating and positive and negative pulsating currents from a source of direct electromotive force. Operating coil wound for current from a 24-volt battery. Ringing current taken from a battery of dry cells. Used for supplying ringing current in small exchanges. Dry cells are not included. Size of base, 8" x 8".....	24.70
84-B*	Same as No. 84-A, except the operating coil is wound for current from two Edison BSCO primary cells in series.....	24.00
84-C*	Same as No. 84-A, except the operating coil is wound for current from a 36-volt battery....	24.60
84-D*	Similar to No. 84-A, except the operating coil is wound for current from one Edison BSCO primary battery and the contact springs are arranged to deliver alternating current only..	28.50
84-E*	Similar to No. 84-A, except the operating coil is wound for current from one Edison BSCO primary battery.....	30.75

\* Batteries not included.



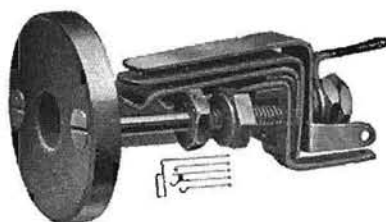
No. 84-A—Open

We make a variety of interrupter attachments which are for mounting on ringing machines and which are intended to interrupt battery current supply and ringing current supply in various circuits. Interrupters can be supplied to meet any requirement as to frequency of interruption for such uses as tone test, howler, busy-back, and machine ringing.

**JACKS**

The Jacks designed for mountings must be ordered in connection with them. See note under Jack Mountings.

Code No.	Contact Points	Used with plug number	Used with Jack Mountings number		List Price each
77	Platinum	85	Singly	.....	\$0.83
81	Platinum	110	6, 7	10 per strip 20 per strip	.68 .53
92	None	109	18, 19, 113	10 per strip 20 per strip	.48 .38
141	Platinum	110	108, 109, 110, 112	10 per strip 20 per strip	.68 .53
*193	None	110	117, 118, 119, 120	10 per strip 20 per strip	.48 .38



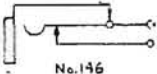
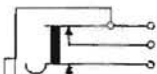
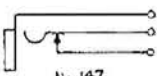
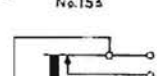
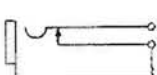
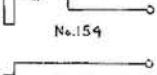
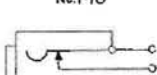
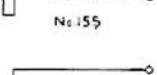


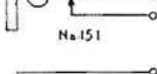
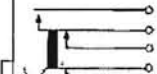
No. 77

\*The No. 119 tool is designed for extracting and replacing sleeve of the No. 193 Jack.

**Singly Mounted Punched Frame Jacks**

Single Mounting Lug at Front of Springs

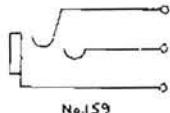
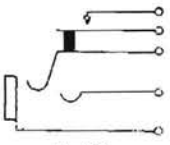
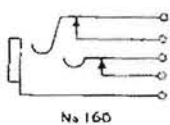
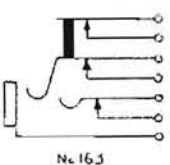
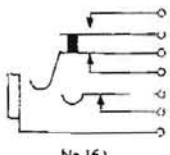
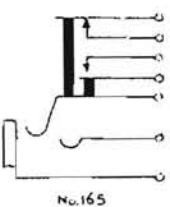


Code No.	Used with Plug Number	List Price each	Code No.	Used with Plug Number	List Price each		
 No. 146	146	116	\$0.165	 No. 153	153	47-116	\$0.33
 No. 147	147	47-116	.165	 No. 154	154	47-116	.54
 No. 148	148	47-116	.30	 No. 155	155	47-116	.36
 No. 149	149	47-116	.30	 No. 156	156	47-116	.54
 No. 151	151	47-116	.45	 No. 189	189	47	.60
 No. 152	152	47-116-103-137	.195	 No. 204	204	47	.81

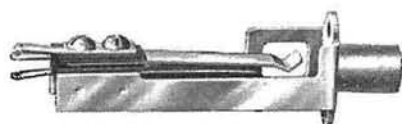
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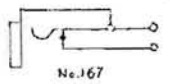
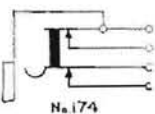
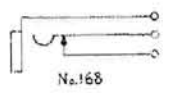
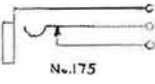
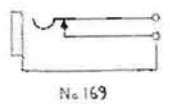
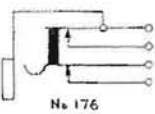
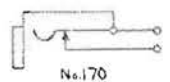
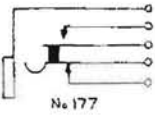
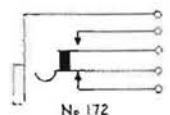
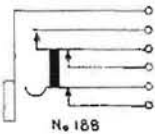
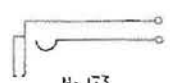
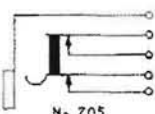
### Single Mounting Lug at Side



Code No.	Used with Plug Number	List Price each	Code No.	Used with Plug Number	List Price each
 No. 159	110	\$0.195	 No. 162	110	\$0.375
 No. 160	110	.38	 No. 163	110	.555
 No. 161	110	.57	 No. 165	110	.45
				206	.87

### Double Mounting Lugs Front and Back

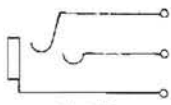
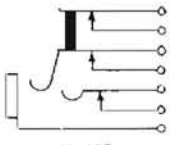
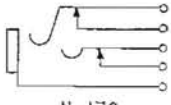
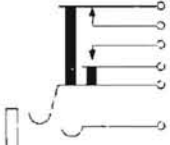
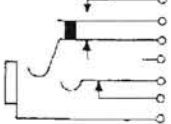
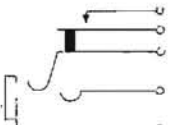


Code No.	Used with Plug Number	List Price each	Code No.	Used with Plug Number	List Price each
 No. 167	116	\$0.18	 No. 174	47-116	\$0.345
 No. 168	47-116	.18	 No. 175	47-116	.375
 No. 169	47-116	.315	 No. 176	47-116	.555
 No. 170	47-116	.315	 No. 177	47-116	.56
 No. 172	47-116	.47	 No. 188	47	.77
 No. 173	47-116-103-137	.21	 No. 205	47	.81

Telephone Apparatus  
and Accessories

## JACKS (Continued)

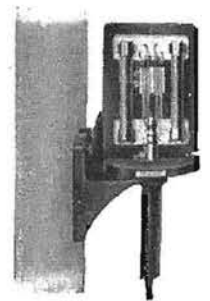
### Double Mounting Lugs at Sides

	Code No.	Used with Plug Number	List Price each		Code No.	Used with Plug Number	List Price each
	178	110	\$0.21		182	110	\$0.57
No. 178				No. 182			
	179	110	.39		184	110	.465
No. 179				No. 184			
	180	110	.585				
No. 180							
	181	110	.39				
No. 181							



### Singly Mounted Jacks

Code No.	Description	List price each
186	A Jack designed for mounting on poles having a cast iron frame and case; affords a means of connecting a portable telephone to the line. Contains protective apparatus consisting of: Two 500-volt, 1 ampere D. & W. fuses, Two No. 1 protector blocks, Two No. 2 protector blocks, Two No. 3 protector micas. Lock can be furnished if specified on order. For use with No. 138 plug.	\$6.00
187	Same as No. 186, except it is not equipped with protective apparatus	3.40
199	Intended for use with the No. 1-A Signal Group in connection with the toll-line circuit of the No. 1800 switchboard. For use with No. 47 plug.	.75



No. 186 Jack—Open

## JACK BOXES

Code No.	Dimensions inches	Description	List Price each
359-A	8 x 2 3/4 x 5	Arranged for connecting either of two telephones to any one of six other telephone lines.	\$14.05
345-A	5 1/2 x 1 3/8 x 4 1/8	Used for connecting two head telephones to the same line, in train dispatching service. On request	



No. 359-A Jack Box



No. 345-A Jack Box  
 Telephone Apparatus and Accessories.

## JACKS (Continued)

### Mounting Centers for Punched Frame Jacks

Code No.	Horizontal Centers	Vertical Centers	Springs	Terminals	Mounting Lugs
*146	5/8"	7/8"	2	2	1
*147	5/8"	7/8"	2	3	1
*148	5/8"	7/8"	2	2	1
*149	5/8"	7/8"	2	2	1
*151	5/8"	7/8"	4	5	1
*152	5/8"	7/8"	1	2	1
*153	5/8"	7/8"	4	4	1
*154	5/8"	7/8"	4	4	1
*155	5/8"	7/8"	2	3	1
*156	5/8"	7/8"	4	5	1
159	5/8"	7/8"	2	3	1
160	5/8"	7/8"	4	5	1
161	7/8"	7/8"	6	7	1
162	7/8"	7/8"	4	5	1
163	7/8"	7/8"	6	7	1
165	1"	7/8"	6	7	1
167	5/8"	1 1/8"	2	2	2
168	5/8"	1 1/8"	2	3	2
169	5/8"	1 1/8"	2	2	2
170	5/8"	1 1/8"	2	2	2
172	5/8"	1 1/8"	4	5	2
173	5/8"	1 1/8"	1	2	2
174	5/8"	1 1/8"	4	4	2
175	5/8"	1 1/8"	2	3	2
176	5/8"	1 1/8"	4	4	2
177	5/8"	1 1/8"	4	5	2
178	5/8"	1 1/8"	2	3	2
179	3/4"	1 1/8"	4	5	2
180	7/8"	1 1/8"	6	7	2
181	7/8"	1 1/8"	4	5	2
182	7/8"	1 1/8"	6	7	2
184	1"	1 1/8"	6	7	2
*185	5/8"	1 1/8"	3	4	1
188	5/8"	1 1/8"	5	6	2
*189	5/8"	1 1/8"	5	6	1
*204	5/8"	1 1/8"	4	5	1
205	5/8"	1 1/8"	4	5	2

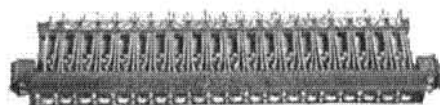
NOTE.—All numbers marked \* if mounted back to back, in two rows will mount on 5/8" horizontal and vertical centers.

## JACK MOUNTINGS

For central battery exchanges the multiple jack strips in each panel are separated into groups of five by thin white holly strips. Each group consists of one hundred jacks numbered 0 to 99. Each strip is divided into four parts, each having five jacks, by a distinctive mark so that an operator may readily choose the proper ones. It is also usual to furnish these jack mountings with a groove on the lower edge for marking the jacks for various purposes, such as signifying that several adjoining jacks are connected to one private exchange. This groove is shown on the Nos. 113 and 120 jack mountings.

In ordering, specify the number of jacks and the code number, the code number of the mounting with the number per strip, together with the numbering desired. If holly strips are to be attached to the lower edge of any, the order should specify which ones. The proper number of jacks should be ordered to equip the mountings fully.

### Not arranged for Number Plates



No. 7

Telephone Apparatus  
and Accessories

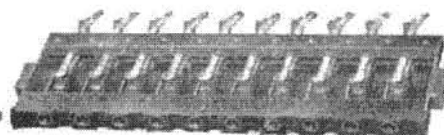
		Used with Number			Used with
Code No.	Number	Jack per Strip			
6	166	10	No. 9 switchboard		
7	166	20	No. 9 switchboard		

List Price

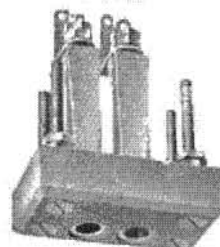
The price of the jack mounting is included in the price of the jack.

**JACK MOUNTINGS****Not arranged for Number Plates (Continued)**

Code No.	Used with Jack Number	Number per Strip	Used with	List Price
18	92	10	No. 92 jack, No. 1 switchboard	The price of jack mountings is included in the price of the jack.
30	151, 152	4	All switchboards for operator's telephone jacks	
78	151, 152	6	No. 1 switchboard for operator's and supervisor's telephone jacks	
80	151, 152	2	All switchboards for operator's telephone jacks	
108	141	20	No. 10 switchboard	
109	141	10	No. 10 switchboard	
112	141	20	No. 10 switchboard	
113	92	20	No. 92 jack, No. 1 switchboard	
118	193	20	No. 193 jack, No. 1 switchboard	
120	193	20	No. 193 jack, No. 1 switchboard	



No. 18



No. 80



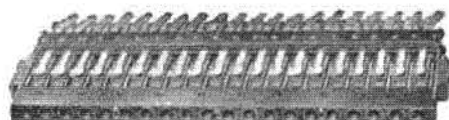
No. 108



No. 109



No. 112



No. 113



No. 114



No. 19



No. 110

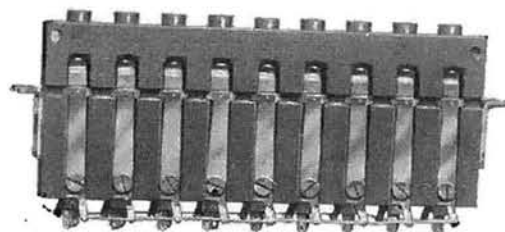
**Arranged for Number Plates**

These are not numbered. In ordering, specify the number of jacks and the code number, the code number of the mounting with the number per strip. The proper number of jacks should be ordered to fully equip the mountings.

Code No.	Used with Jack Number	Number per Strip	For Number Plates	Used with	List Price
19	92	10	6, 30, 108	No. 92 jack, No. 1 switchboard	The price of jack mountings is included in the price of the jack.
110	141	10	5-A	No. 10 switchboard	
117	193	10	4, 31, 109	No. 193 jack, No. 1 switchboard	

## KEYS

The following list represents a few of the most commonly used types of keys. A complete line of standard keys which will be found to satisfy any service requirement are manufactured, information on which will be cheerfully furnished upon request. All contacts used in the talking circuit of Western Electric keys are made of platinum.



No. 69 Type Keys on No. 243 Mounting

Code No.	Description	List Price each
----------	-------------	--------------------

### No. 69. Push Button Type

- |      |   |        |
|------|---|--------|
| 69-A | Push button type non-locking order wire key. Mounted in strips on various key mountings. Red plungers. Make two contacts when operated. | \$0.60 |
|------|---|--------|

### No. 242. Push Button Type

- |       |  |      |
|-------|--|------|
| 242-B | Push button type non-locking order wire key with local contact. Mounted in strips on various key mountings. Red plungers. Make three contacts when operated. Similar in appearance to No. 69 type. | 1.00 |
|-------|--|------|

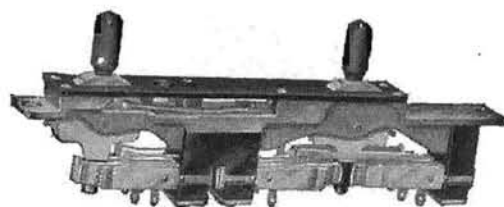


No. 92 Type Key

### No. 92 Type

- |      |   |     |
|------|---|-----|
| 92-A | Single, brass mounted, push button type ringing key. Non-locking. Diameter of shell, $21/32$ ". For $7/8$ " or $1 1/8$ " key shelf as specified. Breaks two and makes two contacts when operated. | .75 |
|------|---|-----|

- |      |   |     |
|------|---|-----|
| 92-B | Single, brass mounted, push button type listening key. Locking. Diameter of shell, $21/32$ ". For $7/8$ " or $1 1/8$ " key shelf as specified. Breaks two and makes two contacts when operated. | .75 |
|------|---|-----|



No. 102 Type Key

- |       |  |     |
|-------|--|-----|
| 464-A | Single, brass mounted, push button type key. Non-locking. Diameter of shell, $1/2$ ". For $7/8$ " key shelf. Breaks one contact when operated. | .60 |
|-------|--|-----|

### No. 102 Type

- |       |  |      |
|-------|--|------|
| 102-A | Combined listening and two-party ringing key, white indicator. Listening key locking and makes two contacts when operated. Ringing keys, non-locking, each breaking two and making two contacts when operated. | 3.15 |
|-------|--|------|

- |       |   |      |
|-------|---|------|
| 110-A | Combined listening and two-party ringing key. Listening key has local contact, white indicator. Listening key locking, and makes three contacts when operated. Ringing keys non-locking, each breaking two and making two contacts when operated. | 3.30 |
|-------|---|------|

- |       |   |      |
|-------|---|------|
| 121-A | Single listening key. Locking. Breaks two contacts and makes two when operated. | 1.60 |
|-------|---|------|



No. 121-A Key



**KEYS****No. 102 Type (Continued)**

Code No.	Description	List Price each
123-A	Single ringing key. Non-locking. Breaks two and makes two contacts when operated.....	\$1.35
124-A	Two single listening keys mounted on one frame. Each key locking, and break two and make two contacts when operated.....	2.80
156-A	Combined listening and two-party ringing key. Listening key locking and makes three contacts when operated. Ringing keys non-locking, each breaking and making two contacts when operated.....	2.85
164-A	Single combined and listening and ringing key. Listening key has local contact. Listening key is locking and makes three contacts when operated. The ringing key is non-locking and breaks two and makes two contacts when operated.....	2.10

**No. 104 Type**

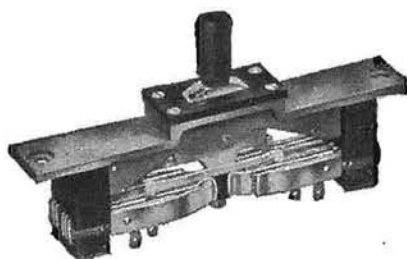
104-A	Single combined listening and ringing key. Listening key is locking and makes two contacts when operated. The ringing key is non-locking and breaks two and makes two contacts when operated.....	1.75
115-A	Single ringing key. Non-locking. Breaks two and makes two contacts when operated.....	1.20
116-A	Single combined listening and ringing key. Listening key has local contacts. Listening key is locking and makes three contacts when operated. The ringing key is non-locking and breaks two and makes two contacts when operated.....	1.90
155-A	Single listening key. Locking. Breaks two contacts and makes two contacts when operated.....	1.45
184-A	Single combined listening and ringing key. Listening key is locking and breaks two and makes two contacts when operated. The ringing key is non-locking and breaks two and makes two contacts when operated.....	1.80

