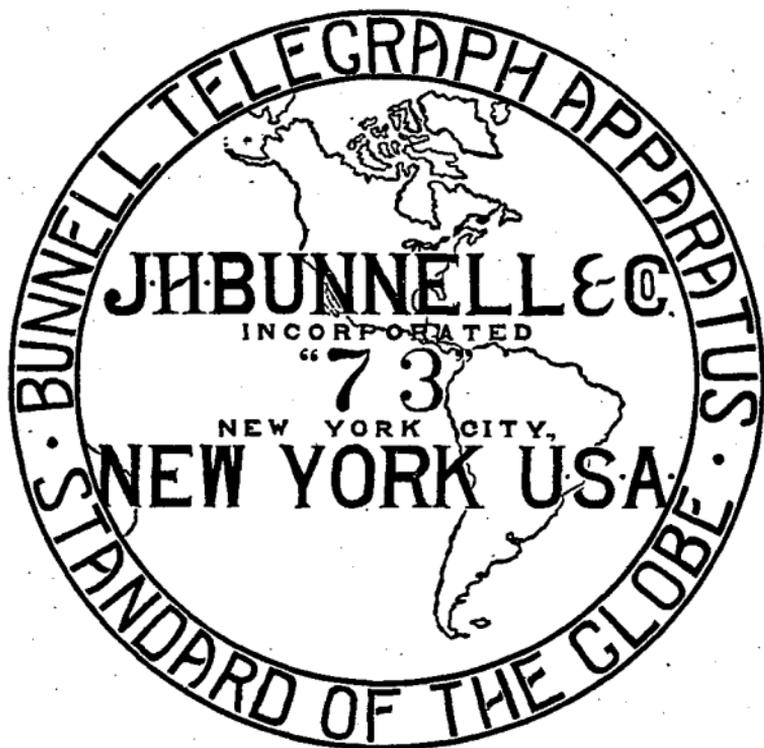


J. J. GHEGAN,
PRESIDENT

C. E. GRAHAM,
VICE-PRESIDENT



1918

ANNOUNCEMENT.

With this issue we present the twenty-eighth edition, abridged, of our catalog. It contains numerous large additions of important articles and illustrations, describing many improvements in telegraphic and other electrical apparatus, together with more detailed and extensive lists of supplies and tools. It will be found interesting, as a book of reference regarding latest prices, and as a most complete list and description of all that is newest and best in telegraph and other electrical apparatus.

Our ample facilities for the manufacture of high grade appliances on a large scale, and consequently at lowest cost, enable us to offer the best the market affords, at prices within the range of all.

Since 1878 the name BUNNELL has stood for all that is best in the electrical industry and we will continue the policy of distributing our apparatus through the jobber and dealer to the benefit of the trade.

TERMS.

Our terms to customers with approved credit are 30 days net cash.

To those unknown to us, who do not have a satisfactory commercial rating, it will be necessary to furnish us with the names of at least three reputable firms with whom you have been doing business on open account; otherwise remittance must accompany your order.

Our rules do not permit C. O. D. shipments unless a sufficient amount accompanies the order to cover transportation charges both ways should shipment not be accepted.

NOTE:—A name and list number is given to each article. Use both when ordering and thus avoid errors.

It is essential that proper shipping directions be given, otherwise we shall use our own judgment.

All goods shipped by us are carefully and properly packed and delivered to the Transportation Company in good condition, which ends our responsibility. All claims for loss or damage to goods in transit should be made to the transportation company by the customer or consignee.

Claims for shortage should be made within five days after receipt of goods.

Goods returned for credit without previous agreement may not be accepted.

All list prices and discounts are subject to change without notice.

WE SHALL CONTINUE TO MAKE OUR HOUSE

“HEADQUARTERS”

— FOR —

THE LATEST AND BEST IN
EVERYTHING ELECTRICAL

J. H. BUNNELL & COMPANY

Incorporated

32 PARK PLACE (Broadway Block), NEW YORK

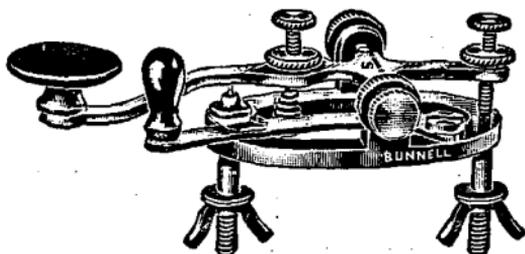
Copyright 1918.

STEEL LEVER KEYS.

"The Operator's Favorite."

The BUNNELL Key is more durable and in every respect better than any other for rapid and perfect Morse sending for the following reasons:

The lever is light and strong and, with its trunnion being made of but one piece of fine wrought steel, the common defect of loose trunnions is avoided. Strength is obtained with much less weight of metal, and by the perfect bearing, which the solid trunnion gives, and the perfect alignment of contact points, sticking is absolutely prevented.



No. 9040—9044.

Our Keys furnished with Tungsten Contact Points have been adopted by the Western Union and Postal Telegraph Companies;

also by large Railroad Companies. For the amateur or where a less expensive key is desired, we can furnish them with Coin Silver Contacts.

The size and proportions are such as to

make it the most perfect operating key possible to obtain, either for the hand of the skilled and rapid expert or for the beginner. The Legless Keys are provided with lips for bug wedges.



No. 9042—9046

STANDARD KEYS WITH SILVER CONTACTS.

Schedule BA.

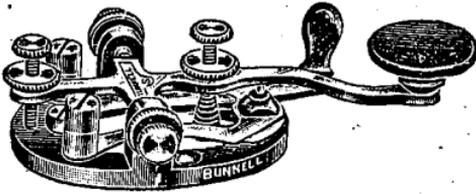
List No.		Price Each
9040	Leg Key with Brass Frame and Nickel Plated Lever....	\$2.80
9041	Leg Key, Full Nickel Plate.....	3.40
9042	Legless Key with Brass Frame and Nickel Plated Lever.	2.80
9043	Legless Key, Full Nickel Plate.....	3.60

1.85

KEY SUPREME WITH TUNGSTEN CONTACTS.

9044	Leg Key with Brass Frame and Nickel Plated Lever....	\$2.80
9045	Leg Key, Full Nickel Plate.....	3.60
9046	Legless Key with Brass Frame and Nickel Plated Lever.	3.00
9047	Legless Key Full Nickel Plate.....	3.80
6208	Portable Base for Legless Keys only.....	1.40

THE "TRIUMPH KEY."



No. 9050.

Note the name "Bunnell" on the Lever.

This new model legless form of Steel Lever Key has been adopted as the Standard of the Western Union, and Postal Telegraph Companies.

It is the finest steel lever key ever produced.

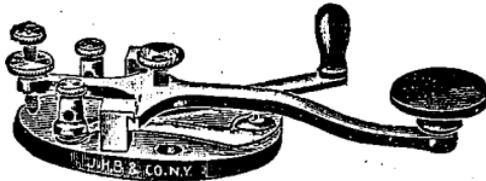
In addition to the Tungsten contact points of our Standard Steel Lever Keys, it has Mica and other valuable improvements—The Acme of Perfection in Steel Lever Keys.

List No.	Schedule BA.	Price each
9050	Triumph Key, Polished Brass Body.....	\$3.00
9051	Triumph Key, Full Nickel Plated.....	4.40

v.50

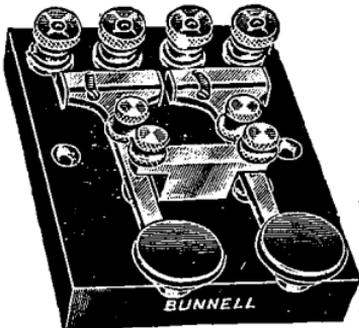
VICTOR KEYS.

Bunnell Quality Leg and Legless Forms.



No. 6213.

List No.	Schedule BA.	Price each
9121	Victor Leg, Polished Brass.....	\$4.50
9122	Victor Leg Key, Full Nickel Plated.....	5.30
9123	Victor Legless, Key, Polished Brass.....	4.80
9124	Victor Legless, Key, Full Nickel Plated.....	5.80
9125	Victor O. C. Key, Polished Brass.....	6.00
9126	Victor O. C. Key, Full Nickel Plated.....	8.00
9127	Victor O. C. Key, on Wood Base.....	7.00



No. 9052.

THE IMPROVED BUNNELL CABLE KEY.

Consists of Two Special Keys, made in the best manner, connected and mounted together on a Polished Hard Rubber Base, as shown in illustration.

Its ease of manipulation and perfect insulation commend its general use on all cable lines.

Schedule BA.

List No.	Price Each
9052	Bunnell Cable Key.....\$20.00

THE FRY OPEN CIRCUIT KEY.



No. 6215.

Ideal for open circuit working with Dry Battery.

Has circuit closer which must be worked like an ordinary key. With circuit closer in "closed" position, the battery cannot be put to line or short circuited by pressing down on key lever, hence, leaving a book or other heavy object on key does not waste the battery, but the relay is always in circuit ready to receive signals.

List No. **Schedule BA.** Price Each
6215 \$6.00



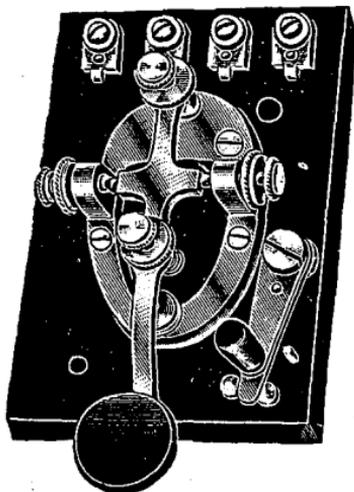
No. 9037.

BUNNELL

OPEN CIRCUIT KEY.

Front and Back Contact.

List No.	Schedule BA.	Price Each
9035	O.C. Leg Key, Polished Brass Body.....	\$5.00
9036	O.C. Leg Key, Full Nnickel Plated.....	5.80
9037	O.C. Legless Key, Polished Brass Body.....	5.20
9038	O.C. Legless Key, Full Nickel Plated.....	6.00



No. 9039.

POLE CHANGER KEY.

A very simple form of hand pole changer.

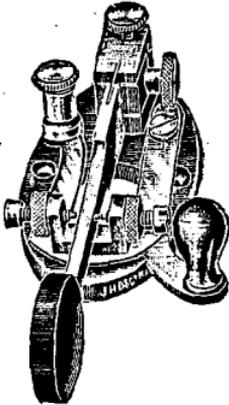
Used extensively by the Western Union Telegraph Co.

It consists of a special high grade form of "double contact" (front and back) Key mounted on Polished Hard Rubber Base with four terminals and Cut-out Switch.

Schedule BA.

List No.	Price Each
9039	\$9.00

Many imitations made to represent Bunnell Keys are sold under various names and misrepresentations. Our Keys are the original, and are the highest standard of excellence in telegraph keys known in America. The name "BUNNELL" is a guarantee of high quality.

THE DOUBLE SPEED KEY.**Improved Contact Holders.**

(Patented)
No. 5876.

Requires but one-half the motions of the ordinary key, and these are made by a side-wise rocking motion of the hand, easily acquired, which guarantees that operators will not be affected with cramp, and those who are so affected will soon recover their

SPEED AND STYLE.

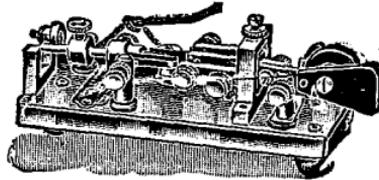
Condemned by every operator at first glance, but on reflection this judgment is quickly reversed, and a trial or demonstration creates enthusiasm, and free predictions that it is the

COMING KEY.

It is simple and inexpensive. It is attractive in appearance. It can be quickly mastered. It is made exclusively by the manufacturers of the best telegraph instruments on earth.

Schedule BD.

List No.	Price Each
5876 Style W Key	\$5.00
5879 Portable Base only	1.20
5880 Wedge and Cord only	1.50

THE VIBROPLEX KEY.**New No. 4 Model.**

No. 9059.

(So small can be carried in the pocket.)

An achievement in sending machine construction.

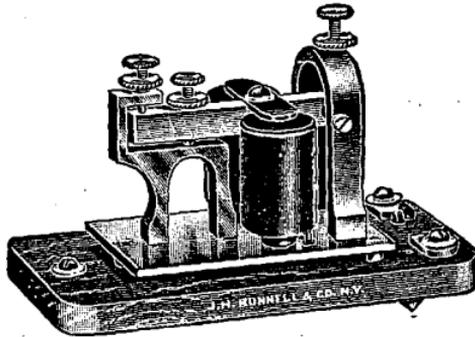
A marvel of speed, smoothness of action, and ease of manipulation. Made especially to meet the demands of that large army of telegraphers who desire a small, light-weight, but efficient sending machine. The same sending possibilities, the same carrying qualities that characterize the work of the larger Vibroplex, together with the same strength and durability are found in the Vibroplex Number 4. Less than half the size of the larger models, and weighs but two and one-half pounds.

