

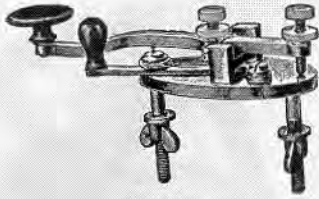
GENERAL CATALOGUE N°2



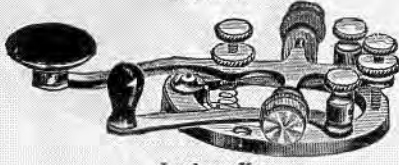
**ELECTRICAL SUPPLIES
TELEPHONE APPARATUS
FIRE ALARM APPARATUS**

**MONTREAL, TORONTO, WINNIPEG,
REGINA, CALGARY, VANCOUVER.**

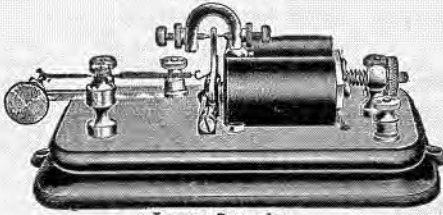
TELEGRAPH APPARATUS



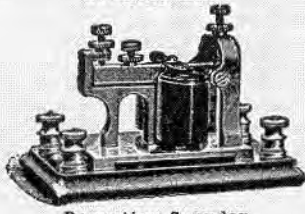
Leg Key



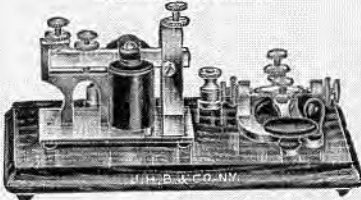
Legless Key



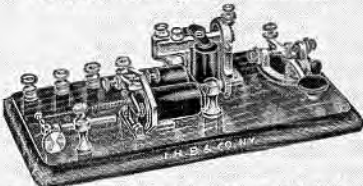
Lever Sounder



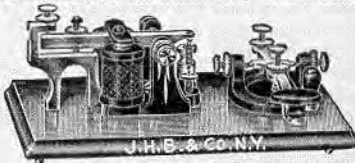
Repeating Sounder



Combination Sounder and Key



Combination Sounder, Key and Relay



Learner's Outfit

STANDARD TELEGRAPH KEYS

		Leg Keys		Price
Trade No.	Mfrs. No.	Finish		Each
093271	25919	Brass lacquered		\$2.20
093272	12534	Nickel-plated		2.80

		Legless Keys		Price
Trade No.	Mfrs. No.	Finish		Each
093273	25921	Brass lacquered		2.40
093274	12532	Nickel-plated		3.00

		OPEN CIRCUIT KEYS		Price
		Front and Back Contact		Each
Trade No.	Mfrs. No.	Finish		
093275	6216	Leg pattern		\$4.20
093276	6217	Legless pattern		4.60

		ALUMINUM LEVER SOUNDERS		Price
Trade No.	Resist. Ohms	Size Inches	Finish	Each
093277	4	5 1/2 x 3	Brass lacquered	\$3.20
093278	20	5 1/2 x 3	Brass lacquered	3.50
093279	4	5 1/2 x 3	Nickel-plated	4.00
093280	20	5 1/2 x 3	Nickel-plated	4.30

		REPEATING SOUNDERS		Price
		Aluminum Lever		Each
Trade No.	Resistance Ohms	Finish		
093281	4	Brass lacquered		\$6.40
093282	20	Brass lacquered		6.40
093283	4	Nickel-plated		7.20
093284	20	Nickel-plated		7.20

		COMBINATION SETS		Price
		Sounder and Key		Each
Trade No.	Mfrs. No.	Resistance Ohms	Finish	
093285	504	Wound to 20 ohms resistance. For all short lines up to 15 miles. No relay required.....		\$5.80
093286	505	Wound to 4 ohms resistance. For local battery		5.50
093287	506	No. 505, complete with 6x8 crowfoot battery and chemicals, wire for connecting and book of instructions, making an extra fine learners set..		7.20

		Sounder, Key and Relay		Price
Trade No.	Mfrs. No.	Resistance Ohms		Each
093288	579	150		\$17.40
093289	6225	250		18.00
093290	580	250		23.00

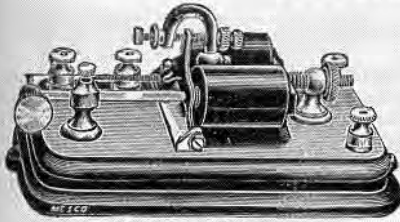
For nickel-plating Nos. 579 or 6225, add \$3.00 to list.

For nickel-plating No. 580, add \$4.00 to list.

		MORSE LEARNER'S OUTFIT		Price
Trade No.	Mfrs. No.			Each
093291	605	Complete outfit consists of one No. 607 Learner's Instrument, with 5x7 crowfoot battery, wire, book of instructions, and all necessary material for operating.....		\$4.00
093292	607	Morse Instrument only, wound to 4 ohms.....		2.60
093293	608	Morse Instrument only, wound to 20 ohms.....		2.90

NOTE—Battery cannot be sent by mail. Postage on instrument only (net), 40 cents.

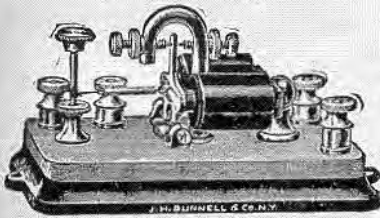
TELEGRAPH APPARATUS



Main Line Relay

MAIN LINE RELAYS

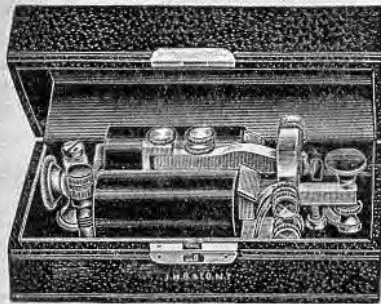
Trade No.	Resistance Ohms	Finish	Price Each
093245	150	Brass lacquered	\$8.00
093246	150	Nickel-plated	9.20



Pony Relay

PONY RELAYS, No. 567

Trade No.	Resistance Ohms	Finish	Price Each
093247	5	Brass lacquered	\$6.70
093248	20	Brass lacquered	7.00
093249	5	Nickel-plated	7.70
093250	20	Nickel-plated	8.00



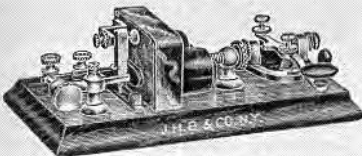
Pocket Relay

POCKET RELAYS

Has all the practical qualities of a full size sounding relay and is a very compact and handsome instrument. Furnished with nicely finished carrying case, 5 $\frac{3}{4}$ inches long, 2 $\frac{3}{4}$ inches wide.

Trade No.	Mfrs. No.	Resistance Ohms	Price Each
093251	581	150	\$24.00
093252	6226	250	25.00

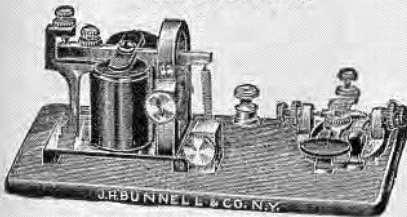
BARCLEY BOX RELAYS



Barclay Box Relay

Trade No.	Mfrs. No.	Resist. Ohms.	Description	Price Each
093253	404	150	With key and local contacts	\$15.00
093254	405	150	With key, without local contacts	14.00
093255	426	150	Without key, with local contacts	12.80
093256	427	150	Without key or local contacts	11.80

MAIN LINE SOUNDING RELAYS

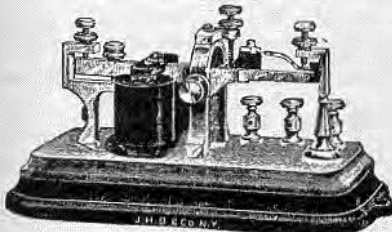


Main Line Sounding Relay

Trade No.	Mfrs. No.	Resistance Ohms	Description	Price Each
093257	559	150	With key on base	\$9.00
093258	560	150	Without key	8.00
093259	561	...	Mahogany case for wrecking sets	2.50
093260	562	...	Leather case	5.00
093261	563	200 to 300	With key on base	9.50
093262	564	200 to 300	Without key	8.50
093263	565	20 to 100	With key on base	8.50
093264	566	20 to 100	Without key	7.50

TRANSMITTERS

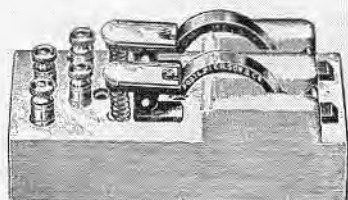
Mounted on wooden base, with cast iron sub-base.



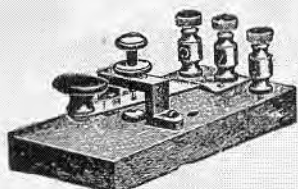
Transmitter

Trade No.	Resistance Ohms	Price Each
093265	6	\$14.00

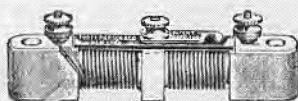
TELEGRAPH SUPPLIES



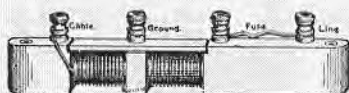
Double Spring Jack



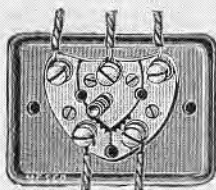
No. 11444



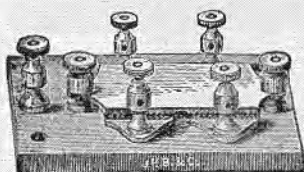
Type A



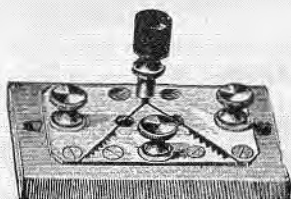
Type B



No. 1784



No. 1786



No. 1787

PORCELAIN BASE SPRING JACKS

This type of spring jack is the latest and most improved idea of telegraph equipment. It is constructed on the unit plan, and is, therefore, elastic and can be used to accommodate any number of lines. It is absolutely fireproof, the only materials used in its construction being brass and porcelain. The markers can be removed and replaced with ease.

Single Spring Jack

Trade No.	PORCELAIN BASE Length Inches	Width Inches	Width Jack Inches	Price Each
096879	6¾	1⅞	⅞	\$5.00

Double Spring Jack

096880	6¾	3¼	⅞	9.00
--------	----	----	---	------

Made to take standard wedge.

STRAP KEYS

Regular

Trade No.	Mfrs. No.		Price Each
096881	11443	Lower contact.....	\$1.40
096882	11444	Upper and lower contact....	1.80

Extra Heavy Railroad Pattern

096883	62840	Railroad pattern.....	4.20
--------	-------	-----------------------	------

LIGHTNING ARRESTERS

Argus, Type A

The Type A Argus Lightning Arrester is intended for use where space is limited. It can be easily mounted in cable boxes already in use, without disturbing the box.

Trade No.	Length	DIMENSIONS, INCHES Width	Height	Price Each
096884	5¼	¾	1	\$1.25

Argus, Type B

Type B Argus Lightning Arrester is the same as Type A, excepting that it has a fuse wire at one end, which protects wires and cables from crosses with high tension currents. This type of arrester, owing to its combined features of protection, has been adopted as a standard for this class of instruments.

096885	7	¾	1	1.35
--------	---	---	---	------

Union Lightning Arrester and Ground Wire Switch

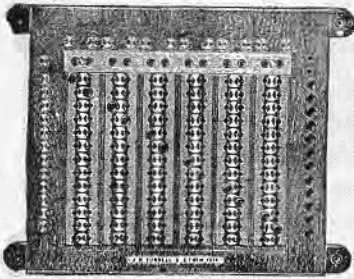
Serves as peg cut-out, lightning arrester and ground wire switch. It is an excellent and cheap form for amateur and all short lines.

Trade No.	Mfrs. No.		Price Each
096886	1784	Union Arrester	\$0.90
096887	1785	Extra pegs.....	.16

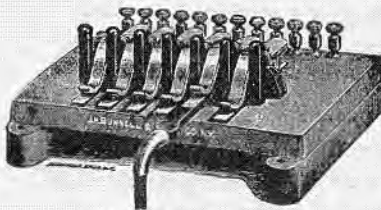
Nos. 1786 and 1787

096888	1786	Heavy plate lightning arrester, brass or nickel-plated.....	3.00
096889	1787	Triangle lightning arrester and ground wire switch. For short lines, etc.....	.90

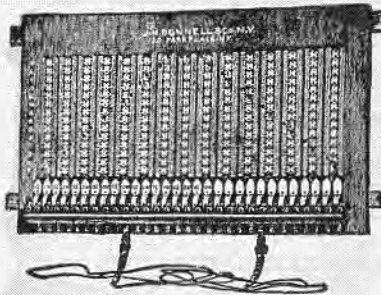
TELEGRAPH SUPPLIES



Peg Switchboard



Spring Jack Switchboard



Western Union Spring Jack Switchboard

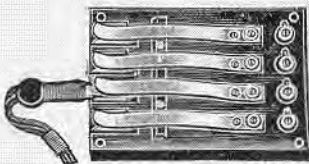


Table Jack Switch

PEG SWITCHBOARDS

These consist of brass straps, discs and lightning arrester mounted on a wood panel and connected to binding posts mounted on front of board. Peg plugs for connecting the straps and discs are furnished as listed below.

Trade No.	No. Lines	No. of Straps	Rows Discs	Peg Plugs	Price Each
096901	1	2	4	4	\$ 3.00
096902	2	4	6	8	6.00
096903	3	6	8	12	10.00
096904	4	8	10	16	14.00
096905	5	10	12	20	18.00
096906	6	12	14	24	24.00
096907	7	14	16	28	30.00
096908	8	16	18	32	36.00
096909	9	18	20	36	48.00
096910	10	20	22	40	54.00
096911	11	22	24	44	66.00
096912	12	24	26	48	74.00
096913	13	26	28	52	82.00
096914	14	28	30	56	90.00
096915	15	30	32	60	100.00

SPRING JACK SWITCHBOARDS

These consist of boards on which are mounted a single row of spring jacks, number of jacks to be specified. Binding posts to be mounted on front or back of board, as specified.

Trade No.	Price Each
096916 Spring jack switchboard.....	\$4.80

WESTERN UNION

SPRING JACK SWITCHBOARDS

These consist of rows of brass discs and straps, with peg plugs for making connections. On the marginal panel at each end of the board is a single row of binding posts, one post for each row of discs. When ordering, rows of discs and number of straps should be specified.

096932 With a single row of spring jacks at bottom.....	.....
096917 With a double row of spring jacks at bottom.....	.....

Prices quoted on application.

TABLE JACK SWITCHES

096918 Four-line table jack only.....	4.20
096919 Additional lines, per line.....	1.40
096920 Wedge, with 4-foot cord, extra.....	3.00

PLUGS

Trade No.	Type	Description	Finish	Price Each
096921	Split	Loop switch plug, halves insulated.....	Brass	\$1.50
096922	Peg	Cut-out and lightning arrester plug.....	Brass	.20
096923	Peg	Switchboard plug.....	Brass	.30

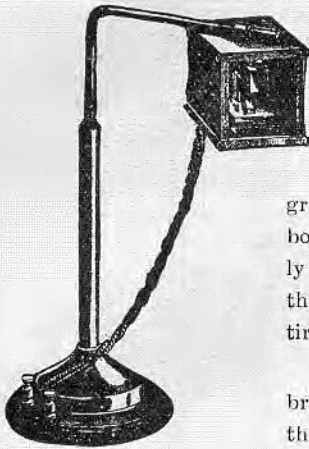
PLUG CORDS

Postal Single Conductor Switch Cord

Trade No.	Description	Price Each
096924	One end equipped with No. 4A wedge and other end with tips.....	.....
096925	Both ends equipped with tips.....	.....
Postal Double Conductor Switch Cord		
096926	One end equipped with No. 2A wedge and one end with tips.....	.....
096927	Both ends equipped with tips.....	.....
Western Union Single Conductor Switch Cord		
096928	One end equipped with No. 3A wedge and other end with tips.....	.....
096929	Both ends equipped with tips.....	.....
Western Union Double Conductor Switch Cord		
096930	One end equipped with No. 1A wedge and other end with tips.....	.....
096931	Both ends equipped with tips.....	.....

Prices quoted on application.

TELEGRAPH SUPPLIES



No. 614

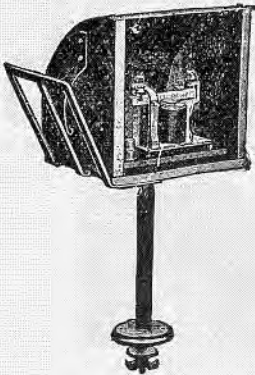
ADJUSTABLE RESONATORS

The position of the sounder, encased in resonator, which greatly increases and concentrates the sound, is adjustable, both as to its height and lateral position, so as to be entirely convenient to the receiving operator, without affecting the work at other instruments, the sound being almost entirely confined to the immediate locality of the instrument.