**No. 128 Type**

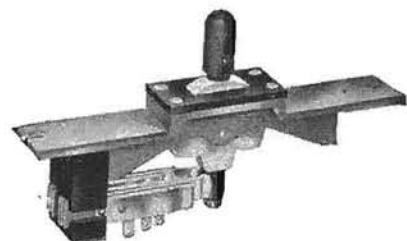
128-A	Four-party line master switching or ringing key. Breaks two and makes two contacts when operated in either of the four positions.....	6.00
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**No. 227 Type**

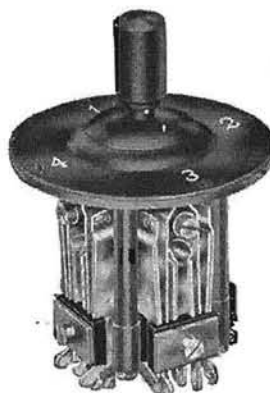
227-A	Listening and four-party ringing key. Red indicator. Listening key locking. Ringing keys non-locking. All keys when operated break two and make two contacts.....	6.00
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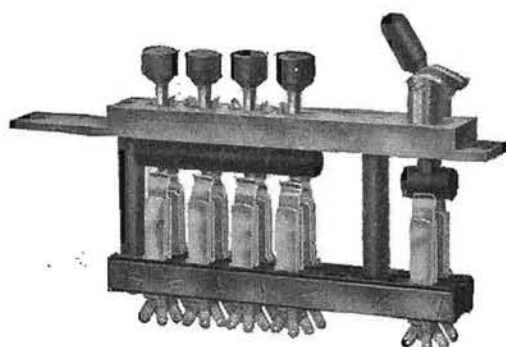
No. 104 Type Key



No. 115-A Key



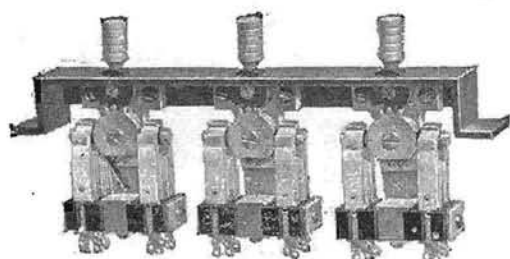
No. 128 Type Key



No. 227 Type Key

## KEYS (Continued)

## No. 251 Type



No. 251-A Key

Code No.	Description	List Price each
251-A	Combined listening and ringing keys. For use on Cordless Private Exchange Branch switchboards. Ringing key non-locking. All listening keys locking. All keys break two and make two contacts when operated.....	On request

## No. 375 Type

375-A	Push button type ringing key. Breaks two and makes two contacts when operated. Non-locking.....	\$0.70
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## No. 378 Type

378-A	Plunger type key. Must be used with a key lever. Locking.....	.70
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## No. 406 Type

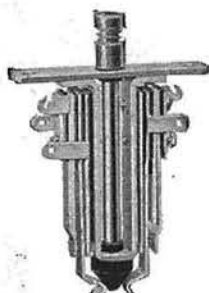
272-A	Rotating plunger type listening key. Locking. Intended for use on cordless Private Branch exchange switchboard. Breaks two and makes two contacts when operated.....	.90
406-A	Rotating plunger type key. Locking. Makes one contact when operated..	.75

## No. 468 Type

468-A	A four-party harmonic ringing and listening key. The push buttons are made to have three positions—a normal, an operated, and a semi-operated or indicating position. The button last depressed remains in the indicating position until restored by the operation of one of the other buttons. The listening key is of the lever type and is locking. The mounting length of this key is 6 1/2".....	6.60
468-B	Same as the No. 468-A, differing only in the combination of common ringing springs.....	7.35
468-C	Same as the No. 468-A, differing only in the combination of common ringing springs.....	6.75
468-D	A four-party harmonic master ringing key having contacts for starting relay.....	11.25
468-E	An eight-party harmonic master ringing key having contacts for starting relay. Consists of four push buttons and a locking lever.....	11.85
468-F	An eight-party harmonic ringing and listening key, having contacts for starting relay. Consists of four push buttons and a double locking levers.....	12.60
468-G	A four-party harmonic ringing and listening key, having contacts for starting relay. Consists of four push buttons and a double locking lever, one side arranged for listening, the other for ringing back.....	13.05



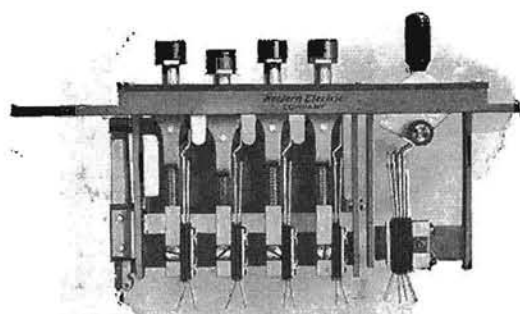
No. 375 Type Key



No. 378 Type Key



No. 406 Type Key



No. 468 Type Key

## KEYS (Continued)



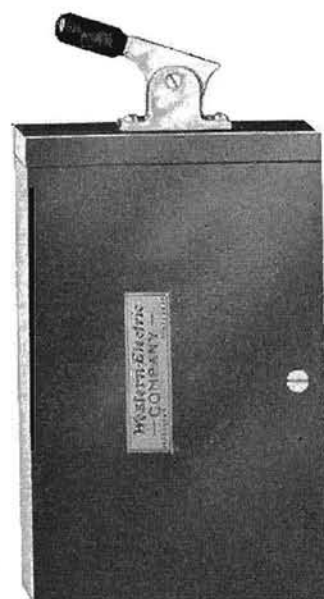
No. 6002-A

### No. 6002 Type

6002-A Rectangular wooden box equipped with 1 No. 378-A key and 1 No. 23-A key lever. Ebonized or black finish. Intended for use as switching key to connect a telephone instrument on either one or both of two lines. Size of box,  $3\frac{3}{8}$  inches wide,  $1\frac{1}{2}$  inches high,  $5\frac{1}{8}$  inches long. . . . . \$2.70

6002-B Rectangular wooden box equipped with 1 No. 378-A key and 1 No. 6-A key lever. Ebonized or black finish. Intended for use as a switching key to connect a telephone instrument on either one of two lines. . . . . 2.35  
 Dimensions same as No. 6002-A.

6002-C Rectangular wooden box equipped with 1 No. 375-A key. Ebonized or black finish. Intended for use as a switching key to connect a telephone instrument on either one of two lines. . . . . 1.95  
 Dimensions same as No. 6002-A.



No. 6002-B

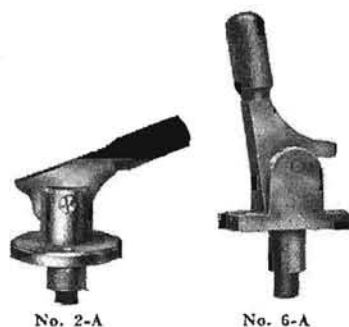


No. 6002-C

## KEY LEVERS

These are used with the No. 378 type plunger keys.

Code No.	Operated Position of Handle	Handle	List Price each
2-A	Vertical	Hard rubber, black. . . . .	\$0.45
4-A	Horizontal	Hard rubber, black. . . . .	.45
6-A	Vertical	Hard rubber, black. . . . .	.38
6-B	Vertical	Hard rubber, red. . . . .	.38
14-A	Horizontal	Hard rubber, black. . . . .	.38
14-B	Horizontal	Hard rubber, red. . . . .	.38



No. 2-A

No. 6-A

Telephone Apparatus and Accessories

## SWITCHBOARD LAMPS

The over-all diameter of the No. 2 type lamp is .3075 in., and of the No. 4 type .515 in.



No. 2



No. 4

Code No.	Voltage	CURRENT CONSUMPTION		Used with Lamp Sockets Number	List Price each
		Minimum Amperes	Maximum Amperes		
2-A	4	.17	.21	12, 13, 30, 32	\$0.27
2-B	4	.27	.31	12, 13, 30, 32	.27
2-C	15	.09	.12	12, 13, 30, 32	.27
2-D	16	.27	.31	12, 13, 30, 32	.27
2-E	20	.09	.12	12, 13, 30, 32	.27
2-F	12	.097	.12	12, 13, 30, 32	.27
2-G	24	.075	.115	12, 13, 30, 32	.27
2-H	6	.27	.31	12, 13, 30, 32	.27
2-J	24	.025	.035	12, 13, 30, 32	.27
2-K	30	.09	.12	12, 13, 30, 32	.27
2-L	10	.24	.26	12, 13, 30, 32	.27
2-N	6	.12	.16	12, 13, 30, 32	.27
2-P	8	.085	.10	12, 13, 30, 32	.27
2-R	18	.09	.12	12, 13, 30, 32	.27
2-T	35 to 47	.025	.045	12, 13, 30, 32	.27
2-U	24	.035	.045	12, 13, 30, 32	.27
4-A	4	.50	.60	16	.39
4-B	8	.50	.60	16	.39
4-C	22	.17	.21	16	.39
4-D	12	.27	.31	16	.39
4-E	18	.17	.21	16	.39
4-F	20	.17	.21	16	.39
4-G	24	.15	.185	16	.39

## LAMP CAPS

### No. 2 Type

Used with Nos. 12 and 13 Lamp Sockets

Code No.	Symbol	Color	Price each	Code No.	Symbol	Color	Price each
2-A	⊖	White Opalescent	\$0.12	2-AC	⊙	Red	\$0.12
2-B	⊙	White Opalescent	.12	2-AD	E	White Opalescent	.12
2-C	⊕	White Opalescent	.12	2-AE	P	Red	.15
2-D	⊙	White Opalescent	.12	2-AF	U	White Opalescent	.12
2-E	⊖	White Opalescent	.12	2-AG	W	White Opalescent	.12
2-F	⊙	White Opalescent	.12	2-AH	D	White Opalescent	.12
2-G	⊕	White Opalescent	.12	2-AJ	B	White Opalescent	.12
2-H	⊖	Red	.12	2-AK	N	White Opalescent	.12
2-J	⊙	White Opalescent	.12	2-AL	•	Green	.15
2-K	⊕	White Opalescent	.12	2-AM	S	White Opalescent	.12
2-L	⊖	Green	.12	2-AN	V	White Opalescent	.12
2-M	⊕	White Opalescent	.12	2-AP	X	White Opalescent	.12
2-N	⊙	Red	.12	2-AR	⊙	Red	.15
2-P	⊙	Jeweled Red	.15	2-AS	P	White Opalescent	.12
2-R	⊙	Jeweled Blue	.15	2-AT	T	White Opalescent	.12
2-S	⊙	Jeweled Green	.15	2-AU	G	White Opalescent	.12
2-T	⊕	Red	.15	2-AW	⊕	White Opalescent	.12
2-U	⊖	Amber	.12	2-AY	⊖	White Opalescent	.075
2-W	⊖	Blue	.12	2-AZ	⊕	Red	.15
2-Y	⊙	Green	.15	2-BC	F	White Opalescent	.12
2-Z	M	White Opalescent	.12	2-BD	⊙	White Opalescent	.12
2-AA	⊖	Red	.15	2-BE	⊕	Green	.15
2-AB	A	White Opalescent	.12				



No. 2-C



No. 2-J



No. 2-AY

## LAMP CAPS (Continued)

### No. 4 Type

Used with Nos. 16 and 32 Lamp Sockets

Code No.	Symbol	Color	List Price each	Code No.	Symbol	Color	List Price each
4-A	○	White Opalescent	\$0.15	4-E	⊗	White Opalescent	\$0.225
4-B	⊗	Jeweled Red	.225	4-F	⊙	Green	.225
4-C	⊗	Jeweled Green	.225	4-G	⊕	White Opalescent	.225
4-D	○	Red	.225	4-H	Ⓜ	White Opalescent	.225



No. 4-A

### No. 8 Type

Used with No. 30 Lamp Socket

8-A	○	White Opalescent	\$0.06	8-G	⊗	White Opalescent	\$0.12
8-B	○	Clear	.12	8-H	⊗	White Opalescent	.12
8-C	○	Clear, Flat Top	.26	8-J	⊕	White Opalescent	.12
8-D	○	Red	.12	8-K	⊙	White Opalescent	.12
8-E	⊙	White Opalescent	.12	8-L	○	Green	.12
8-F	⊙	White Opalescent	.12				



No. 8-A

### No. 68 Type

Used with Nos. 12 and 13 Lamp Sockets

68-A	White Opalescent	\$0.09
68-B	Red	.135
68-C	Green	.135



No. 68-A

### No. 69 Type

Used with Nos. 16 and 32 Lamp Sockets

69-A	○	White Opalescent	\$0.165
69-B	⊗	Jeweled Red	.24
69-C	⊗	Jeweled Green	.24
69-D	⊕	White Opalescent	.24



No. 69-A

## LAMP GUARDS

Code No.	Used with Lamp Sockets Number
21	12, 13
22	16, 32

List Price each
\$0.03
.03



No. 21  
 Telephone Apparatus  
 and Accessories

## LAMP SOCKETS

### Mounted Singly



No. 13

Code No.	Used with Lamps Number	Used with Lamp Caps Number	Used with Thickness of Shelf inches	List Price each
13	2 type	2, 68	$\frac{1}{8}$ .....	\$0.23
16	4 type	4, 69, 70	$\frac{1}{8}$ , $1\frac{3}{16}$ , $1\frac{1}{4}$ , $1\frac{1}{8}$ , as specified	.75
32	2 type	4, 69, 70	$\frac{1}{8}$ , $1\frac{3}{16}$ , $1\frac{1}{4}$ , $1\frac{1}{8}$ , as specified	.75
27	2 type	6	$1\frac{1}{4}$ .....	1.35

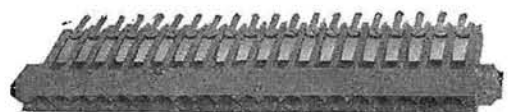
### Mounted in Strips

These must be ordered in connection with the lamp socket mountings. See note under Lamp Socket Mountings.

Code No.	Used with Lamps Number	Used with Lamp Caps Number	Suitable for Lamp Socket Mountings Number	List Price each
12	2 type	2	102, 117, 118, 122, 134, 136, 137.....	5 per strip \$0.75
30	2 type	8	101, 102, 111, 118.....	10 per strip .53 20 per strip .38



No. 101



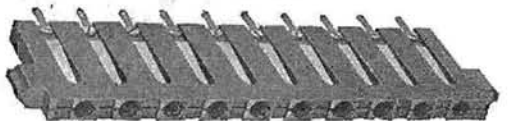
No. 102



No. 136



No. 137



No. 122



No. 134

## LAMP SOCKET MOUNTINGS

In ordering, specify the number of lamp sockets and the code number, together with the code number of the lamp socket mounting. The proper number of lamp sockets should be ordered to fully equip the mountings.

### Not Arranged for Number Plates

Code No.	Used with Lamp Sockets No.	No. per Strip	Used with	List Price each
101	30	10	No. 49 jack, No. 1 switchboard.....	The price of the lamp socket mounting is included in the price of the lamp socket.
134	12	10	No. 92 jack, No. 1 switchboard.....	
102	12, 30	20	No. 49 jack, No. 1 switchboard.....	
118	30	20	No. 92 jack, No. 1 switchboard.....	
136	12	10	No. 10 switchboard...	
137	12	20	No. 10 switchboard...	

### Arranged for Number Plates

Code No.	Used with Lamp Sockets No.	No. per Strip	For Number Plates	Used with	List Price each
122	12	10	4, 31, 109	No. 49 jack, No. 1 Swbd.	The price of the lamp socket mounting is included in the price of the lamp socket.
134	12	10	6, 30, 108	No. 92 jack, No. 1 Swbd.	

## TELEPHONE POWER APPARATUS

We are prepared to furnish a complete line of Telephone Power Apparatus, including the following:

**Charging Generators**

**Ringing Generators**

**Motor Generators**

**Ringing Dynamotors**

**Portable Charging Sets**

**Motors**

**Choke Coils**

**Gas Engines**

**Spark Coils**

### Machine Covers

A complete line of machine covers is manufactured for all of our machines. They are made of eight-ounce brown army paraffine canvas.

### Machine Tables

These consist of an angle iron frame with a slate top drilled for our various small machines, such as ringing, coin collector, or service meter machines.

### Rheostats

These are used with our various generators which supply direct current, and are made for mounting on the front or rear of the power switchboard. When rear mounted they require hand wheels and index plates.

They should be ordered with each new machine when required. When a rheostat is being ordered for a machine already installed, the data on the name plate of the machine should be stated in the order.

### Starting Boxes

No-voltage release or no-voltage release and overload boxes are supplied for motors of all capacities and voltages. They are arranged for rear of board mounting and require a hand wheel on the front. They should be ordered with new motors. When a starting box is being ordered for a machine already installed, the data on the name plate on the motor should be stated in the order.

### Belts

Endless leather belts are carried in single or double ply. Specify length, width, and ply.

### Power Protection Panels

These are arranged for mounting on a wall, and comprise a slate panel equipped with a switch, together with the necessary fuses, retardation coils and lightning arresters for protecting motors. A complete line is manufactured, suitable for all kinds of circuits and for motors of different horsepower.

### Power Switchboards

These comprise one or more slate panels mounted on an iron framework which is braced to the floor and wall. Space is left for access to the back of the board. The size and number of panels depend upon the machines furnished. There is mounted on these boards all of the apparatus for controlling the machines.

### Battery Panels

These are arranged for mounting on a wall and comprise a slate panel equipped with fuses for protecting the storage battery and a shunt for reading the battery current. They are made for protecting one or two batteries.

Information and prices on application.