Handsomely finished in nickel-plate with an unusually attractive base of Blue Enamel.

Schedule BD.

List No.	Price Each
9059 Model 4 Enamel Base.....	\$16.70
9060 Model 4 Nickel Plated Base.....	18.90
9061 Upright Model	16.70

THE NEW ALUMINUM LEVER GIANT SOUNDER.



No. 500.

Excels all others in Tone, Loudness, and Quick Action. It is in every respect the finest and best Sounder ever designed. Requires minimum amount of local battery.

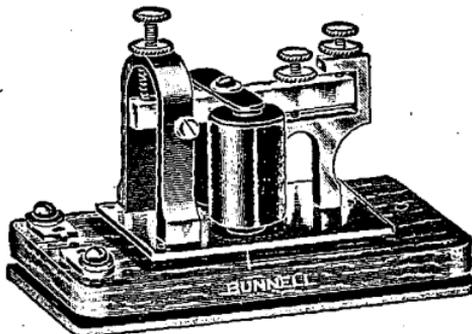
Sounders wound to 4 ohms can be used on lines up to ¼ mile in length; while 20 ohm Sounders will operate on Main Lines up to 15 miles in length; without using a relay.

Schedule BA.

List No.	Price Each
500 Giant Sounder, Polished Brass Finish, 5 Ohms.....	\$3.50
9076 Giant Sounder, Nickel Plated, 5 Ohms.....	4.50
501 Giant Sounder, Polished Brass Finish, 20 Ohms.....	3.80
9077 Giant Sounder, Nickel Plated, 20 Ohms.....	4.80

ALUMINUM LEVER SOUNDER.

With Patent Aluminum Resonator Base.



No. 502.

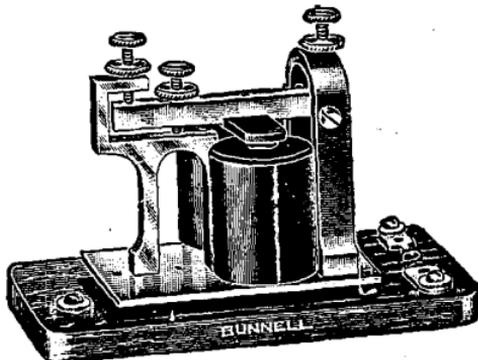
This new Sounder is the last and most improved type. It is superior to any other now in use. The aluminum Resonator Base gives the instrument great durability, renders it practically unbreakable, and at the same time greatly increases the volume and quality of sound.

Schedule BA.

List No.	Price Each
502 Wound to 5 Ohms Resistance.....	\$5.00
503 Wound to 20 Ohms Resistance.....	5.30

THE "1892" GIANT SOUNDER.

With Large Magnets and Important New Improvements.

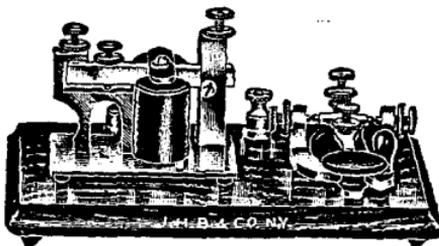


No. 515.

These sounders have aluminum or brass levers, and with one cell of local crowfoot battery will give a loud clear and quick stroke, equal to the best of any other form using two cells.

List No.	Schedule BA.	Price Each
515	Wound to 5 Ohms.....	\$6.00
516	Wound to 20 Ohms.....	6.30

THE GIANT SOUNDER AND STEEL LEVER KEY COMBINATION SET.

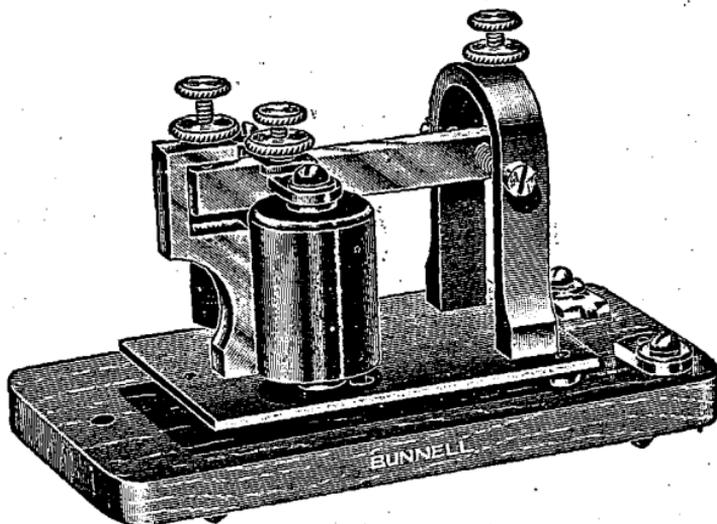


No. 504.

For learner's use or for use on city wires, private lines, and all short lines up to 15 miles in length. The most perfect and complete learner's instrument ever produced, consisting of our latest form of giant sounder, finely finished, with aluminum lever, polished rubber covered magnets wound with fine silk covered wire, and mounted on polished mahogany base, with a BUNNELL Steel Lever, solid Trunion key, having our supreme contact points. These instruments are the same high grade type that are now and have been for over a quarter of a century the standard of the Western Union and Postal Telegraph Companies, and all the principal railroad telegraph companies in the United States, and are improved up-to-date.

List No.	Schedule BA.	Price Each
504	Wound to 20 Ohms. For use on all short lines up to 15 miles. No relay required	\$6.80
505	Wound to 5 Ohms. For local battery.....	6.50

THE "GHEGAN" ALTERNATING CURRENT SOUNDER.



No. 9078.

A Money Saver for the Companies.

A trouble eliminator for operators and battery men. The original expense is practically the only one, as the current required is but a few milliamperes.

Once installed, no further attention is required.

The sound is everything that could be desired, being the same as that given by the high class BUNNELL instrument.

It can be used on any 110 volt, 60 cycle alternating current circuit. A marvel of simplicity—nothing to get out of order.

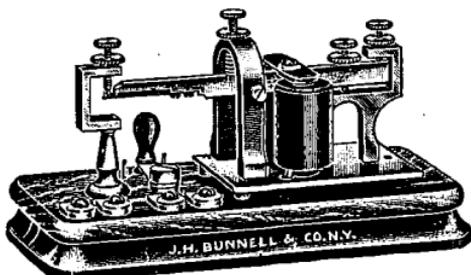
Can be operated on direct current without any change of adjustment, so that in places where the alternating current circuit is liable to be interrupted, a few dry cells could be switched into bridge over any such interruptions.

The sounder is so well designed there is no perceptible heating even when left on closed circuit continuously, and the humming so slight, as not to be noticeable.

Schedule BC.

List No.	Price Each
9078 Ghegan A. C. Sounder	\$7.00

NOTE—By giving the lever plenty of play between stops the sounder may be connected direct to the 110 volt 60 cycle circuit. We recommend, however, the use of a current and voltage reducer consisting of resistance units and condensers with which arrangement the lever play may be adjusted to suit and the current consumption is reduced to about ten milliamperes on closed circuit. Prices and further particulars of this arrangement furnished on application.

REPEATING SOUNDERS.**The Best Modern Form of Repeating Sounder.**

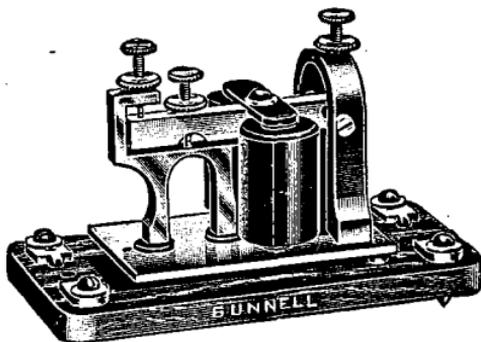
No. 514.

Equipped with Spring Points, hardened Silver Contacts, and New W. U. type of Clamping Binding Posts.

Is mounted on a polished hardwood base with Enameled Iron Surbase, and all brass parts highly polished and lacquered.

Schedule BA.

List No.	Price Each
514 Spring Point Repeating Sounder, 6 Ohms.....	\$10.00

"QUAD" REPEATING SOUNDER.**Giant Pattern, With Rigid Points.**

No. 507.

Has hardened silver contacts, W. U. Clamping Binding Posts and Aluminum Lever.

Metal parts are polished and lacquered, and mounted on a cherry base.

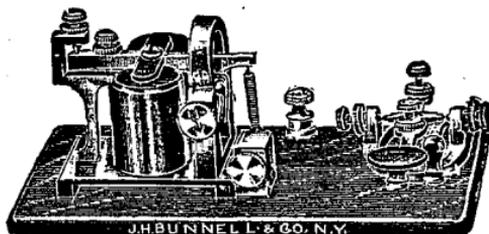
Schedule BA.

List No.	Price Each
9109 Quad Repeating Sounder, 5 Ohms.....	\$6.00
9110 Quad Repeating Sounder, 20 Ohms.....	6.30

NEW MAIN LINE SOUNDER.

"MCM" Model.

(Ghegan Patent.)



No. 559.

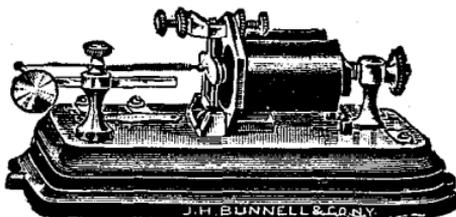
New and important improvements, instantaneous adjustment of both armature spring and distance from magnet cores, both adjustment nuts conveniently located in front. The arrow on the upper adjustment nut indicates the relative distance between armature and magnet cores. The string arrangement used in the old-style tension springs is entirely dispensed with, and a wide and rapid range of spring adjustment obtained by a cam lever operated by the lower adjusting nut. The "MCM" Model retains all the good points of our original type of instrument, and is intended for use on main lines in place of the ordinary relay, dispensing entirely with the local sounder, thus saving the continual expense of maintaining local batteries.

Schedule BA.

List No.		Price Each
559	150 Ohms, with key on base.....	\$13.50
560	150 Ohms, without key.....	14.50
561	Mahogany Case for wrecking sets.....	6.00
562	Leather Case	16.00
563	250 Ohms, with key on base.....	14.00
564	250 Ohms, without key	12.00
565	20 to 100 Ohms, with key on base.....	12.00
566	20 to 100 Ohms, without key.....	11.00

Nos. 563 to 566 are for all circuits from 1 to 100 miles in length, when, with ordinary Main Battery Power suitable for such lines, they are very satisfactory Sounders.

These instruments are mounted on polished hardwood bases and all metal parts are highly finished and lacquered.

MAIN LINE RELAYS.**Solid Trunnion, Single Piece Armature.**

No. 533.

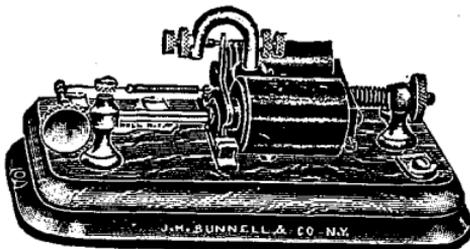
Magnets wound with Enameled or Silk Covered Wire, Polished Rubber Coil Covers, Mahogany Base, Mounted on Ornamental Surbase, with Extension Adjustment. In addition to the excellent merits of these relays in all the usual details of construction and finish, their special advantages consist in the armature and lever, which is all struck from a single piece of finest iron, the improved form of trunnion seat, the improved magnet adjustment, etc., etc., making them the finest type of relay ever constructed.

BUNNELL PATTERN STANDARD No. 1 RELAY.**Schedule BA.**

List No.	Resistance,	Ohms,	Finish	Price Each
533	150	Ohms,	Polished Brass Finish	\$10.00
9053	150	Ohms,	Nickel Plated	11.50
534	250	Ohms,	Polished Brass Finish	11.00
9054	250	Ohms,	Nickel Plated	12.50
535	300	Ohms,	Polished Brass Finish	12.00
9055	300	Ohms,	Nickel Plated	13.50

GOOSE-NECK PATTERN STANDARD No. 2 RELAY.

Adopted by the Western Union and Postal Telegraph Companies.



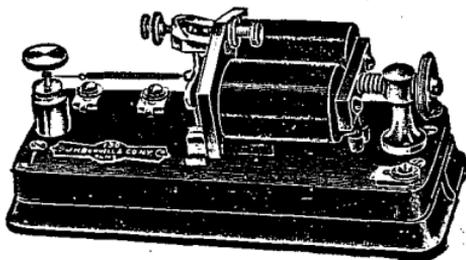
No. 536.