We also furnish the adjustable resonator with wall bracket for convenience where operator's table is against the wall.

For loudening, concentrating and directing the signals of an ordinary Morse Sounder to the ear of the receiving operator. Especially adapted for receiving operators using the typewriter, for noisy railroad stations, and for all situations where the sound of the instrument is subject to interference from outside noises.

Trade No.	Mfrs. No.		Price Each
093299	614	Desk pattern resonator, without sounder	\$9.00

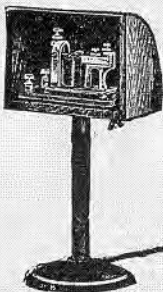


No. 616

THE JONES RESONATORS

With message clip and lateral adjustment. Stem is hollow so that cord can pass through it. Hood has lateral motion, permitting it to be turned three quarters round.

Trade No.	Mfrs. No.		Price Each
093300	616	Resonator, without sounder	\$7.50



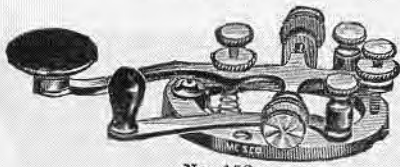
No. 619

MASCOT RESONATORS

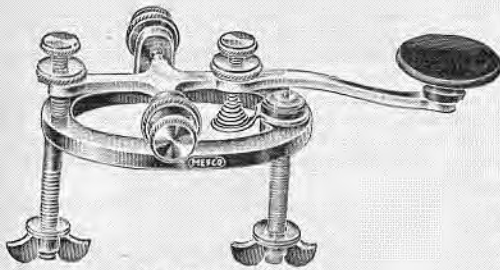
Portable, can be moved to any desired position within range of cord. The cord enters base and passes through hollow stem to sounder.

Trade No.	Mfrs. No.		Price Each
093301	619	Resonator, without sounder	\$3.50

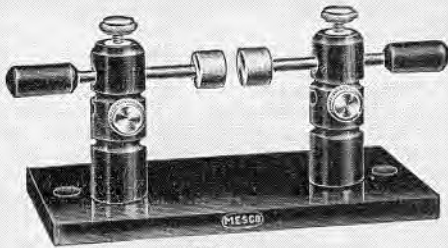
WIRELESS TELEGRAPH APPARATUS



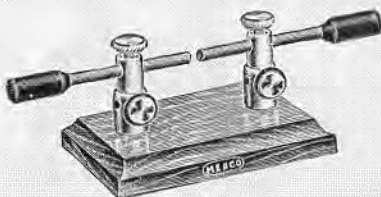
No. 452



No. 450



No. 465



No. 467

WIRELESS KEYS

Trade No.	Mfrs. No.	Legless Type	Price Each
078027	452	Nickel-plated lever, brass frame.....	\$3.25
078028	453	All nickel-plated....	3.50
Leg Type			
078029	450	Nickel-plated lever, brass frame.....	3.00
078030	451	All nickel-plated....	3.25

This key is of the standard type of telegraph key, but with no circuit breaker and with extra heavy points. The bushings are of mica, which will stand the heat caused by breaking heavy currents. This key will break as much as 25 amperes if shunted by a suitable condenser. Can be used on stations from the smallest up to 2½ K. W. capacity.

Steel lever is nickel-plated, and brass frame is finely grained and lacquered.

HIGH EFFICIENCY SPARK GAP

078031	465	5.00
--------	-----	------

This spark gap is adapted for all stations from the smallest up to ¼ K. W. capacity. The base is of polished hard rubber, and the standards are of hard rubber composition of the highest insulating properties. The hard rubber ends on the brass rods permit the length of the gap to be varied while sending. Spark terminals are of zinc, as used by commercial stations, and are renewable.

ZINC SPARK GAP

078032	467	1.00
--------	-----	------

Extensively used for coils up to 2-inch spark; base is of polished oak, standards are nickel-plated, and spark terminals are of zinc. Hard rubber ends are provided so that the length of the gap can be varied while sending.

TRANSMITTING OUTFITS

Type A

Consists of the following: One No. 462 one-inch spark coil; one No. 467 zinc spark gap; one No. 452 wireless telegraph key; 6 dry batteries.

Will send from one to five miles with a suitable aerial wire.

078033	476	15.00
--------	-----	-------

Type B

Consists of the following: One No. 464 two-inch spark coil; one No. 456 high efficiency spark gap; one No. 452 wireless telegraph key; 8 dry batteries.

Under above conditions, will transmit up to about eight miles.

078034	477	30.00
--------	-----	-------

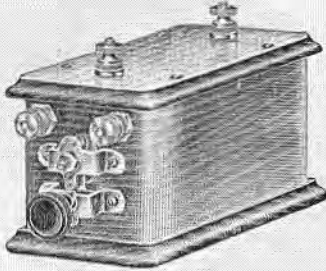
Type C

078035	490	One-inch coil.....	20.00
078036	491	Two-inch coil.....	33.00

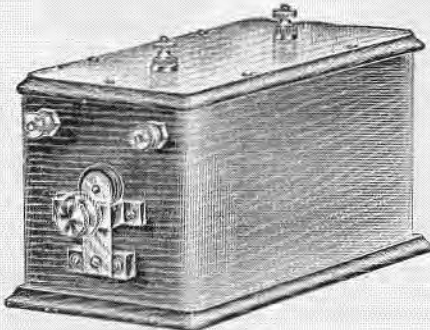
No. 490 consists of the same parts as the Type A outfit, but the coil, key and spark gap are mounted on a heavy polished oak base.

No. 491 has the same parts as the Type B outfit, with the coil, key and spark gap mounted on a heavy polished oak base.

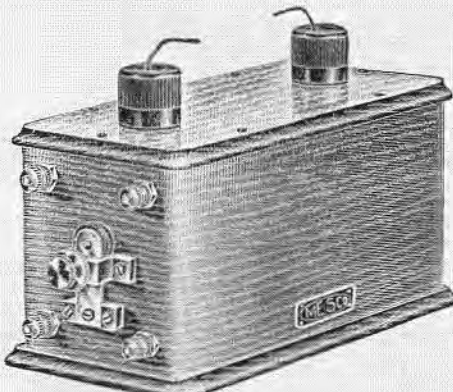
WIRELESS TELEGRAPH APPARATUS



Nos. 459-460



Nos. 461-464



Nos. 495-496



No. 449



No. 498

WIRELESS SPARK COILS

These coils are designed especially for wireless and high frequency work. The rated spark length is guaranteed between needle points, if the proper number of good dry batteries is used to operate the coil. The spark produced is heavy and energetic.

The contact points on the interrupter are heavy platino-iridium which is the best material known for the purpose. The interrupter is so designed that it will not stick.

All coils are furnished complete with primary condenser, which is placed in the case of Nos. 459 to 464, inclusive. Nos. 495 and 496 coils are provided with a No. 439 adjustable primary condenser, which is arranged in ten sections, so that the proper capacity may be used for the various aerial capacities with which the coil may be used.

These coils are designed for use in connection with dry, wet or storage batteries. We do not guarantee the coils if operated in connection with electrolytic interrupters of any description.

All coils are enclosed in polished quartered oak cases.

Trade No.	Mfrs. No.	Length of Spark, In.	No. of Dry Cells Required	Price Each
078062	459	$\frac{1}{4}$	5	\$5.75
078063	460	$\frac{3}{8}$	5	6.75
078064	461	$\frac{1}{2}$	5	8.00
078065	462	1	6	9.00
078066	463	$1\frac{1}{2}$	6	14.00
078067	464	2	8	20.00
078068	495	3	8	35.00
078069	496	4	10	58.00

Prices on larger coils furnished upon application.

AERIAL INSULATORS

These insulators will stand considerable tension, are unaffected by ordinary degrees of heat and cold, moisture, and acids, and have the highest insulating properties. No. 498 is the most generally used for small stations.

Trade No.	Mfrs. No.	Description	Price Each
078070	449	5-inch molded insulator	\$0.50
078071	498	Molded ball insulator	.42
078072	497	$10\frac{1}{2}$ -inch molded insulator	.83

Special prices for quantity orders.

PREMO STRANDED AERIAL WIRE

This is a hard wire, resembling hard drawn copper, but of high tensile strength and conductivity. About the same strength as phosphor-bronze. Recommended for all types of aeriels.

Trade No.	Description	Price per Foot
078073	7 strands, each No. 20 B. & S.	\$.02 $\frac{1}{2}$

ALUMINUM AERIAL WIRE

Trade No.	No. of Wire	Approx. Feet to the Pound	Price per Pound
078074	14	250	\$1.00
078075	12	175	1.00

WIRELESS TELEGRAPH APPARATUS

RECEIVING OUTFITS

Type B

This set consists of the following:
One No. 454 detector; one No. 455 tuning coil;
one No. 468 75-ohm wireless receiver and 3-foot
cord; one cell Blue Seal Dry Battery.

The detector and tuning coil are mounted in
a portable polished oak case. Will receive from
standard commercial stations up to 100 miles, if
proper height of aerial wire is used.

Trade	Mfrs.	Price
No.	No.	Each
078076	458	\$13.00

Type A

Type A set consists of the same instruments as
Type B but they are not mounted in a case.
Operates over same distance as the Type B set,
and parts can be connected in any way the user
may desire.

078077	482	8.80
--------	-----	------

Type C

Type C outfit consists of the following:

One No. 456 double contact tuning coil; one
one No. 454 detector; one No. 478 double headband
complete; one No. 474 fixed condenser; one Blue
Seal Dry Cell.

Will receive from high power stations 200 or
more miles distant, if connected in accordance with
the instructions given in this book, and if used in
connection with an aerial at least 60 feet long and
60 feet above the earth, consisting of at least four
parallel wires.

078078	493	20.50
--------	-----	-------

ADJUSTABLE PRIMARY CONDENSERS

This condenser was designed for use with Nos.
495 and 496 spark coils. The capacity surface con-
sists of 1500 square inches of foil, separated by
the best quality of paper arranged in ten sections, five
of 100 square inches and five of 200 square inches
each. Adjustment accomplished by means of
plugs with hard rubber composition heads.

The condenser may also be used for receiving
purposes and the arrangement in sections will
prove invaluable in tuning. About the laboratory
this condenser is a very useful instrument.

Finished in polished quartered oak and lac-
quered brass.

078079	439	8.00
--------	-----	------

FIXED RECEIVING CONDENSERS

No. 474

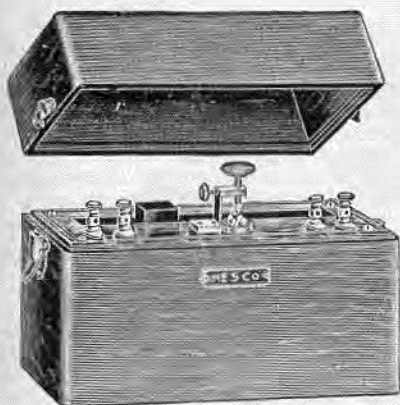
Arranged in three sections which are not con-
nected in any way within the case. The leads of
each section are brought out to a pair of binding
posts mounted on the cover of the case. Five sep-
arate capacities are therefore available which is an
advantage where close tuning is required. Each
condenser section has a surface of 204 square
inches of foil. The case is of polished oak, and the
binding posts are lacquered brass.

078080	474	2.10
--------	-----	------

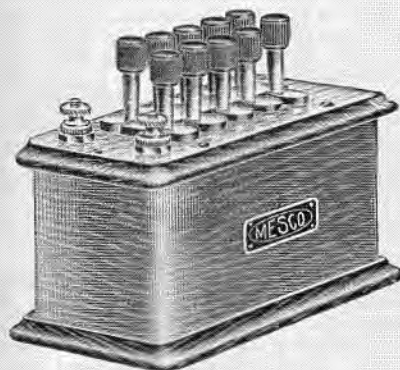
No. 440

Consists of a single section mounted in a
polished brass case, 2½ inches in diameter. Has
sufficient capacity for any station and is highly
efficient. The base is removable so that it can be
screwed to tables or cases of portable outfits.

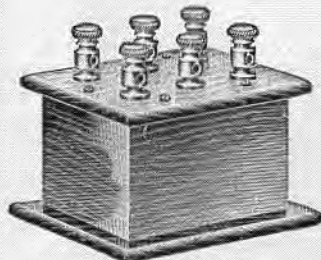
078081	440	1.25
--------	-----	------



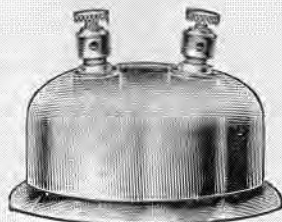
No. 458



No. 439

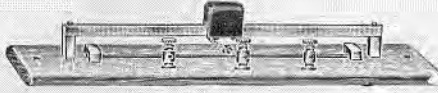


No. 474

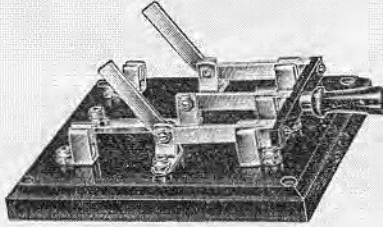


No. 440

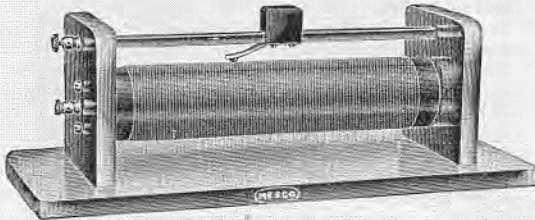
WIRELESS TELEGRAPH APPARATUS



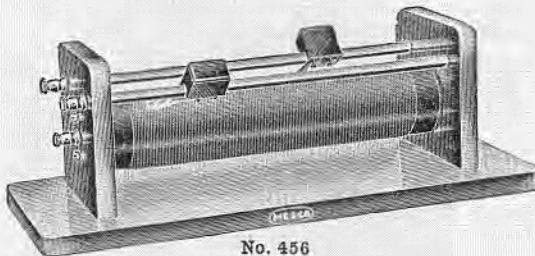
No. 475



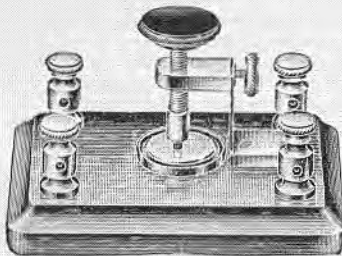
No. 416



No. 455



No. 456



No. 454

POTENTIOMETERS

Regulates current gradually. Total resistance about 300 ohms. A special form of contact prevents wearing away of resistance rod, but always maintains perfect connection with rod. Used for varying current and voltage. Slider rod is of hard rubber. Finish, lacquered brass and polished oak.

Trade No.	Mfrs. No.	Price Each
078082	475	\$3.00

ANTENNA SWITCHES

The antenna or aerial is used to disconnect the transmitting apparatus while receiving. This switch has two high tension and three low tension clips, and is so arranged that either a straight way or loop aerial may be used, and several low tension circuits may be made or broken. It is suitable for all stations from the smallest up to 2 K. W. capacity. The throw of this switch is only about 60 degrees, so that quick change from transmitting to receiving, or vice versa, may readily be made. The base is of heavy hardwood, size $6\frac{3}{4} \times 8 \times \frac{7}{8}$ inches.

078083	416	3.75
--------	-----	------

RECEIVING TUNING COILS

Single Contact

Wound with black enameled wire and properly designed for the use of this wire. The sliding contact is certain in operation and always touches the wire. Wire does not loosen from core. All metal parts are of polished brass. The slider handle is of hard rubber. Save lengths from zero to 1500 meters.

078047	455	5.00
--------	-----	------

Double Contact

Designed for use where closer tuning is required than can be obtained with a single contact coil, and will be found to be very selective when used with No. 474 fixed condenser. Brass parts are gold lacquered. Enameled wire used, and coil properly designed for this wire. Adjustable to receive lengths from zero to 1500 meters.

078084	456	6.00
--------	-----	------

DETECTORS

This instrument is unusually sensitive and has a wide range of adjustment which permits the use of crystals or metals of any ordinary size.

Furnished with a separable carbon electrode and a specially prepared metallic disk, also a metallic point and a carbon crystal. The metal parts are lacquered, and the adjusting screw has a genuine hard rubber knob.

078085	454	3.00
--------	-----	------

WIRELESS TELEGRAPH APPARATUS

TELEPHONE RECEIVERS

Made especially for wireless purposes. With powerful field magnets and thin diaphragms, they are very sensitive. Actual tests have proven their sensitive qualities.

Nos. 481 and 479 double head-sets complete have been used in receiving commercial wireless messages over distances of 1300 and 1000 miles respectively. All receivers are wound with silk covered wire.