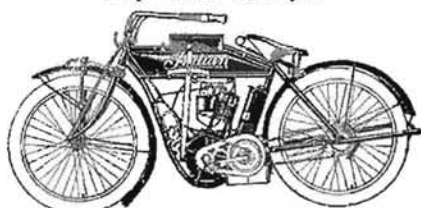


## Western-Electric

### INDIAN MOTOCYCLES



7 h.p. "Indian" Motorcycle



4 h.p. "Indian" Motorcycle

Of great value to any telephone company, especially by enabling the "Trouble Man" to cover four times as much ground, and at a lower cost than is possible in any other way. Can also be economically used by inspectors, collectors, and other employees. They are offered in the following sizes:

#### Seven H. P. Regular Model

For rough and hilly country. Can be geared either for speed, or for hard climbing.

#### Four H. P. Single Cylinder

Most satisfactory for town work and fairly level country; but will climb steeper hills than any other single cylinder motorcycle.

Free Engine Clutch and Magneto on all "Indians" without extra charge.

Further information and prices on request.

### MOUNTING PLATES

The term "mounting plate" refers in general to a mild steel plate drilled and slotted for mounting relays, resistance coils, service meters, or small retardation coils. Plates for mounting drops and signals are known as "drop mountings" and "signal mountings," respectively.

The standard thickness of a relay mounting plate is  $\frac{1}{8}$  in.; of a mounting plate for No. 18 and No. 19 type resistance,  $\frac{1}{4}$  in.; and of a mounting plate for service meters,  $\frac{3}{8}$  in. All these plates are of mild steel, copper plated, oxidized, and lacquered to improve the appearance and prevent rusting.

Whenever necessary the holes for terminals are equipped with hard rubber bushings to insulate the parts in circuit from the plate.

Certain mounting plates are equipped with dust-proof covers which enclose the strips of relays. Such mounting plates are used with relays like the No. 189, not equipped with individual covers.

The length of mounting plates is usually 19 in., 21 $\frac{5}{8}$  in., 23 in., or 27 in. The first is used on relay racks, the second and third on subscriber and trunk sections of the No. 1 board and the last on the No. 10 board. Service meters are regularly mounted 20 per strip on a plate 33 $\frac{3}{4}$  in. long.

Mounting plates of other sizes are furnished to meet conditions.

#### Relay Mounting Plates

Code No.	Number per Strip	Centers inches	Size inches	List Price each
600-A	10	1 $\frac{3}{4}$	19 x 1 $\frac{3}{4}$	\$0.60
606-A	10	1 $\frac{3}{4}$	21 $\frac{5}{8}$ x 1 $\frac{3}{4}$	.70
609-A	10	1 $\frac{3}{4}$	23 x 1 $\frac{3}{4}$	.70
605-B	34	1 $\frac{1}{2}$	21 $\frac{5}{8}$ x 4 $\frac{1}{2}$	1.80
610-C	34	1 $\frac{3}{4}$	23 x 4 $\frac{1}{2}$	1.80
603-F	10	1 $\frac{5}{8}$	19 x 2 $\frac{1}{2}$	1.75

#### Resistance Mounting Plates

601-A	10	1 $\frac{3}{4}$	19 x 1 $\frac{3}{4}$	\$0.45
601-C	40	$\frac{1}{2}$	19 x 1 $\frac{3}{4}$	.70
607-D	40	$\frac{1}{16}$	21 $\frac{5}{8}$ x 1 $\frac{3}{4}$	.85
602-F	42	$\frac{1}{16}$	23 x 1 $\frac{3}{4}$	.85

#### Message Register Mounting Plates

623-A	20	1 $\frac{5}{8}$	33 $\frac{3}{4}$ x 1 $\frac{1}{4}$	\$1.00
671-A	10	1 $\frac{5}{8}$	19 x 1 $\frac{1}{4}$	.60

## NUMBER PLATES

Code No.	Description	Size inches	Used on	List Price each
1-A	White ivory, black figures $\frac{1}{4}$ in. high.	$\frac{5}{8}$ diam.	Wooden stile casings and panel numbers.	\$0.075
12-A	White ivory, black figures $\frac{1}{8}$ in. high.	$\frac{3}{8}$ diam.	Plug shelves and key shelves	.06 $\frac{3}{4}$
113-A	White ivory, black figures $\frac{1}{2}$ in. high.	1 $\frac{1}{4}$ diam.	Panels of switchboard.....	.36
23-C	Aluminum, black figures $\frac{3}{32}$ in. high.	$\frac{3}{16}$ diam.	Flat iron stile casings.....	.075
107-B	Aluminum, black figures $\frac{1}{4}$ in. high.	$\frac{1}{2}$ diam.	Flat iron stile casings.....	.07 $\frac{1}{2}$
59-B	Hard rubber faced, white figures $\frac{5}{32}$ in. high.	$\frac{1}{8}$ x $\frac{7}{16}$	No. 2 jack mounting, No. 2-C designation strip, No. 50-A designation strip...	.07 $\frac{1}{2}$
5-B	Hard rubber, white figures, $\frac{3}{32}$ in. high.	$\frac{1}{8}$ x $\frac{1}{2}$	No. 110 jack mounting....	.07 $\frac{1}{2}$
6-A	Metal, black finish, white figures $\frac{1}{8}$ in. high.	$\frac{1}{4}$ x $\frac{3}{8}$	No. 19 jack mounting.....	.04 $\frac{1}{2}$
21-B	Hard rubber, white figures $\frac{5}{32}$ in. high.	$\frac{1}{8}$ x $\frac{1}{8}$	No. 105 board, for numbering toll and outgoing jacks.....	.07 $\frac{1}{2}$
30-A	Metal, black finish, numbers printed on white paper.	$\frac{1}{4}$ x $\frac{3}{8}$	No. 19 jack mounting.....	.03 $\frac{3}{4}$
31-A	Metal, black finish, numbers printed on white paper.	$\frac{1}{4}$ x $\frac{3}{8}$	No. 2 jack mounting and Nos. 2-C and 50-A designation strips.....	.03 $\frac{3}{4}$
108-A	Metal, black finish, numbers printed on white paper.	$\frac{1}{4}$ x $\frac{3}{8}$	No. 19 jack mounting and No. 134 lamp socket mounting when mounted together.....	.03 $\frac{3}{4}$
109-A	Metal, black finish, numbers printed on white paper.	$\frac{1}{4}$ x $\frac{3}{8}$	No. 2 jack mounting and No. 122 lamp socket mounting when mounted together.....	.03 $\frac{3}{4}$
58-A	Metal, nickel finish, black figures.	$\frac{1}{8}$ x $1\frac{1}{4}$	Protector bar of main distributing frame.....	.06
93-A	Aluminum, black figures...	$1\frac{1}{8}$ x $2\frac{5}{8}$	Transmitter of telephone sets.....On request	
97-A	Metal, black finish, white letters or figures $\frac{1}{4}$ in. high.	2 x $2\frac{1}{8}$	Transmitter of telephone sets.....	.06
110-A	Metal, nickel plated, paper card with celluloid covering.	$1\frac{1}{2}$ x $2\frac{3}{4}$	Transmitter of telephone sets.....On request	



No. 1-A



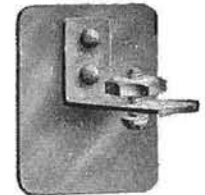
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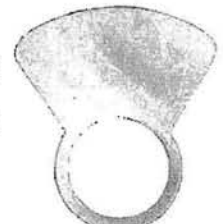
No. 23-B



No. 30-A



No. 58-A



No. 93-A



No. 97-A



No. 110-A

Telephone Apparatus and Accessories

NUMBER PLATES (Continued)

No. 67 Type



No. 67-AP

Code No.	Description	Size inches	Used on
67	Brass, black finish, raised copper figures $\frac{3}{8}$ in. high; designations as listed be- low.	2 x 1	Power switchboards for des- ignating the circuits con- trolled by switches, etc.

Code No.	Designation	List Price each
67-A	BAT.....	\$0.55
67-B	VM.....	.40
67-C	G-1.....	.55
67-D	G-2.....	.55
67-E	G-3.....	.55
67-F	G-4.....	.55
67-G	G-5.....	.55
67-H	G-6.....	.55
67-J	M-1.....	.55
67-K	M-2.....	.55
67-L	M-3.....	.55
67-M	M-4.....	.55
67-N	M-5.....	.55
67-P	M-6.....	.55
67-Q	R-3.....	.55
67-R	R-4.....	.55
67-S	B-1.....	.55
67-T	B-2.....	.55
67-U	GEN.....	.55
67-W	R-2.....	.55
67-Y	PC-2.....	.70
67-Z	START.....	.85
67-AA	RUN.....	.55
67-AB	LINE.....	.70
67-AC	R-1.....	.55
67-AE	PC-1.....	.70
67-AP	AMM.....	.55

## PLUGS

In ordering specify the code number and if cords are to be attached give the code number of the cords together with the length and color. No extra charge is made for attaching cords to plugs.

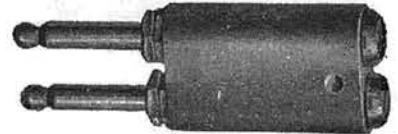
Code No.	Number of Conductors	Used with Jacks No.	Used with Cords No.	Use	List Price each
47	2	147, 151, 152, 153, 154, 155, 156	156, 421	Switchboards.....	\$0.54
85	3	77	30	Operator's head telephone.....	1.73
103	Twin 2	151, 152	87, 254	Operator's head telephone and chest transmitter.....	1.73
109	3	92	155, 386	Switchboards.....	1.29
110	3	159, 160, 165, 193	152, 387	Switchboards.....	1.29
112	Twin 2	151, 152	87	Operator's head telephone and chest transmitter. Has transmitter cutout key.....	4.30
116	1	147, 155, 265		Switchboards.....	.27
137	Twin 2	151, 152	87, 254	.....	1.65
138	2	186, 187, 396		Portable telephones.	5.25



No. 47



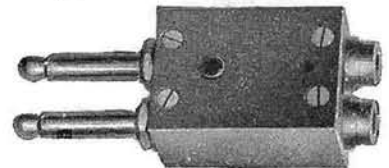
No. 85



No. 103



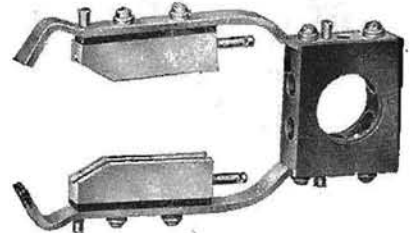
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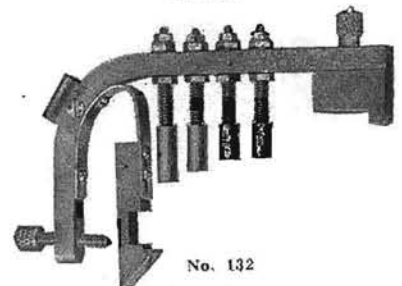
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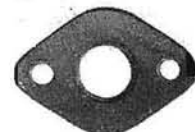
No. 116



No. 128



No. 132



No. 13 Plug Seat

## For Testing on Distributing Frames

Code No.	Number of Conductors	Used with Cords Number	Use	List Price each
124	2	129	For testing on Nos. 4, 65, 78, and 84 Protectors.....	\$0.98
128	4	129	For testing on Nos. 4, 65, 78, and 84 Protectors.....	1.90
132	4	129, 153	For testing on terminal strips Nos. 35, 36, 38 and 39.....	3.10

## PLUG SEATS

### Red Fiber

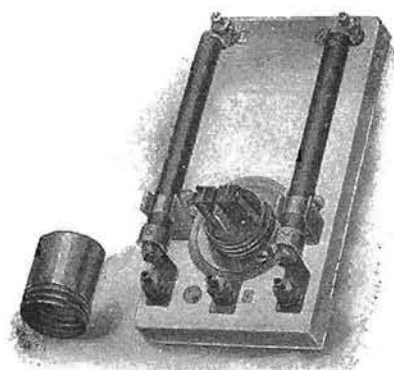
Code No.	Mounted on Centers inches	Used with Plugs Number	List Price each
12	$\frac{3}{4}$	110	\$0.015
13	$\frac{3}{4}$	109	.015
15	$\frac{13}{16}$	47, 116	.015

## PROTECTORS

For code numbers of fuses, protector blocks and protector micas, see tables having these headings.

### Mounted Singly

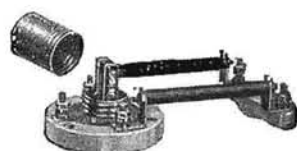
#### No. 12 Type



No. 12-A

Code No.	Used with	Protection against	Consists of	List Price each
12-A	Magneto telephone sets.	High potential, abnormal and sneak currents.	2 7-ampere fuses with heat coils, 2 carbon cutouts and mountings..	\$1.22

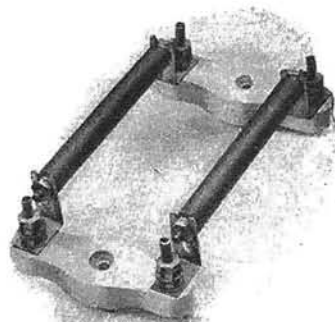
#### No. 58 Type



No. 58-A

58-A	Centralbattery or magneto telephonesets.	High potential and abnormal currents.	2 7-ampere fuses, 2 carbon cutouts and mountings..	.77
58-B	Magneto telephone sets.	High potential and abnormal currents.	2 7-ampere fuses, 2 copper cutouts and mountings..	.95
58-C	Magneto street railway telephone sets.	High potential and abnormal currents.	2 1/2-ampere fuses, 2 copper cutouts and mountings. Two protector micas are used between each pair of protector blocks.....On request	

#### No. 59 Type



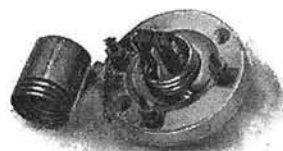
No. 59-A

59-A	No. 60 type protector.	Abnormal current.	2 7-ampere fuses and mountings..	.48
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#### No. 60 Type

60-A	Centralbattery or magneto telephone sets	High potential current.	2 carbon cutouts and mountings..	.38
60-B	Magneto telephone sets.	High potential current.	2 metal cutouts and mountings..	.56
60-E	Magneto telephone sets.	High potential current.	2 metal cutouts and mountings..	.67 1/2

#### No. 62 Type



No. 60-A

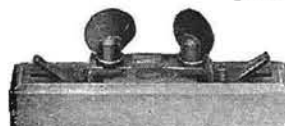
62-A	Centralbattery switchboard circuits.	Abnormal current.	1 mica fuse and mounting; capacity 1/2 to 5 amperes as specified	.09
62-B	Centralbattery switchboard circuits.	Abnormal current.	1 alarm fuse with mounting; capacity 1/2 to 5 amperes as specified	.215

#### No. 68 Type



No. 62-A

68-A	Centralbattery switchboard circuits.	Abnormal current.	1 mica fuse and mounting; capacity 1/2 to 5 amperes as specified	.13 1/2
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No. 68-A

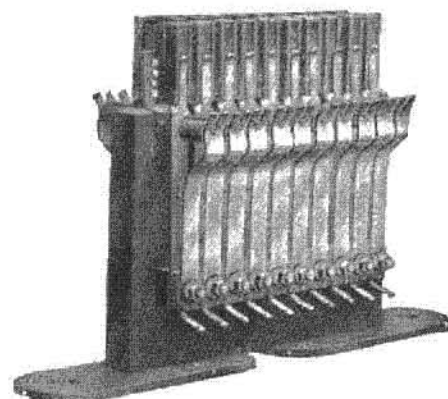
## PROTECTORS (Continued)

### Mounted in Strips

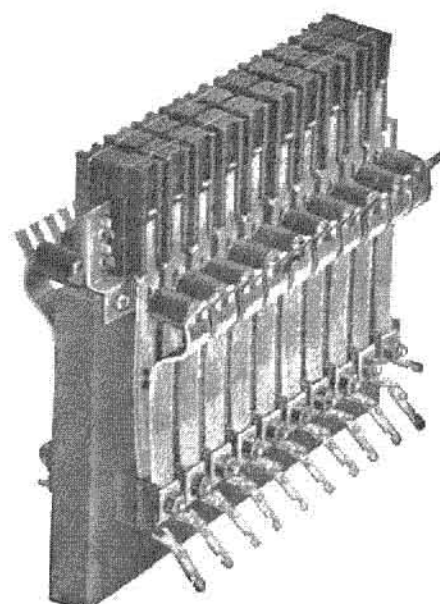
The No. 4 and No. 65 protectors are like the No. 84 and No. 78 respectively except the mounting, and the No. 4 and No. 84 differ from the No. 65 and No. 78 only in the way the wires are connected to them. The Nos. 4 and 84 are designed for the outside wires to be connected first to a terminal block and jumper wires to extend from the terminal block to one side of the protector, and the switchboard cables to the other. The Nos. 65 and 78 are just the reverse, that is, they are designed for the outside wires to be connected directly to one side of the protector, and jumper wires to extend from the other side to a terminal strip, where they are connected to the switchboard cables.

In ordering, specify the number of protectors per strip (noting that some protectors are single, while others are in pairs) and if the protector is for a frame give sufficient information for the drilling. If the protector is to be mounted on a frame which we have furnished, the name of the exchange with the location of the protectors on the frame is sufficient.