Schedule BA.

List No.	Resistance,	Ohms,	Finish	Price Each
536	150	Ohms,	Polished Brass Finish	\$9.00
9943	150	Ohms,	Nickel Plated	10.50
537	250	Ohms,	Polished Brass Finish	10.00
9944	250	Ohms,	Nickel Plated	11.50
538	300	Ohms,	Polished Brass Finish	11.00
9945	300	Ohms,	Nickel Plated	12.50

Standard

C. Q. A. RELAY.



No. 768.

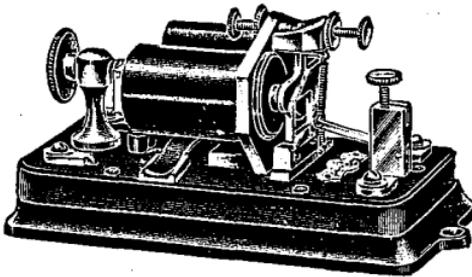
This is the latest development of our high grade No. 1 instrument. It is the result of long experience and an intimate knowledge of what a perfect Relay should be, combined with mechanical skill and the best materials that can be obtained for the purpose.

We have designated it the C. Q. A. or Champion Quick Adjustment Relay because with our new magnet adjustment the magnets may be instantly moved to any desired distance from the armature. The armature tension spring adjustment is also simplified and improved. The C. Q. A. Relay is very compact, the dimensions of subbase being only seven and one-half inches long by three and one-half inches wide. The C. Q. A. Relay is mounted on slate instead of wood. It is furnished with the latest style of W. U. Clamp Connections to which the magnet and local wires are soldered, thus making such a thing as a loose connection impossible. The magnets are supported and protected by a spectacle frame. An automatic stop prevents contact between the magnet cores and the armature.

The C. Q. A. Relay is furnished regularly with hardened silver contact points as adopted by the Western Union and Postal Telegraph Companies.

Schedule BA.

List No.		Price Each
9070	Resistance, 150 Ohms, Polished Brass Finish	\$ 9.00
9071	Resistance, 150 Ohms, Nickel Plated	10.50
9072	Resistance, 250 Ohms, Polished Brass Finish	10.00
9073	Resistance, 250 Ohms, Nickel Plated	11.50
9074	Resistance, 300 Ohms, Polished Brass Finish	11.00
9075	Resistance, 300 Ohms, Nickel Plated	12.50

S. O. S. RELAY.

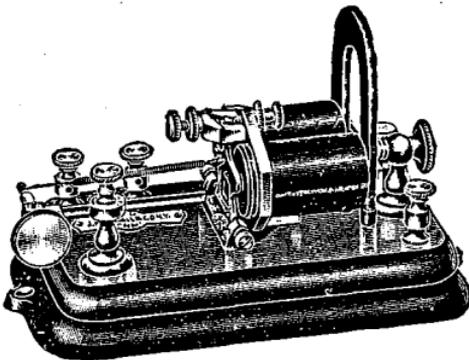
No. 770.

This illustration shows our latest compact form of C. Q. A. Relay, known as the S. O. S. type. It is mounted on slate base $5\frac{1}{4}$ x 3 inches with a "dead" local post, to facilitate resonator connection and with a miniature Jack underneath the magnet spools for Vibrating Transmitter (Bug) Connection. It has a novel stringless, tension

spring adjustment that avoids spoiling the springs by putting them out of shape. Can be furnished with tension spring arrangement as shown on Relay Cat. No. 768, if so ordered. Mounted on surbase or feet as desired.

Schedule BA.

List No.	Price Each
770 150 Ohms Resistance, with Jack	\$12.00
771 150 Ohms Resistance, without Jack	11.00
772 250 Ohms Resistance, with Jack	13.00
773 250 Ohms Resistance, without Jack	12.00

BUNNELL SPECIAL RAILROAD RELAY.

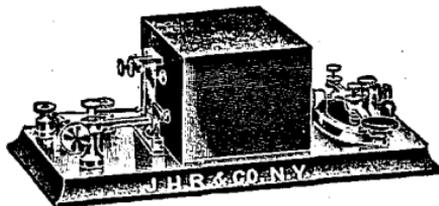
No. 767.

For crowded wires where many relays are worked in a single circuit, these relays, although they are wound to only 50 Ohms resistance, give better service in bad weather than can be obtained with the best 150 Ohm Relays of ordinary construction. The improvement in the working of line by the clear action of the relay, which is accomplished in this form, together with the immense resistance reduction in circuit, is such to insure adoption wherever tried.

List No.	Price Each
767 Wound to 50 Ohms Resistance	\$12.00

Schedule BA.

BOX SOUNDING RELAY AND STEEL LEVER KEY COMBINATION SET.



No. 542.

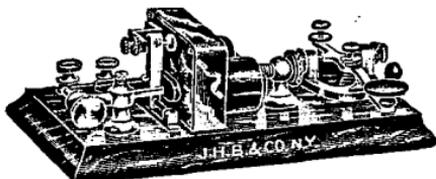
Of best construction for Loud, Clear Sound, without Local Sounder.

With all metal parts polished and lacquered and a highly finished Mahogany Box and Base, it makes a very fine instrument.

Schedule BA.

List No.		Price Each
542	With Key on Base, Wound to 150 Ohms.....	\$13.00
543	With Key on Base, Wound to 250 Ohms.....	14.00
545	Without Key on Base, Wound to 150 Ohms.....	11.00
546	Without Key on Base, Wound to 250 Ohms.....	12.00

BARCLAY BOX RELAYS.



No. 404.

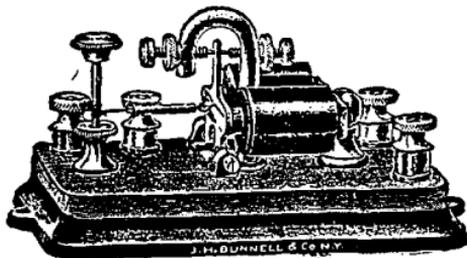
The Snare Drum Principle which Mr. Barclay has so ingeniously applied to his Box Relays produces a clear, pleasing sound that is very penetrating, and consequently can be easily read even in noisy places or on lines having weak currents.

Box is of burnished brass and all other metal parts are polished and mounted on a hardwood base.

Schedule BA.

List No.		Price Each
404	150 Ohms with Key and Local Contacts	\$14.50
9083	250 Ohms with Key and Local Contacts	15.50
405	150 Ohms with Key, without Local Contacts.....	14.00
9084	250 Ohms with Key, without Local Contacts.....	15.00
426	150 Ohms without Key, with Local Contacts	12.50
9085	250 Ohms without Key, with Local Contacts	13.50
427	150 Ohms without Key or Local Contacts	12.00
9086	250 Ohms without Key or Local Contacts	13.00

THE "DANDY" PONY RELAY.



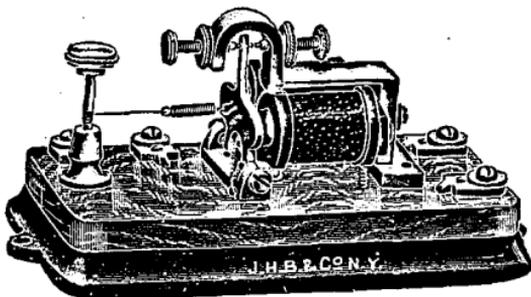
No. 567.

Our latest model, mounted on a highly finished wood base, with Enameled Iron Surbase.

Schedule BA.

List No.		Price Each
567	20 Ohm Non-adjustable Rubber Covered Magnets	\$5.00
568	20 Ohm Non-adjustable Cloth Covered Magnets	4.50
569	20 Ohm Adjustable Rubber Covered Magnets	5.50
For 50 Ohm Relays, add 30 cents to list; for 75 Ohms, add 60 cents to list.		

NOVEL FORM PONY RELAY.

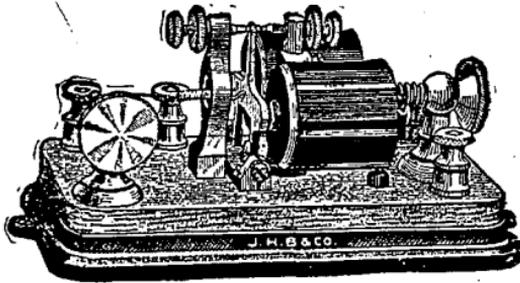


No. 570.

For lines of less than 75 miles in length. Elegantly finished. Mounted on Polished Mahogany Base, with Enameled Surbase. Size of base, 6½ inches by 3½ inches.

Schedule BA.

List No.		Price Each
9087	5 Ohms, for lines up to ¼ mile long.....	\$4.50
570	20 Ohms, for lines up to 15 miles long.....	4.50
571	50 Ohms, for lines up to 20 miles long.....	4.80
572	75 Ohms, for lines up to 40 miles long.....	5.10
573	100 Ohms, for lines up to 75 miles long.....	5.40
574	With Polished Rubber Covered Magnets, extra.....	.60



No. 575.

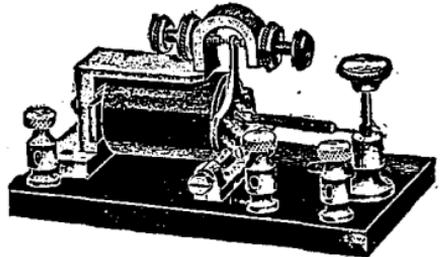
**THE "1900" MODEL
PONY RELAY.**

An improved form of Pony Relay, with large rubber covered, adjustable magnets, etc. Finely finished.

List No.	Schedule BA.	Price Each
575	Wound to 20 Ohms	\$7.50
576	Wound to 50 Ohms	7.80
577	Wound to 75 Ohms	8.10
578	Wound to 100 Ohms	8.40

**SINGLE SPOOL
CONCENTRIC MAGNET
PONY RELAY.**

Compact form, suitable for time relay in connection with clocks. Finely finished in Polished Brass and mounted on a Hard Rubber Base.



No. 541.

List No.	Schedule BA.	Price Each
9094	5 Ohms Resistance	\$7.00
541	20 Ohms Resistance	7.00
6222	50 Ohms Resistance	7.30

HUDSON WORD COUNTER.

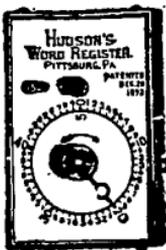
For counting number of words written on a typewriter.

Furnished with attachments for applying it to all the standard makes of machines.

(In ordering be sure to specify make and model of machine on which it is to be used.)

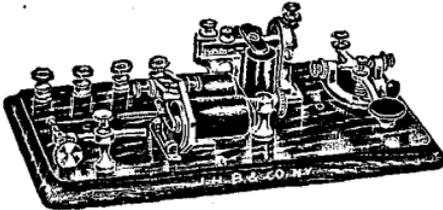
Any number of words may be counted without re-setting by simply taking note of each 1,500 words and adding thereto the number registered when the work is completed.

Directions for attaching accompany each machine.



List No.	Schedule BA.	Price Each
6211	\$6.00

RELAY, STEEL LEVER KEY AND GIANT SOUNDER COMBINATION SET.



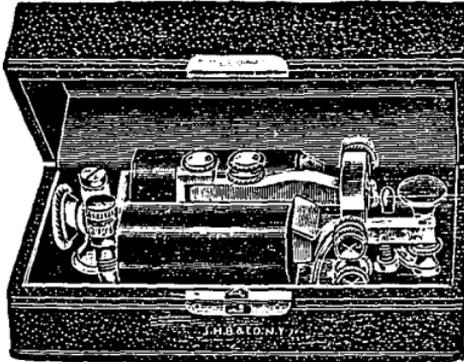
No. 579.

A complete set of our best instruments, mounted on a Polished Mahogany Base, occupying a space of 13 inches long by 6 $\frac{3}{8}$ inches wide. These sets are used for special office work and for use as testing sets at the switchboard.

List No.	Schedule BA.	Price Each
9062	150 Ohm Relay; 5 Ohm Sounder, Polished Brass	.....\$20.00
9063	150 Ohm Relay; 5 Ohm Sounder, Nickel Plated	..... 23.00
9064	250 Ohm Relay; 5 Ohm Sounder, Polished Brass	..... 21.00
9065	250 Ohm Relay; 5 Ohm Sounder, Nickel Plated	..... 24.00
9066	250 Ohm Large Relay; 5 Ohm Sounder, Polished Brass	28.00
9067	250 Ohm Large Relay; 5 Ohm Sounder, Nickel Plated	32.00
9068	500 Ohm Large Relay; 5 Ohm Sounder, Polished Brass	30.00
9069	500 Ohm Large Relay; 5 Ohm Sounder, Nickel Plated	34.00

POCKET RELAY.