No. 478

Receivers Only

Trade No.	Mfrs. No.	Ohms. Resis.	Price Each
078086	468	75	\$1.50
078087	469	500	2.75
078088	470	1000	4.60
078089	471	1500	5.80

With Double Head-Band, 6-foot Cord and Two Receivers

078090	478	75	5.00
078091	479	500	7.50
078092	480	1000	10.00
078093	481	1500	11.50

With Single Head-Band, 5-foot Cord, and One Receiver

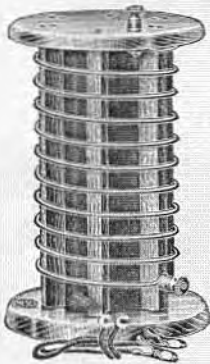
078094	444	75	3.25
078095	445	500	4.50
078096	446	1000	7.10
078097	447	1500	8.75



No. 444

Leather Covered Head Bands Only

Trade No.	Mfrs. No.		Price Each
078098	472	Single adjustable	\$2.10
078099	473	Double adjustable	2.50



No. 484

TRANSMITTING TUNING COIL OR SENDING HELIX

Adapted to coils giving up to 4-inch spark. Every inch of the wire is accessible. Two flexible leads fitted with lacquered spring clips are furnished with each helix. Very close tuning of the transmitting circuits can be secured with this helix.

Finished in polished oak and lacquered brass.

Trade No.	Mfrs. No.	Price Each
078100	484	\$8.50

LEYDEN JARS

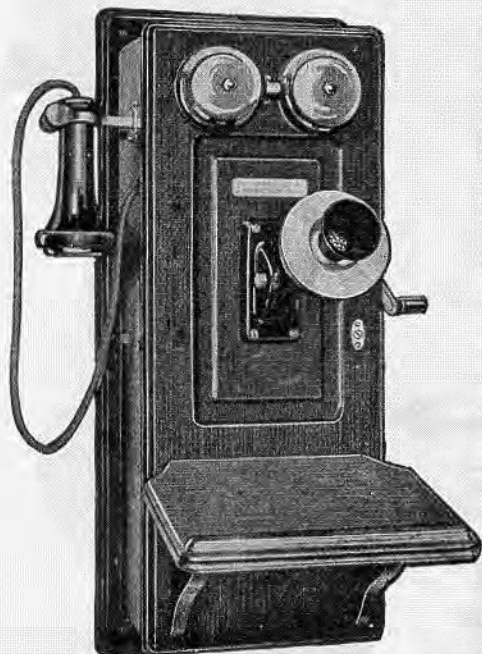
These jars are made of the best quality of glass with the result that there is practically no brush discharge. A heavy grade of foil, fastened securely to the glass is used to coat the jars. The jar tops are made of solid oak, well polished. Unexcelled for all high frequency and experimental work.



No. 486

Trade No.	Mfrs. No.	Capacity Pints	Price Each
078101	486	1/2	\$1.75
078102	487	1	2.10
078103	488	2	2.50
078104	489	4	3.25

TELEPHONE APPARATUS AND SUPPLIES
MAGNETO SYSTEMS



No. 1317 Type Telephone Set



No. N1300-F

In listing telephone apparatus and supplies we wish to call your attention to the fact that we have not in any sense listed our complete line, but only the more common types of telephones and appliances.

We manufacture a line of common battery equipments, complete in every particular, and other kinds of telephone apparatus intended to meet special conditions; for example: Apparatus for steam and electric railways, intercommunicating sets for dwellings, factories, and offices; also sets for use in mines, and submarine apparatus for use on vessels, etc. Therefore, if you do not find what you need in this catalogue, write our nearest house for further information.

MAGNETO WALL SETS, TYPE 1317

These sets are the shelf magnetophone wall type, adapted for use on bridging lines. The cabinet is made of quarter-sawed oak, is particularly strong in construction and handsome in appearance. Equipped with ringer, generator, No. N250 transmitter, No. 144-W receiver with 3-foot cord and short self-contained switch hook.

PUSH BUTTON SIGNALLING SYSTEM

Moderate Load—Bridging

Trade No.	Mfrs. No.	Ohms Ringer	No. Bars Generator	Price Each
089205	N1317-A	1600	5	\$14.10

Furnished with No. N1-A key.

089206	N1317-F	1600	5	14.39
--------	---------	------	---	-------

Same as No. N1317-A, but with No. N1-A condenser.

Heavy Load—Bridging

089207	N1317-E	2500	5	14.10
--------	---------	------	---	-------

Furnished with No. N1-A key.

089208	N1317-G	2500	5	14.39
--------	---------	------	---	-------

Same as No. N1317-E, but with No. N1-A condenser.

CODE RINGING SERVICE

Light Load—Bridging				
089209	1317-AH	1000	3	11.39

Rural—Moderate Load—Bridging

089210	1317-N	1600	5	13.69
--------	--------	------	---	-------

089211	N1317-R	1600	5	14.15
--------	---------	------	---	-------

No. N1317-R is the same as No. 1317-N, but with No. N1-A condenser.

Rural—Heavy Load—Bridging

089212	1317-P	2500	5	13.69
--------	--------	------	---	-------

089213	1317-S	2500	5	14.15
--------	--------	------	---	-------

No. 1317-S is the same as No. 1317-P, but with No. N1-A condenser.

MAGNETO WALL SETS, TYPE N1300

Batteries in Separate Box

CODE RINGING SERVICE

Light Load—Bridging

Equipped with No. N229 transmitter, No. 144-W receiver with 3-foot cord, and short type hook switch.

089214	N1300-K	1000	3	11.30
--------	---------	------	---	-------

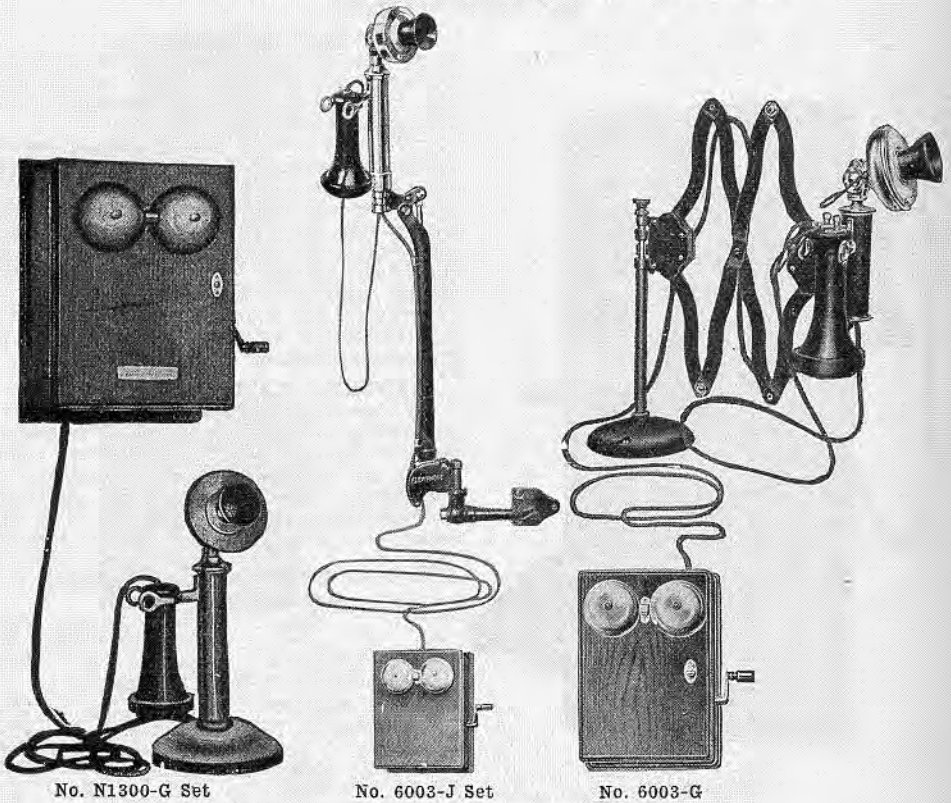
PUSH BUTTON SIGNALLING SYSTEM

Rural—Heavy Load—Bridging

Equipped with No. N229 transmitter, No. 144-W receiver with 3-foot cord, short type switch hook, No. N1-A condenser, and No. N1-A key.

089215	N1300-F	2500	5	15.10
--------	---------	------	---	-------

TELEPHONE APPARATUS AND SUPPLIES



No. N1300-G Set

No. 6003-J Set

No. 6003-G

MAGNETO DESK SETS

These sets consist of a No. 1020-B desk stand equipped with No. N229 transmitter, No. 144-W receiver with 3-foot cord, 6-foot connecting cord and desk set box of the No. N300 type, which contains a ringer, generator, and induction coil.

CODE RINGING SERVICE

Light Load—Bridging

Trade No.	Mfrs. No.	Ohms Ringer	No. Bars Generator	Price Each
089281	N1300-G	1000	3	\$13.32

Equipped with No. 1020-B desk stand and No. N300-G desk set box.

Rural—Heavy Load—Bridging

089282	N1300-A	2500	5	16.50
--------	---------	------	---	-------

Equipped with No. 1020-B desk stand and No. N300-A desk set box.

PUSH BUTTON SIGNALLING SYSTEM

Moderate Load—Bridging

089283	N1300-R	1600	5	17.15
--------	---------	------	---	-------

Equipped with No. 1020-B desk stand and No. N300-R desk set box, which also contains one No. N1-A key and one No. N1-A condenser.

Rural—Heavy Load—Bridging

089284	N1300-C	2500	5	17.15
--------	---------	------	---	-------

Equipped with No. 1020-B desk stand and No. N300-C desk set box, which also contains one No. N1-A key and one No. N1-A condenser.

WITH FLEXIBLE ARM—FOR FLAT TOP DESKS

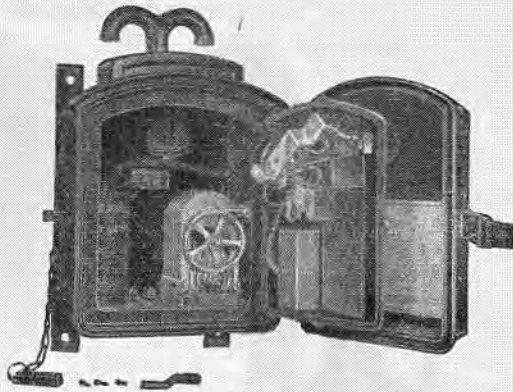
Light Load—Bridging

089285	6003-J	1000	3	17.35
Equipped with No. 315-H desk set box and No. 1001-A flexiphone.				
089286	6003-G	1000	3	15.12
Equipped with No. 315-H desk set box and No. 1040-F flexiphone.				
089287	6003-H	1000	3	18.16
Equipped with No. 315-H desk set box and No. 1020-A set and arm.				

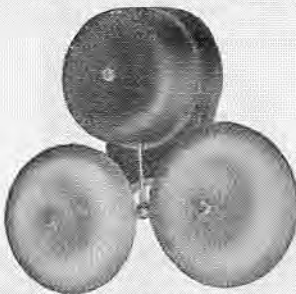
TELEPHONE APPARATUS AND SUPPLIES



No. N299-F, Generator Box



No. 1336-E, Mine Telephone Set



No. 292-A, Extension Bell

MINE TELEPHONES

These sets are ironclad, fireproof, rust-proof, and moisture-proof. The apparatus inside is protected by the inner door, which is screwed down tight to the case. The ringer coils and induction coil are specially treated to repel moisture, and all metal parts are heavily galvanized. Supplied with 3-inch loud ringing gongs.

Trade No.	Mrs. No.	Ohms Ringer	No. Bars Generator	Price Each
089187	1336-E	2500	5	\$39.00

HAND GENERATOR BOXES

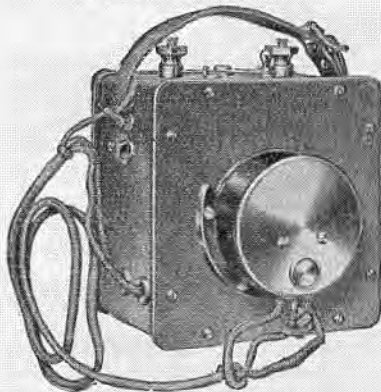
These sets consist of a 5-bar generator mounted in a box equipped with binding posts. They are used in connection with substation equipment and in any other place where a hand generator is desired for ringing purposes.

Trade No.	Mrs. No.	Price Each
089188	N299-F	Alternating current \$7.00

LOUD RINGING EXTENSION BELLS

These bells are suitable for use in either an interior or exterior location.

Trade No.	Mrs. No.	Ohms	Description	Price Each
089189	292-A	1000	6-in. N. P. steel gongs	\$5.06
089190	292-E	2500	6-in. N. P. steel gongs	5.50



No. 1006-A, Test Set

TEST SETS, No. 1006

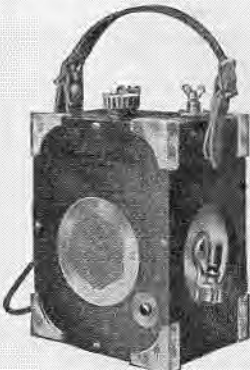
This style consists of a hardwood box containing generator and buzzer, and having a receiver holder, terminals, and switch for controlling the ringing and talking circuits, mounted on the box. The receiver is used both as a receiver and transmitter. No provision is made for mounting a battery inside the set.

Trade No.	Mrs. No.	Will Ring Through Ohms	Price-Each
089191	1006-A	2500	\$10.65
089192	1006-B	3500	10.94
089193	1006-C	5000	12.10

TEST SETS, No. 1017-B

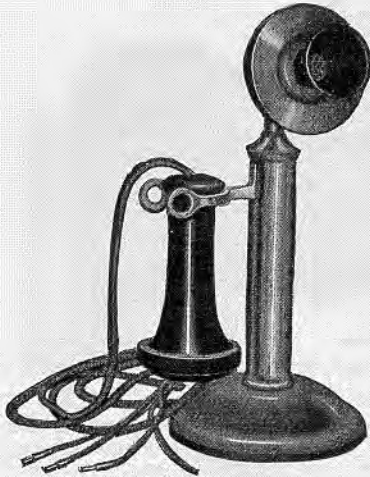
This is a strong, reliable set, especially adapted for linemen. The box is protected by metal corners and is very attractive in appearance. A standard transmitter and receiver are furnished. Equipped with a 2-bar generator that will ring through 2500 ohms. An E. V. P. Columbia Flashlight Battery can be mounted in this set. The knurled knob at the top of set moves a switch which controls the talking and ringing circuits. Weight of set, 8 pounds.

089194	1017-B	2500	14.06
--------	--------	------	-------

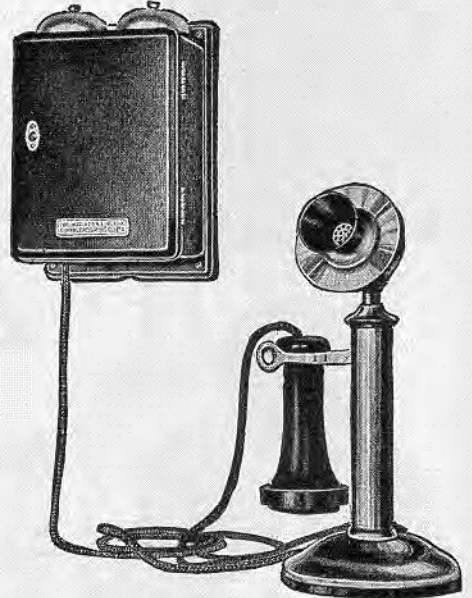


No. 1017-B, Test Set

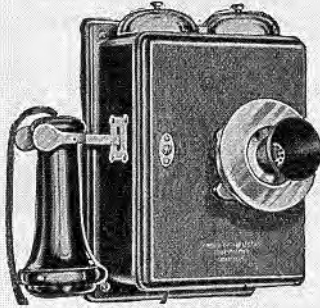
TELEPHONE APPARATUS AND SUPPLIES
COMMON BATTERY SYSTEMS



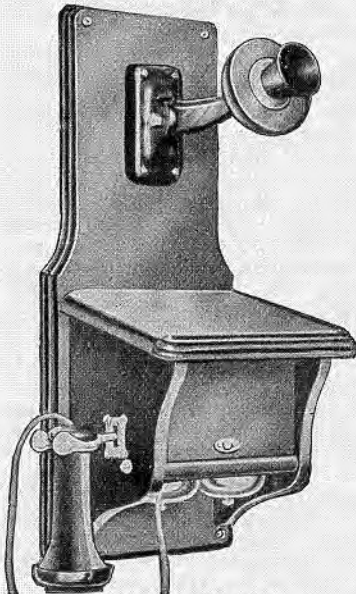
No. 1020-B, Desk Stand



No. 6000-A, Desk Set



No. 1293-A, Wall Set



No. 1294-A, Wall Set

DESK STANDS

No. 1020-B

Designed for regular bridging service; nickel-plated finish. Includes the following: No. 20-B desk stand, No. 229 transmitter, No. 144-W receiver, No. W234 cord.

Trade No.	Mfrs. No.	Price Each
089266	1020-B	....

No. 1020-S

Same as No. 1020-B except finish, which is black instead of nickel-plated. Includes the following: No. 20-S desk stand, No. 229 transmitter, No. 144-W receiver, No. W234 cord.

089267	1020-S
--------	--------	-------

DESK SET, No. 6000-A

Can be arranged for single-party, two-party selective, or four-party semi-selective service. Set consists of No. 1295-A desk set box, which contains a 1000 ohm ringer, No. 20 induction coil, No. 21-D condenser, and No. 1020 desk stand.