Code No.	Used with	Protecting against	Consists of	List Price each
4-A	Magneto central office.	High potential and sneak currents.	2 heat coils, 2 carbon cutouts, and No. 10 protector mounting for mounting on wall	\$0.67
4-C	Central battery central office.	High potential and sneak currents.	2 heat coils, 2 carbon cutouts and No. 10 protector mounting for mounting on wall	.67
65-A	Magneto central office.	High potential and sneak currents.	2 heat coils, 2 carbon cutouts and No. 23 protector mounting for mounting on wall	.67
65-B	Central battery central office.	High potential and sneak currents.	2 heat coils, 2 carbon cutouts and No. 23 protector mounting for mounting on wall	.67
78-A	Magneto central office.	High potential and sneak currents.	2 heat coils, 2 carbon cutouts, and No. 24 protector mounting for mounting on frame.....	.67
78-B	Central battery central office.	High potential and sneak currents.	2 heat coils, 2 carbon cutouts and No. 24 protector mounting for mounting on frame.....	.67
84-A	Magneto central office.	High potential and sneak currents.	2 heat coils, 2 carbon cutouts and No. 11 protector mounting for mounting on frame.....	.67
84-B	Central battery central office.	High potential and sneak currents.	2 heat coils, 2 carbon cutouts and No. 11 protector mounting for mounting on frame.....	.67

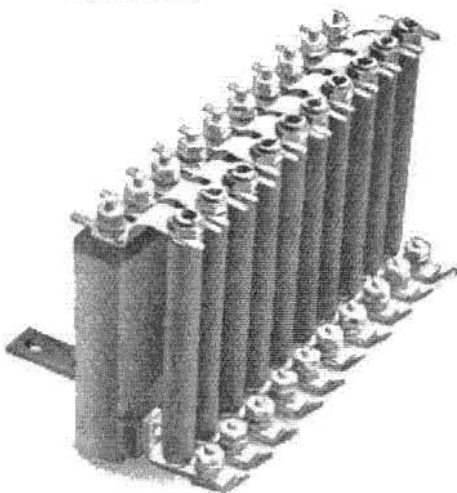


No. 4-A



No. 84-A

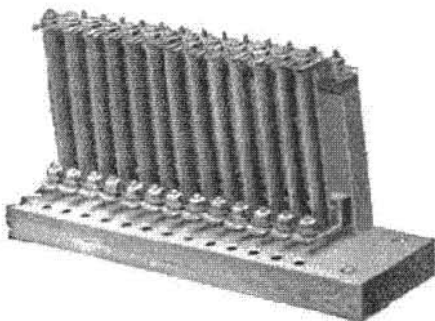
**PROTECTORS (Continued)**



No. 7-A

**No. 7-A Type**

Code No.	Used with	Protecting against	Consists of	List Price each
7-A	Magneto and central battery central offices and cable terminals.	Abnormal current.	1 6-ampere fuse and No. 2 protector mounting for mounting on wall or in cable terminals (except No. 15 type)....	\$0.24



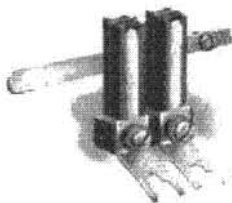
No. 7-D

**No. 7-D Type**

7-D	Magneto and central battery central offices.	Abnormal current	1 6-ampere fuse and No. 41 protector mounting for wall type main distributing frame.....	.27
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**No. 17 Type**

17-A	No. 7-A protector.	High potential current.	2 carbon cutouts and No. 15 protector mounting for mounting on No. 7-A protector	.41½
17-B	No. 7-A protector.	High potential current.	2 copper cutouts and No. 15 protector mounting for mounting on No. 7-A protector	.60



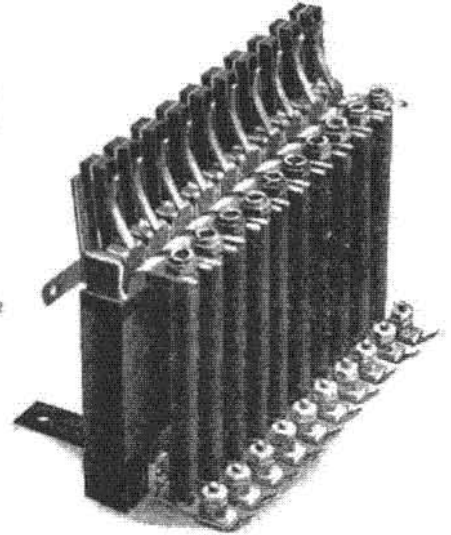
No. 17-A



## PROTECTORS (Continued)

### No. 61 Type

Code No.	Used with	Protecting against	Consists of	List Price each
61-A	Magneto and central battery central offices and cable terminals.	High potential and abnormal currents.	1 6-ampere fuse, 1 carbon cutout and No. 30 protector mounting for mounting on wall or in cable terminals (except No. 15 type)..	\$0.55 <sup>1</sup> / <sub>2</sub>



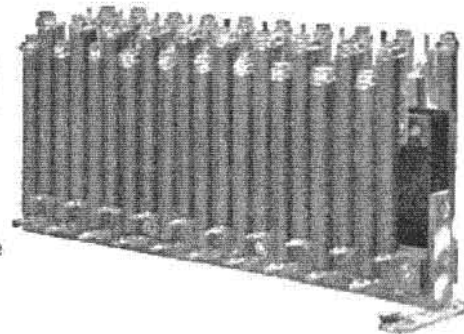
No. 61-A

### No. 77 Type

77-B	No. 15-A and B cable terminals.	Abnormal current.	1 No. 7-A fuse and No. 50 protector mounting for mounting in No. 15 type cable terminal..	.24
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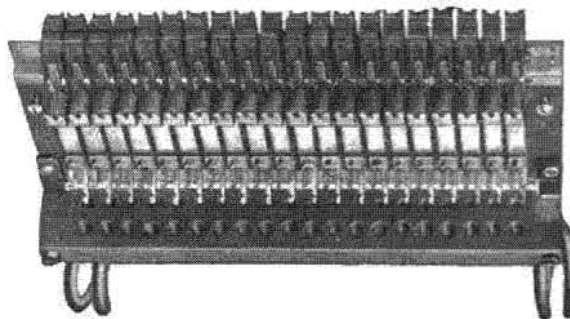
### No. 80 Type

Code No.	Used with	Protecting against	Consists of	List Price each
80-A	No. 7-A protector.	High potential current.	2 carbon cutouts and No. 53 protector mounting for mounting on No. 7-A protector.....	\$0.57 <sup>1</sup> / <sub>2</sub>

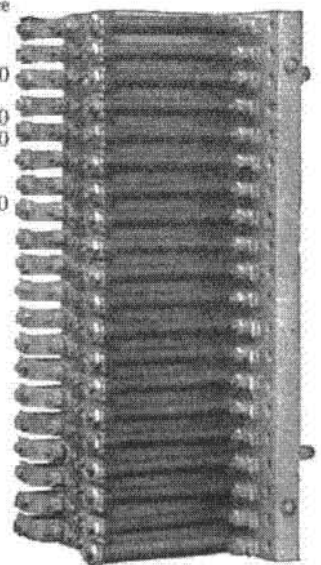


## PROTECTOR GROUPS

Code No.	Protection	Number and Type of Lines	Used with Distributing Frame No.	List Price each
1435-J	Abnormal current...	20 outside, magneto or central battery...	1420, 1430	\$15.00
1435-K	None.....	20 outside, magneto or central battery...	1420, 1430	1.20
1435-L	High potential and sneak currents.	20 inside, magneto	1420, 1430	15.00
1435-M	High potential and sneak currents.	20 inside, central battery.....	1420, 1430	15.00



No. 1435-L or M



No. 1435-J  
 Telephone Apparatus and Accessories

PROTECTOR BLOCKS

A No. 1 protector block is used with a No. 2 and requires one or two No. 3 protector micas. A No. 5 block is used with another No. 5 and requires a No. 7 protector mica. A No. 9 protector block is used by itself and requires no protector micas. A No. 19 protector block is used with a No. 20 and requires one or two No. 10 protector micas.

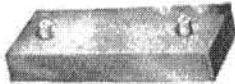
Code No.	Description	Used with Protectors Number	List Price each
1	Plain carbon block with fuse metal.....	4-A, 4-C, 12-A, 58-A, 60-A, 61-A, 65-A, 65-B, 78-A, 78-B, 84-A, 84-B.....	\$0.02¼
2	Grooved carbon block without fuse metal	4-A, 4-C, 12-A, 58-A, 60-A, 61-A, 65-A, 65-B, 78-A, 78-B, 84-A, 84-B.....	.01½
5	Grooved carbon block with fuse metal....	17-A.....	.02½
9	Wood Dummy.....	4, 65, 78, 84.....	.00¾
19	Copper block with two pins which fit into two bush- ings of the 20 protector block.	17-B, 58-B, 58-C, 60-B, 80-A.....	.04¾
20	Copper block with two bushings which engage two pins of the 19 pro- tector block.	17-B, 58-B, 58-C, 60-B, 60-E, 80-A.....	.07½
21	Alloy block with two pins..	60-E.....	.10½



No. 1



No. 2



No. 19



No. 20



No. 3



No. 10

PROTECTOR MICAS

Code No.	Used with Protector Blocks Number	Used with Protectors Number	List Price per hundred
3	1, 2	4-A, 4-C, 12-A, 58-A, 60-A, 61-A, 65-A, 65-B, 70-A, 78-A, 78-B, 79-A, 84-A, 84-B.....	\$1.15
12	1, 2, 5, 16 and 17	17-A.....	3.85
10	19 and 20	17-B, 58-B, 58-C, 60-B, 74-A, 79-A.....	1.15

PROTECTOR MOUNTINGS

Code No.	Description	List Price each
48	Asbestos mat, 8 in. x 4¾ in. for placing under No. 58 type protectors.....	\$0.021

## RECEIVERS

### Concealed Binding Post Type

Code No.	Description	Used with	List Price each
143-W	Concealed binding post hand receiver, composition case.	Telephone sets, desk stands, telephone arms, etc.....	\$1.20

144-W	Concealed binding post hand receiver, hard rubber case.	Telephone sets, deskstands, telephone arms, etc.	1.52
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171-W	Magnetless hand receiver, composition case.	Series central battery sets.....	1.10
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No. 143-W

### Exposed Binding Post Type

122-W	Standard bipolar hand receiver, hard rubber case, exposed binding posts.	Telephone sets, desk stands, telephone arms, etc.....	1.52
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No. 122-W

### Head Band Type

128-W	Standard bipolar head receiver, hard rubber case.	Operator's telephone set, all switchboards....	1.95
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148-W	Bipolar head receiver, leather covered head band.	Operator's telephone set.....	2.70
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157-W	Bipolar head receiver, metal head band.	Auxiliary receiver for telephone set	2.70
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No. 128-W

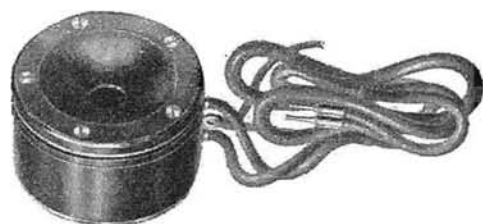
## RECEIVERS (Continued)



No. 141-W



No. 131-W



No. 125-W



No. 147-W

Code No.	Description	Used with	List Price each
141-W	Small, metal case, bipolar receiver.	No. 1002-A hand set.....	\$1.90
131-W	Metal case bipolar receiver.	No. 1 hand set handle, No. 1001 hand set.....	2.30
145-W	Small bipolar receiver, hard rubber case.	No. 1017 test set.	1.40
146-W	Small bipolar receiver, hard rubber case.	Auxiliary receiver for desk stand...	1.75
125-W	Lineman's receiver, hard rubber case and earpiece metal back. Includes 3 ft. No. 15 cord.	No. 1006 type test sets.....	3.45
147-W	Double head receiver, metal head band.	Railway train dispatching service.	5.75

## RECEIVER PARTS

### No. 143-W RECEIVER

Code No.	Description	List Price per 100
P-91974	Shell.....	\$16.30
P-92007	Earpiece.....	6.45
P-95114	Diaphragm.....	1.85

### No. 144-W RECEIVER

P-92006	Shell.....	\$54.00
P-92020	Earpiece.....	26.50
P-95114	Diaphragm.....	1.85

### No. 122-W RECEIVER

P-90038	Earpiece.....	\$26.50
P-95114	Diaphragm.....	1.85
P-90804	Terminal cap.....	16.40
P-95123	Cap-screw.....	.78
P-95115	Cap-screw washer.....	.06
P-95058	Binding post.....	5.85
P-95065	Binding post screw.....	.35

## MESSAGE REGISTERS

For Counting the Number of Effective Calls Made on a Telephone Line. Mounted at the Central Office on Steel Mounting Plates



No. 5-G

Code No.	Outer Winding Resistance ohms	Inner Winding Resistance ohms	Operates on volts	Does Not Operate on volts	List Price each
5-A	40	525	20	18.5	\$3.75
5-G	40	525	27	25.	3.70
5-L	37.5	463	25	23.5	3.75

For Counting the Number of Connections Made by an Operator Mounted on Steel Mounting Plates

Code No.	Resistance ohms	Operating Current amperes	Non-operating Current amperes	List Price each
5-B	.27	1.1	1	\$3.40
5-C	510	.043	.040	3.60
5-D	34	.117	.103	3.45
5-H	.27	1.3	1.2	3.40
5-M	315	.036	.032	3.75

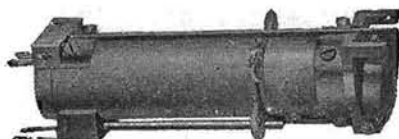
Telephone Apparatus and Accessories

## RELAYS

The wide range of types and resistances of our relays make it impracticable to catalogue them all here. The following will 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

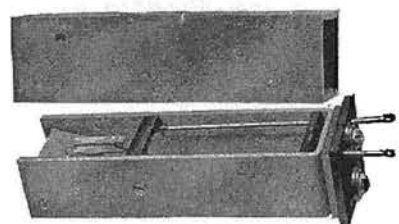
**No. 44 Type** is self-restoring and has the characteristics of a drop. Has a line operating coil and a restoring coil. Used when a local signal circuit is to be closed by ringing on the line. When the line coil is energized, the front armature is released and falls forward, closing a local contact.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



No. 44

### No. 87 Type

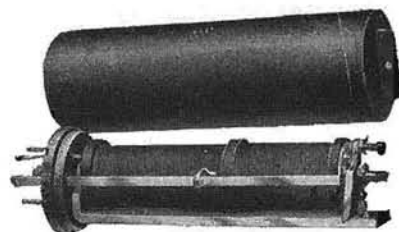
**No. 87 Type** closes a local circuit only while the line is being rung upon. Has flexible contact springs and a heavy armature of sluggish action so that the local circuit remains closed as long as there is ringing current on the line. Used in trunk circuits between central offices. Has a cross-talk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



No. 87

### No. 89 Type

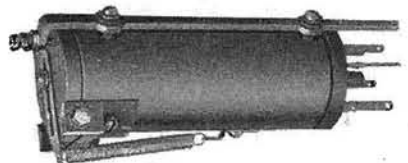
**No. 89 Type** has an operating coil and a locking coil. Made to respond to ringing current and to close a circuit through its armature contact and locking coil so that the relay remains in the operated position after ringing has ceased. Used for toll line signaling and in toll cord supervisory circuits.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



No. 89

### No. 114 Type

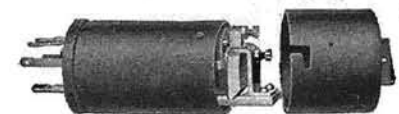
**No. 114 Type** operates on direct current. Has one or two operating windings. Used when a firmly established back contact is desired. Makes one contact and breaks one.



No. 114

### No. 118 Type

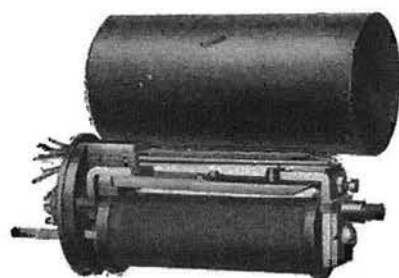
**No. 118 Type**--Sensitive relay for operating on direct current. For general use where a single contact is to be made. Has cross-talk proof cover. One form of this relay has in addition a back contact.



No. 118  
 Telephone Apparatus  
 and Accessories

## RELAYS (Continued)

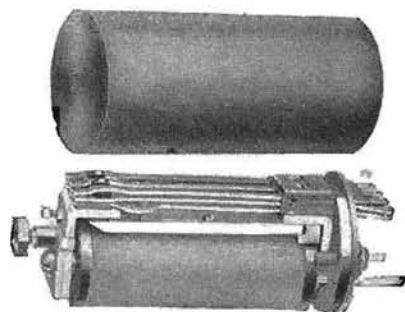
### No. 122 Type



No. 122-A

**No. 122 Type**--Operated by direct current and generally used where it is desired to break two and then make two contacts, or to make two and then break two contacts, when the relay is energized.

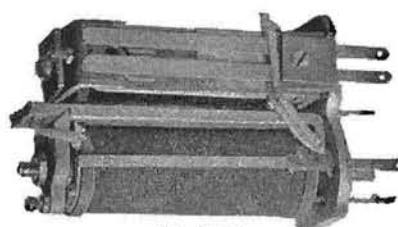
### No. 125 Type



No. 125-A

**No. 125 Type**--Operated by direct current and generally used where it is desired to break three and then make three contacts, or to make three and then break three contacts, when the relay is energized.

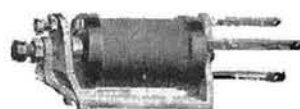
### No. 163 Type



No. 163-E

**No. 163 Type**--The type of line and cut-off relay used with the No. 1 switchboard. Comprises a line relay which controls the signal lamp circuit, and a cut-off relay which operates and cuts off the line relay and signal equipment when the call is answered.

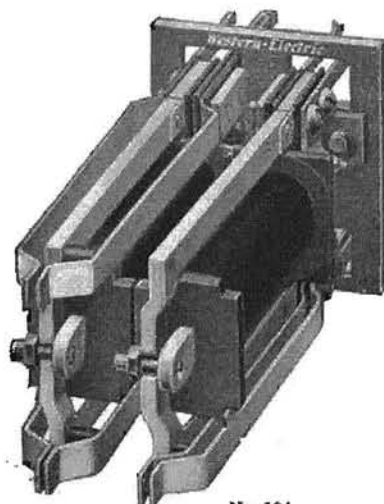
### No. 189 Type



No. 189-B

**No. 189 Type**--A small relay operating on direct current. Used as a line relay with the No. 10 switchboard. Makes one contact when operated.