“Bunnell” Pattern.

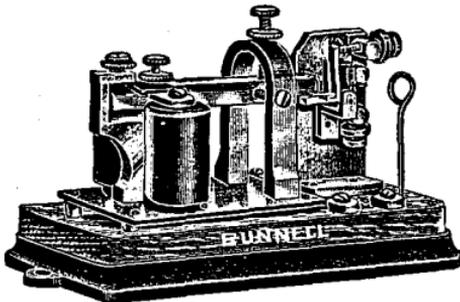


No. 581.

Has all the practical qualities of a full size Sounding Relay and is a very compact and handsome instrument. Entirely finished in Polished Brass.

Furnished with a fine black carrying case, 5 $\frac{3}{4}$ inches long, 2 $\frac{3}{4}$ inches deep and 2 $\frac{1}{2}$ inches wide.

List No.	Schedule BA.	Price Each
581	Wound to 150 Ohms, with Case.....	\$22.00
6226	Wound to 250 Ohms, with Case.....	23.00

THE GHEGAN A. C. RELAY OR TRANSMITTER.

No. 9932.

Furnished with front and back contact. The front contact or **closed circuit** form closes the second or local circuit whenever the main or first circuit is closed. The back contact or **open circuit** type does the reverse, that is, closes the second or local circuit whenever the first or main circuit is broken.

The double contact can be used for both front and back contact when desired.

Schedule BC.

List No.		Price Each
9932	Standard Form Ghegan A. C. Relay.....	\$12.00
9933	Simple Form, Single, Back Contact A. C. Relay.....	6.00

THE "WHEATSTONE" OR BRITISH POST OFFICE POLAR RELAY.

No. 9128.

This is the most sensitive and reliable form of Polar Relay known.

It is extremely quick-acting and for rapid or automatic work is unexcelled.

The entire apparatus is enclosed in a handsome substantial case, only the adjusting nut and terminals being exposed.

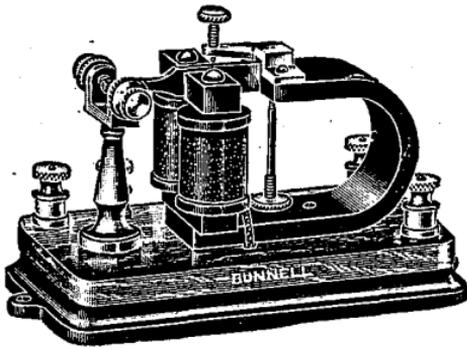
The top of the case is of beveled plate glass permitting easy inspection of the contact-arm and stops and the upper part of case is hinged to make it accessible for adjustment of stops.

We can furnish the apparatus with either permanent magnets or energising coil as desired. Standard resistance 150 x 150 ohms. Energising Coil, 100 ohms. Normal Working current, 5 Milliamperes. Minimum, .5 Milliamperes. Dimensions about 6 inches high. Diameter of base, about 5 1/4 inches.

Schedule BA.

List No.		Price Each
9128	Wheatstone Relay	\$85.00

POLAR RELAYS.



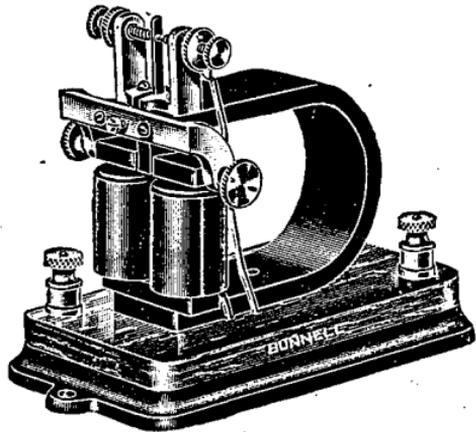
No. 555.

Polarized Relays are more sensitive than neutral relays even on direct current, make and break circuits, in which case the armature must have either a spring or magnetic bias to draw or attract it to one of its limiting stops when the circuit may be opened.

Their chief use, however, is in connection

with pole changing keys or transmitters as in duplex and quadruplex work in which cases differential windings are used, one of the windings being in the actual line and the opposing winding in the artificial line for the purpose of rendering the relay irresponsive to signals from its own station.

When used with pole changing impulses and the armature is not biased it will remain against either stop when circuit is open.

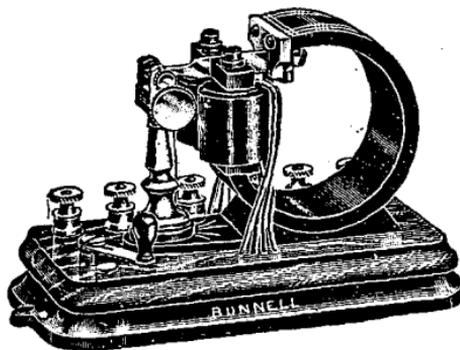


No. 557.

Schedule BA.

List No.	Price Each
555 No. 1 Polarized Relay, 20 Ohms.....	\$10.00
556 No. 1 Polarized Relay, 50 Ohms.....	10.30
557 No. 2 Polarized Relay, 50 Ohms.....	15.00
558 No. 2 Polarized Relay, 100 Ohms.....	15.50

STANDARD POLAR RELAY.



No. 554.

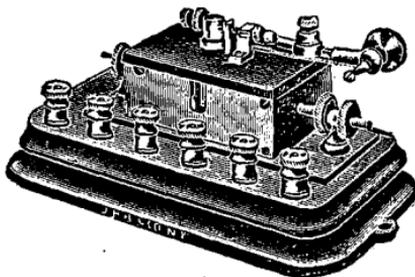
This form continues to be a great favorite and is believed by many experts to be unexcelled by any other type.

It is well constructed, very sensitive and is provided with double contacts and a switch so that the local working stop can be changed instantly without changing the wires.

Schedule BA.

List No.	Price Each
554 Differentially Wound, 400 x 400 Ohms.....	\$30.00

FREIR POLAR AND NEUTRAL RELAYS.



No. 3109.

These were the Western Union Standard for many years.

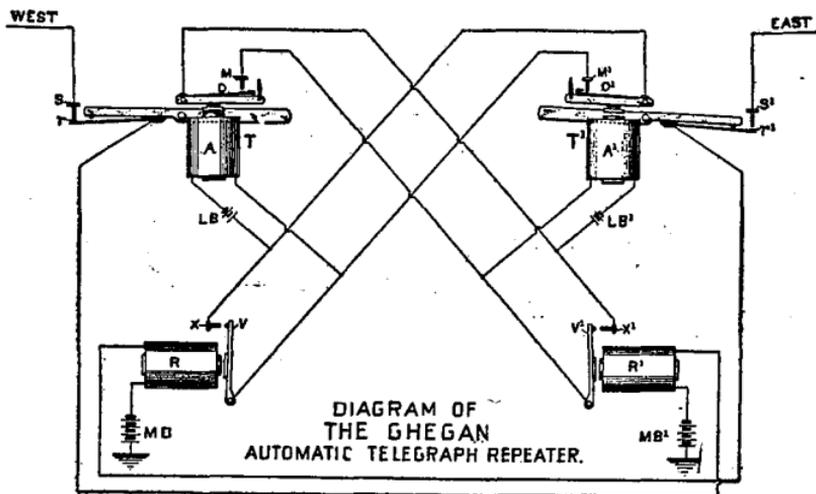
We make them in the best manner possible, extremely durable and sensitive.

Schedule BA.

List No.	Price Each
3109 No. 1 Freir Polar Relay	\$40.00
774 No. 2 Freir Neutral Relay	40.00

THE GHEGAN AUTOMATIC TELEGRAPH REPEATER.

MODE OF OPERATION.



There being no extra weight or attachment of any kind to either the relay or transmitter armatures, the quickest possible action can be obtained with this repeater.

As both relay armatures work in unison, it can always be seen at a glance if the signals are being properly repeated.

We believe these repeaters are capable of giving the best results under all conditions.

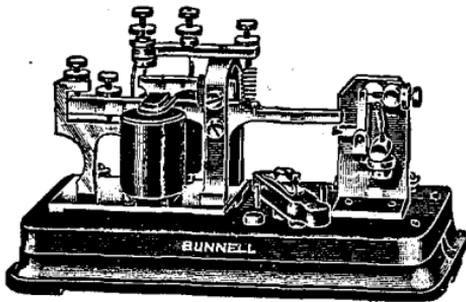
The transmitters, when once set, need practically no attention, the only adjustment necessary being that of the ordinary relay.

There being fewer parts to connect and fewer wires to be run, there is much less complication than with other forms of automatic repeaters, so that any operator can easily understand them sufficiently to set them up and manage them.

The transmitters are provided with switches for working the lines independently or putting them together at will.

These repeaters are now in use on the lines of the B. & O., Lehigh Valley, N. Y. Central, Penna., Erie, Seaboard Air Line, Mexican National Railroads, The U. S. Telephone Co., American Sheet Steel Co., U. S. Govt. Signal Service, Telephone Companies, and after long competitive tests, were adopted as the standard of the Postal Telegraph and Cable Co.

**THE GHEGAN AUTOMATIC TELEGRAPH REPEATER.
THE GHEGAN CIRCUIT CONTROLLER OR TRANSMITTER.**



No. 6219.

Novel, Simple, Efficient.
No Extra Local Magnets.
Simple as a Button Repeater. Ordinary Relays Used. No Extra Instruments. No Extra Local Batteries.

Two ordinary Relays and two GHEGAN Transmitters, like cut, constitute a complete set of Automatic Repeaters.

PRINCIPLES INVOLVED.

The fact that an armature on being drawn towards a magnet becomes itself magnetic by induction, and that the closer it approaches the magnet the stronger the magnetism becomes, are the novel principles utilized in this repeater.

DESCRIPTION.

It will be noticed that, besides its ordinary armature repeating contact, the transmitter is provided with a second armature mounted above the regular one. The lever of this second or superposed armature makes contact with its back stop the instant that the armature begins its upward movement.

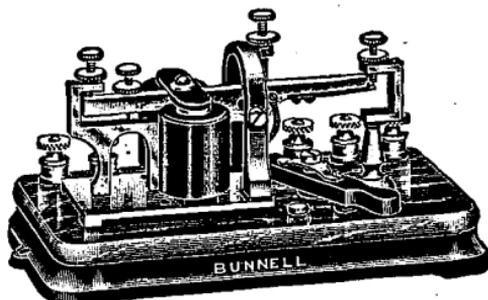
The second armature spring is adjusted so that, on closing the local circuit of the transmitter, the regular armature must reach its front stop before the magnetism induced in it is sufficiently strong to draw the second armature from its back stop. The object of this is to allow a sufficient margin of time between the closing of the main circuit by the downward movement of the first armature and the opening of a shunt circuit by the subsequent downward movement of the second armature, to permit a relay in the main circuit to close its local contacts before the shunt circuit around them is opened.

This margin of time between the closing of the main and the opening of the shunt circuit enables these repeaters to work well even on leaky lines where the relays act so sluggishly as to render other types of automatic repeaters useless.

Schedule BA.

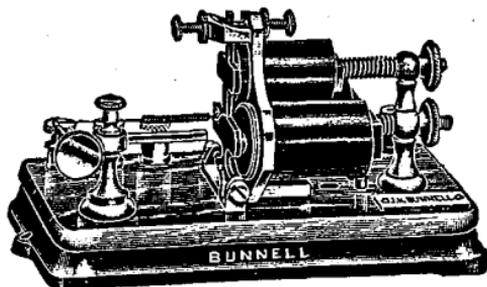
List No.	Price Each
6218 Set Complete (2 Transmitters and 2 Relays).....	\$66.00
6219 Ghegan Transmitter only	24.00

AUTOMATIC TELEGRAPH REPEATERS.



No. 589.

Weiny-Phillips Transmitter.



No. 590.

Weiny-Phillips Relay.

The operation of this repeater is simple and easily understood. The third spool of relay is differentially wound, so that normally the windings neutralize each other and no magnetism is developed in this spool. One of the coils of the differential spool is in circuit with the front contact of the transmitter of opposite side, so that the instant the transmitter circuit is broken the corresponding coil of the differentially wound spool is opened, thereby permitting the second coil to act and hold the relay armature closed.

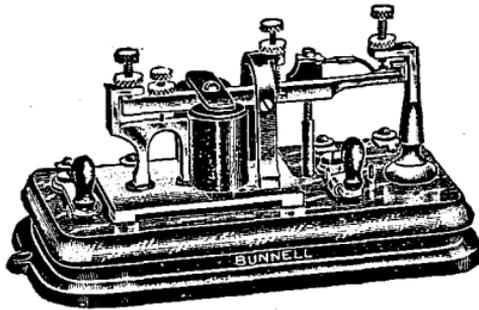
The differential magnet being energized by the breaking instead of the closing of the auxiliary circuits enables this repeater to act quickly, and thereby very materially increases its capacity for rapid signalling.