Trade No.	Mfrs. No.	Ohms Ringer	Price Each
089268	6000-A	1000	\$10.67

WALL SET, No. 1293-A

Can be arranged for single-party, two-party selective, or four-party semi-selective service. The box is finished in either oak or walnut, and contains a 1000-ohm ringer, No. 20 induction coil, No. 21-D condenser, transmitter and receiver.

089269	1293-A	1000	8.34
--------	--------	------	------

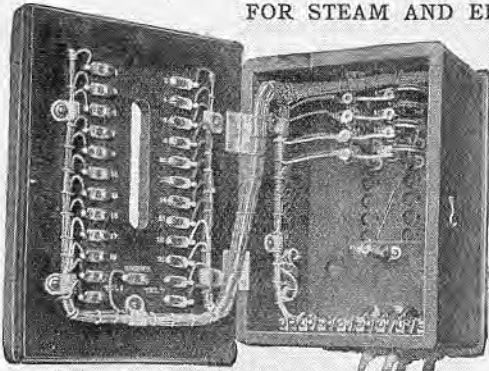
WALL SET, No. 1294-A

Can be arranged for single-party, two-party selective, or four-party semi-selective service.

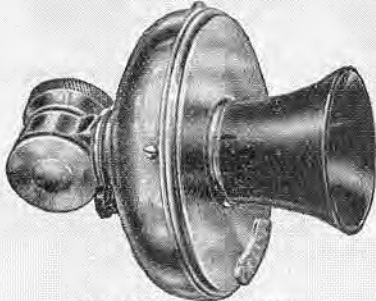
The cabinet is finished in either oak or walnut, and contains a 1000-ohm ringer, No. 20 induction coil, No. 21-D condenser, transmitter and receiver.

089270	1294-A	1000	9.47
--------	--------	------	------

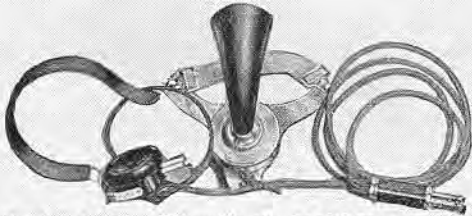
TELEPHONE EQUIPMENT
FOR STEAM AND ELECTRIC RAILWAYS



No. 1-A Test Board (Open)



No. 229-W Transmitter



Head Telephone Set with No. 283-W Transmitter



No. 1020-A Arm



Special No. 1020-A Arm

TEST BOARDS

No. 1-A

Designed for use in train dispatching circuits. For two metallic circuits. Consists of the following:

- Nine No. 108 Jacks.
- One No. 272-A key, $\frac{1}{8}$ -inch mounting.
- Four No. 116 plugs.
- Two 19-inch No. 388 cords, white.
- Two 19-inch No. 388 cords, red.
- Eight No. 12-F apparatus blanks.
- One No. 6-F apparatus blank.

Trade No.	Mfrs. No.	Price Each
093307	1-A	.....

No. 1-B

Designed for use in train dispatching circuits. For four metallic circuits. Same as No. 1-A, excepting it is fully equipped. Consists of the following:

- Seventeen No. 108 jacks.
- Two No. 272-A keys, $\frac{1}{8}$ -inch mounting.
- Eight No. 116 plugs.
- Two 19-inch No. 388 cords, white.
- Two 19-inch No. 388 cords, red.
- Two 19-inch No. 388 cords, green.
- Two 19-inch No. 388 cords, black.

093308	1-B
--------	-----	-------

TRANSMITTERS

Special No. 229-W

Low resistance, designed for use on train dispatching circuits. Used with Special No. 1020-R desk stand, flexiphone. No. 1020-A and Special No. 1040 type transmitter arms.

093309	Special No. 229-W
--------	-------------------	-------

No. 283-W

Breast transmitter of medium resistance, designed for use on train dispatching circuits. Used with No. 375 cord in dispatcher's head telephone equipment.

093310	283-W
--------	-------	-------

TRANSMITTER ARMS

No. 1020-A

Designed for regular local or central battery service. Used on flat top desks. Consists of the following:

- One No. 20-A transmitter arm.
- One No. 229-W transmitter.
- One No. 122-W receiver.
- One No. 310 cord.

093311	1020-A
--------	--------	-------

Special No. 1020-A

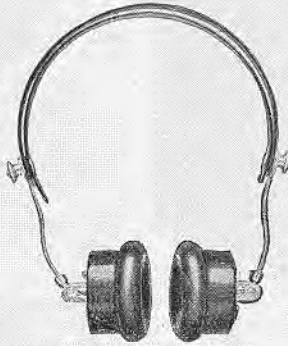
Swinging transmitter arms for use at way stations on flat top desks. Consists of the following:

- One Special No. 229-W transmitter.
- One No. 156-W receiver.
- One 6-foot No. 416 cord.
- One 3-foot No. 408 cord.
- One $\frac{9}{16}$ -inch No. 423.

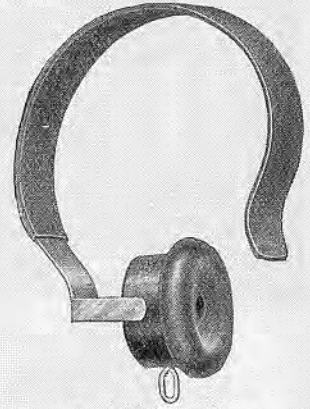
093312	Special 1020-A
--------	----------------	-------

TELEPHONE EQUIPMENT
 FOR STEAM AND ELECTRIC RAILWAYS


No. 147-W Receiver



No. 153-W Receiver



No. 156-W Receiver

HEAD RECEIVERS**No. 147-W Double**

Consist of two No. 145-W receivers equipped with adjustable ball and socket joints, and a two-piece nickel-plated headband. Resistance, 70 ohms per unit. Used with No. 283-W transmitter in dispatcher's telephone set, with No. 363 cord.

Trade No.	Mfrs. No.	Price Each
089467	147-W	\$6.32

No. 153-W Double

Similar to No. 147-W, but equipped with a split rubber covered headband. Resistance, 70 ohms per unit.

Trade No.	Mfrs. No.	Price Each
089468	153-W	8.25

No. 156-W Single

A single head receiver, similar to No. 148-W. Equipped with leather covered headband. Resistance, 610 ohms.

Trade No.	Mfrs. No.	Price Each
089469	156-W	3.63

DESK STANDS, SPECIAL No. 1020-R

Local battery desk stands include No. 20-R desk stand with hook for head receiver, special No. 229-W transmitter, S-9091, No. 156-W receiver, 6-foot No. 416 cord, 3-foot No. 408 cord, 9½-inch No. 423 cord. Finished in black or nickel.

Trade No.	Mfrs. No.	Price Each
089470	Special 1020-R	.....

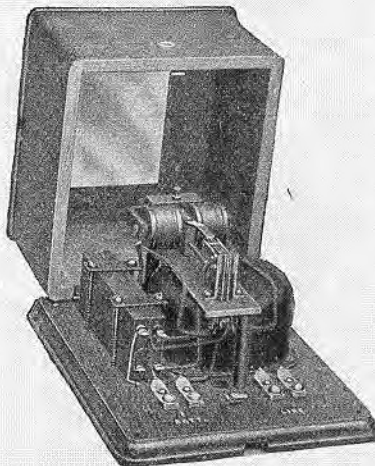
INTERRUPTERS, No. 62-A

Electrically operated interrupters, designed to give alternating current for railway telephone service. Especially adapted for use in block towers. Also intended for use on yard lines, etc., where several telephones are connected to the same line. Operate on five cells of dry battery and only when battery key is closed.

Trade No.	Mfrs. No.	Price Each
089471	62-A	26.05



No. 1020-R Desk Stand

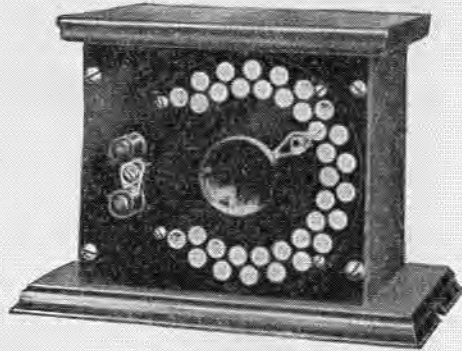


No. 62-A Interrupter

TELEPHONE EQUIPMENT
FOR STEAM AND ELECTRIC RAILWAYS



No. 50-A Selector Key Cabinet



No. 51-C Intercalling Key

SELECTOR KEY CABINETS

No. 50-A

Designed for mounting four rows of six keys per row. Dimensions, $15\frac{1}{4} \times 5\frac{5}{8} \times 12\frac{1}{4}$ inches.

Trade No.	Mfrs. No.	Price Each
089454	50-A	.....

No. 50-B

Arranged for mounting 4 rows of nine keys per row. Dimensions, $21\frac{1}{4} \times 5\frac{5}{8} \times 12\frac{1}{4}$ inches.

089455	50-B
--------	------	-------

No. 50-C

Arranged for mounting five rows of ten keys per row. Dimensions, $23\frac{1}{4} \times 5\frac{5}{8} \times 15\frac{1}{4}$ inches.

089456	50-C
--------	------	-------

SELECTOR SENDING KEYS

No. 51-C

Master key for intercalling circuits. Capacity, 55 stations. Designed for use on intercalling circuits to enable way station operators to call each other.

089453	51-C
--------	------	-------

No. 50-A

Individual key can be adjusted to select any way station from No. 1 to No. 35. Designed for use in dispatcher's signalling circuit for calling way stations. Mounts in No. 50-A, No. 50-B, or No. 50-C selector sending key cabinets. Each key can be removed from the cabinets without disturbing others.

089451	50-A
--------	------	-------

No. 50-B

Individual key can be adjusted to select any way station from No. 1 to No. 48. Designed for use in dispatcher's signalling circuit for calling way stations. Mounts in No. 50-B and No. 50-C selector sending key cabinets. Each key can be removed from the cabinets without disturbing others.

089452	50-B
--------	------	-------

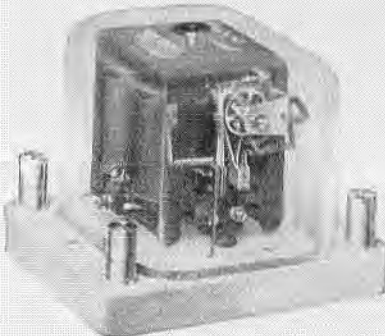
SELECTOR SETS, No. 102-A

These sets consist of a box equipped with one No. 101404 vibrating bell, one No. 50-A selector, two No. 50-A retardation coils, one No. 5-G resistance,

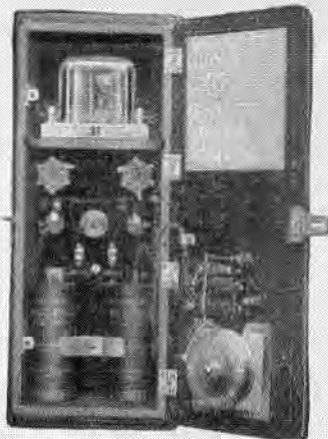
No. 33 type or No. 34-A resistances furnished, as required. Box is arranged for, but not equipped with, two dry cells.

Designed for use at way stations where signal bells are operated by local battery. Size, approximately, $19\frac{3}{4} \times 9\frac{1}{4} \times 6\frac{1}{4}$ inches.

089450	102-A
--------	-------	-------

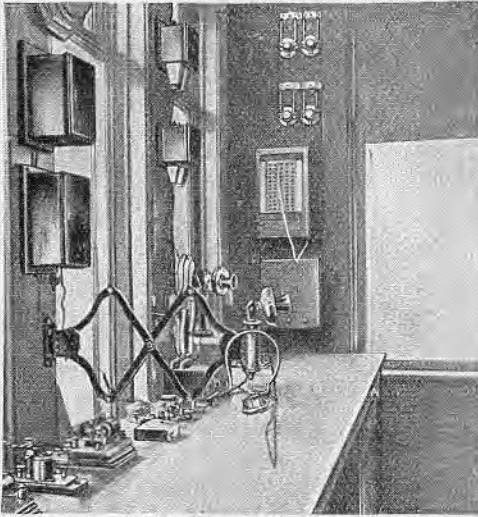


No. 50-A Selector



No. 102-A Selector Set

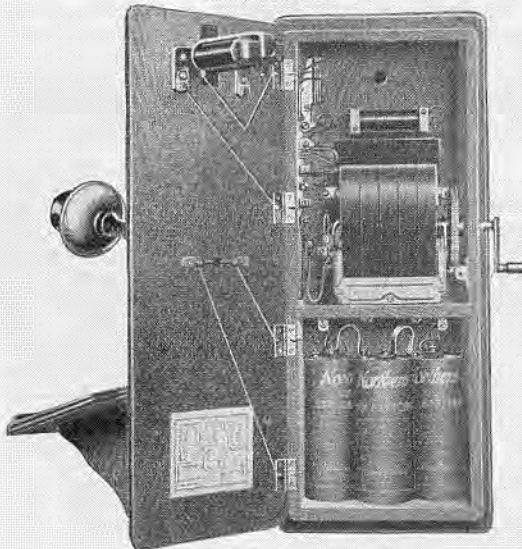
**TELEPHONE EQUIPMENT
FOR STEAM AND ELECTRIC RAILWAYS**



Special No. 1040-B Arm



Van Akin Arm



No. 1317 Telephone Set

**TRANSMITTER ARMS
Special No. 1040-B**

An adjustable folding arm for use on train dispatching telephone lines. Suitable for way station equipments. Mounts on wall. Consists of the following:

- One special No. 40-B transmitter arm,
- One special No. 229-W transmitter.
- One No. 156-W receiver.
- One 6-foot No. 416 cord.
- One 3-foot No. 408 cord.
- One 9½-inch No. 423 cord.

Trade No.	Mfrs. No.	Price Each
095919	Special 1040-B	.....

Special No. 1040-D

Same as special No. 1040-B, excepting that it is made to mount on roll-top desks.

095920	Special 1040-D
--------	----------------	-------

Special No. 1040-F

Same as special No. 1040-B, excepting that it is made to mount on flat-top desks.

095921	Special 1040-F
--------	----------------	-------

N. E. TRANSMITTER ARMS

These arms are of especial value in towers and other places where the operators are obliged to move around considerably. They can be adjusted vertically, horizontally, and also for either right or left ear. When not in use the arm is swung away and all circuits are broken.

Trade No.	Price Each
095922	.....

VAN AKIN TRANSMITTER ARMS

These arms possess the same advantages as the Northern Electric Arms. The transmitter and receiver circuits are carried to a commutator in the base of the arm so that no twisting or breaking of cords can occur. When this arm is used, the Special No. 1295-AB telephone set is not required, as the same apparatus is mounted in the commutator box.

095923
--------	-------

**TELEPHONE SETS, No. 1317-W
Wall Type**

Designed for use on standard railway dispatcher's telephone circuits at sidings and similar places, for use of conductors and trainmen. Five-bar A. C. generator and 2500-ohm unbiased ringer. Equipment consists of the following:

- No. 48-A generator
- No. 38-BG ringer.
- No. 21-AA condenser.
- No. 29 induction coil.
- No. 51-A retardation coil.
- No. 143-D switch hook.
- No. 1002-A push button.
- Three-foot No. 408 receiver cord.
- No. 282-W transmitter.
- No. 163-W receiver.

Trade No.	Mfrs. No.	Price Each
095924	1317-W	.....

TELEPHONE EQUIPMENT
FOR STEAM AND ELECTRIC RAILWAYS

PORTABLE TELEPHONE SETS

No. 1330-E

This is a portable street railway magneto telephone set, designed for use on heavily loaded lines, used with No. 3 or No. N2 line poles. Five-bar A. C. generator and 2500-ohm unbiased ringer. Contains special No. 48 generator, No. 32-BG ringer, No. 21-F condenser, No. 29 induction coil, No. 1001-C hand set with No. 366 cord, two No. 3-B binding posts. Two Blue Bell Dry Cells will be furnished, when ordered.

The weight of the set complete is about 28 pounds. Size, $12\frac{1}{2} \times 13\frac{1}{2} \times 5\frac{1}{2}$ inches.

Trade No.	Mfrs. No.	Price Each
089226	1330-E	.....

No. 1330-F

Same as No. 1330-E, excepting that it is equipped with No. 138 plug and 6-foot No. 396 cord for making the line connections.

089227	1330-F
--------	--------	-------

No. 1331-E

This is a local battery magneto portable telephone set for lightly loaded lines. For use with No. 3 or No. N2 line poles. Three-bar A. C. generator and 2500-ohm buzzer. Contains No. 3-B 2500-ohm buzzer, No. 29 induction coil, No. 22-A generator, No. 21-F condenser, No. 1001-C hand set with No. 366 cord, two No. 2-C binding posts. Two dry cells will be furnished, only when ordered.

Weight of the set complete is about 17 pounds. Size, $11\frac{1}{2} \times 10\frac{1}{2} \times 4\frac{3}{4}$ inches.