### No. 194 Type



No. 194

**No. 194 Type**--This compact type line and cut-off relay is used with the No. 1 type switchboard; comprises a line relay which controls the signal lamp circuit, and a cut-off relay which operates and cuts off the line relay and signal equipment when the call is answered.

### No. 195 Type

**No. 195 Type**--Alternating current relay designed to close a lamp circuit.

**REPEATING COILS**

The No. 8-A repeating coil is mounted in a wooden box, and the Nos. 20-A and 30-A have a cloth covering. With these exceptions the coils listed below are enclosed in iron cross-talk proof shells. The No. 25-E is provided with a hard rubber base. All others are mounted on wooden bases.

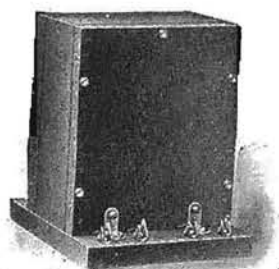
Code No.	Resistance ohms	Size of Base inches	Use	List Price each
8-A	2 primary windings, 52.5 each. 2 secondary windings, 76 each.	$3\frac{1}{8} \times 4\frac{1}{4}$	Cord circuits Nos. 1006, 1101, 1102, and 1010, magneto switchboards.....	\$2.40
20-A	1 primary winding, 277. 1 secondary winding, 40. 1 tertiary winding, non-inductive, 360.	$5\frac{7}{16} \times 1\frac{1}{4}$	Trunk operator's telephone circuit, No. 1 switchboard.....	1.15
25-E	1 primary winding, 42. 1 secondary winding, 42.	$3\frac{1}{8} \times 4\frac{1}{8}$	Street railway telephone sets Nos. 1278-A and 1302-A.....	5.05
30-A	1 primary winding, 385. 1 secondary winding, .03.	$5\frac{1}{2} \times 5\frac{1}{2}$	Tone test circuit...	6.25
37-A	2 primary windings, 36 each. 2 secondary windings, 35 each.	$11 \times 8\frac{5}{8}$	Phantom toll circuits and simplex circuits.....	18.90

**No. 25 Type**

These have two coils mounted on one base and are for use on standard repeating coil racks. Size of base is  $10\frac{3}{4}$  in. by 4 in.

The windings of the Nos. 25-C and 25-G are the same as those of the Nos. 25-A and 25-F respectively, except that they are brought out to terminals on both ends of the base.

Code No.	Resistance ohms	Used with	List Price each
25-A	2 primary windings, 21 each. 2 secondary windings, 21 each.	Cord circuits and incoming trunk circuits on central battery switchboards..	\$7.65
25-S	2 primary windings, 21 each. 2 secondary windings, 21 each. 2 non-inductive windings, 40 each.	48 volt battery long distance and incoming toll trunks, central battery switchboards.....	8.30
25-C	2 primary windings, 21 each. 2 secondary windings, 21 each.	Cord circuit and incoming trunk circuits on central battery switchboards..	7.65
25-G	2 primary windings, 21 each. 2 secondary windings, 21 each. 2 non-inductive windings, 40 each.	48 volt battery long distance and incoming toll trunks, central battery switchboards.....	8.30
25-AA	2 primary windings, 64 each. 2 secondary windings, 47 each.	Rural phantom circuits.....	13.95



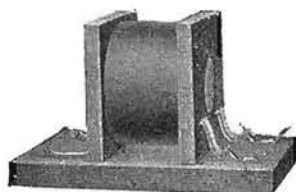
No. 8-A



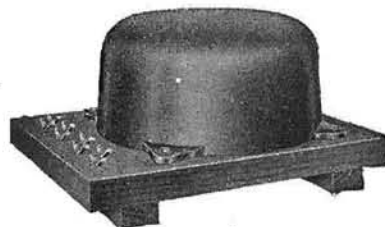
No. 20-A



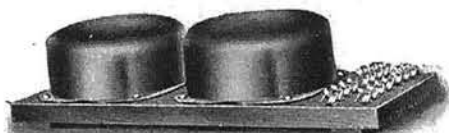
No. 25-E



No. 30-A



No. 37-A



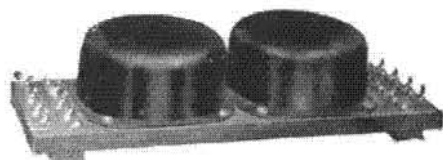
No. 25-A



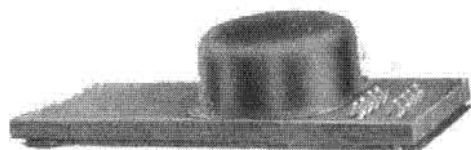
**REPEATING COILS (Continued)****No. 26 Type**

These have one coil per base, and are for use on standard repeating coil racks. Size of base is 10 $\frac{3}{4}$  in. by 4 in.

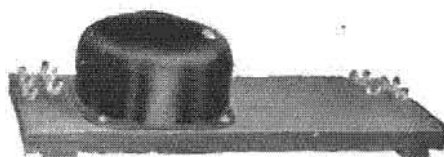
The windings of the Nos. 26-C and 26-F are the same as those of the Nos. 26-A and 26-E respectively, except that they are brought out to terminals on both ends of the base.



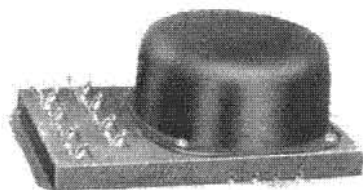
No. 25-C



No. 25-A



No. 26-C



No. 27-A



No. 42

Code No.	Resistance ohms	Use	List Price each
26-A	2 primary windings, 21 each. 2 secondary windings, 21 each.	Cord circuits and incoming trunk circuits of central battery switchboards.	\$4.05
26-H	2 primary windings, 21 each. 2 secondary windings, 21 each. 2 non-inductive windings, 40 each.	48 volt battery long distance and incoming toll trunks, central battery switchboards.	4.35
26-C	2 primary windings, 21 each. 2 secondary windings, 21 each.	Cord circuits and incoming trunk circuits of central battery switchboards.	4.05
26-F	2 primary windings, 21 each. 2 secondary windings, 21 each. 2 non-inductive windings, 40 each.	48 volt long distance and incoming toll trunks, central battery switchboards.	4.25

**No. 27 Type**

These have a single coil on a base 6 in. by 4 in. and are used where a single coil mounted on a short base is desired.

27-A	2 primary windings, 21 each. 2 secondary windings, 21 each.	Cord circuits and incoming trunk circuits on central battery switchboards.	\$3.95
27-D	2 primary windings, 21 each. 2 secondary windings, 21 each.	48 volt battery long distance and incoming toll trunks on central battery switchboards.	4.25
27-E	2 primary windings, 105 each. 2 secondary windings, 95 each.	Rural phantom circuits.	7.50

**No. 42 Type**

42-A	4 windings, 35, 53, 72, and 90.	Magneto cord circuits to prevent ringing through.	\$2.05
42-B	4 windings, 22, 34, 45, and 57.	Magneto cord circuits to prevent ringing through.	2.40

## RESISTANCES

### No. 1 Type

These have one winding on a brass core, fiber heads, and enclosed in a brass shell.

Code No.	Resistance ohms	List Price each	Code No.	Resistance ohms	List Price each
1-A	400	\$0.30	1-K	30	\$0.30
1-B	2,500	.45	1-L	100 (non-inductive)	.30
1-C	500	.30	1-N	700	.30
1-D	60	.30	1-P	5	.30
1-E	300	.30	1-R	250	.30
1-F	1,000	.45	1-T	350	.30
1-G	3,000	.60	1-U	45	.30
1-H	200	.30	1-W	2,000 (non-inductive)	.45
1-J	20	.30	1-Y	1,200	.45



No. 1

### No. 5 Type

These have one winding on a wooden spool

Code No.	Resistance ohms	List Price each	Code No.	Resistance ohms	List Price each
5-A	120	\$0.70	5-S	9,000	\$1.50
5-B	20	.70	5-T	20,000	1.90
5-C	60	.70	5-U	450	.85
5-D	50	.70	5-W	150	.70
5-E	90	.70	5-Y	1,450	1.15
5-F	10	.75	5-Z	8,550	1.50
5-G	10,000	1.50	5-AA	300	.70
5-H	500	.85	5-AB	9,250	1.50
5-J	600	.85	5-AC	2,000	1.12
5-K	750	1.15	5-AD	8,800	1.50
5-L	1,000	1.15	5-AE	1,200	1.15
5-M	2,500	1.15	5-AF	100	.70
5-N	800	1.15	5-AG	200	.70
5-P	180	.70	5-AH	250	.70
5-R	40	.70			



No. 5

### No. 18 Type

These have a micanite core and two terminals.

Code No.	Resistance ohms	List Price each	Code No.	Resistance ohms	List Price each
18-A	37	\$0.35	18-U	100	\$0.35
18-B	40	.35	18-W	133	.35
18-C	83	.35	18-Y	90	.35
18-D	120	.35	18-Z	67	.35
18-E	140	.35	18-AA	95	.35
18-F	150	.35	18-AB	45	.35
18-G	200	.35	18-AC	500	.35
18-H	210	.35	18-AD	240	.35
18-J	30	.35	18-AE	600	.35
18-K	80	.35	18-AF	300	.35
18-L	170	.35	18-AG	226	.35
18-M	53	.35	18-AH	320	.35
18-N	180	.35	18-AJ	400	.35
18-P	130	.35	18-AK	60	.35
18-Q	110	.35	18-AL	4	.35
18-R	10	.35	18-AM	250	.35
18-S	20	.35	18-AN	350	.35
18-T	50	.35			



No. 18

## RESISTANCES (Continued)

## No. 19 Type

These have a mica core, two windings and three terminals, the middle terminal being common to one end of each of the windings.



No. 19 Type Resistance

Code No.	Resistance ohms	List Price each
19-A	37 and 37	\$0.38
19-B	40 and 40	.38
19-C	40 and 83	.38
19-D	83 and 83	.38
19-E	30 and 30	.38
19-F	40 and 60	.38
19-G	40 and 100	.38
19-H	40 and 120	.38
19-J	10 and 40	.38
19-K	100 and 100	.38
19-L	60 and 60	.38
19-M	20 and 20	.38
19-N	5 and 8	.38
19-P	20 and 130	.38
19-R	25 and 120	.38
19-S	60 and 90	.38
19-T	25 and 25	.38
19-U	25 and 90	.38
19-W	10 and 10	.38
19-Y	15 and 15	.38
19-Z	120 and 120	.38
19-AA	15 and 90	.38
19-AB	120 and 210	.38
19-AC	60 and 83	.38
19-AD	160 and 150	.38
19-AE	30 and 120	.38
19-AF	140 and 140	.38
19-AG	120 and 160	.38
19-AH	240 and 240	.38
19-AJ	200 and 200	.38
19-AK	70 and 70	.38
19-AL	40 and 68	.38
19-AM	50 and 50	.38
19-AN	200 and 260	.38
19-AP	180 and 180	.38
19-AR	60 and 260	.38
19-AS	170 and 170	.38



No. 31 Type Resistance

## No. 31 Type

A steel tube enameled resistance; mounted on a wood base; used in railway composite circuit.

Code No.	Resistance ohms	List Price each
31-A	1,200	\$1.15

## RESISTANCE LAMPS

These have tubular bulbs  $1\frac{1}{4}$  in. diameter with carbon filament and are fitted with Edison bases.



No. 1 Resistance Lamp

Code No.	Resistance ohms	List Price each
1-A	660	\$0.40
1-B	220	.35
1-C	300	.40
1-D	100	.40

## RETARDATION COILS

These represent a few of the commonly used types which we manufacture

## No. 46 Type

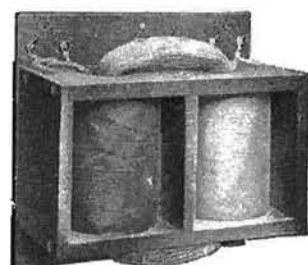
Code No.	Resistance ohms	List Price each
46-A	1 winding, 600	\$1.00
46-B	1 winding, 150	.85
46-C	1 winding, 200	.90
46-D	1 winding, 250	.90
46-E	1 winding, 300	1.00
46-F	1 winding, 500	.90
46-G	1 winding, 750	1.00
46-H	1 winding, 350	1.00
46-J	1 winding, 900	1.00
46-K	1 winding, 1,000	1.05
46-L	1 winding, 400	.90
46-M	2 windings, 125 each	1.15
46-N	2 windings, 100 each	1.05
46-P	2 windings, 500 each	1.05
46-R	1 winding, 1,500	.90
46-S	1 winding, 40	.90



No. 46 Type

## No. 5 Type

5-K	2 windings, 15 each	Composite circuit and No. 9 switchboard.	\$11.80
5-U	1 winding, 1,000	Duplex circuits.	21.50
5-W	1 winding, 146	Duplex circuits.	9.35
5-Y	1 winding, 500	Duplex circuits.	14.50
5-AA	2 windings, 80 each	Composite circuits.	25.20
5-AC	2 windings, 192 each	Rural phantom circuits.	9.00
44-C	2 windings, 192 each	2 coils on one base for rural phantom circuits.	15.75



No. 5-K

## No. 8 Type

8-B	2 windings, 85 each	Cord circuit Nos. 4, 101, 102, and cordless private exchanges.	\$3.25
8-L	2 windings, 175 each	No. 4 private exchange.	3.90



No. 8-B

## No. 12 Type

12-A	1 winding, 165	Operator's telephone circuit, Nos. 1, 9 and 10 switchboards, Nos. 101 and 102 private exchanges.	\$0.85
12-G	1 winding, 2.3	Telephone set.	.75
12-L	1 winding, 400	Operator's telephone circuit, No. 4 private exchange.	1.50
12-M	1 winding, 2	Telephone set.	.75
12-H	1 winding	Choke coil use in primary circuit of battery driven 38 watt dynamotor.	6.75
12-J	1 winding	Choke coil used in primary circuit of battery driven 75 watt dynamotor.	6.75
12-K	1 winding	Choke coil used in primary circuit of battery driven 150 watt dynamotor.	6.75



No. 12-A



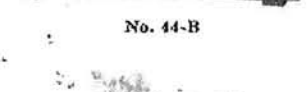
No. 12-K



No. 12-K

## No. 44 Type

44-B	2 windings, 200 each	This has two separate toroidal coils on the same wooden base. Each coil is enclosed in a cross-talk proof shell. Used in the cord circuit of No. 1 toll switchboard.	\$17.10
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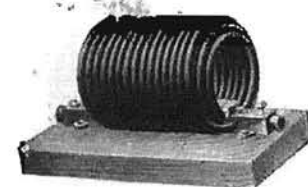


No. 44-B

## No. 31 Type

The No. 31 Type is for use with lightning arresters for the protection of overhead direct and alternating current power circuits; mounted on a temporary base for shipment.

Code No.	Capacity, Amperes	List Price each
31-B	25	\$4.30
31-D	50	7.50
31-F	100	17.65
31-H	150	25.90



No. 31-B

## RINGERS

### Equipped with Gongs

#### No. 2 Type

##### Long Coils, Unbiased

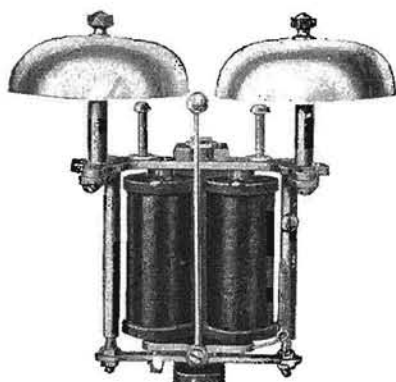


No. 2 Type

Code No.	Mounts on Woodwork inches	Approx. Resistance ohms	Use	List Price each
2-AG	$\frac{5}{8}$	1000	Telephones	\$1.85
2-BG	$\frac{5}{8}$	2500	Telephones	2.45
2-FG	$\frac{5}{8}$	1600	Telephones	2.45
3-AG	$\frac{1}{2}$	1000	Telephones	1.85
3-BG	$\frac{1}{2}$	2500	Telephones	2.45
4-AG	$\frac{3}{4}$	1000	Telephones	1.85
4-BG	$\frac{3}{4}$	2500	Telephones	2.45

#### No. 6 Type

##### Long Coils, Biased



No. 6 Type

6-AG	$\frac{5}{8}$	1000	Telephones	\$1.85
6-BG	$\frac{5}{8}$	2500	Telephones	2.45
6-FG	$\frac{5}{8}$	1600	Telephones	2.45
7-AG	$\frac{1}{2}$	1000	Telephones	1.85
7-BG	$\frac{1}{2}$	2500	Telephones	2.45
8-AG	$\frac{3}{4}$	1000	Telephones	1.85
8-BG	$\frac{3}{4}$	2500	Telephones	2.45

#### No. 38 Type

##### Long Coils, Unbiased

All No. 38 Type ringers listed below have gong posts suitable for mounting on  $\frac{5}{8}$ " woodwork. Spacers can be furnished, however, to adapt them for mounting on  $\frac{3}{8}$ " or  $\frac{1}{2}$ " woodwork.