These instruments are beautifully designed and handsomely finished. Have hardened silver contacts, polished rubber covered magnets, etc., and mounted on a hardwood base with enameled iron surbase.

Schedule BA.

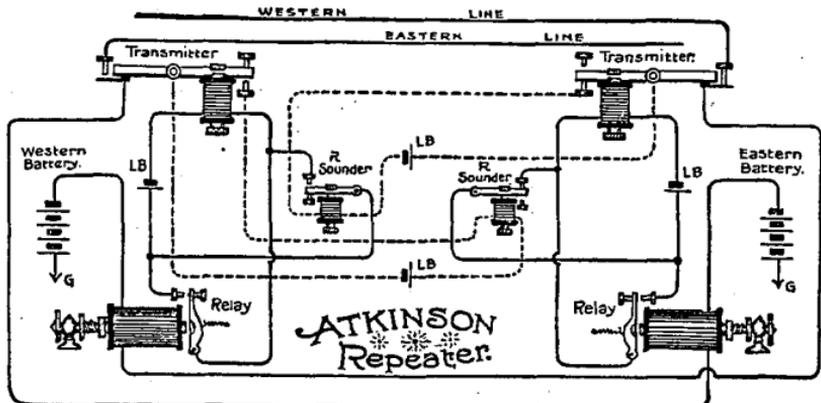
List No.	Price Each
9080 Set complete, consisting of 2 Transmitters and 2 Relays	\$70.00
9081 W. P. Transmitter only each.....	16.00
9082 W. P. Relay only each.....	20.00

ATKINSON REPEATER.



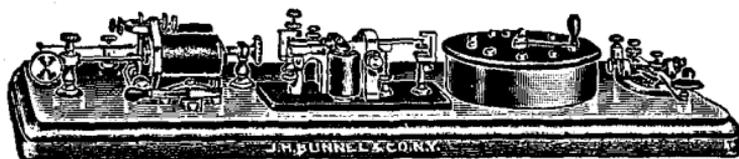
No. 592.

This repeater has been extensively used by the Western Union and generally gives good satisfaction. It consists of two of our Standard Relays, two Atkinson Transmitters and two Bunnell Repeating Sounders arranged as shown in the diagram.



Schedule BA.

List No.		Price Each
592	Atkinson Repeater Transmitter only, 6 Ohms.....	\$15.00
9048	Set complete consisting of 2 each Relays, Transmitters and Sounders	60.00

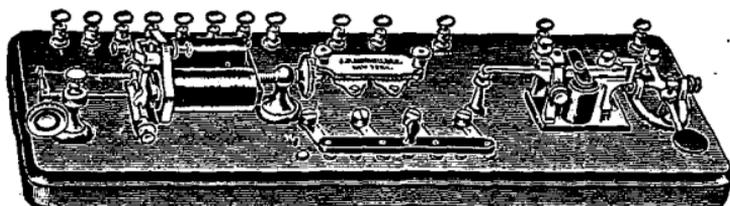
AUTOMATIC REPEATERS.**Bunnell-Toye Form.**

No. 686.

Simple, reliable and easily managed under all circumstances. The set consists of Relay, Transmitter, Rheostat, Key and Switch. Two of these instruments make a complete Repeater. When connected, a turn of the Switch makes both parts act automatically as a repeater, or turned in opposite direction, separates the lines, leaving each line connected to and operated separately by its own set of instruments.

Schedule BA.

List No.	Price Each
686 Complete Repeater (consisting of two Instruments), Polished Brass	\$140.00
9088 Complete Repeater (consisting of two Instruments), Nickel Plated	152.00

OPEN CIRCUIT AUTOMATIC REPEATER.

No. 687.

A Relay, Transmitter, Key, Lightning Arrester and Switch mounted on a polished hardwood base constitutes one instrument. Two of these make a complete Repeater. When connected they can be used as an Automatic Open-Circuit Repeater, or as two single sets of ordinary Morse Open-Circuit Instruments, according to the position of the Switch on each set.

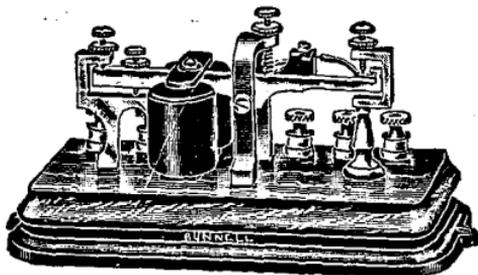
Full directions for connecting up and operating accompany each Repeater.

Schedule BA.

List No.	Price Each
687 Complete Repeater (consisting of two Instruments), Polished Brass	\$140.00
9089 Complete Repeater (consisting of two Instruments), Nickel Plated	152.00

SINGLE POLE TRANSMITTERS.

Single Transmitter.—Shovel Nose Pattern.
With Circuit Preserving Contacts.



No. 595.

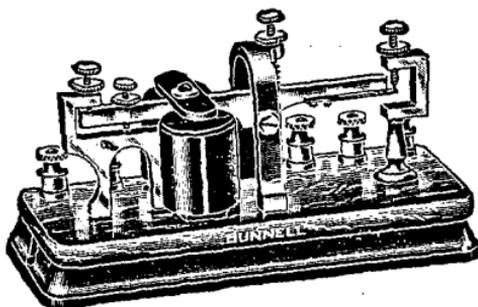
Has hardened silver contact points. Mounted on Mahogany base with enameled subbase and all brass parts polished and lacquered.

Schedule BA.

List No.

Price Each

595 Single Transmitter, 6 Ohms.....\$15.00

CIRCUIT PRESERVING TRANSMITTER.

No. 596.

Latest improved form of Circuit Preserving or Single Transmitter, as used on Duplex Transmitter System.

Has the same high standard of construction of all our instruments.

Specifications are the same as for the Single Transmitter.

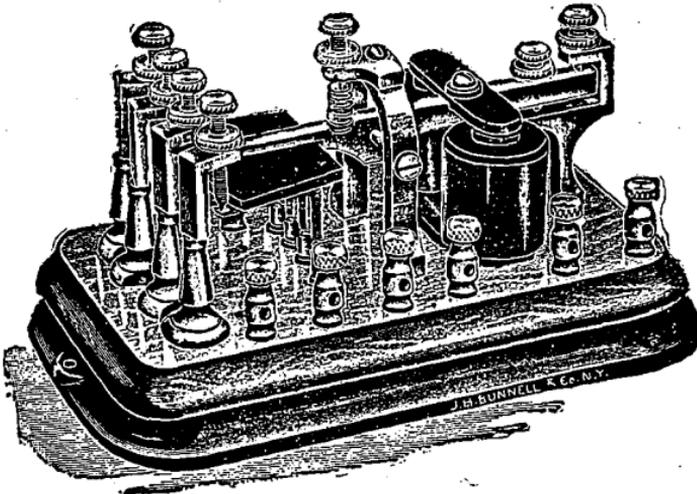
Schedule BA.

List No.

Price Each

596 Circuit Preserving Transmitter, 6 Ohms.....\$13.00

MULTIPLE TRANSMITTERS.



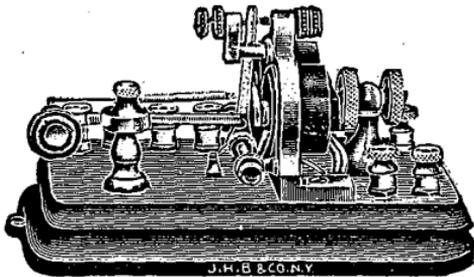
No. 2918.

These Transmitters are used to repeat time or other signals simultaneously over a number of circuits.

Schedule BA.

List No.	Price Each
2918 Four Point Transmitter, 6 Ohms.....	\$30.00

SMITH THREE COIL NEUTRAL RELAY.



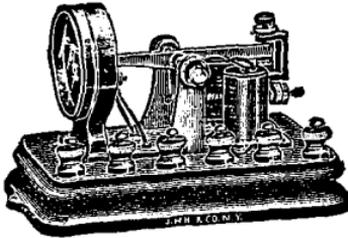
No. 601.

For quadruplex work, has proven a very satisfactory instrument, as made by us. The windings and mountings must be carefully and skillfully done in order to obtain the best results of which the instrument is capable.

Schedule BA.

List No.	Price Each
601 Smith Relay, 200 x 200 Ohms.....	\$20.00

"CLOCK FACE" POLE CHANGER TRANSMITTER.



No. 602.

This is an excellent form of Battery Pole Changer. It has been extensively used by the Western Union on Duplex and Quadruplex Circuits.

The contact points are enclosed in a protecting cover having a glass front to facilitate inspection.

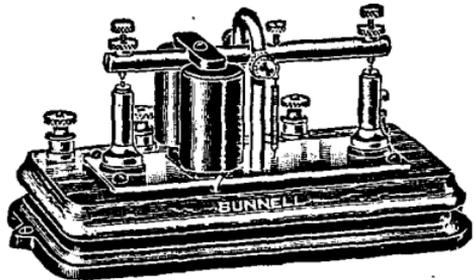
Schedule BA.

List No.	Price Each
602 Clock Face Pole Changer. 6 Ohms.....	\$36.00

**STANDARD DYNAMO
POLE CHANGER.**

Walking Beam Model.

For Duplex and
Quadruplex Circuits.



No. 603.

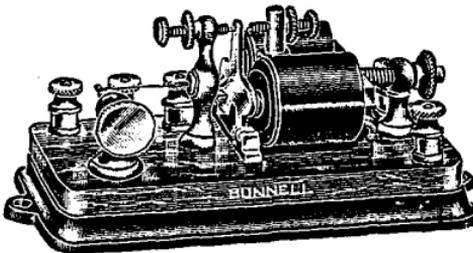
Schedule BA.

List No.	Price Each
603 Wound to 6 Ohms.....	\$16.00

PONY POLE CHANGER.

Penn. R. R. Pattern.
For Dynamo Work.

This a favorite type of Duplex and Quadruplex Circuits that use dynamo instead of battery currents.



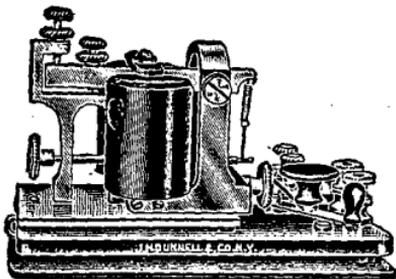
Schedule BA.

List No.	Price Each
604 Pony Pole Changer. 10 Ohms.....	\$10.50

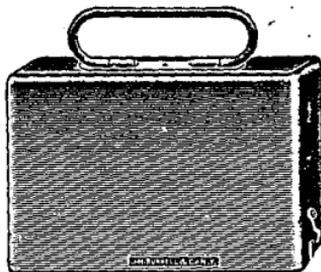
ARMY FIELD TELEGRAPH SET.

With Bunnell's Patent Aluminum Resonator Base and Carrying Case.

This set was formerly used by the United States Army Telegraph Service. It has a full size Main Line Sounding Relay, 150 Ohms and Key, in a most compact, convenient, practical and beautiful form. The Case is of highly polished brass and lacquered; 6 inches long, by 3½ inches deep, by 4 inches wide.



No. 598.

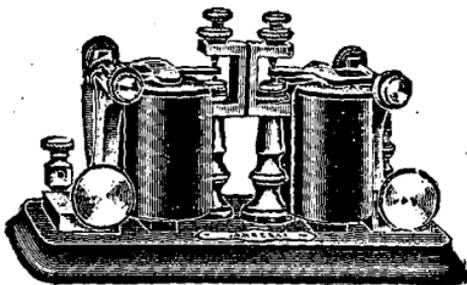


Case.

Schedule BA.

List No.	Price Each
597 150 Ohm Field Set, with Case.....	\$28.00
598 150 Ohm Instrument only.....	24.00

BALANCED DOUBLE RELAY.



No. 540.

This instrument consists of two high grade relays connected in series on same base, having opposite contacts, which may be connected in series or multiple for the purpose of opening or closing a second circuit when the first or main circuit through the relays is varied or broken. As the local contacts are oppositely arranged, that is to break or make circuit under opposing conditions, one making contact on front and the other on the back stop, the relays

being properly adjusted, an increase or decrease in the relay circuit will cause one or the other armature to move, thus opening or closing the local or second circuit. This prevents the possibility of alarm being made inoperative by grounding or opening or by increasing or decreasing the current in the circuit.