089228	1331-E
--------	--------	-------

No. 1331-F

Same as No. 1331-E, excepting that it is equipped with No. 138 plug and 6-foot No. 396 cord for making connection to the line.

089229	1331-F
--------	--------	-------

No. 1332-A

This is a telephone set, in portable leather case with a shoulder carrying strap, for use in connection with No. 3 or No. N2 line pole on train despatching lines. Contains No. 29 induction coil, No. 21-M condenser, No. 2-C binding post, No. 1001-C hand set with No. 366 cord. Two dry cells will be furnished, only when ordered.

Weight of the set complete is about 5 pounds. Size, $5\frac{1}{4} \times 2\frac{1}{4} \times 2\frac{1}{2}$ inches.

089230	1332-A
--------	--------	-------

No. 1332-E

Same as No. 1332-A, excepting that it is equipped with a No. 3-B 2500-ohm buzzer.

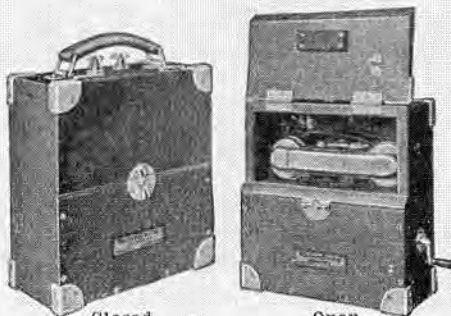
089231	1332-E
--------	--------	-------

No. N3-A

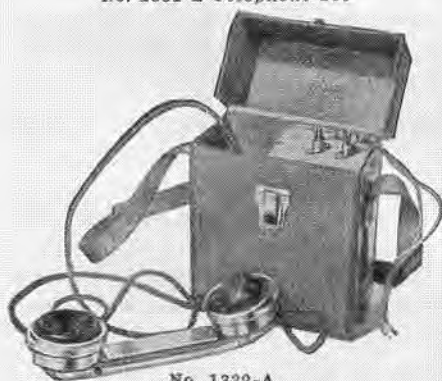
This is a local battery portable railroad telephone set for use with No. 3 or No. 2N line poles. Contains No. 175-W receiver with No. 92 cord, No. 21-AA condenser, special No. 229-W transmitter, and No. 29 induction coil.



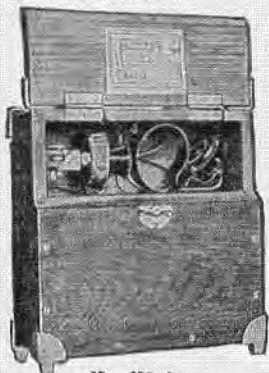
Closed Open
No. 1330 Telephone Set



Closed Open
No. 1331-E Telephone Set

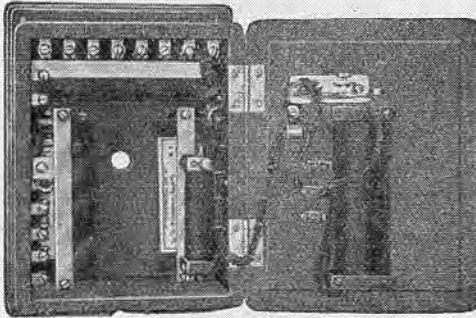


No. 1332-A



No. N3-A

**TELEPHONE EQUIPMENT
FOR STEAM AND ELECTRIC RAILWAYS**



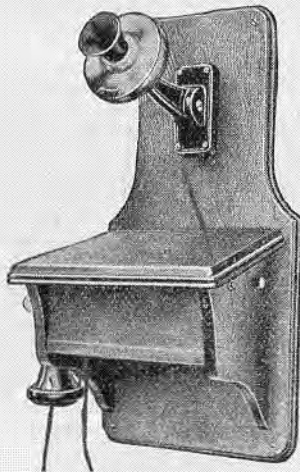
No. 1311-A

TELEPHONE SETS

No. 1311A, for Desk Service

Designed for use with No. 20-U desk stand for desk type composite telephone sets. For same class of service as No. 1312-A listed below. Contains No. 21-D condenser, No. 21-H condenser, No. 21-U condenser, No. 12-G retardation coil, No. 5 induction coil, No. P-101495 interrupter, and No. 1-A howler.

Trade No.	Mfrs. No.	Price Each
089482	1311-A	\$13.75



No. 1312-A

No. 1312-A, Wall Type

This is our standard wall type composite set. Contains No. 12-G retardation coil, No. 21-D condenser, No. 21-U condenser, No. 21-H condenser, No. 140-B switch hook, special No. 390-B key, No. 1-A howler, No. 5 induction coil, No. P-101495 interrupter, 3-foot No. 408 cord, No. 286-W transmitter, and No. 122-W receiver.

089433	1312-A	24.95
--------	--------	-------

No. 1314-A, Portable

This portable composite set contains No. 12-M retardation coil, No. 140-F switch hook, special No. 390-B key, No. 21-D condenser, No. 21-U condenser, No. 21-H condenser, No. 1-B howler, No. 3-B binding post, three No. 3-C binding posts, 3-foot No. 311 cord, 5½-inch No. 179 cord, 10-foot No. 267 cord, No. 4 line pole, No. 5 induction coil, No. P-101495 interrupter, No. 228-W transmitter, and No. 133-W receiver.

Weight of set complete is about 26 pounds. Size 11½ x 12 x 7½ inches.

089484	1314-A	45.20
--------	--------	-------



No. 1314-A

Batteries are not supplied with telephone sets, and should be ordered separately.

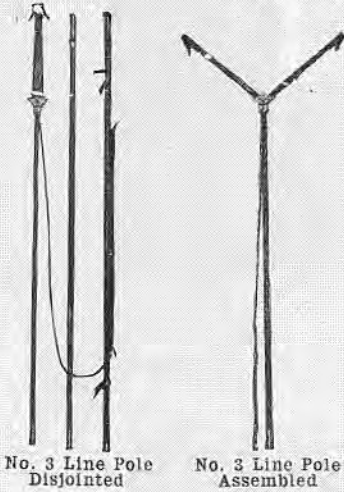
TELEPHONE EQUIPMENT

FOR STEAM AND ELECTRIC RAILWAYS

LINE POLES

Made of hickory and are adapted for use in connection with metallic circuits; the spreaders are of sufficient length to engage wires spaced a distance of 2 feet apart. Connectors are provided with a cleaning device. Equipped with 100 feet of 2-conductor cord.

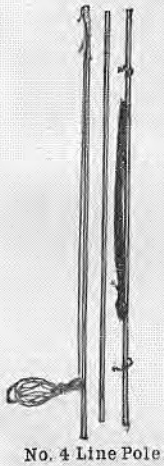
Used with Nos. 1330-E, 1331-E, 1332-E, N3-A, and 1332-E portable telephones.



Trade No.	Mfrs. No.	Price Each
089495	3	\$7.84

Similar to No. 3, but arranged for connecting the portable telephone to the line wire of a grounded circuit. Equipped with 10 feet of single-conductor cord.

Used with No. 1314-A portable telephone.

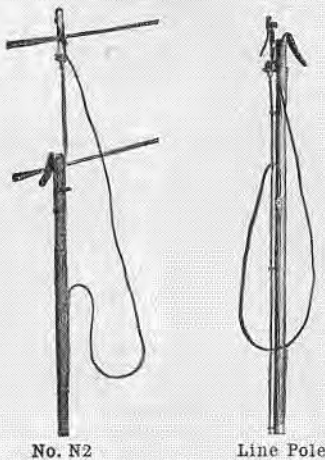


Trade No.	Mfrs. No.	Price Each
089496	4	\$7.23

RICHARDSON LINE POLES

Arranged for use in connection with metallic circuits. Can be connected to line wires in either horizontal or vertical planes which are spaced any distance up to 5½ feet. The adjustment of one-wire clamp is controlled by a cord. The length of the cord connecting the line to the telephone set is 100 feet.

Used with Nos. 1330-E, 1331-E, 1332-A, 1332-E and N3-A portable telephones.



Trade No.	Mfrs. No.	Price Each
089497	N2	\$8.78

TELEPHONE APPARATUS AND SUPPLIES



No. 1324



No 1325

INTER-PHONES

For the information of architects, contractors, electrical engineers, and those interested in inter-phone systems for residences, clubs, schools, hospitals, offices, stores, factories, power stations, public buildings, and similar places, we show in this catalogue some of the more common types of inter-phones and apartment house sets.

Non-Flush Metal Wall Sets

Designed for strictly intercommunicating service where it is desirable for each station to be able to connect with any one of the other stations on the system.

Trade No.	Mfrs. No.	No. of Stations	Price Each
089242	1324-F	6	.....
089243	1324-A	12	.....

Flush Metal Wall Sets

These sets possess all the features of the non-flush type. In addition, the front of the set is removable from the back, thus permitting the back of the set to be used as an outlet box. The outlet box may be placed in the building while under construction, and the front of the set, which contains all the working parts, may be fastened in place when convenient.

089244	1325-F	6	.....
089245	1325-A	12	.....
089246	1355-A	16	.....
089247	1355-E	20	.....
089248	1355-F	24	.....

Desk Sets

This set is designed to work with either of the above wall sets, and can be furnished in either 6 or 12 buttons.

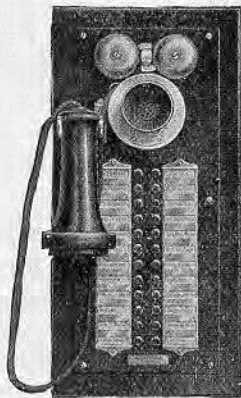
089249	6016-F	6	.....
089250	6016-A	12	.....

Non-Flush Wooden Wall Sets

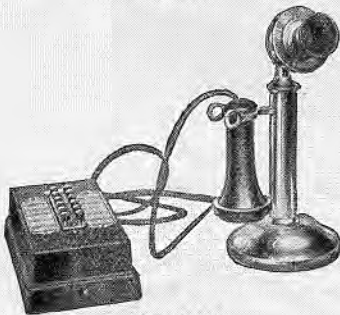
In residences, factories, schools, and similar places where the intercommunication between stations is not so frequent as to require separate lines, we have developed apparatus to meet such conditions and are prepared to furnish inter-phones in standard capacities of 4 and 8 buttons. These inter-phones allow any one of the outlying stations to be called without interfering with any of the others, and are therefore just as satisfactory as the individual line type, except for the fact that but two parties can be talking at the same time.

Trade No.	Mfrs. No.	No. of Buttons	Description	Price Each
089251	1327-J	4	With retardation coil	.....
089252	1327-K	4	Without retardation coil	.....
089253	1327-L	8	With retardation coil	.....
089254	1327-M	8	Without retardation coil	.....
089255	1327-N	..	For outlying stations	.....

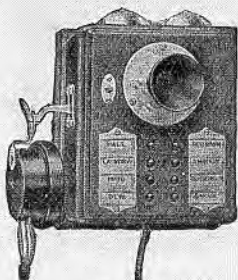
No. 1327-N set is designed for the outlying stations for use in connection with Nos. 1327-J, K, L, and M sets.



No. 1355

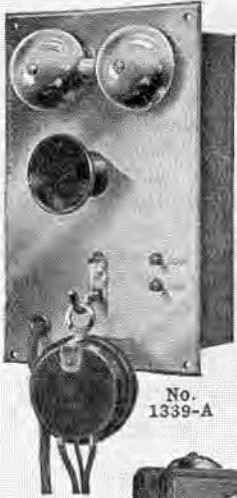


No. 6016

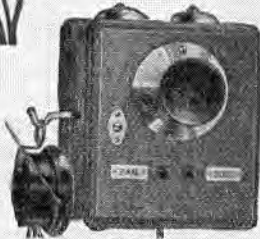


No. 1327-I

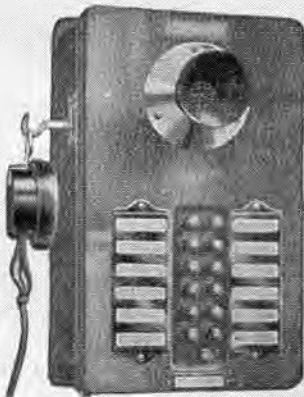
TELEPHONE APPARATUS AND SUPPLIES



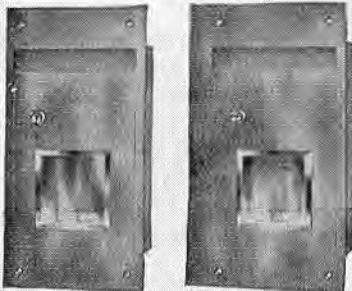
No. 1339-A



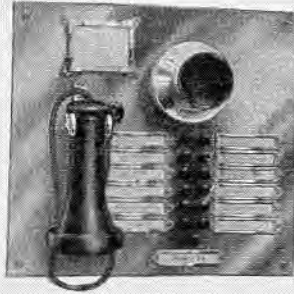
No. 1327-N



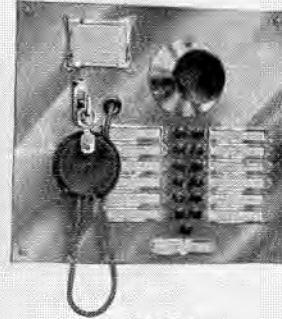
No. 1350-E



Letter Boxes



No. 1351-G



No. 1351-E

APARTMENT HOUSE INTER-PHONES

At the present time, two different methods of communicating between the vestibule and suites of apartment houses are in use, the first being the ancient speaking tube and the second, the telephone. The telephone is fast replacing the speaking tube, for speaking tubes, at their best, are unsanitary and not economical in the long run.

No. 1339-A, Flush Suite Set

This set is equipped with two push buttons; one calling the janitor, the other for operating the electric door opener. The standard finish of this set is brushed brass; other finishes can be supplied to order, at a slight increase in price.

Trade No.	Mfrs. No.	Price Each
089298	1339-A	....

No. 1351-G, Vestibule Set

This set is equipped with a semi-flush adjustable transmitter and standard hand receiver. All apparatus is mounted on the back of the face plate so that every piece is accessible when set is opened.

089299	1351-G
--------	--------	------

No. 1351-E, Vestibule Set

This set is the same as No. 1351-G, except that the transmitter is mounted flush on the face plate, and the receiver is the watchcase pattern.

089300	1351-E
--------	--------	------

No. 1327-N, Non-Flush Suite Set

This set is regularly furnished with two push buttons; one for calling the janitor, the other for operating the electric door opener. The standard finish of this set is oak, with nickel trimmings; other standard wood finishes can be furnished to order, at slight increase in price.

089301	1327-N
--------	--------	------

No. 1350-E, Janitor's Set

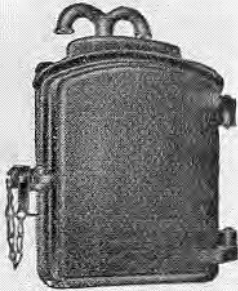
This set is used when there is not more than one vestibule served by one janitor. Arranged to open from the back so that the terminals on the backboard are entirely unobstructed. The standard finish of this set is oak; other wood finishes can be furnished to order, at slight increase in price.

089302	1350-E
--------	--------	------

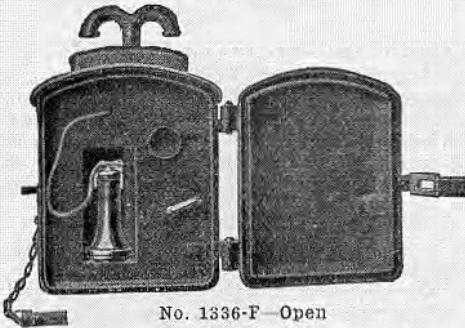
LETTER BOXES

These letter boxes are made with close manufacturing limits to ensure the vestibule telephone sets lining up properly. The standard finish of these boxes is brushed brass; other standard metal finishes can be furnished to order, at slight increase in price.

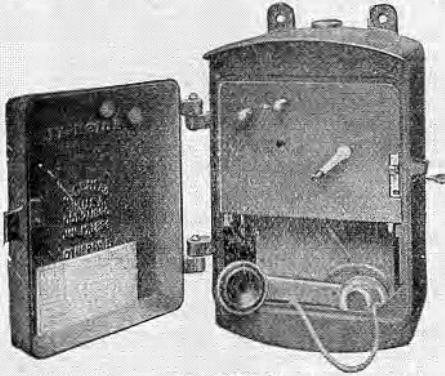
TELEPHONE APPARATUS AND SUPPLIES



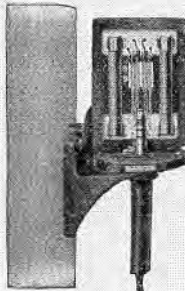
No. 1336-F—Closed



No. 1336-F—Open



No. 1278-G

No. 186 Jack
ClosedNo. 186 Jack
Open

No. 138 Plug

TELEPHONE SETS

No. 1336-F—Metal Protected

This set is enclosed in an iron case for use out-of-doors on train despatching circuits. Five-bar A. C. generator and 2500-ohm unbiased ringer. Contains No. 48-C generator, No. 143-K switch hook, No. 45-BG ringer, No. 32 induction coil, two No. 20 gongs, No. 51-B retardation coil, No. 21-AA condenser, No. 1002-A push button, No. 292-W transmitter, No. 166-W receiver, two No. 385 transmitter cords, No. 334 receiver cord.