Code No.	Approximate Resistance ohms	Use	Remarks	List Price each
38-AG	1000	Telephones		\$1.85
38-BG	2500	"	High efficiency	2.45
38-FG	1600	"	ringer having im-	2.45
38-JG	50	"	proved adjust-	1.65
38-WG	2000	"	ment feature.....	2.40
38-YG	3500	"		2.70
38-AAG	5000	"		On request

#### No. 40 Type

##### Long Coils, Unbiased



No. 38 Type

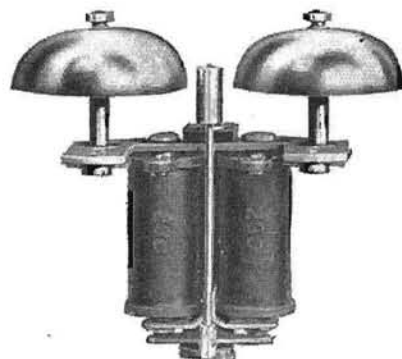
40-AG	1000	Swtehbrds.	Ringer adapted for mounting on No. 1200 Type Switchboards.....	\$2.40
40-BG	2500	"		3.00
40-FG	1600	"		3.00

## RINGERS (Continued)

### No. 45 Type

Long Coils, Unbiased

Code	Resistance ohms	Use	Remarks	List Price each
45-BG	2500	Telephones used in damp places	Has gong posts for $\frac{5}{8}$ " woodwork. For use with telephone located in mines and other damp places. Specially treated to resist the action of moisture and gases. Equipped with No. 20 gongs..	\$2.45



No. 41 Type

### No. 46 Type

Long Coils, Biased

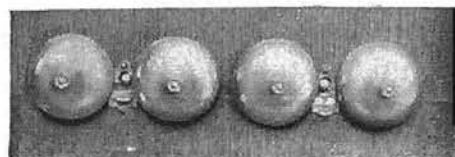
46-BG	2500	Telephones	High efficiency ringer having improved adjustment feature. For four-party selective ringing using pulsating current...	\$2.45
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### No. 41 Type

For Harmonic Ringing

Have gong posts adapting them for mounting on  $\frac{5}{8}$ " woodwork.

Code No.	Frequency Cycles per second	Resistance ohms	Use	Remarks	List Price each
41-RG	$16\frac{2}{3}$	1800	Telephones	Operate on constant voltage	\$3.80
41-SG	$33\frac{1}{3}$	460	"		3.45
41-TG	50	460	"		3.45
41-UG	$66\frac{2}{3}$	460	"		3.45



No. 1-A Ringer Indicators

## RINGER INDICATORS

Can be used in connection with No. 40 Switchboard ringers to indicate the calling line.

Code No.	List Price each
1-A.....	\$0.45

## RINGER PARTS

### No. 38 Type Ringer

Code No.	Description	
P-101702	Permanent magnet.....	} Prices on request
P-38973	Magnet screw.....	
P-38974	Magnet screw washer.....	
P-101698	Armature pivot screw.....	
P-101699	Pivot screw nut.....	
P-108454	Armature adjusting screw.....	
P-43759	Screw for clamping gong post adjustment.....	
No. 17	Gong.....	
P-13695	Gong screw.....	
P-101838	Clapper ball protector.....	
P-23217	Screw for clapper ball protector.....	
P-108487	Armature and clapper assembly.....	
P-22844	Mounting screw.....	
P-103709	Mounting screw washer.....	
P-106891	Electro magnet coil for No. 38-A 1000-ohm ringer....	
P-106892	Electro magnet coil for No. 38-B 2500-ohm ringer....	
P-106893	Electro magnet coil for No. 38-F 1600-ohm ringer....	
P-106894	Electro magnet coil for No. 38-J 50-ohm ringer....	
P-107878	Electro magnet coil for No. 38-W 2000-ohm ringer....	
P-107879	Electro magnet coil for No. 38-Y 3500-ohm ringer....	
P-107880	Electro magnet coil for No. 38-AA 5000-ohm ringer....	

### No. 41 Type Harmonic Ringer

Code No.	Description	
P-106993	Permanent magnet.....	} Prices on request
P-38973	Magnet screw.....	
P-38974	Magnet screw washer.....	
P-43759	Screw for clamping gong post adjustment.....	
No. 16	Gong.....	
P-13695	Gong screw.....	
P-108229	Clapper ball protector.....	
P-23217	Screw for clapper ball protector.....	
P-22844	Mounting screw.....	
P-103709	Mounting screw washer.....	

NOTE.—Ringer parts are listed for convenience in ordering, and are subject to change without notice.



## SIGNALS

## Switchboard Type

The No. 4 has two coils and is used principally as a line signal in private exchanges employing magnetic signals and operating on a central battery basis.

The No. 32 has a single coil and is used principally as a supervisory signal in private exchanges employing magnetic signals and operating on a central battery basis. It is also used as the line signal in the cordless private exchange switchboards.

The No. 34 is used as a line signal in the No. 9 switchboard and in the trunk circuits of the No. 106 magneto switchboard. The Nos. 30 and 41 signals are used in the cord circuits of the No. 9 switchboard.

The No. 42 is used as a busy signal with multiple toll line jacks and mounts on same centers as jacks.

The Nos. 4, 34, 39, and 41 signals are numbered in paint on the shutter, numbering to be specified.

Code No	Resistance ohms	List Price each
4-E	500	\$1.90
32-A	33.3	2.35
34-A	80	2.25
34-B	300	2.40
39-A	2 windings, 250 each	3.30
41-B	2 windings, 100 each	3.25
42-A	100	.90



No. 4-E, No. 2 Mounting



No. 32-A

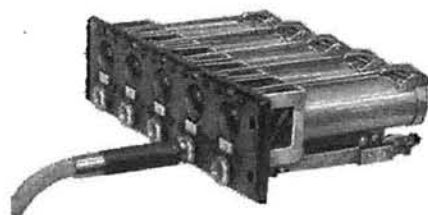


No. 34-A



No. 42-A Signal on No. 79 Mounting

## Combined Jacks and Signals

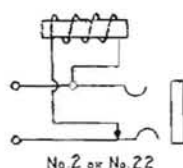
No. 2 Type—Combined Jack and Signal, on  
No. 80 MountingNo. 2 Type—Combined Jacks and Signals  
on No. 81 Mounting

The Combined Jack and Signal is used as a magneto line signal on switchboards where it is desirable that the jack be closely associated with the signal, thereby increasing the ease and rapidity of operating.

The signal ball is automatically restored by inserting the plug in the jack.

## No. 2 TYPE

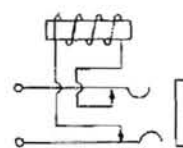
Code No.	Approximate Resistance ohms	Plugs Used	Description	Mountings No.	List Price each
2-A	80	47	Has night bell contact, and single cut-off jack. For non-multiple magneto lines.....	80 or 81	\$3.00
2-B	100	47		80 or 81	3.00
2-C	240	47		80 or 81	3.00
2-D	1000	47		80 or 81	3.10
2-E	1600	47		80 or 81	3.40



No. 2 or No. 22

## No. 3 TYPE

Code No.	Approximate Resistance ohms	Plugs Used	Description	Mountings No.	List Price each
3-A	80	47	Has night bell contact and double cut-off jack. For non-multiple magneto lines.....	80 or 81	\$3.10
3-B	100	47		80 or 81	3.10
3-C	240	47		80 or 81	3.10
3-D	1000	47		80 or 81	3.20
3-E	1600	47		80 or 81	3.50

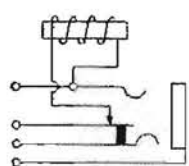


No. 3 or No. 23

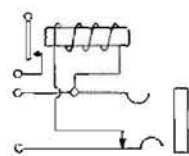
Telephone Apparatus  
and Accessories

## Combined Jacks and Signals (Continued)

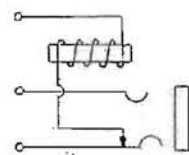
### No. 4 TYPE

	Code No.	Approximate Resistance ohms	Plugs Used	Description	Mountings No.	List Price each
No. 4 on No. 24	4-A	80	110	Has night bell contact and single cut-off jack. For multiple magneto lines	80 or 81	\$3.00
	4-B	100	110		80 or 81	3.00
	4-C	240	110		80 or 81	3.00
	4-D	1000	110		80 or 81	3.10
	4-E	1600	110		80 or 81	3.40

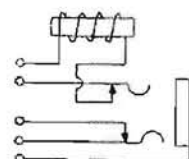
### No. 6 TYPE

	Code No.	Approximate Resistance ohms	Plugs Used	Description	Mountings No.	List Price each
No. 6 on No. 26	6-A	80	47	Same as No. 2 Type except that it has a contact on its armature which closes a local circuit during the ringing interval, providing the audible code signaling feature.	80 or 81	\$3.30
	6-B	100	47		80 or 81	3.30
	6-C	240	47		80 or 81	3.30
	6-D	1000	47		80 or 81	3.40
	6-E	1600	47		80 or 81	3.70

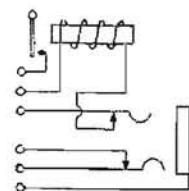
### No. 7 TYPE

	Code No.	Approximate Resistance ohms	Plugs Used	Description	Mountings No.	List Price each
No. 7 on No. 27	7-A	80	47	Same as No. 2 Type except that one side of the signal winding is brought out to a separate terminal, adapting it to selective central office signaling on bridged party lines.	80 or 81	\$3.00
	7-B	100	47		80 or 81	3.00
	7-C	240	47		80 or 81	3.00
	7-D	1000	47		80 or 81	3.10
	7-E	1600	47		80 or 81	3.40

### No. 11 TYPE

	Code No.	Approximate Resistance ohms	Plugs Used	Description	Mountings No.	List Price each
No. 11 on No. 31	11-A	80	110	Has night bell contact and double cut-off jack. Sleeve of jack is brought out to a separate terminal. For multiple or non-multiple magneto lines.	80 or 81	\$3.60
	11-B	100	110		80 or 81	3.60
	11-C	240	110		80 or 81	3.60
	11-D	1000	110		80 or 81	3.70
	11-E	1600	110		80 or 81	4.00

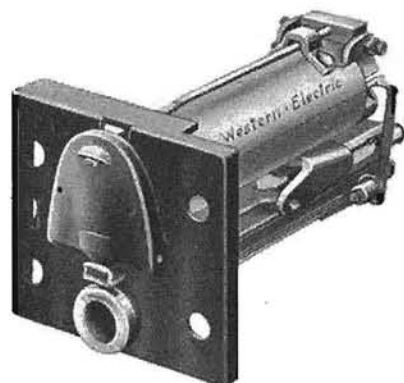
### No. 12 TYPE

	Code No.	Approximate Resistance ohms	Plugs Used	Description	Mountings No.	List Price each
No. 12	12-A	80	110	Has night bell contact and double cut-off jack. Also has a relay contact on the armature similar to the No. 6 Type.	80 or 81	\$3.70
	12-B	100	110		80 or 81	3.70
	12-C	240	110		80 or 81	3.70
	12-D	1000	110		80 or 81	3.80
	12-E	1600	110		80 or 81	4.10

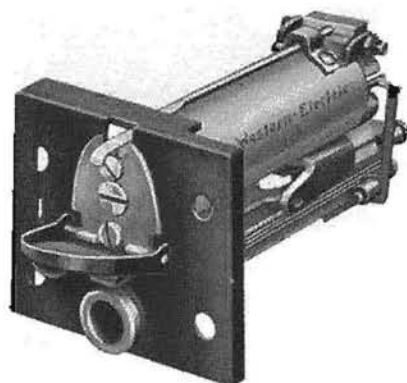
## SIGNALS (Continued)

### Combined Jacks and Drops

Perform the same service as the combined Jack and Signal and differ principally in that a shutter type drop is used in place of a spherical ball as a signal. Like the combined Jack and Signal, the signal or shutter is restored when the plug is inserted in the jack.

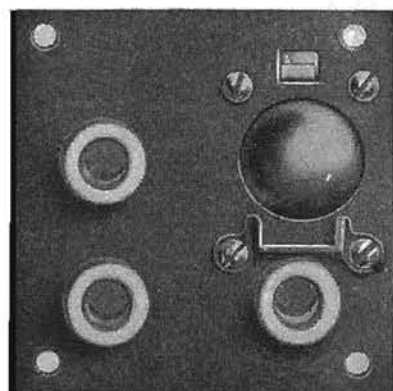


No. 22 Type—Signal Restored



No. 22 Type—Signal Operated

Approximate Resistance ohms			No. 22 TYPE		Mountings No.	List Price each
Code No.	Resistance ohms	Plugs Used	Description			
22-A	80	47	}	Has a night bell contact and single cut-off jack. For non-multiple magneto lines.....	89	On request
22-B	120	47			89	
22-C	330	47			89	
22-D	1000	47			89	
22-E	1600	47			89	
			No. 23 TYPE			
23-A	80	47	}	Has night bell contacts and double cut-off jack. For non-multiple magneto lines.....	89	On request
23-B	120	47			89	
23-C	330	47			89	
23-D	1000	47			89	
23-E	1600	47			89	
			No. 24 TYPE			
24-A	80	110	}	Has night bell contact and single cut-off jack. For multiple magneto lines.....	89	On request
24-B	120	110			89	
24-C	330	110			89	
24-D	1000	110			89	
24-E	1600	110			89	
			No. 26 TYPE			
26-A	80	47	}	Same as No. 22 Type except that it has a contact on its armature which closes a local circuit during the ringing interval, which provides the audible code signaling feature.....	89	On request
26-B	120	47			89	
26-C	330	47			89	
26-D	1000	47			89	
26-E	1600	47			89	
			No. 27 TYPE			
27-A	80	47	}	Has night bell contact and single cut-off jack. One side of the drop winding is brought out to a separate terminal. Adapted to selective central office signaling on bridged party lines.....	89	On request
27-B	120	47			89	
27-C	330	47			89	
27-D	1000	47			89	
27-E	1600	47			89	
			No. 31 TYPE			
31-B	120	110	}	Has night bell contact and double cut-off jack. Sleeve of jack is brought out to a separate terminal for multiple or non-multiple magneto lines.....	89	On request
31-C	330	110			89	
31-D	1000	110			89	



No. 1-A Signal Group

## SIGNAL GROUPS

Code No.	Description	List Price each
1-A	Includes 1 No. 3-C combined jack and signal, 2 No. 199 jacks, 1 No. 719 mounting plate.....	\$4.60

Occupies same space as two combined jack and signals on No. 80 Mountings.

## SIGNAL MOUNTINGS



No. 82 Signal Mounting

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

### For Central Battery Signals

Code No.	For Signals No.	Number of Signals per Strip	Size of Face Plate inches
2	4	10	15 x $1\frac{1}{8}$
29	34	5	$7\frac{1}{2}$ x $1\frac{1}{8}$
60	34, 39, 41	15	$24\frac{1}{8}$ x $1\frac{1}{8}$
61	34	20	$24\frac{1}{8}$ x $1\frac{1}{8}$
62	34, 39, 41	12	21 x $1\frac{1}{8}$
77	42	10	$9\frac{3}{8}$ x $\frac{7}{8}$
78	42	10	$7\frac{1}{2}$ x $\frac{7}{8}$
79	42	20	$9\frac{1}{8}$ x $\frac{7}{8}$
82	42	10	$11\frac{1}{8}$ x $\frac{7}{8}$
83	42	20	$11\frac{1}{8}$ x $\frac{7}{8}$
84	34	20	$23\frac{3}{8}$ x 1.37
85	41	15	$23\frac{3}{8}$ x 1.37
87	41	10	$22\frac{1}{2}$ x $1\frac{1}{8}$

The price of the Signal mounting is included in the price of the Signal.

### For Combined Jacks and Signals

Code No.	For Signals No.	Number of Signals per Strip	Size of Face Plate inches
80	2, 3, 4, 6, 7, 11, 12	1	$1\frac{1}{8}$ x $2\frac{1}{4}$
81	2, 3, 4, 6, 7, 11, 12	5	$6\frac{1}{4}$ x $1\frac{3}{4}$
88	2, 3, 4, 6, 7, 11, 12	10	$11\frac{3}{4}$ x $1\frac{3}{4}$
89	22, 23, 24, 26, 27, 31	5	$6\frac{1}{4}$ x $1\frac{3}{4}$
90-A	30, 33	2	$6\frac{1}{4}$ x $1\frac{3}{4}$
90-B	30, 33	3	$6\frac{1}{4}$ x $1\frac{3}{4}$
90-C	30, 33	5	$6\frac{1}{4}$ x $1\frac{3}{4}$

The price of the combined Jack and Signal mounting is included in the price of the combined Jack.

### For Supervisory Signals

Code No.	For Signals No.	Number of Signals per Strip	Size of Face Plate inches
80	10-C or 13-C	1	$1\frac{1}{8}$ x $2\frac{1}{4}$
81-A	10-C or 13-C	5	$1\frac{1}{4}$ x $6\frac{1}{4}$
81-B	10-C or 13-C	3	$1\frac{1}{4}$ x $6\frac{1}{4}$
81-C	10-C or 13-C	2	$1\frac{1}{4}$ x $6\frac{1}{4}$
90-C	30-C or 33-C	5	$1\frac{1}{4}$ x $6\frac{1}{4}$

Price of Supervisory Signal Mountings is included in the price of the Supervisory Signal.

## SIGNAL PLUGS

These are used for inserting in a jack to designate change of number, lines temporarily disconnected, lines arranged for calling only, or similar purposes.