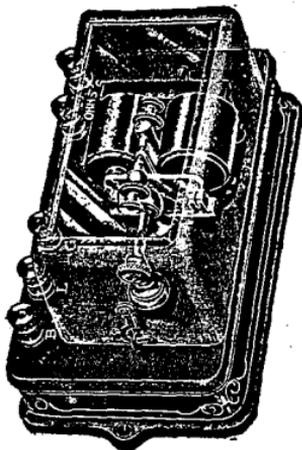
Contacts are of hardened silver and all metal parts are of highly polished brass. Substantially constructed, very efficient and reliable.

Schedule BA.

List No.	Price Each
540 Balanced Double Relay, 150 Ohms.....	\$22.00

GHEGAN BATTERY KICK-OFF AND LINE DISCHARGER

For Raising Intermediate Stations on Leaky Lines and Eliminating
"Breaking In" by "Non-Adjusted" Offices.



Patented.

When placed at terminal or battery stations of leaky lines, causes the ordinary instruments in way or intermediate offices to respond to every signal from any office on the line, provided the instruments at the terminal or battery offices are in adjustment.

It is very simple and does not add any resistance or complication to the main circuit.

It consists of a special "Inductarium," the primary coil of which is connected in multiple or series with the regular local sounder, and a special type of relay having its magnet winding connected to the secondary coil of the inductarium.

The armature lever and back contact of the special relay are placed in series in the main line so that when the local circuit is broken by armature of regular

relay, an induced impulse or "kick" from the inductarium energizes the special relay, thus momentarily breaking the main line circuit by the withdrawal of special relay armature from its back stop. Therefore, the opening of any key on the line "kicks" all battery off, consequently every relay armature responds.

The duration of the "kick" is so short that it has no effect on the regular working of the line.

An impulse or "kick" of opposite polarity ordinarily follows the closing of the circuit, but at this would be an interference causing false dots, it is nullified by a magnetic bias to the special relay which makes the armature responsive to one polarity only.

When static effects interfere with perfect line working, by connecting the front contact of special relay to earth and the line to the armature, a discharge will be made every time the armature contacts with its front stop.

The apparatus may be used at intermediate stations for discharging only, by connecting a leg from line to armature of special relay and grounding its front stop.

The complete apparatus is mounted in a finely dust-proof case having beveled glass top as shown in cut.

It is very compact, base measurement being only about 7 x 4 inches.

When ordering, state resistance of local sounder and voltage of local battery.

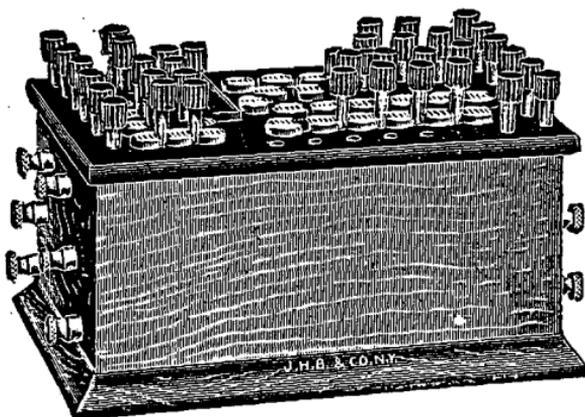
List No.

Schedule BA.

Price Each

8639 Ghegan Battery Kick-Off\$30.00

PLUG TYPE RHEOSTATS.



STANDARD QUAD. RHEOSTAT.

Schedule BA.

List No.	Price Each
7551 Capacity 20,025 Ohms	\$75.00

PROPORTIONAL QUAD. RHEOSTAT.

Schedule BA.

List No.	Price Each
7552 Capacity 2,400 Ohms	\$36.00

STANDARD DUPLEX RHEOSTAT.

Schedule BA.

List No.	Price Each
7553 Capacity 6,300 Ohms, each side.....	\$30.00

SMITH RHEOSTAT.

Schedule BA.

List No.	Price Each
7554 Capacity 700 Ohms, each side.....	\$16.00

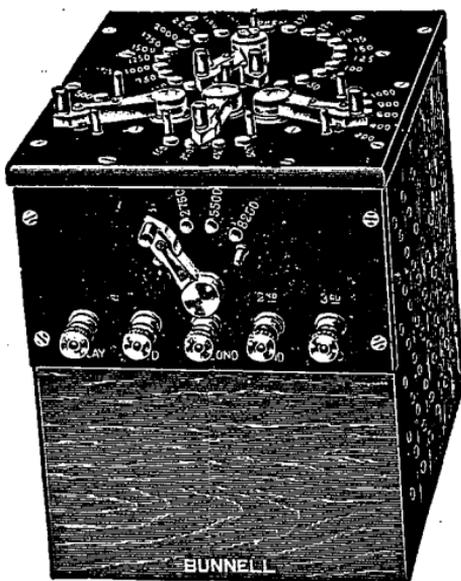
STANDARD RHEOSTAT.

Improved Solid Top, with coils carefully and accurately adjusted.

Schedule BA.

List No.	Price Each
1247 Capacity $\frac{1}{2}$ to 10,000 Ohms.....	\$80.00
1248 Capacity 1 to 10,000 Ohms.....	77.00
1250 Capacity $\frac{1}{2}$ to 2,000 Ohms.....	75.00
1251 Capacity 1 to 2,000 Ohms.....	72.00

RHEOSTATS.



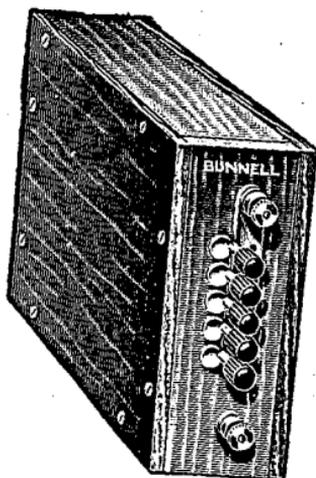
No. 9091.

Standard Duplex and Quadruplex Types.

Combination Radial Arm Rheostats, Leak Rheostats, Printer Rheostats, and added Resistances. We make them all in the most skillful manner and for the most reasonable prices consistent with our High Grade Work.

Schedule BA

List No.		Price Each
9090	Radial Arm Rheostat	\$60.00
9091	Printer Rheostat	65.00
9092	Leak Rheostat	45.00
9093	Line Resistance Box	35.00

CONDENSERS.**Adjustable and Non-Adjustable.**

No. 5356.

Our Condensers have stood the highest requirement tests of both insulation and break down. We can furnish them to suit particular conditions at extremely low prices.

Adjustable multiple Condensers are subdivided into five sections.

Schedule BA.

List No.	Price Each
5356 3 M. F. Adjustable.....	\$30.00
5358 5 M. F. Non-adjustable...	36.00

MACHINE MADE CONDENSERS.**UNMOUNTED UNITS FOR EXPERIMENTAL PURPOSES.**

Very compact and efficient.

Schedule BA.

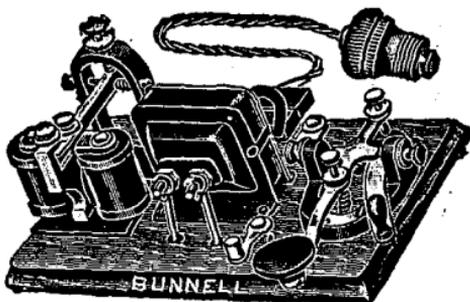
List No.	Capacity	Price Each
8596	Capacity $\frac{1}{8}$ M. F.	\$1.30
8597	Capacity $\frac{1}{4}$ M. F.	1.40
8598	Capacity $\frac{1}{2}$ M. F.	1.50
8599	Capacity 1 M. F.	1.75
8600	Capacity $1\frac{1}{4}$ M. F.	2.00

SMALL UNITS MOUNTED IN BLACK JAPANNED TIN CASES.**Schedule BA.**

List No.	Capacity	Price Each
9921	Capacity $\frac{1}{8}$ M. F.	\$1.00
9922	Capacity $\frac{1}{4}$ M. F.	1.00
9923	Capacity $\frac{1}{2}$ M. F.	1.10
9924	Capacity 1 M. F.	1.25
9925	Capacity $1\frac{1}{4}$ M. F.	1.50

In addition to the above, we can furnish Condensers of other capacities either mounted or unmounted. Send us your order, stating exact requirements. We guarantee satisfaction in both quality and price

ALTERNATING CURRENT COMBINATION INSTRUMENT.
(Ghegan Patent.)



Consists of A. C. Sounder, Steel Lever Key, and Transformer; mounted on base, as shown in illustration, with six foot cord, and attachment plug.

The Ideal Instrument for Telegraph Schools, Home Practice, Private Lines, etc.

Always Ready. No Danger. No Battery. No Dirt, and practically No Expense to operate.

Can be used on the 110 Volt 60 Cycle Alternating Current Lighting Circuit by screwing the attachment plug into a lamp socket.

Works as perfectly as from a battery. Never requires change of adjustment.

Schedule BC.

List.No.	Price Each
9056 Complete	\$12.00

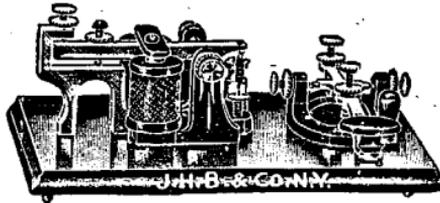
NOTE: Two or more instruments may be connected in series just the same as instruments with batteries, by attaching the primaries of the transformers in multiple to the 110 Volt 60 Cycle Lighting Circuit with the secondaries and the sounders all in series which is done by simply screwing the attachment plugs into lamp sockets, and connecting the instruments in the usual way, through their binding screws or terminals. Two terminals or binding posts and a single point switch are mounted on base of each instrument.

In working two or more instruments on a line, polarity of impulses must correspond—If instruments work independently (with switches closed) but do not work together with the switches open, simply reverse one of the connecting blocks and they will respond properly.

When it is desired to operate two or more instruments on a line the terminals are used for connecting the instruments in series, when used this way, the single point switches should be left open. Closing a switch localises the instrument so that it can be used for practice without interfering or being interfered with by other instruments on the line.

NOTE: The Switch should be closed at all times on instruments used singly.

THE "DANDY" MORSE LEARNER'S OUTFIT.



No. 607.

Consists of a full size, well made, complete Morse Telegraph apparatus of the latest and best form for learners, including handsome sounder, with Steel Lever (Solid Trunnion) Key, and a cell of gravity battery, latest form. It is the best working set of learner's instruments for short or long lines, yet offered. The sounder lever, sounding post, adjustment screws, etc., are in finely finished brass composition, the same metal as in all our first class instruments. The Magnets are strong. The Sounder is loud and clear. The Key has steel lever, mounted on Japanned Iron Frame.

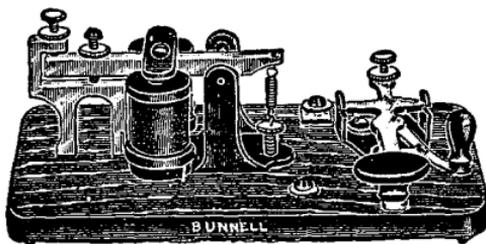
Without doubt the finest practice set ever produced, either for the beginner or experienced operator.

Schedule BA.

List No.	Price Each
605 Complete Outfit consists of one 5 Ohm "Dandy" Learner's Instrument, with 5 x 7 Crowfoot Battery, Wire, Book of Instructions, and all necessary material for operating	\$5.00
606 Same as No. 605 but with Dry Cell instead of Crowfoot Battery	4.00
607 "Dandy" Morse Instrument only, 5 Ohms.....	3.50
608 "Dandy" Morse Instrument only, 20 Ohms.....	3.80

THE "NEW DEPARTURE" LEARNER'S OUTFIT.

With Beeko Key and Sounder.



No. 436.

The ideal set for home practice. Always ready, neat, clean and attractive.

The instrument is a well made Beeko Learner's Apparatus, with a Steel Lever Key, arranged for use with a cell of Mascot Dry Battery.

The "Circuit Closer" should be detached from the key, as it will prolong the life of the battery to leave the circuit open when not using the instrument. With "Circuit-closer" detached the Mascot Dry Battery should last for several months' practice.

When it is desired to operate two or more instruments on one line with Bluestone Battery, the "Circuit-closers" should be left on the keys.

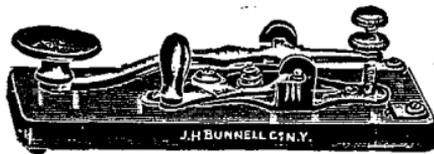
The Magnets can be rewound at slight expense when instruments are to be used on longer lines.

Schedule BA.