Trade No.	Mfrs. No.	PRICE, EACH	
		Less than 10	10 or More
089345	1336-E	\$41.80	\$38.30

No. 1278-G—Metal Protected

Particularly adapted for street railway service. Five-bar A. C. generator and 1000-ohm unbiased ringer. Contains No. 48-A generator, No. 25-E repeating coil, No. 13 induction coil, two No. 1 protector blocks, two No. 2 protector blocks, two No. 3 protector micas, two 500-volt, 1-ampere fuses, and No. 5-B lock.

089346	1278-G	56.50	50.25
--------	--------	-------	-------

Batteries are not supplied with telephone sets and should be ordered separately.

JACKS

These jacks have a cast iron cover and are arranged for mounting on poles. For the purpose of affording a means of connecting a portable set to a telephone line. Used with No. 1330-F and No. 1331-F telephone sets. Can also be used with Nos. 1330-E and 1331-E telephone sets.

Trade No.	Mfrs. No.	Used with Plug No.	Description	Price Each
089347	186	138	With protective apparatus	\$5.77
089348	187	138	Without protective apparatus	3.28

Protective apparatus consists of two No. 1 protector blocks, two No. 2 protector blocks, and two No. 3 protector micas.

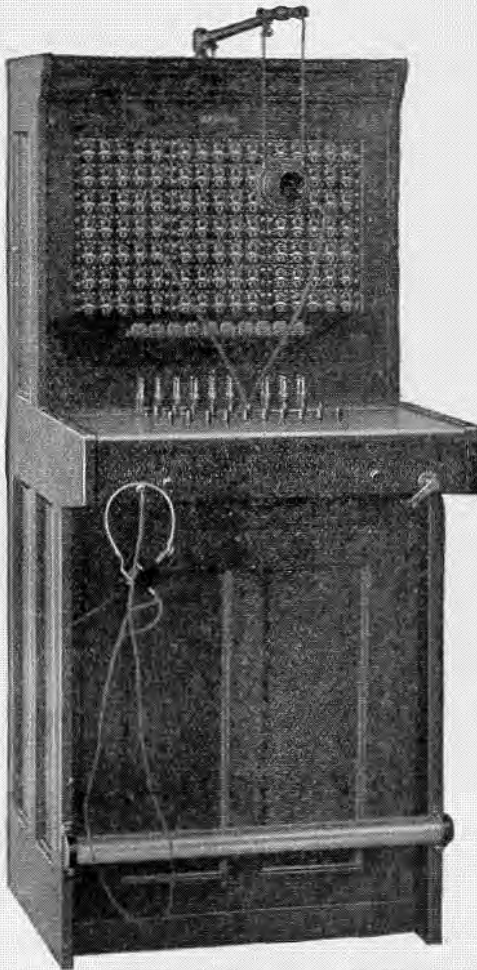
PLUGS

Designed for attaching No. 1330 and 1331 telephone sets to a telephone line through the medium of a No. 186 jack mounted on a pole.

Trade No.	Mfrs. No.	No. of Conductors	Used with Jack No.	Used with Cord No.	Price Each
089349	138	2	186	396	\$5.05

TELEPHONE APPARATUS AND SUPPLIES

SWITCHBOARDS



Central Office Switchboard, No. 1220
Magneto Type, with Self-Restoring Line Signals

Capacity { 105 Magneto Lines
10 Pairs of Cords
15 Transfer Circuits

TELEPHONE APPARATUS AND SUPPLIES

SWITCHBOARDS

Central Battery Multiple Switchboards

We are prepared to furnish telephone switchboards of any size or capacity. Our large experience in the design and manufacture of switchboards enables us to produce and guarantee satisfactory equipment for every need.

The scope of this type of equipment is so broad that it is not possible to go into any detail in this catalogue, but we will be glad to submit a proposition upon receipt of specifications, or to have our engineers call and give you any information you may desire.

Non-Multiple Switchboards

Complete detailed information on our non-multiple switchboards is contained in the following bulletins, copies of which will be furnished upon request:

- No. N1001—Magneto Non-Multiple Switchboards with Self-Restored Line Signals.
- No. N1003—Magneto Convertible Non-Multiple Switchboards with Self-Restored Line Signals.
- No. N1004—Central Battery Non-Multiple Switchboards with Lamp Signals.
- No. N1005-2—No. N-4 Type Lamp Signal Private Branch Exchange Switchboards.
- No. N1007—Accessories and Protector Equipment for Non-Multiple Switchboards.
- No. N1008—Telephone Power Plant Equipments for Non-Multiple Switchboards.
- No. N1014—Central Battery Non-Multiple Switchboards with Magnetic Signals
- No. N1020—Magneto Non-Multiple Switchboards—No. 1800 Sectional Unit Type.

Magneto Non-Multiple Switchboards of Cabinet Type, Equipped with Self-Restoring Line Signals

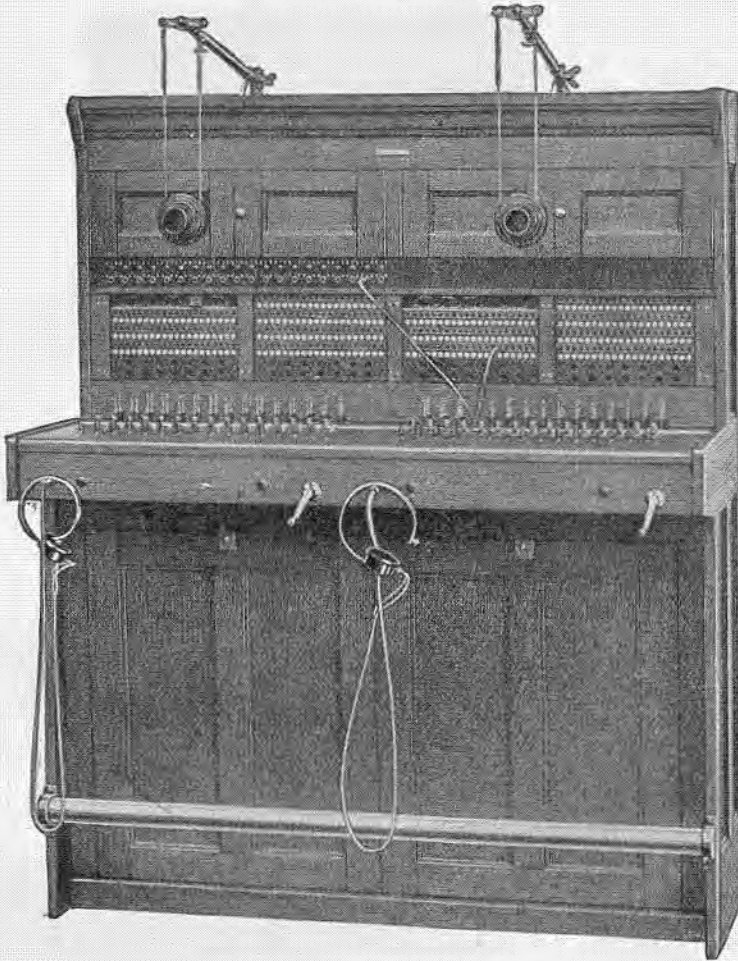
These switchboards are built in one and two position sections, which have capacities varying from 60 to 165 lines per position, and are recommended for exchanges having equipments up to 500 lines. The sections are so designed that additional sections may be lined up without making any change whatever. Special attention is called to the high quality of the apparatus, the efficiency of operation, the accessibility of all parts, the durability of the mechanism subject to wear and rough usage, and the attractive appearance of the entire equipment.

The red ball in the combined jack and signal resembles a lamp signal in a central battery board, and equals it in signalling qualities and appearance; it is restored automatically by the insertion of the plug, thus insuring the most prompt service possible with magneto apparatus. These features make this type of signal rank next to the lamp signal. This style switchboard is illustrated on the preceding page.

TELEPHONE APPARATUS AND SUPPLIES

SWITCHBOARDS

Central Battery Non-Multiple—With Lamp Signals



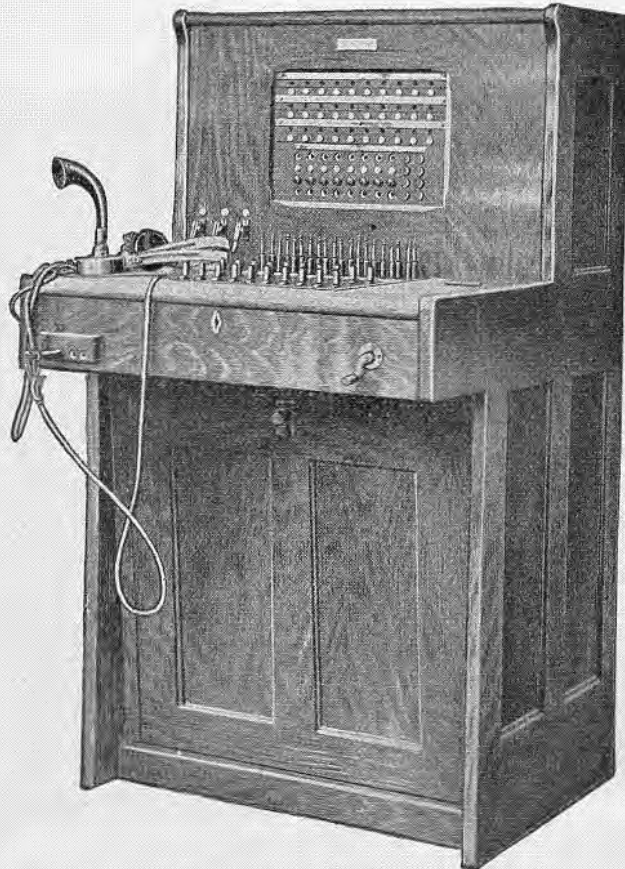
Central Office Switchboard, No. 1238

Central Battery Type, with Lamp Line Signals and Self-Restored
Rural and Toll Line Signals

Capacity { 280 Central Battery Lines
20 Magneto Lines
30 Pairs of Cords
28 Transfer Circuits

These switchboards are recommended for use in exchanges where the ultimate number of subscribers' lines will not exceed 500, and where a central battery system is required with or without magneto toll or rural line connections.

These switchboards are built in frameworks similar to those of the non-multiple magneto switchboards. Their capacities vary from 100 to 220 lamp signal lines, and 20 magneto lines terminating in combined jacks and signals per position. In the boards that are arranged for magneto lines, certain of the cord circuits are designed to handle magneto to magneto and magneto to common battery connections, and are, therefore, termed combination cord circuits. The central battery cord circuits are of the same type as used in our large central battery switchboards, and while very simple, they possess high transmission efficiency. All the apparatus employed is of the high standard quality that is characteristic of Northern Electric material.

TELEPHONE APPARATUS AND SUPPLIES
SWITCHBOARDS
No. N4 Type Private Branch Exchanges

No. N4-A Private Branch Exchange Switchboard

Capacity	{	30 Lamp Signal Lines
		10 Lamp Signal Cord Circuits
		10 Lamp Signal Trunk Circuits

These private branch exchange switchboards may be used in business establishments, schools, hotels, factories, or any place where an instantaneous means of communication between all departments is essential. They eliminate running from one department to another, and thus greatly increase the efficiency of the entire organization.

These switchboards are built in various sizes, ranging from a 30-line, 10-trunk board to multiple boards having capacity for 1200-line circuits and 80-trunk circuits.

The switchboard cabinets are constructed of selected quarter-sawed oak, the general outline of which presents a practical and pleasing appearance. The exposed woodwork is given a rich deep golden oak finish of such character as not to scratch easily or show wear.

The line and trunk circuits are of the lamp signal type. The line circuits that are under 400 feet in length need not be equipped with a line relay, while those that are over 400 feet should be so equipped. These line relays are extremely simple and reliable, and have been in extensive use in our multiple central battery installations and branch exchanges, where they have been giving universal satisfaction.

A great advantage of these boards is that by equipping certain lines with No. 189-M relays, their service will be restricted to the building or plant in which the switchboard is located.

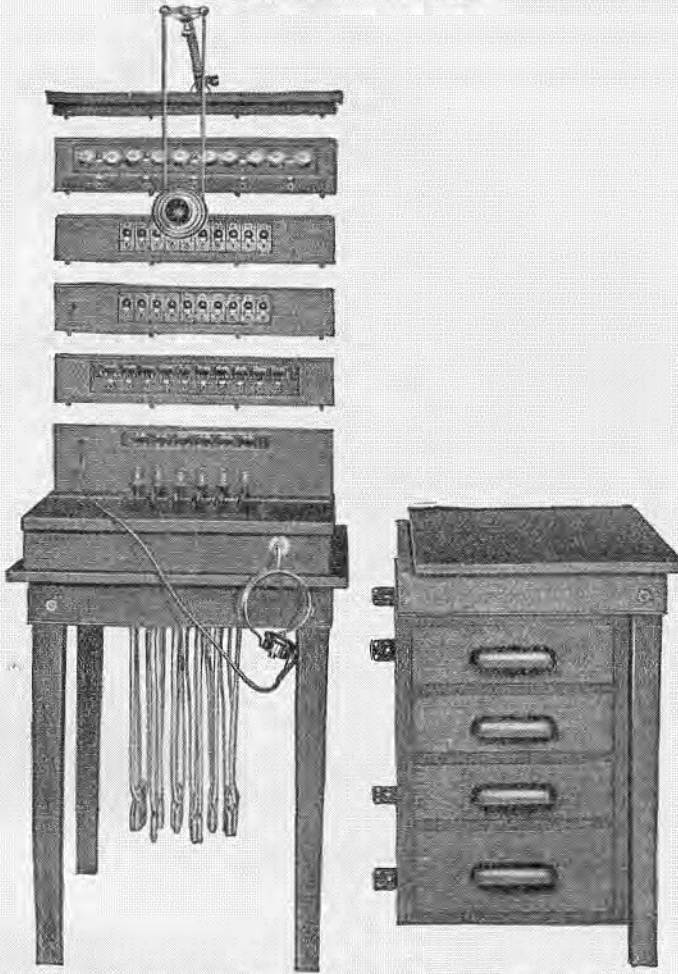
The cord circuits possess positive double lamp supervision and are of the three-wire type. Their transmission efficiency is high, and they are arranged for ringing on both the calling and answering cords. The cord circuit keys are easy to manipulate and are of durable construction.

Complete details and prices on these boards will be supplied upon request.

TELEPHONE APPARATUS AND SUPPLIES

SWITCHBOARDS

No. 1800 Sectional Unit Type



Showing the Flexibility of the Unit System and the Ease with which Different Units may be Assembled into a Switchboard to Meet a Variety of Operating Conditions

The requirements of the small, rapidly growing telephone system have been fully incorporated in the design of the new No. 1800 sectional unit type switchboards. They make possible the selection of a type of switchboard that will have exactly the style of apparatus and capacity desired. Every kind of service that is met with in small exchanges can be provided for in these switchboards by apparatus most suited to that service. Their flexibility of operation and their ease of increase in size make them especially adaptable for the small exchange.

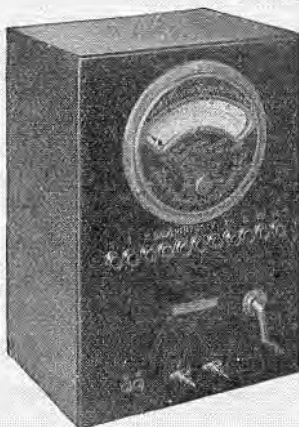
Some of the good features of this type of switchboard are:

1. The ease with which a switchboard can be assembled to meet any line or operating condition.
 2. You buy at one time only as much switchboard capacity as you need.
 3. The switchboard capacity can be increased as your business grows, thus requiring a minimum of expenditure of capital at all times.
 4. All the operating features of a large type switchboard have been retained in this sectional unit board, from the standpoints of both circuit and mechanical arrangement.
 5. Standard Northern Electric quality apparatus and material is used throughout.
 6. The accessibility to all terminals and apparatus.
 7. The strength and rugged construction of the parts subject to wear and rough usage, and the fine appearance of the complete assembled switchboard.
- Complete information and prices will be furnished upon application.