### For No. 193 Jacks

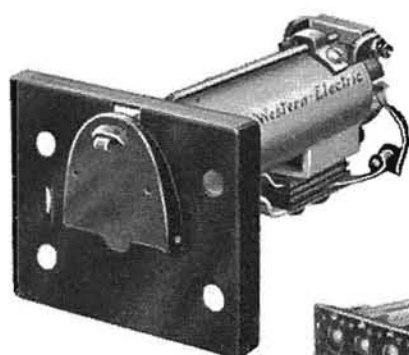
Code No.	Color	List Price per 1000	Code No.	Color	List Price per 1000
1-A	White	\$6.45	2-E	Yellow	\$6.45
2-B	Red	6.45	2-F	Blue	6.45
2-C	Slate	6.45	2-G	Dark Green	6.45
2-D	Black	6.45	2-H	Light Green	6.45

### For No. 92 Jacks

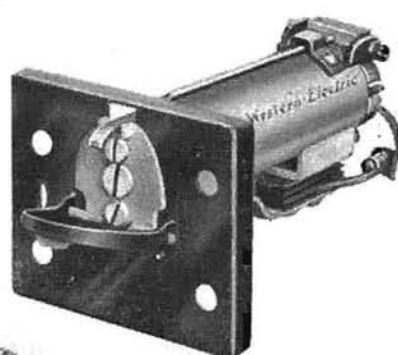
3-A	White	\$6.45	4-E	Yellow	\$6.45
4-B	Red	6.45	4-F	Blue	6.45
4-C	Slate	6.45	4-G	Dark Green	6.45
4-D	Black	6.45	4-H	Light Green	6.45

Information and prices on Signal Plugs to fit other types of jacks furnished upon request

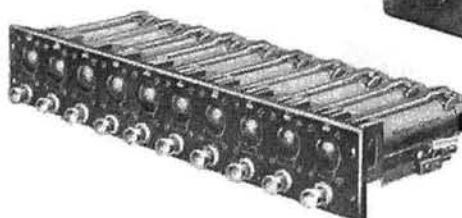
## SUPERVISORY SIGNALS



No. 30 Supervisory Signal  
Shutter Restored



No. 30 Supervisory Signal  
Shutter Operated

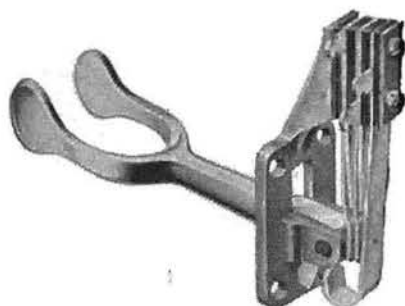


No 10-C Supervisory Signals

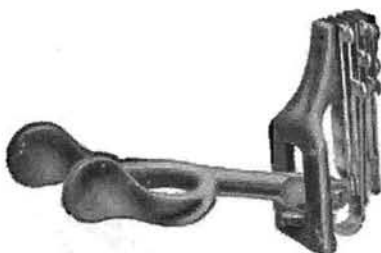
Code No.	Approximate Resistance ohms	Description	Mountings	List Price each
10-C	240	A magneto supervisory signal similar to the No. 2 Combined Jack and Signal, with a push button for restoring the signal ball.	80, 81-A, 81-B, 81-C	\$2.80
13-C	Each winding 320	Similar to No. 10-C, but equipped with a double winding, two additional terminals and two connectors in the same manner as the No. 35 Type drop.	80, 81-A, 81-B, 81-C	3.30
30-C	330	A manually restored shutter type magneto supervisory signal, to be used in connection with the No. 22 Type Combined Jack and Drop or as a line drop.	90-C	1.80
33-C	Each winding 352	A manually restored shutter type magneto supervisory signal with two windings. To be used in connection with the No. 22 Type Combined Jack and Drop. (Double winding.)	90-C	2.65

Telephone Apparatus  
and Accessories

## SWITCH HOOKS



No. 140 Type

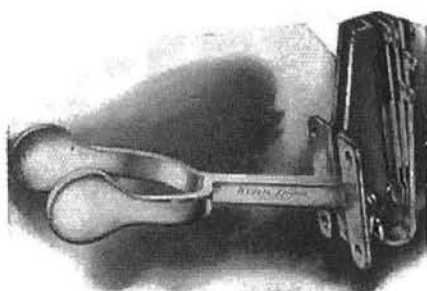


No. 140 Type

Code No.	Description	Contacts	List Price each
140-S	Short lever, self-contained...	2 front	\$0.75
140-T	Short lever, self-contained...	1 front	.75
140-U	Short lever, self-contained...	2 front	1.00
143-A	Short lever, self-contained...	2 front	.75
143-B	Short lever, self-contained...	1 back 2 front	.90
143-G	Short lever, self-contained...	2 front 1 passing ground	1.05
143-M	Short lever, self-contained...	1 front	.75
141-A	Brass wire hook threaded at one end and provided with a cap staked on. For use with No. 1002 hand set...		.03

## TELEPHONE ARMS

### With Transmitter, Receiver, and Cords



No. 143 Type



No. 1020-AC

Code No.	Description	Finish	List Price each
<b>No. 1020 Type</b>			
1020-AC	For regular local or central battery bridging service. For use on a flat top desk or table. Includes: 1 No. 122-W receiver 1 No. 229-W transmitter 1 8½-ft. No. 180 cord 1 2½-ft. No. 389 cord 1 11-in. No. 390 cord Same, equipped with No. 143-W concealed binding post, composition case receiver.	Dull Black Rustproof	\$12.35       12.00

## TELEPHONE ARMS (Continued)

## No. 1046 Type

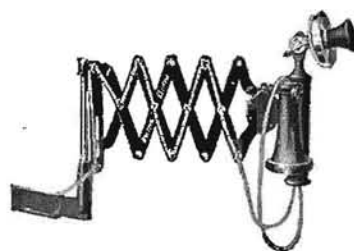
Code No.	Description	Finish	List Price each
1046-AA	An adjustable telephone arm combining the advantages of a desk stand and a swinging arm. Balances in any position. Black finish with nickel trimmings. For mounting on the side of a rolltop desk. Includes: 1 No. 271-W transmitter 1 No. 143-W receiver 1 3-ft. No. 408 cord 1 6-ft. No. 409 cord 1 9½-in. No. 426 cord 1 9½-in. No. 427 cord Same, equipped with No. 122-W or No. 144-W receiver.	Black Enamel	\$13.55 13.90
1046-AB	Same as No. 1046-AA, except arranged for mounting on the side of a flat top desk or on the wall. Equipped with No. 122-W or No. 144-W receiver.	Black Enamel	13.55 13.90
1046-AC	Same as No. 1046-AA, except arranged for mounting on the top of a flat top desk. Equipped with No. 122-W or No. 144-W receiver.	Black Enamel	13.55 13.90



No. 1046-AC Telephone Arm

## No. 1048 Type

1048-AA	A strong, collapsible, swinging telephone arm. Length of arm closed . 8¼ inches Length of arm extd. . 23 inches Equipped with No. 122-W or No. 144-W receiver.	Black Enamel	8.65 9.00
1048-AB	Same as No. 1048-AA, except arranged for mounting on the side of a flat top desk or on the wall. Equipped with No. 122-W or No. 144-W receiver.	Black Enamel	8.80 9.15
1048-AC	Same as No. 1048-AA, except arranged for mounting on the top of a flat top desk. Equipped with No. 122-W or No. 144-W receiver.	Black Enamel	8.80 9.15



No. 1048-AA Telephone Arm

## TELEPHONE BRACKETS

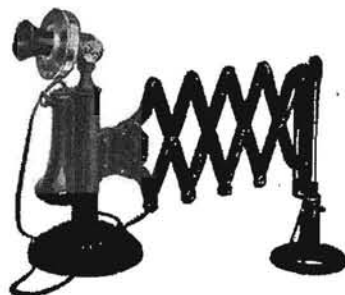
## No. 147 Type

A strong collapsible arm arranged with a clamping device to hold a desk telephone stand.

Length of arm closed, 8¼ inches  
Length of arm extended, 23 inches

The desk stand is not included in price of arm, and must be ordered separately.

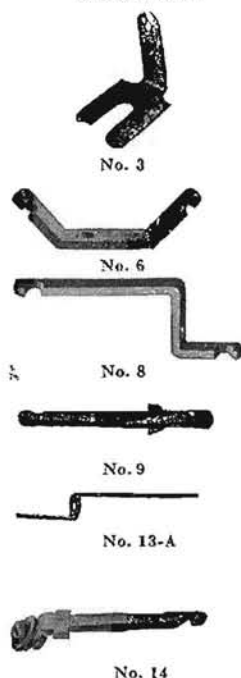
Code No.	Description	Finish	List Price each
147-AA	For mounting on either side of a roll top desk.	Black Enamel	\$5.25
147-AB	For mounting on the side of a flat top desk or on the wall.	Black Enamel	5.25
147-AC	For mounting on top of a flat top desk. Desk Stand not included.	Black Enamel	5.25



No. 147-AC Telephone Bracket



## TERMINAL PUNCHINGS



Code No.	Description	List Price per 100
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 Switchboards.....	.30
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 shorter.....	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-A



No. 16



No. 17-A

## TERMINAL STRIPS

These strips consist of a maple base drilled for connecting wires and equipped with terminal punchings held in place by hard rubber insulating strips.

**Used on Intermediate Distributing Frame**

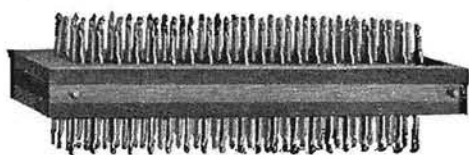
Code No.	Number of Terminals in each Row	Number of Rows of Terminals	Length of Strip inches	List Price each
35	20	3	$7\frac{3}{4}$	\$1.50
36	20	4	$7\frac{3}{4}$	1.80
37	20	5	$7\frac{3}{4}$	2.10
38	20	3	$6\frac{1}{2}$	1.20
39	20	4	$6\frac{1}{2}$	1.50
40	20	5	$6\frac{1}{2}$	1.80
41	20	6	$6\frac{1}{2}$	2.10
43	20	4	$6\frac{1}{2}$ for No. 9 exchange	.53
49	20	3	$6\frac{1}{2}$ for No. 9 exchange	.48

**Used on Main Distributing Frame**

65 1 row of 40 three-way terminals;  $7\frac{3}{4}$  in. long 1.20

**Used on No. 9 Switchboard Section**

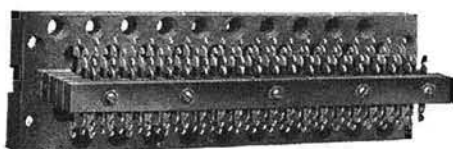
53	20	2	10	.45
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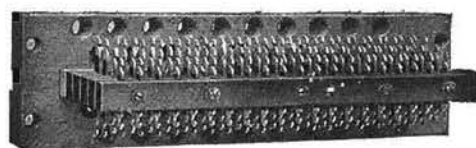
No. 49



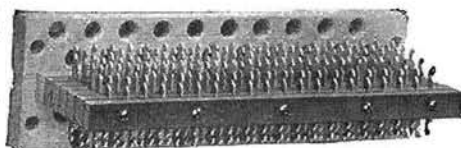
No. 53



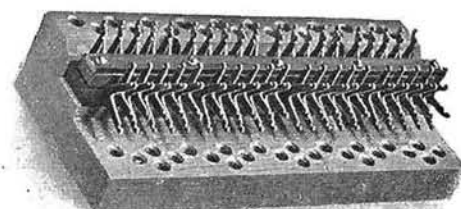
No. 35



No. 36

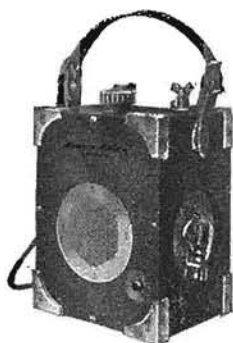


No. 37

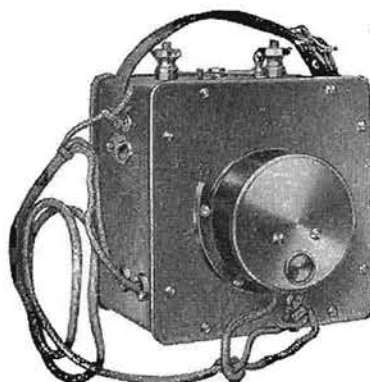


No. 65

## TESTING APPARATUS



No. 1017-B Test Set



No. 1006-A

### Linemen's Test Sets

#### No. 1017 Type

A wooden box telephone test set equipped with a regular local battery talking circuit consisting of a standard transmitter, induction coil, receiver, and a special three-cell dry battery unit. Can be used either on magneto or central battery lines.

Code No.	Will ring through ohms	Contains	Size of Case inches	Finish	List Price each
1017-B	2500	1 No. 2-D buzzer 1 No. 29-B 2-bar A. C. generator 1 No. 370 cord 1 No. 13 induction coil 1 No. 266-W transmitter 1 No. 145-W receiver	$4\frac{3}{4} \times 6\frac{3}{4} \times 7\frac{3}{4}$	Birch Mahogany	\$14.55

Batteries not furnished unless ordered.

#### No. 1006 Type

Wooden box test sets in which the No. 125-W receiver is also used as a transmitter. The use of the No. 1017-B is recommended on account of its higher transmitting efficiency.

1006-A	2500	1 No. 2-A buzzer 1 No. 29-A 2-bar A. C. generator 1 No. 125-W receiver 1 receiver cord	$6 \times 5\frac{1}{2} \times 4\frac{1}{2}$	Cherry	\$11.05
1006-B	3500	1 No. 2-B buzzer 1 No. 29-A 2-bar A. C. generator 1 No. 125-W receiver 1 receiver cord	$6 \times 5\frac{1}{2} \times 4\frac{1}{2}$	Cherry	11.35
1006-D	5000	1 No. 2-A buzzer 1 No. 22-B 3-bar A. C. generator 1 No. 125-W receiver 1 receiver cord	$6\frac{3}{8} \times 6 \times 4\frac{3}{8}$	Cherry	12.55

### Cablemen's Test Sets

Code No.	Use	Contains	Size of Case inches	Finish	List Price each
16-A	A tone testing set for use in splicing cables	1 No. 31-A condenser 1 No. 13115 switch 1 P. R. buzzer 4 No. 2-A binding posts 6 No. R-4 Columbia dry cells *	$7\frac{1}{16} \times 5\frac{1}{8} \times 7\frac{3}{4}$	Oak with nickel trimmings	\$11.85

\* Batteries not furnished unless ordered

## TESTING APPARATUS (Continued)



Peerless Switch Dial Set

### The Peerless Switch Dial Set

Bridge Arms have values of 1, 10, 100, and 1000 in each arm, and the coils are accurate to 1/20 of 1%.

Rheostat has four dials of 10 coils each, of the values of units, tens, hundreds, and thousands, and the coils are adjusted to an accuracy of 1/10 of 1%.

Ayrton Shunt is set as part of the apparatus.

Provision for outside Galvanometer and outside Battery.

Special designed Switch, with negligible contact resistance.

Quick make and break switches for changing from test to test.

Weight, complete, 7¾ pounds. Size, 9½" x 5¾" x 5½".

Finish of wood work, highly polished mahogany; finish of metal work, polished brass, gold lacquered.

List No.	Mr. No.	
109634	T-2000	Peerless Switch Dial Decade Testing Set
		Price on request



Peerless Portable Plug Set

### Peerless Portable Plug Set

Bridge Coils in A Arm of the values of 1, 10, 100, accurate to 1/20 of 1%. Bridge Coils in B Arm, of the values of 10, 100, and 1000, accurate to 1/20 of 1%. Bridge Arms reversible.

Rheostat Coils are of units, tens, hundreds, and thousands, and are multiples of 1, 2, 2, and 5 ohms or a total of 11,110 ohms, and by using the 1 to 1000 ratio on the bridge, gives a range of 11 megohms in single ohm steps. Accuracy of the Rheostat Coils 1/10 of 1%.

Provision for outside Battery, in case higher voltage is required, than that furnished by the cells in the set.

This Set is especially designed for ease in reading. The Bridge is set at the top, out of the way of the tester, and the plugs are in vertical columns, beginning with the thousands at the left hand side, and followed by the hundreds, tens, and units, so that when balance is obtained one reads the value of the resistance plugged out, the same as reading a column of figures.

The finish of this set is the same as the Peerless Switch Dial Set.

Weight, 7½ pounds. Size, 8½" x 5½" x 6".

List No.	Mr. No.	
109632	T-2010	Peerless Plug Type Testing Set.....
109633	T-2015	Sole Leather Carrying Case for T-2000 or T-2010
		Price on request



Peerless Fault Finder

### Peerless Improved Lineman's Fault Finder

This instrument issued for measuring resistances and locating crosses, grounds, opens and other cases of line and cable troubles.

The unknown resistances are read directly from the scale, thereby avoiding the additional operation of referring to a table for values.

List No.	Mr. No.	
109638	T-2060	Fault Finder .....
109639	T-2061	Sole Leather Carrying Case } Price on request

## TESTING APPARATUS (Continued)

### Government Standard Testing Set

Government Standard Testing Set, made in strict accordance with the rigid requirements of the United States Navy Specifications 17-T-2. A high-grade type of "Plug-In" Set.

Battery consists of 6 Silver Chloride Cells.

Bridge values in the A and B Arms, 1, 10, 100, 1000, and coils are accurate to 1/20 of 1%. Rheostat on the decade plan, with 10 coils in each decade, of the values of units, tens, hundreds, and thousands.

List No. Mfr. No.

116492 T-2070 Peerless G.  
 S. Decade Portable Testing  
 Set.....

116493 T-2085 Carrying  
 Case of Sole Leather, with  
 Shoulder Strap.....

Price on request



Government Standard Set

### L. & N. Post Office Pattern Testing Sets

This set may be used for the measurement of resistances, and also for the location of faults by the Murray and Varley loop tests. Changes of connections for the various tests are easily made.

The bridge has three coils in each arm, 1, 10, and 100 ohms in one arm, and 10, 100, and 1000 ohms in the other. The two arms are reversible, and the coils are accurate to 1/10 of 1%. The rheostat can be varied from 1 ohm to 11,110 ohms in steps of 1 ohm. The rheostat coils are accurate to 1/5 of 1%. A battery of four cells is mounted in the instrument.

The set is thoroughly well made. The blocks are carefully lacquered and mounted upon a polished hard rubber plate. Special care is given to the fit of the plugs. The hard rubber plug tops will not wear loose.



L. & N. Post Office Pattern Testing Set

List No. Mfr. No.

120231 5340 Portable Testing Set.....

120256 5345 Leather Carrying Case for No. 5340.....

Price on request

### L. & N. Plug Decade Portable Testing Set

A high grade set for resistance measurements and the location of faults by the Murray or Varley loop tests. Can be used for locating opens in wires. The convenient decade arrangement is used in the rheostat. The bridge arms are controlled by two plugs and are reversible. The rheostat is controlled by four plugs. All the plugs are always in use, thus eliminating the possibility of losing any of them. The use of few plugs also practically eliminates the possibility of errors due to plug contacts. A battery of four cells and a galvanometer are mounted in the instrument, but outside battery and galvanometer may be used if desired.