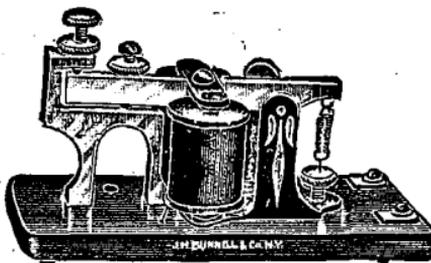
List No.	Price Each
611 Complete Outfit consisting of one 5 Ohm Beeko Learner's Instrument, with Cell of Mascot Dry Battery, Wire and Book of Instructions	\$3.50
436 Beeko Instrument only, wound to 5 Ohms.....	3.00
437 Beeko Instrument only, wound to 20 Ohms.....	3.30

BEEKO LEARNER'S KEY AND SOUNDER.**Schedule BA.**

Instruments are similar to those furnished with our regular Beeko Learner's Sets, but are mounted on separate bases, where, for convenience sake, it is so desired.



No. 5873.



No. 5874.

BEEKO KEY.

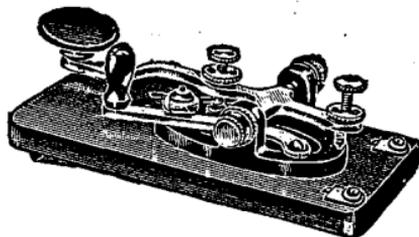
List No.		Price Each
5873	.....	\$1.40
	Postage weight, 1 pound.	

BEEKO SOUNDER.

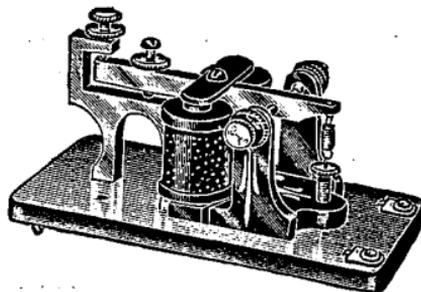
List No.		Price Each
5874	5 Ohms	\$2.40
6220	20 Ohms	2.70
	Postage weight, 2 pounds.	

"DANDY" LEARNER'S KEY AND SOUNDER.**Schedule BA.**

The "Dandy" is our higher grade Learner's Set, and is superior to any other Learner's Set on the market. These Keys and Sounders are the same as those furnished with our regular sets, but are mounted on separate bases.



No. 775.



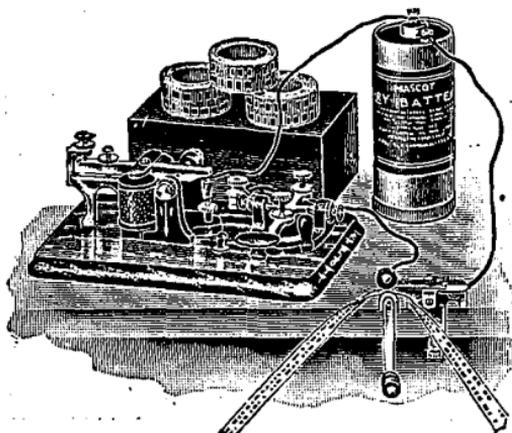
No. 776.

"DANDY" KEY.

List No.		Price Each
775	.....	\$1.80
	Postage weight, 1 pound.	

"DANDY" SOUNDER.

List No.		Price Each
776	5 Ohms	\$2.80
777	20 Ohms	3.10

THE AUDIBLE ALPHABET TRANSMITTER.**For Self-Instruction in Reading Morse or Continental.**

The Morse Code Outfit has one large roll of tape containing four graded lessons and can be used with any battery telegraph instrument.

The Continental Code Outfit also has one large roll of tape containing four lessons in the Continental Code and can be connected to a Telegraph instrument or with a Key and Buzzer to reproduce wireless signals.

Schedule BA.

List No.		Price Each
2371	Audible Alphabet with Morse Records.....	\$1.20
9095	Extra Morse Records .....	.30
9096	Audible Alphabet with Continental Code.....	1.20
9097	Extra Continental Records .....	.30

Outfit consisting of Audible Alphabet, Five Ohm "Dandy" Learner's Instrument, Dry Battery, Wire and Book of Instructions.

Schedule BA.

List No.		Price Each
7500	Outfit Complete, as in illustration.....	\$5.20

TELEGRAPHIC PHONOGRAPH RECORDS.**The Up-to-date Way of Learning Telegraphy.**

Any one interested who has a Standard Disc Talking Machine should get a set of these records. They may be used or reproduced indefinitely on any make of regular disc talking machine such as the Victor or Columbia. The lessons are graduated from the simplest to regular Commercial and Railroad work.

We furnish them in both regular Morse and Wireless or Radio Buzz Signals.

They are made from the sending of experts and the more advanced lessons are not only duplicates of regular forms used in both Commercial and Railroad work but they also produce the most common interfering conditions so that the student acquires actual knowledge in detail of regular telegraphic work and thus may become in a short time, a high class telegrapher.

Schedule BJ.**REGULAR MORSE.**

List No.		Price Each
9907	Set of Eight Double Disc Columbia Records.....	\$8.00
9908	Single Morse Records	1.25

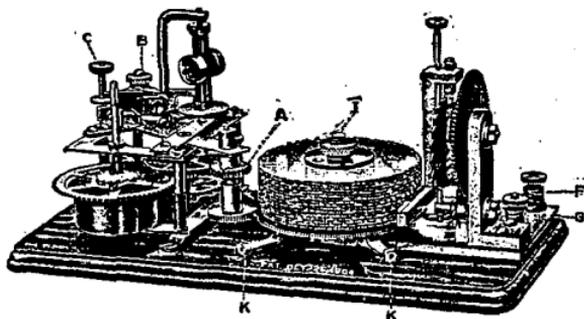
WIRELESS OR RADIO (Sold only in sets).

9909	Set of Four Double Disc Columbia.....	4.00
9910	Set of Six Double Faced Victor Records comprising full Wireless Course with Instruction Booklet.....	6.00

NOTE: The Wireless Records are sold only in sets.

AUTOMATIC TELERAPH TEACHERS.

THE No. 2 OMNIGRAPH.



Sends messages at any speed between 5 and 100 words per minute, in either Morse or Continental Code.

Furnished with 15 Aluminum Dials, adjusted so you can change from one dial to another or even from one word to another automatically.

Operated by a spring motor that will run 1200 words on one winding. Can

be connected to any Key and Sounder or Wireless Buzzer.

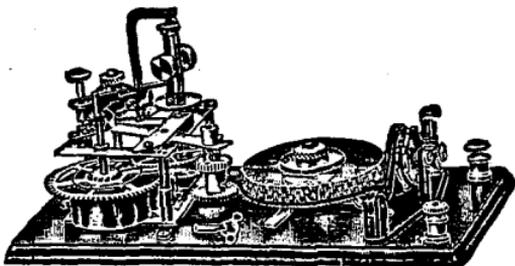
List No.	Schedule BJ.	Price Each
8984	No. 2 Omnigraph	\$23.00
8985	Extra Set 15 Dials, Morse or Continental.....	3.75

OMNIGRAPH No. 2 JUNIOR.

Has the same essential features that distinguish the No. 2, but is only equipped with 5 Dials, which can be furnished in commercial, Morse, Railroad Morse or Continental.

Schedule BJ.

No. 8986.	No. 2 Junior Omnigraph.	Price each	\$16.00
No. 8987.	Extra Set of Dials. (Special Kind.)	Price each	\$1.25



No. 3 OMNIGRAPH TRANSMITTER ONLY.

To be used in circuit with Learners instrument or sounder. Consists of alphabet disc and crank. Extra dials with other matter can be furnished.

List No.	Schedule BD.	Price Each
9033	No. 3 Omnigraph Transmitter	\$3.00
9034	Extra Dials .....	.15

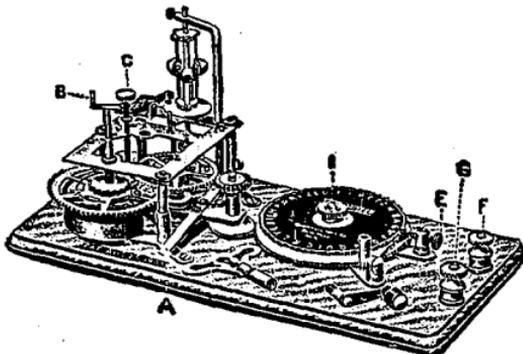
OMNIGRAPH No. 5.

While this instrument has the same motor as the other models it is not elaborate, only 2 dials being furnished with this set. Can be used in connection with Key and Sounder or Buzzer Practice Set.

Schedule BD.

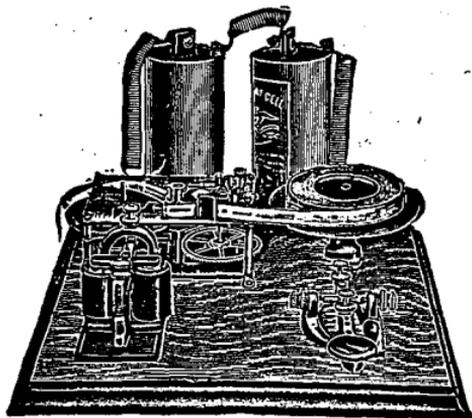
List No. 8988.	No. 5 Omnigraph.	Price each	\$9.00
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The Omnigraph is used for instruction purposes by several departments of the U. S. Government and by the leading Universities,



College and Telegraph Schools throughout the country.

THE NATIONAL AUTOMATIC TELEGRAPH SELF-TEACHER.



Will make you an expert operator. You can learn to receive at a speed faster than that used on ordinary telegraph wires. It also sends slowly and at any speed desired between 5 and 40 words per minute. You learn to send accurately by listening to the records which have been made by an expert telegraph operator, and which reproduce the characters exactly as they were by him upon the telegraph key.

Each record contains from 300 to 500 words; there are 27 different records, containing approximately 10,000 words.

These records consist of beginning exercises, train orders, newspaper reports,

commercial and railway messages, wire conversation, market reports, etc.

One device connected on a line with a number of instruments will send to all at the same time. Every student of telegraphy or club of students should have one.

The entire outfit includes transmitter, Bunnell Sounder, Steel Lever Key, 2 Dry Cells, Entire Set of Records and The Telegraph Instructor (cloth bound) containing 316 pages of information—invaluable to the student.

Schedule BD.

List No.	Price Each
6228 Outfit complete, with Key, Sounder and Batteries.....	\$30.00
6229 Transmitter only, without Key, Sounder or Batteries..	26.00
9098 Series of 27 Morse Records only.....	5.50
9099 Single Morse Record only.....	.30

THE NATIONAL CONTINENTAL CODE TRANSMITTER.

This instrument is the same in design and construction as the Telegraph Self-Teacher with the exception that the Sounder is replaced by a Buzzer and Single Receiver Head Set, in order to get the same sound as produced by wireless signals.

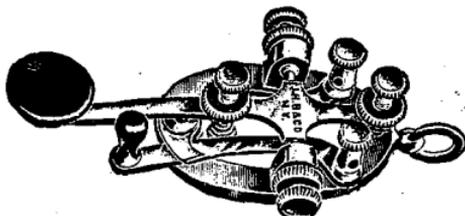
Complete Outfit includes Transmitter, Key, Buzzer, Head Set, 27 Continental Code Records and Wireless Hand Book.

Schedule BD.

List No.	Price Each
9100 Outfit Complete	\$30.00
9101 Series of 26 Continental Code Records.....	5.50
9102 Single Continental Code Records.....	.30

MINIATURE BUNNELL INSTRUMENTS.

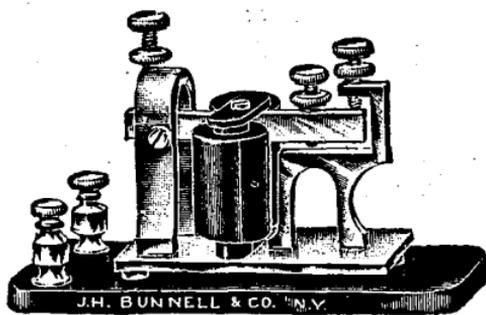
Gold
Lacquered
Body.
Nicked
Lever.



Polished
Rubber
Knob.

No. 440. (Cut Full Size.)

Gold
Lacquered
Body.



Ebonite
Base.
Rubber
Covered
Magnets.

No. 442. (Cut Full Size.)

Perfect working Bunnell Models. Complete in every detail.

The prettiest things ever produced in the shape of Telegraph Instruments.

Every operator in and out of service should have them.

The Miniature Key can be furnished with ring (as shown in cut) for use as a watch charm, or with pin for use as a badge.