TELEPHONE APPARATUS AND SUPPLIES

No. 1800 SWITCHBOARD UNITS

Trade No.	Mfrs. No.	Top Units Description	Price Each
089147	A-1	Intended to form the top of No. 1800 switchboard when a hand set is used.	.....
089148	A-2	Similar to the above, but equipped with suspended transmitter.	.....
Line Units			
089149	BA-1	Equipped with ten single cut-off 240-ohm combined jacks and signals	.....
089150	BB-1	Equipped with ten single cut-off 100-ohm combined jacks and signals	.....
089151	B-2	Equipped with ten double cut-off 240-ohm combined jacks and signals	.....
089152	B-3	Similar to the BA-1 unit, but also equipped for receiving code signals	.....
089153	B-4	Equipped with ten 80-ohm drops and single cut-off jacks.	.....
089154	B-5	Equipped with ten 500-ohm drops and single cut-off jacks.	.....
089155	B-6	Similar to the B-5, but arranged to receive code signals.	.....
089156	BA-7	Equipped with five 2500-ohm ringers and single cut-off jacks.	.....
089157	BB-7	Similar to the BA-7, but equipped with 1600-ohm ringers.	.....
089158	B-8	Equipped with ten double cut-off jacks and 500 drops.	.....
089159	B-9	Equipped with four 2500-ohm ringers and single cut-off jacks, and the necessary apparatus for one important toll line.	.....
089160	B-10	Similar to the BA-7 unit, but one line has three double cut-off jacks for a through toll line.	.....
089161	B-11	Similar to the BA-1 unit, excepting that the signals are arranged for central office selective signalling.	.....
Cord Units			
089162	CA-1	Equipped with four cord circuits with listening jacks and hand set.	.....
089163	CB-1	Similar to the CA-1, excepting that it is to be used with a suspended transmitter.	.....
089164	C-2	Equipped with four cord circuits with listening keys.	.....
089165	C-3	Similar to C-2, but equipped with four non-hang-up cord circuits.	.....
089166	C-4	Similar to C-2, but with four non-hang-up, non-ringing-through cord circuits.	.....
089167	CA-5	Similar to the CA-1 unit, excepting that it is equipped with six cord circuits.	.....
089168	CB-5	Similar to the CB-1 unit, excepting that it is equipped with six cord circuits.	.....
089169	C-6	Similar to the C-2 unit, excepting that it is equipped with six cord circuits.	.....
089170	C-7	Similar to the C-3 unit, excepting that it is equipped with six cord circuits.	.....
089171	C-8	Similar to the C-4 unit, excepting that it is equipped with six cord circuits.	.....
Supporting Units			
089172	D-1	For mounting Nos. CA-1, CB-1, CA-5, and CB-5 cord units on a wall.	.....
089173	D-2	For mounting the cord units not covered by the D-1 unit, on a wall.	.....
089174	D-3	A skeleton table for supporting any cord unit.	.....
089175	D-4	A tier of drawers to be used in connection with the D-3 supporting unit.	.....
089176	D-5	An extension writing panel, which must be used with cord units Nos. CA-1, CB-1, CA-5, and CB-5 when mounted on a D-3 supporting unit.	.....



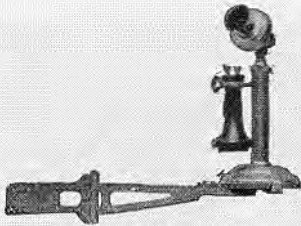
No. 1407 Testing Cabinet

TESTING CABINETS

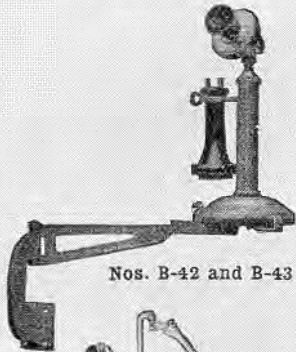
The No. 1407 testing cabinet is a condensed wire chief's desk that affords means for accurately testing for practically all troubles common to both magneto and central battery exchanges. The following are some of the tests that can be made in a very simple manner: Open circuits, ground or short circuits, crosses, low resistance ringers across the line, receivers off, battery voltage and resistance of coils, relays, etc.

Complete information and prices will be furnished upon application.

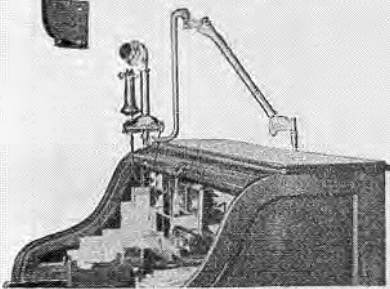
TELEPHONE BRACKETS



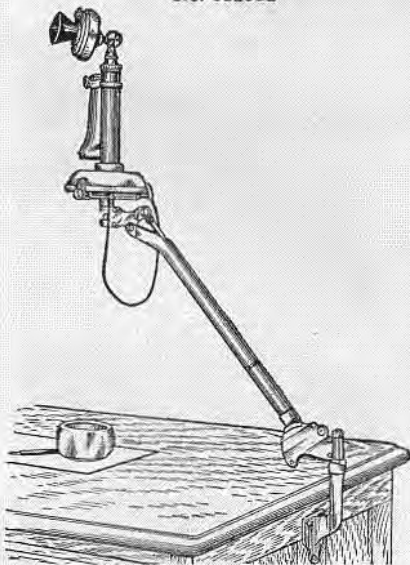
Nos. A-40 and A-41



Nos. B-42 and B-43



No. 041312



No. 041309
Standard Arm for Either Roll or
Flat-Top Desk

IMPERIAL TELEPHONE BRACKETS

Clamps for holding base of telephone are adjustable so bracket will readily take any style desk set.

Standard finishes: polished nickel and oxidized copper.

The finish desired must be specified in ordering.

For Roll-Top Desks

Trade No.	Mfrs. No.	Finish	Price Each
047245	A-40	Pol. nickel	\$3.00
047246	A-41	Ox. copper	3.00

For Flat-Top Desks

047247	B-42	Pol. nickel	3.50
047248	B-43	Ox. copper	3.50

EQUIPOISE TELEPHONE ARMS

FOR ROLL AND FLAT-TOP DESKS AND WALLS

Hard Rubber Finish

Trade No.	Arm Extension Inches	Drop Inches	Price Each
041309	24	....	\$4.00

Heavy Nickel Finish

041310	24	4.50
--------	----	------	------

FOR ROLL-TOP DESKS

Hard Rubber Finish

041311	24	10	4.75
041312	24	15	5.00

Heavy Nickel Finish

041313	30	10	5.25
041314	30	15	5.50

FLOOR STANDS

For 1, 2 or 3 Arms

041315	2.50
--------	----	----	------

PARTS

Link Extensions

Trade No.	Mfrs. No.	Size Inches	Price Each
041317	2	3	\$0.35
041318	3	6	.50
041319	4	10	.75

Drop Extensions

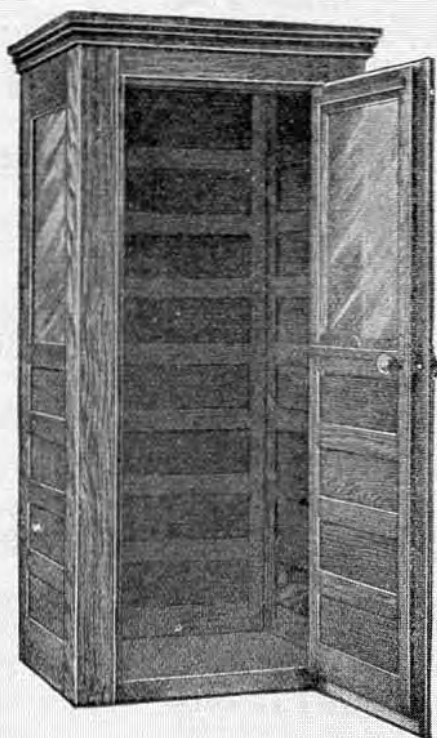
041320	5	10	.90
041321	6	15	1.00
041322	7	17	1.10
041323	8	Special drop clamps for use with phones having straight tubular upright..	.50
041324	9	Double yoke for two arms on one pivot.....	.50
041325	10	Triple yoke for three arms on one pivot.....	.65
041326	12	Demonstration clamp..	2.00

SOUND-PROOF TELEPHONE BOOTHS

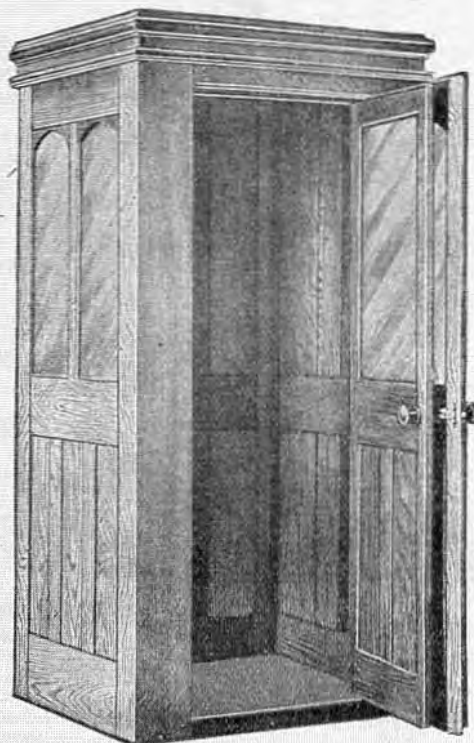
To obtain the best service from the telephone a sound-proof booth is positively essential. That this is an admitted fact is shown by the large operating companies adopting booths for all public stations, and it is found that they add to the revenue of the company using them.

Our booths have double walls with an air space between them, making them noise-proof and private. We recommend the double walls, but, when ordered, we supply single wall booths to our own designs or those of an architect.

Special booths of any wood, finish or size, will be estimated on upon request.



No. 3



No. 1

NUMBER 3

Oak, Glass in Door Only

This is our standard type of booth, meeting the demand for a low priced booth of good appearance and finish.

Trade No.	Mfrs. No.	DIMENSIONS, INCHES		Height	Price Each
		Outside Floor Space	Inside Floor Space		
014200	3	37x31	32x26	84	\$60.00

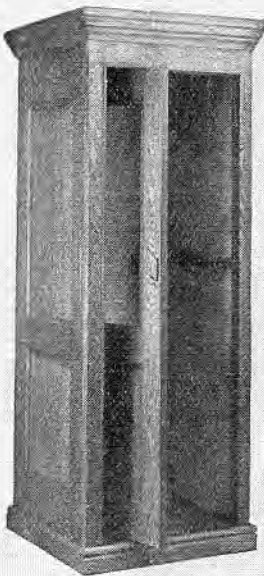
NUMBER 1

Oak, Glass in Door and One Side

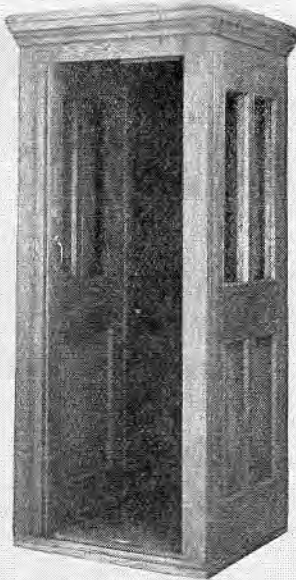
014201	1	40x36	32½x29¼	86	95.00
--------	---	-------	---------	----	-------

Prices for special finishes, quoted on application.

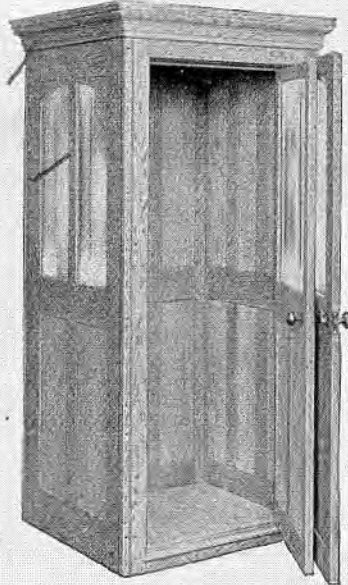
SOUND-PROOF TELEPHONE BOOTHS



Receding Door Type
Metal-Lined



Receding Door Type
All Wood



No. 20

RECEDING DOOR TYPE

The receding door type booth is very compact, and can be used in a space where booths with swinging door could not be installed. Supplied metal-lined or all wood. Regularly finished in oak.

Trade No.	Mfrs. No.	Metal-Lined		Height Inches	Price Each
		Size, Inside Inches			
091182	28x28		84	.....
091183	27x27		84	.....

Prices on other finishes, birch and imitation mahogany, also different sizes, will be quoted on application.

No. 20

The inner and outer booths are independent of each other, being held apart by insulators covered with felt. The door of each booth is hung upon its own hinges, and with special appliance but one set of knobs is necessary.

Trade No.	Mfrs. No.	Oak, Glass in Door and One Side		Height Inches	Price Each
		FLOOR SPACE, Outside	Inside		
091184	20	32x39	26x32	....	\$90.00
091185	20	32x39	26x32	....	97.50

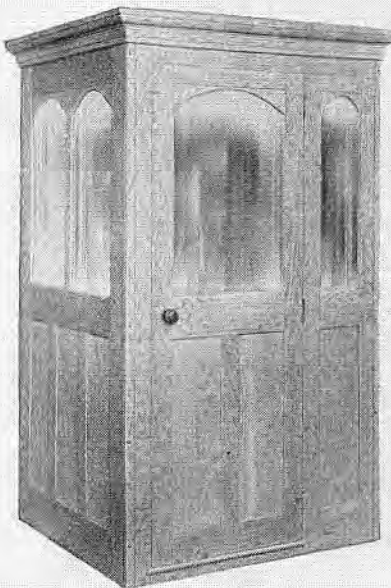
Prices on special finishes quoted on application.

Nos. 21 AND 22

These booths are sufficiently large to accommodate a desk telephone set with a stool, suitable for long distance communications. Can be finished to match office furniture.

Trade No.	Mfrs. No.	Oak, Glass in Front and One Side		Height Inches	Price Each
		FLOOR SPACE, Outside	Inside		
091186	21	39x44	32x37	....	105.00
091187	22	42x49	36x42	....	120.00
091188	21	39x44	32x37	....	112.50
091189	22	42x49	36x42	....	130.00

Prices on special finishes quoted on application.



Nos. 21 and 22

TELEPHONE FUSES



No. 19



No. 22



No. 8



No. 21



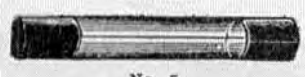
No. 11



No. 25



No. 137



No. 5



No. 1 Veribest



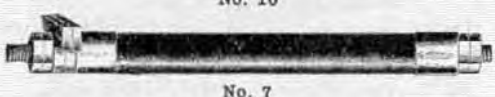
Type W



Type Z



No. 10



No. 7

FUSES

Western Union Style			Price per 100
Trade No.	Fuse No.	Terminals	
016372	19	Copper	\$2.50
016373	19	Foil	2.00
016374	22	Copper	2.50
016375	22	Foil	2.00
016376	8	Copper	2.50
016377	8	Foil	2.00
Postal Style			Price per 100
Trade No.	Fuse No.	Terminals	
016378	21	Copper	2.50
016379	21	Foil	2.00
016380	11	Copper	2.50
016381	11	Foil	2.00
016382	25	Copper	2.50
016383	25	Foil	2.00
016384	137	Copper	2.50
016385	137	Foil	2.00

GLASS TUBULAR FUSES

Trade No.	Mfrs. No.	Type	Price per 100
089788	5	Tubular	\$2.50
089789	1	Veribest	2.50

PORCELAIN TUBULAR FUSES

The fuse tube is made of unglazed porcelain and contains three holes or channels for the wire, instead of the one hole of ordinary fuses. The wire is passed through the tube in one hole, then back again through a second hole and again back through the third hole, the two ends of the fuse wire then being exposed at opposite ends of the tube.

The fuse terminals are made in two pieces, a "ring" and a "head." The ring is permanently fastened to the porcelain tube, but the head is removable. The fuse wire is soldered to the ring, through a hole in the side, and then the heads are screwed into place in the rings. The unscrewing of the heads exposes the fuse wire for inspection or repair.

Trade No.	Type	Price per 100
089790	W	\$24.00

WOOD TUBULAR FUSES

Tubular fuses are made in a number of special types and designs for different classes of work. The Type Z fuse is the type used with approved protector blocks and in the cable terminals. No. 10 is designed for use in protector strips, and No. 7 is for outdoor use as a line fuse on the wires.

020203	Z	16.00
020204	10	16.00
020205	7	18.00

HEAT COILS

Trade No.	Type	Price Each
089791	Heat coil	\$0.02 1/2

State amperage desired, when ordering.



Heat Coil

FIRE ALARM APPARATUS

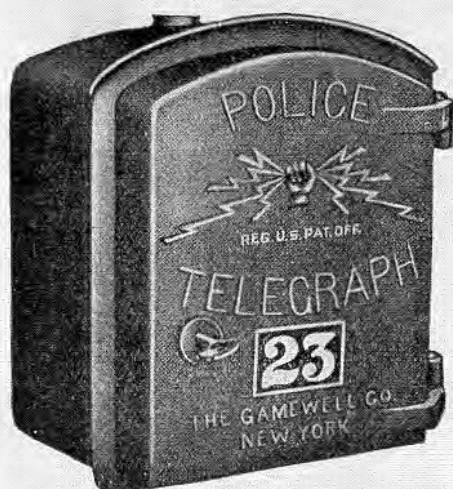
Owing to the large number of types of fire alarm, police signal boxes and apparatus, we are unable to give a complete listing of all material manufactured by us. We are in a position to furnish complete installations for fire alarm telegraph work, or police patrol signalling work, for any sized town or city, and we will be pleased to have our fire alarm specialist go into the question with you at any time upon your request being made.