The ratio coils are accurate to 1/20 of 1%, and the rheostat coils to 1/10 of 1%.

The internal connections of the set are quickly changed by means of two plugs for the different tests for which the set is capable of being used.



L. & N. Plug Decade Testing Set

List No. Mfr. No.

120232 5440 Dial Decade Portable Testing Set.....

120255 544 Leather Carrying Case for No. 5440.....

Price on request

Telephone Apparatus  
 and Accessories

## TESTING APPARATUS (Continued)

### L. & N. Dial Decade Testing Set



L. & N. Dial Decade Testing Set

List No.	Mfr. No.
120233	5400
120258	5401

L. & N. Dial Decade Portable Testing Set. } Price on request  
 Leather Carrying Case for No. 5400. .... }

### L. & N. Fault Finder



L. & N. Fault Finder

A simplified form of Wheatstone bridge for the measurement of resistances, and the locations of faults by the Murray & Varley loop tests. Can also be used for the location of open wires. Simplified directions (contained in the lid of the instrument) make it possible for the instrument to be used satisfactorily by those who have never had experience in the use of such apparatus. The set includes battery of fourteen cells and a galvanometer.

List No. Mfr. No.

120234	5420	Fault Finder.....	} Price on request
120257	5421	Leather Carrying Case for No. 5421.....	

### New Queen Dial Decade Portable Testing Set



Queen Dial Decade Test Set

This instrument is a high grade portable Wheatstone Bridge for the measurement of resistances and the location of crosses, grounds, and opens, and insulation measurements. The resistances are wound with Manganin having a negligible temperature coefficient, adjusted to better than 1/20 % in the bridge arms and better than 1/10 % in the rheostat.

The Bridge arms give ratios of 1 to 10,000 and 10,000 to 1, thereby enabling all resistances which come within the range of the Wheatstone Bridge method to be satisfactorily measured by this instrument.

List No. Mfr. No.

120235	E-3108	New Dial Decade Portable Testing Set.....	} Price on request
120236	E-3109	Sole Leather Carrying Case with shoulder strap.....	
120237	E-3110	Flexible Contact Clutches, for clamping to large size conductors.....	



## TESTING APPARATUS (Continued)

### Queen Acme Portable Testing Set

This instrument is recommended when expenditures for a high grade portable testing set must be reduced to a minimum. The resistances are wound with Manganin accurate to 1/10% in the rheostat and 1/20% in the bridge arms. The ratios are such that all resistances which come within the range of the Wheatstone Bridge method can be measured with this instrument. It is arranged for loop testing and is complete with galvanometer, battery, keys, and switches. All of the various tests can be made by means of the setting of plainly lettered switches.



Queen Acme Test Set and Case

List No.	Mfr. No.		
120238	E-3200	Acme Portable Testing Set.....	} Price on request
120239	E-3215	Sole Leather Carrying Case for No. E-3200.....	
120240	E-3110	Flexible Contact Clutches for clamping to large size conductors....	

### Queen Portable Galvanometer

This instrument is of the pivot and jewel D'Arsonval type, having a sensibility such that one volt through 750,000 ohms would give one scale division deflection. Useful for supplementing old style galvanometers in bridges. Insulation testing, and the detecting of circuits where sensibility is required.

List No.	Mfr. No.		
120252	E-8060	Queen Portable D'Arsonval Galvanometer.....	} Price on request
120253	E-8062	Queen Portable D'Arsonval Galvanometer with six Chloride of Silver cells.....	
120254	E-8058	Queen Portable D'Arsonval Galvanometer, same as No. E-8060, excepting that it is mounted in a case without lid.....	

In all of the above Galvanometers, the scale is calculated so that the deflections are strictly proportional.

### Chloride of Silver Testing Battery

The Chloride of Silver cell has the advantage over the ordinary dry cell of not deteriorating as a result of not being used, constant electromotive force and minute size. A battery of these cells forms a valuable adjunct for a testing equipment.

These batteries are mounted in polished mahogany cases with pole change switch in the lid, as well as tapping key. Any individual cell or the total number may be placed in circuit.



Chloride of Silver Testing Battery

List No.	Mfr. No.		
120245	E-8934	Silver Chloride Testing Battery, 100 cells.....	} Price on request
120246	E-8935	Silver Chloride Testing Battery, 75 cells.....	
120247	E-8936	Silver Chloride Testing Battery, 50 cells.....	
120248	E-8937	Silver Chloride Testing Battery, 36 cells.....	
120249	E-8938	Silver Chloride Testing Battery, 24 cells.....	
120250	E-8939	Silver Chloride Testing Battery, 12 cells.....	
120251	E-8940	Single cells, each.....	

Telephone Apparatus  
and Accessories

## TESTING APPARATUS (Continued)

### No. 1407 Testing Cabinet



No. 1407

The No. 1407 Testing Cabinet is a condensed wire chief's desk that affords means for accurately testing for practically all troubles common to both magneto and central battery exchanges. Its application is universal, since it is arranged for mounting either alongside of the switchboard or in the terminal room. The cabinet is substantially built of quarter-sawn oak, having a rich golden oak finish, and presents a very pleasing appearance.

Tests can be made in a very simple manner without complicated mathematical calculations for grounds, crosses, short circuits, opens (that is, lack of continuity), bad joints, and practically all troubles common to the average telephone company.

Its universal application and simple operation are its main advantages.

The No. 1407 testing cabinet can be obtained in the following combinations. In ordering, specify which group is desired.

#### Group No. 1--

Consists of 1 No. 1407 Testing Cabinet for local battery (magneto) systems complete, ready for volt-meter testing (except 30 volt dry cell battery), including the following circuits:

1 testing circuit, arranged for single- or two-party ringing, complete with 10,000-ohm Weston voltmeter, keys for making tests, testing cord, and grounding cord.

1 operator's circuit, complete with head band receiver and chest type transmitter.

NOTE.—The equipment covered by the following groups is not included under Group No. 1.

#### Group No. 2--

Consists of hand generator equipment for single- or two-party ringing.

This group is not necessary in all cases because ringing current can frequently be obtained from the hand generator on the switchboard, alongside of which the No. 1407 Cabinet is sometimes mounted, or from the interrupter or ringing machine.

#### Group No. 3--

Consists of 1 10-ft. cord and No. 128 plug (or shoe) for use in testing at the protector frame. This No. 128 plug fits only our No. 84 type protector. If protectors of other than Western Electric manufacture are used, a suitable plug should be obtained from the manufacturer who made the protector.

#### Group No. 4--

Consists of 30 Blue Bell dry cells. It will usually be found advisable to furnish the dry cells separately and not to include this group with the cabinet.

#### Group No. 5--

Consists of 1 No. 1407 Testing Cabinet for central battery systems, complete. This group includes all the apparatus covered by Group No. 1, and, in addition, such other necessary equipment as to make the No. 1407 Testing Cabinet applicable for use with central battery.

NOTE.—The equipment covered by the preceding (except Group No. 1) or following groups is not included in Group No. 5.

#### Group No. 6--

Consists of apparatus necessary for placing howler current on the testing cord.

#### Group No. 7--

Consists of incoming trunk and call wire equipment. This is used when the testing cabinet is located away from the switchboard, and enables the test man to receive and send calls.

#### Group No. 8--

Consists of the necessary keys and apparatus to provide for four-party harmonic ringing.

#### Group No. 9--

Consists of the necessary keys and apparatus to provide for four-party pulsating ringing.

#### Group No. 10--

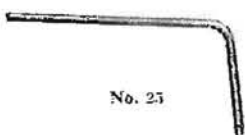













Consists of hand generator equipment for four-party pulsating ringing. This group is not necessary in all cases of four-party pulsating ringing, as ringing current can frequently be obtained from the hand generator on the switchboard, alongside of which the cabinet is sometimes mounted, or from the interrupter or ringing machine.

Telephone Apparatus  
and Accessories



## TOOLS







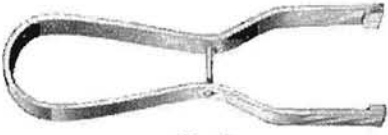







## For Central Offices

Code No.	Used for	List Price each	
25	Spring adjustment of horizontal key.....	\$0.25	 No. 25
28	Nos. 4 and 65 protector nuts.....	.30	 No. 28
34	Wrench and screw driver for $\frac{3}{8}$ in. hexagonal nuts on No. 7 protector.....	1.00	 No. 34
35	Plug and drop screws.....	.30	 No. 35
39	Shutter support adjuster, used on drops.....	.30	 No. 39
40	Double screw driver for drops.....	.30	 No. 40
43	Fits $\frac{3}{16}$ in. and $\frac{1}{4}$ in. nuts.....	.30	 No. 43
46	Removing cap nuts from relays of No. 122 type.	.55	 No. 46
48	Wrench and screw driver for adjusting armature contacts of No. 185-A relay. Will fit $\frac{1}{4}$ in. and $\frac{3}{8}$ in. nuts.....	.90	 No. 48
50	Relay spring adjustment.....	.40	 No. 50
58	Handling heat coils of protectors.....	.75	 No. 58
64	Wrench and screw driver for adjusting Nos. 4 and 16 jack fasteners.....	1.90	 No. 64
66	Extracting line and supervisory lamps.....	.30	 No. 66
67	Adjusting ring springs of No. 49 jacks.....	.40	 No. 67
68	Adjusting tip springs of No. 49 jacks.....	.40	 No. 68

No. 64  
Telephone Apparatus  
and Accessories

# TOOLS (Continued)

## For Central Offices

	Code No.	Used for	List Price Each
	No. 72	72 Wrench and screw driver for adjusting armature contact screws, $\frac{1}{16}$ in. and $\frac{3}{32}$ in. hexagonal nuts.....	\$0.85
	No. 74	74 Fits $\frac{5}{16}$ in. and $\frac{7}{16}$ in. nuts.....	.45
	No. 77	77 Holding wires to terminals of jacks for soldering.	1.15
	No. 81	81 Adjusting tip and ring springs of No. 92 jacks..	.40
	No. 85	85 Extracting No. 4 type lamps.....	.30
	No. 87	87 Extracting No. 8 type lamp caps.....	.30
	No. 90	90 Removing caps of Message Registers.....	.90
	No. 91	91 Removing cover of No. 89 type relay.....	.55
	No. 92	92 Nuts on Nos. 18 and 19 resistances.....	.55
	No. 93	93 Multiple cable lifter.....	.25
	No. 97	97 $\frac{3}{8}$ in. hexagonal nuts on No. 7 type fuses.....	.45
	No. 105	105 Adjusting springs on No. 453 type keys.....	.45
	No. 112	112 Extracting Nos. 2 and 4 type lamp caps.....	.30
	No. 119	119 Extracting and replacing sleeves of No. 193 jacks.....	On request

## TRANSMITTERS

### No. 229-W. With Lug

Code No.	Description	Used with	List Price each
229-W	High resistance transmitter with lug.	Magneto or central battery desk stands, transmitter arms and short wall telephone sets.	\$2.00



No. 229-W

### No. 232-W Switchboard Suspended Type

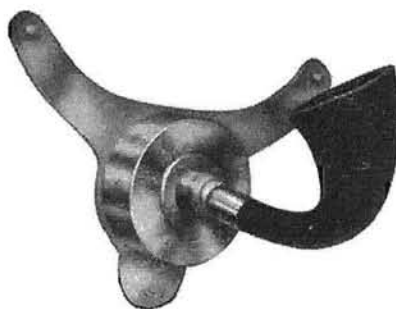
232-W	High resistance transmitter arranged to be suspended by two cords entering side of case.	For magneto or central battery switchboards.	2.55
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No. 232-W

### No. 234-W Operators' Chest Type

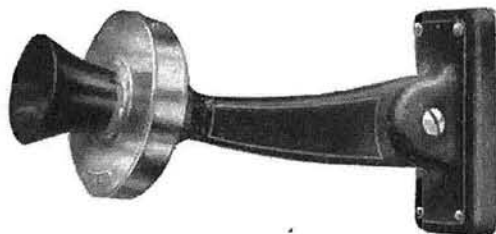
234-W	Operator's chest transmitter arranged to be supported by a band around the operator's neck. This attachment is not furnished with the transmitter.	Magneto or central battery switchboards as operator's transmitter. No. 3 transmitter attachment is used as a support.	2.95
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No. 234-W

### No. 244-W Hand Set Type

244-W	High resistance transmitter arranged to be fixed to No. 1 handset handle.	No. 1001 hand set	2.25
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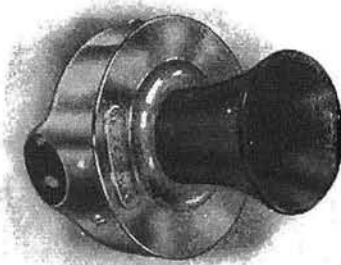
No. 244-W

### No. 250-W Bracket Type

250-W	High resistance bracket type transmitter.	Wall telephone sets that require bracket type transmitter.	2.00
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No. 266



No. 267



No. 297

## TRANSMITTERS (Continued)

Code No.	Description	Used with	List Price each
266-W	Transmitter to be fastened inside case.	No. 1017 test sets.	\$1.30
267-W	Transmitter arranged to be fixed to No. 2 type handset handle.	No. 1002-A handset.	1.55
270-W	High resistance transmitter of the bracket type having insulated case. Similar in exterior appearance to No. 250-W.	All wall telephone sets that require bracket type transmitter.	2.15
291-W	High resistance transmitter having insulated case with lug. Similar in exterior appearance to No. 229-W.	Desk stands and small telephone sets.	2.15
293-W	High resistance transmitter with lug.	Desk stands and wall sets.	2.00
297-W	Insulated, high resistance transmitter, face only, arranged for flush mounting in face of telephone.	Metal wall sets...	1.55
300-W	High resistance transmitter arranged to be suspended by two cords. Similar in appearance to No. 232.	Magneto switch-board in connection with No. 33 induction coil.	2.60
301-W	Insulated high resistance bracket type transmitter.	Wall sets.....	2.15
317-W	Insulated high resistance transmitter having lug but no bolt.	Metal wall sets..	2.00

## TRANSMITTER PARTS

### No. 229-W

Code No.	Description	
P-84570	Mouthpiece.....	} Prices on request
P-90160	Diaphragm.....	
P-91811	Rim screw.....	

### No. 250-W

P-84570	Mouthpiece.....	} Prices on request
P-90160	Diaphragm.....	
P-91811	Rim screw.....	

Telephone Apparatus  
and Accessories

### No. 291-W

Code No.	Description	
P-84570	Mouthpiece.....	} Prices on request
P-93248	Diaphragm.....	
P-91811	Rim screw.....	

### No. 270-W

P-84570	Mouthpiece.....	} Prices on request
P-90160	Diaphragm.....	
P-81811	Rim screw.....	

## TRANSMITTER ARMS

## For Switchboards

## Using Suspended Transmitter

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

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.....	\$4.60

19-A Oxidized copper unless otherwise specified ..... 5.65



No. 7-A



No. 19-A

## Using Transmitter with Lug

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

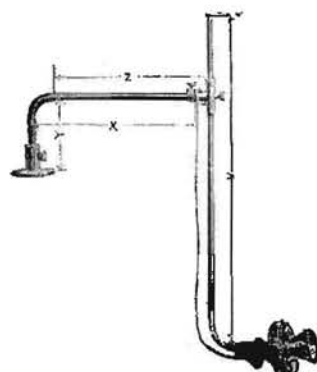
No. 11 type is nickel plated unless otherwise specified.

Code No.	DIMENSIONS IN INCHES				List Price each
	B	C	E	F	
11-A	19	12	12	12	On request
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 type is nickel plated unless otherwise specified.



No. 11



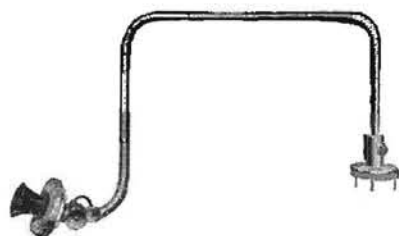
No. 23

## For Desks

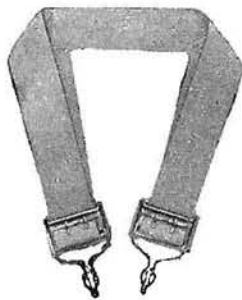
Code No.	DIMENSIONS, INCHES				List Price each
	V	X	Y	Z	
23-A	27	11	5	10	\$3.60
23-B	18	11	5	10	3.60
23-C	12	8	6	7	3.60
23-D	20	14	4	13	3.60
23-E	12	14	8	13	3.60
23-F	8	14	4	13	3.60

No. 41 type is nickel plated unless otherwise specified.

41-A Used with No. 4 private exchanges..... \$5.65

No. 41-A  
Telephone Apparatus  
and Accessories

TRANSMITTER ATTACHMENTS

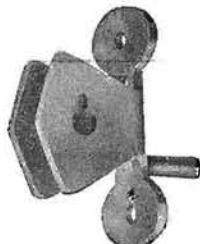


No. 3-A

Used to Support the Operator's "Chest" Transmitter

Code No.	Description	List Price each
2-A	Buckle only.....	\$0.045
3-A	Buckles and slate colored tape.....	.105
3-B	Buckles and black colored tape.....	.105
3-C	Buckles and white tape.....	.105

TRANSMITTER BRACKET



No. 3-A

Code No.	Description	List Price each
3-A	Nickel plated bracket for mounting transmitter on front of telephone set.....	\$0.18
3-C	Nickel plated bracket for mounting insulated transmitter on front of telephone set.....	.165
6-A	Bracket for metal wall sets for mounting trans- mitter in semi-flush position.....	On request

TROUBLE CAPS

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



No. 1-A

Code No.	Color	To be Used on Plugs Number	List Price each
1-A	Black	109	\$0.02 1/4
1-B	Red	109	.02 1/4
2-A	Black	110	.02 1/4
2-B	Red	110	.02 1/4