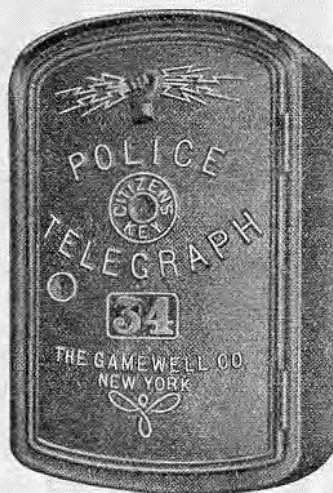
Standard Fire Alarm Box
Showing Cole Key Guard
Attached



Excelsior Type Fire Alarm Box
Made in Both Plain and
Non-Interfering
Styles

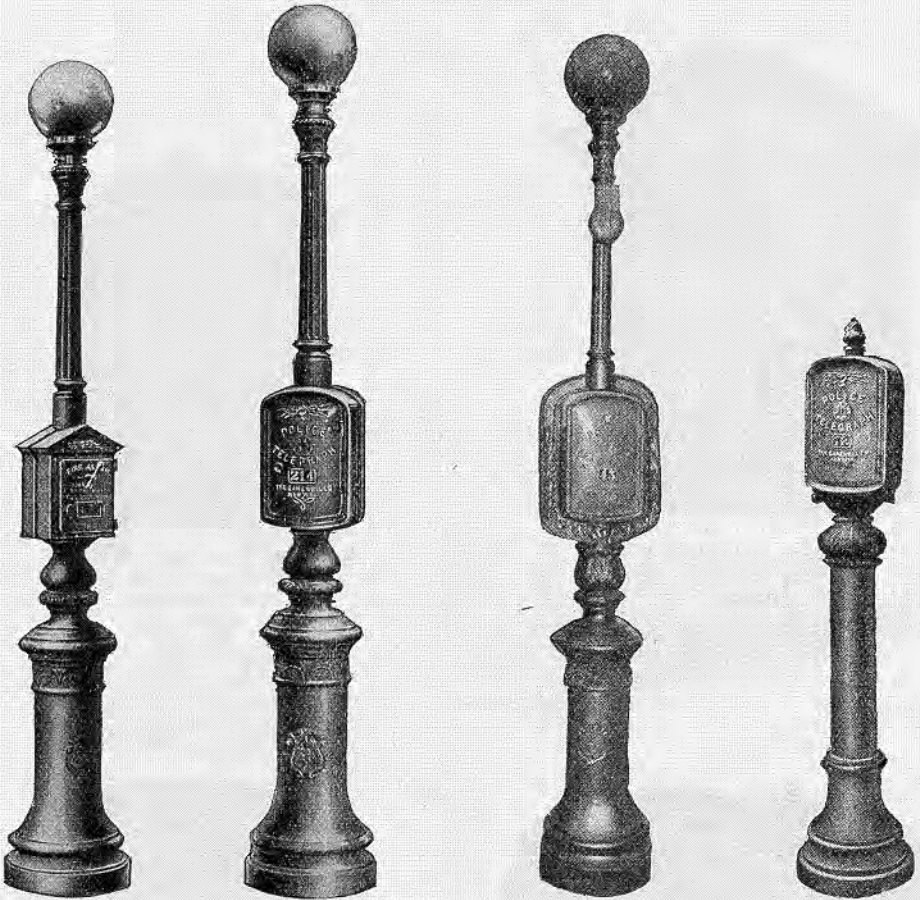


Type C Police Signal Box



Exemplar Police Box

FIRE ALARM APPARATUS



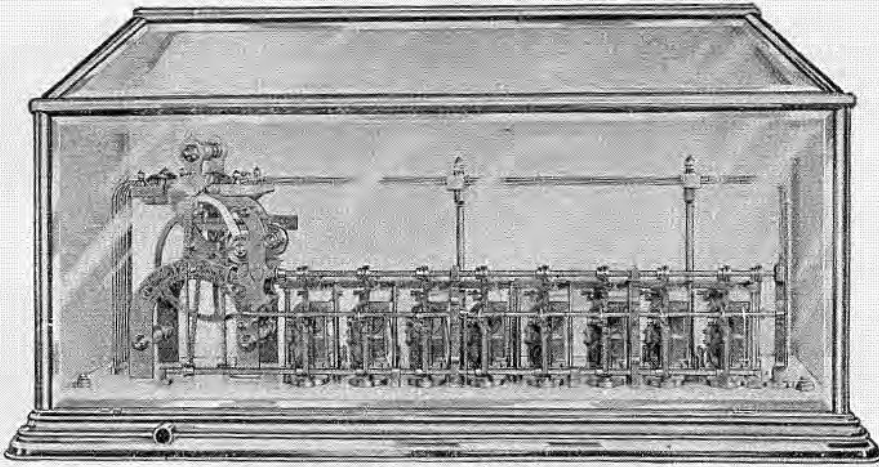
Fire Alarm Signal
Box Post
With Red Globe
on Top

Police Signal Box Post
With Flashlight and
Bell for Calling
Patrolmen

Metropolitan Police Signal
Box Post
With Flashlight and
Bell for Calling
Patrolmen

No. 4 Police Box
Pedestal
With Terminals
in Base

FIRE ALARM APPARATUS



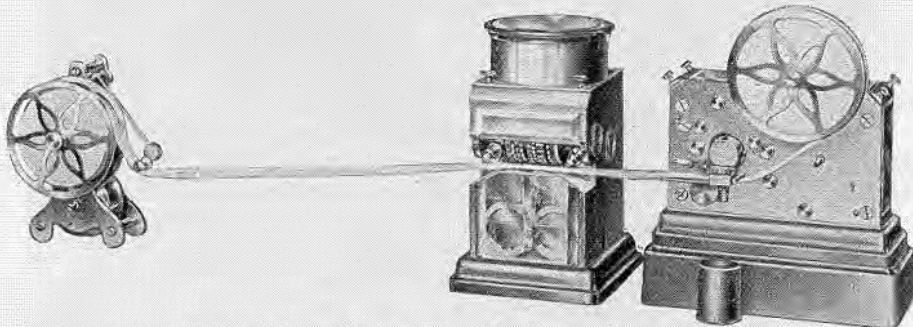
Automatic Non-Interfering Repeater

This machine is made for any number of circuits to repeat automatically the alarm from one circuit over all the other circuits without interference.



Two-Pen Inking Register

Designed for recording electric signals on a paper tape. Dimensions, inches: Base, 11x5; height, 7; over all, 16.



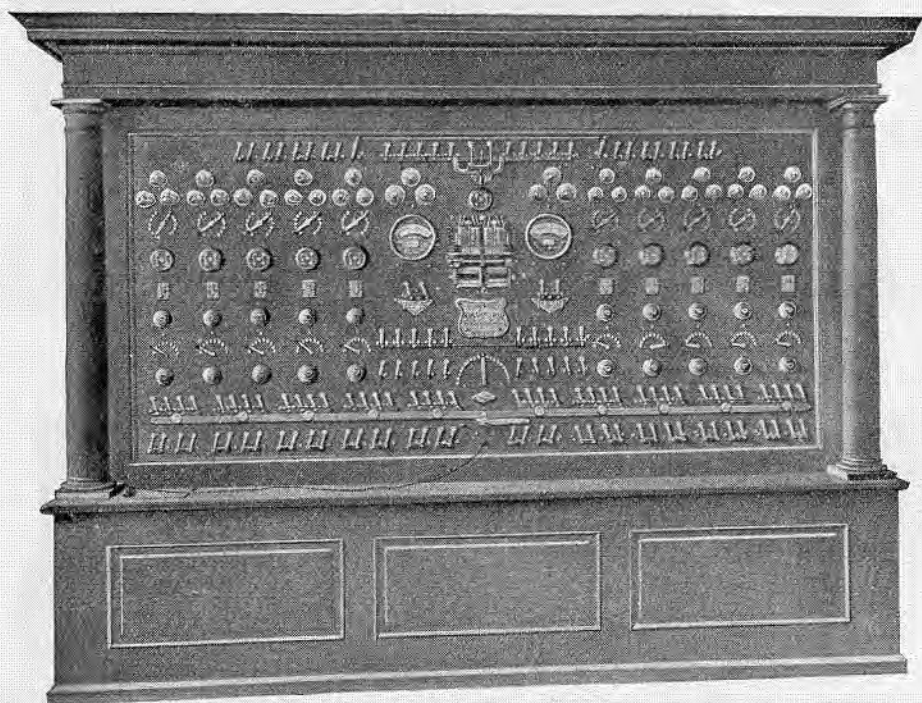
Punching Register, Time Stamp and Paper Take-Up Reel

This equipment punches the record in the paper tape and prints the exact time the signal comes in.

FIRE ALARM APPARATUS



Exemplar Police Desk



Ten-Circuit Standard Automatic Storage Battery and Repeater Switchboard

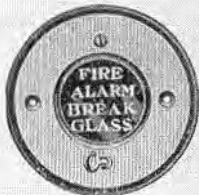
EDWARDS FIRE ALARM APPARATUS



No. 230



No. 77



No. 231



No. 233



No. 232



No. 224

The utmost care in design and attention to details of construction has been given the manufacture of the following apparatus. As a result, a very high degree of perfection has been obtained, which is reflected in the surety of operation, durability and compactness of these devices.

FIRE ALARM BOXES, INTERIOR TYPES

Surface Type

Trade No.	Mfrs. No.	Size Inches	Screw-hole Centers, In.	Price Each
091855	230	3 $\frac{3}{4}$	...	\$1.50

Standard finishes: Polished brass, brushed brass or bronze.

Operation: Raising lever closes circuit.

091856	77	3 $\frac{3}{4}$...	1.00
--------	----	-----------------	-----	------

Standard finishes: Polished brass, brushed brass or bronze.

Operation: Breaking glass closes circuit.

Flush Type

091857	231	4	2 $\frac{5}{16}$	2.00
--------	-----	---	------------------	------

Standard finishes: Polished brass, brushed brass or bronze.

Operation: Breaking glass closes circuit.

091858	233	6x6	...	6.00
--------	-----	-----	-----	------

Standard finishes: Polished brass, brushed brass or bronze.

Operation: Breaking glass closes circuit.

091859	232	4 $\frac{1}{4}$ x2 $\frac{1}{2}$	3 $\frac{3}{16}$	2.00
--------	-----	----------------------------------	------------------	------

For test key, add to list, 50 cents.

Standard finishes: Polished brass, brushed brass or bronze.

Operation: Breaking glass closes circuit.

091860	224	3 $\frac{7}{8}$ x4 $\frac{3}{8}$...	3.35
--------	-----	----------------------------------	-----	------

Standard finishes: Polished brass, brushed brass or bronze.

Operation: Breaking glass closes circuit.

Surface Type

091861	224A	4 $\frac{1}{8}$ x5 $\frac{1}{4}$...	3.75
--------	------	----------------------------------	-----	------

Same as No. 224, except made for surface mounting.

Standard finishes: Polished brass, brushed brass or bronze.

Operation: Breaking glass closes circuit.

Prices include hammers and chains when necessary.

Extra glasses with papers for all types of boxes, each, 20 cents.

NOTE—Boxes No. 224 and No. 224A have heavy cast brass faces; clear glass in front, is backed by red plate; contacts are so designed as to be positive in operation, irrespective of length of time they have been inactive. Special test key included with box; signaling without this key or by breaking glass is impossible.

Unless otherwise specified, boxes will be furnished in black ground, lettering brushed brass.

Prices on special finishes quoted on application.

EDWARDS FIRE ALARM BOXES



No. 118

MECHANICAL SIGNALS

Heavy iron case, japanned. Substantial contact mechanism insulated from frame, exceptionally durable, reliable and compact. These boxes may be specified for use with tower bell strikers, namely, No. 127 and No. 128 and with electro-mechanical gongs and contact box No 229, or for private signal with single stroke bells, etc.



No. 228

SELECTIVE AND REPEATING SIGNALS

Trade No.	Mfrs. No.	Case Finish	Dimensions Inches	Operation	Price Each
091872	118	Japanned	6x4 $\frac{1}{4}$ x3	Break glass	\$15.00
091873	118A	Japanned	6x4 $\frac{1}{4}$ x3	Pull lever	15.00

Furnished to repeat signal three or six times, as ordered. Slow movement.



No. 227

091874	228	Japanned	4 $\frac{1}{4}$ x2 $\frac{3}{4}$ x3	Break glass	25.00
091875	228A	Japanned	4 $\frac{1}{4}$ x2 $\frac{3}{4}$ x3	Pull lever	25.00

Furnished to repeat signal three or six times, as ordered. Door is hinged. Test key furnished, if desired.

091876	227	Japanned	9x5 $\frac{1}{4}$ x4	Break glass and push button	35.00
--------	-----	----------	----------------------	-----------------------------	-------

Furnished to repeat signal three times. Weatherproof case, with conduit entrance at bottom; hinged door and brass padlock.



No. 275

091877	275	Japanned	4 $\frac{1}{2}$ x2 $\frac{3}{4}$ x3	Pull lever	12.00
--------	-----	----------	-------------------------------------	------------	-------

Furnished to repeat signal one, two, three or four times, as ordered. Self-winding mechanism. Cast iron case.

WEATHERPROOF CASE FOR SIGNAL BOXES

Cast Iron, Japanned Finish

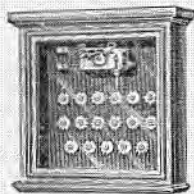


No. 129. W. P. Case Showing Call Box Mounted Inside

Trade No.	Mfrs. No.	Dimensions Inches	Price Each
091878	129	8 $\frac{1}{2}$ x7 $\frac{1}{2}$ x4	\$10.00
Extra charge for strap keys, each.....			.75

Provided with trap lock so that key cannot be removed until released by a master key. Intended chiefly for No. 118 fire alarm box. Strap key for return signals for test may be included.

EDWARDS FIRE ALARM APPARATUS



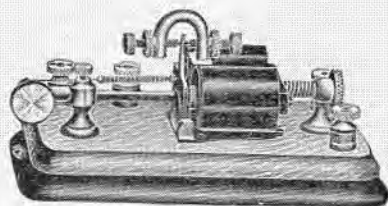
No. 229

CENTRAL STATION CONTACT BOXES

Case, quartered oak, with glass door enclosing mechanism and brass contact-making signal wheels, designed for either open or closed circuit.

The operation is as follows: Upon receipt of notice at the central station the operator places the number wheel, bearing the signal of the district from which the alarm is received, on shaft of mechanism and pulls lever, which automatically causes the sounding of the signal of the district in which the fire is located, repeating three or six times, as desired, on whistle, tower bell or whatever form of alarm may be used. Also used with factory fire alarm systems.

Trade No.	Mfrs. No.	Price Each
091894	229	Box, including six number wheels... \$45.00
		Extra number wheels..... 2.00



No. 238

FIRE ALARM RELAYS

Substantial and well made. Base, polished mahogany; metal parts, old brass. Specified with Edwards Factory or Town Fire Alarm System, with electro-mechanical gongs when used on separate circuits, or any extension work.

Trade No.	Mfrs. No.	Resistance Ohms	Price Each
091895	238	20	\$8.00
091896	238	50	8.75
091897	238	100	9.50
091898	238	250	10.50

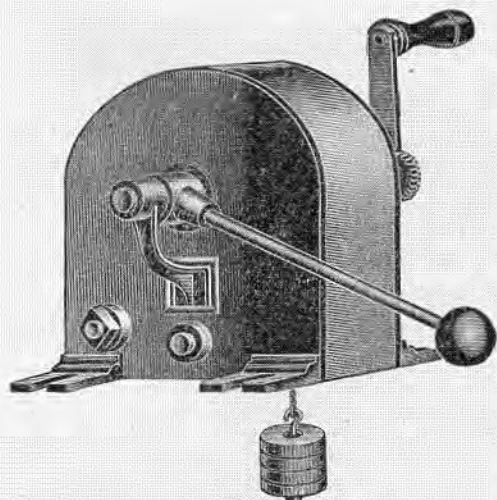
TOWER BELL STRIKERS

For automatically striking bells weighing up to 2,000 pounds. May be arranged to operate on direct current, battery or lighting circuits up to 600 volts, and on alternating current, 100 to 250 volts, 60 cycles, single-phase. Will be wound to 25 ohms for battery operation unless otherwise ordered. If used on high voltages relay must be included in line with alarm boxes, as these are never designed for use directly on high voltage lines. Weights drop about six inches for each stroke on bell. Price includes striker complete with weight cable, but not weights. 50 to 75 pounds are required for operation. The hammer can be placed in any position to strike bell, either inside or outside, or can be attached to tolling clapper. The striker can be adjusted for single strokes or for continuous ringing during contact, or for continuous ringing until run down. It is well adapted for village fire alarm systems, particularly in connection with No. 118 fire alarm box. Capacity, 100 blows to each winding.

Striker arranged to strike bell inside unless otherwise ordered.

Trade No.	Mfrs. No.	Price Each
091899	127	For hand winding... \$350.00
091900	127	For motor winding (not including motor)... 425.00

In ordering, specify weight of bell used.



Small Size Striker
without Counterbalancing Weight