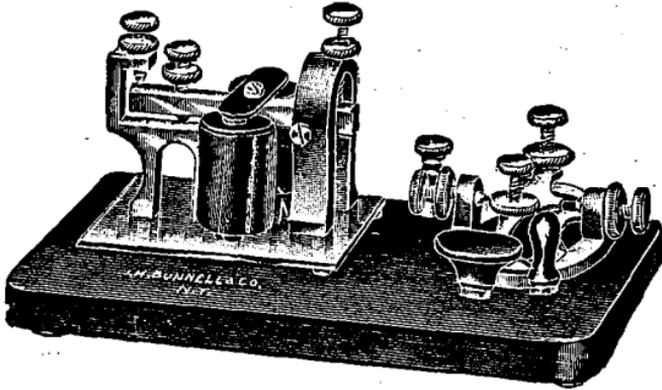
The Miniature Sounder is wound regularly to 5 ohms, but can be furnished in higher resistances at a slightly advanced cost.

Schedule BA.

List No.		Price Each
440	Miniature Key with Ring.....	\$2.50
441	Miniature Key with Pin.....	2.50
442	Miniature 5 Ohm Sounder.....	4.00
9103	Miniature 20 Ohm Sounder.....	4.50
9104	Miniature 150 Ohm Sounder.....	6.00

Sent by sealed Registered Mail on receipt of price.

BUNNELL MINIATURE COMBINATION SET.

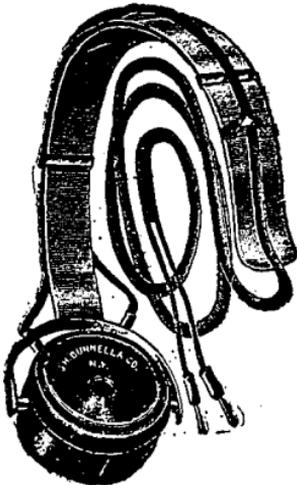


No. 444 (Actual Size).

This handsome little set consists of our Miniature Sounder and Key mounted on a polished hard rubber base. The brass parts are highly polished and finished in a beautiful gold lacquer.

Works like a "Charm."

List No.	Schedule BA.	Price Each
9419	Miniature Combination Set, 5 Ohms.....	\$7.00
9420	Miniature Combination Set, 20 Ohms.....	7.50
9421	Miniature Combination Set, 150 Ohms.....	8.50



No. 6230.
Cut 1/4 size; weight, 8 oz.

THE BUNNELL SECRET SOUNDER.

For noisy places; or where the click of ordinary sounder is objectionable; or where secrecy is desired.

Just the thing for Brokers' offices and Board work; or for noisy Railroad offices, where it is difficult to hear the regular sounder with resonator.

The headpiece contains a Miniature Bunnell Sounder, the strokes of which can be adjusted to suit.

When not receiving, it may be dropped to the shoulder or placed on the desk.

The headband is adjustable, the cord of ample length, and, the outfit being finished in high-grade style, presents a handsome appearance.

Complete with headband and silk-covered cord, as shown in illustration.

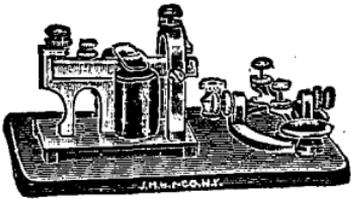
List No.	Schedule BA.	Price Each
6230	Wound to 5 Ohms.....	\$13.50
6231	Wound to 20 Ohms.....	14.00
6232	Wound to 150 Ohms.....	15.00

INTERCHANGEABLE COMBINATION INSTRUMENTS.

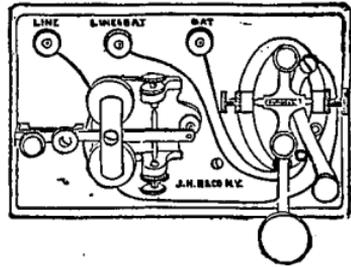
For Open and Closed Circuit Systems.

Use Dry Battery For Telegraphing.

Saves Over 75% of Battery Expense.



No. 432.



Our new Interchangeable Instrument can be used singly for learning or on lines having several offices for practicing or for regular Telegraph work.

With the ordinary instruments when the line is not in use and the Keys are closed (as they have to be to enable signals or calls to be made) there is a continuous waste of battery and when dry cells are used this waste soon exhausts them, thus making their use as costly if not more so than that of the blue vitriol type of wet battery.

By using our Interchangeable Combination Instruments the battery is only in use whenever signals are being actually sent, consequently the Dry Cells will last for a long time, estimated at from one to three years.

The new instrument, although differing in construction, has the appearance of the regular standard closed circuit types with circuit-closing switch on key and is manipulated in the same manner, that is, the circuit-closer must be thrown open or away from the lever when sending, and must be closed or thrown towards the lever when through sending or when a distant office breaks.

DANDY LEARNER'S INSTRUMENT.

With Interchangeable Attachment.

Schedule BE.

List No.		Price Each
430	5 Ohms Resistance	\$6.00
431	20 Ohms Resistance	6.30

GIANT COMBINATION SET.

With Interchangeable Attachment.

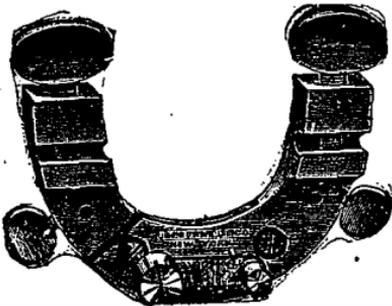
Schedule BE.

432	5 Ohms Resistance	\$8.00
433	20 Ohms Resistance	8.30

(20 Ohm Instruments are recommended for use with Dry Battery.)

LINE TAPPING CLAMP.

With Circuit Closer.



No. 2280.

The Line Tapping Clamp is for use in establishing a temporary office anywhere on the line. The line wire is clamped tightly in the upper clamps, and then cut between the clamps and the operating instrument attached by two pieces of wire to the two lower clamps. The Clamp is provided with a circuit closer, which should be always closed when not using the instrument. The Clamp may be left in the line after using until the line repairer can take it out and reconnect the line. This Clamp will take wire as large as No. 8 B. W. G.

the line. This Clamp will take wire as large as No. 8 B. W. G.

Schedule BA.

- | | |
|---|------------|
| List No. | Price Each |
| 2280 Brass; Polished and Lacquered..... | \$6.50 |
| 2281 Steel; Polished and Lacquered..... | 6.50 |

LINE TAPPING CLAMP

No. 2.

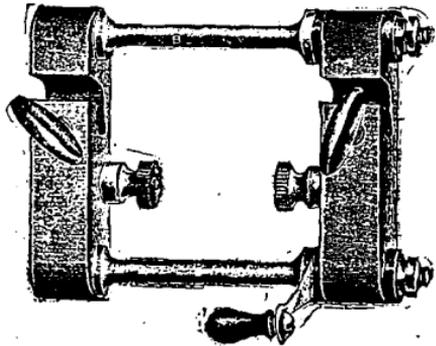
Oblong Pattern.

Latest Improved Form.

1904 Model—

With Circuit Closer.

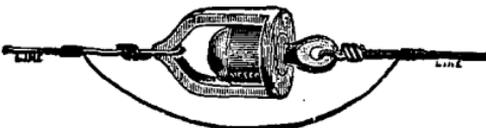
Will take a wire as large as
No. 8 B. W. G.



No. 2282.

Schedule BA.

- | | |
|--------------------------------|------------|
| List No. | Price Each |
| 2282 Brass, Nickel Plated..... | \$7.00 |

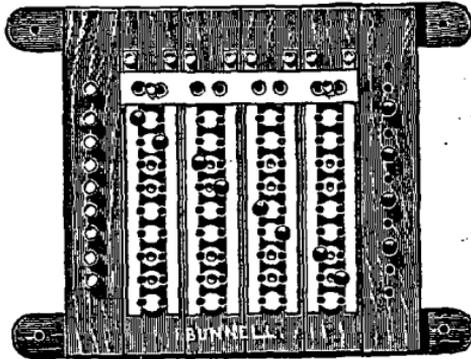


THE ANTI-HUM.

Humming of Telegraph or Telephone Wires easily and cheaply remedied.

Schedule BA.

- | | |
|------------|------------|
| List No. | Price Each |
| 4551 | \$0.40 |



**WESTERN UNION
BUTTON SWITCH**

**With Plate Lightning
Arrester.**

Schedule BA.

No. 1239.

List No.	Line	Perpendicular Bars	Rows of Discs	Price Each
1236	1	2	4	\$ 4.00
1237	2	4	6	8.00
1238	3	6	8	12.00
1239	4	8	10	17.00
1240	5	10	12	22.00
1241	6	12	14	27.00
1242	7	14	16	35.00
1243	8	16	18	48.00
1244	10	20	22	65.00
1245	12	24	26	85.00
1246	Extra Pins .....			.25

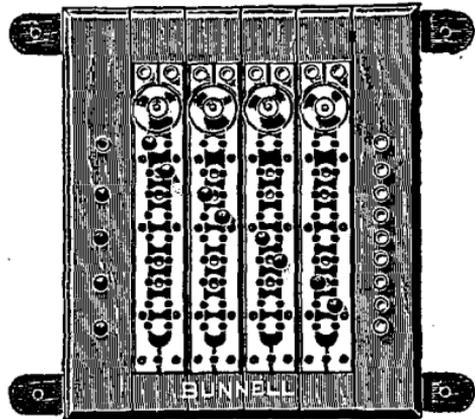
6.00

**BUNNELL PATTERN
BUTTON SWITCH.**

Single Pin Cut-out, Disc
Lightning Arrester and
Other Important Im-
provements.

Schedule BA.

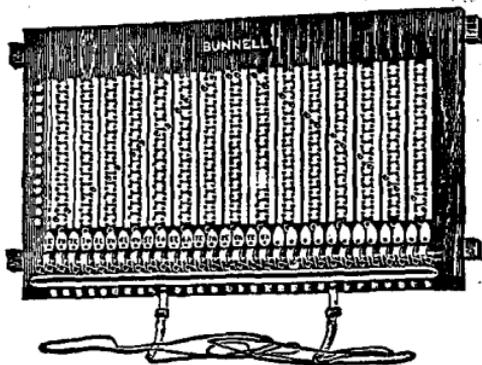
No. 1226.



List No.	Line	Perpendicular Bars	Rows of Discs	Price Each
1223	1	2	4	\$ 4.80
1224	2	4	6	9.60
1225	3	6	8	15.60
1226	4	8	10	20.40
1227	5	10	12	27.40
1228	6	12	14	32.60
1229	7	14	16	42.00
1230	8	16	18	57.60
1231	10	20	22	78.00
1232	12	24	26	102.00
1233	Extra Pins .....			.25

Prices for large sizes, on application.

STANDARD W. U. SPRING JACK SWITCHBOARD.

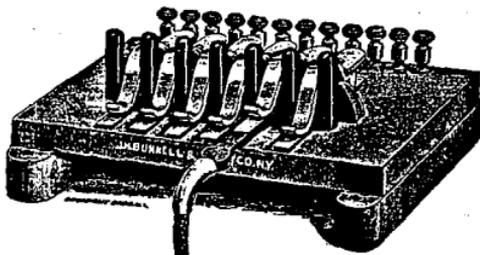


The illustration shows a Standard 15 Line Switchboard with 30 Perpendicular Bars, 14 Rows of Discs and a Single Row of Jacks.

In ordering or requesting prices on Spring Jack Switchboards, state the number of Lines for which they are wanted, how many Horizontal Rows of Discs, and whether a Single or Double Row of Jacks is required.

Prices on Spring Jack Switchboards, Lamp Boards, and Terminal Boards will be furnished on application.

WESTERN UNION SPRING JACK WITH WEDGE AND CORD.



The illustration shows a Six-line Western Union Spring Jack with Wedge and Cord.

Schedule BA.

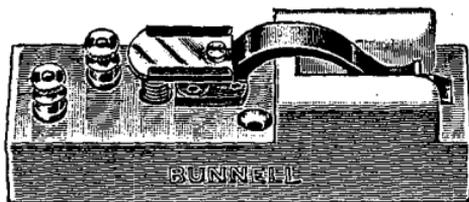
List No.

Price Each

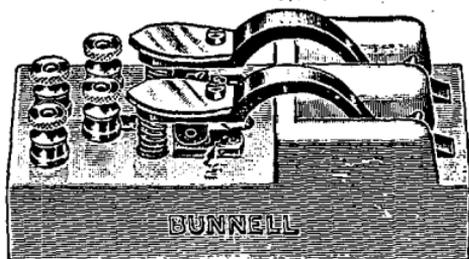
1268 Per Line (state number of Jacks required).....\$4.50

1269 Wedge with 4-foot Cord Extra..... 3.20

PROCELAIN BASE SPRING JACKS.



No. 9107.



No. 9108.

Made of finely milled and highly polished brass and equipped with name plates. Mounted on a glazed porcelain base.

We can supply these Spring Jacks with the Quad Clamping Style of Binding Post or the Postal Style of Binding Post.

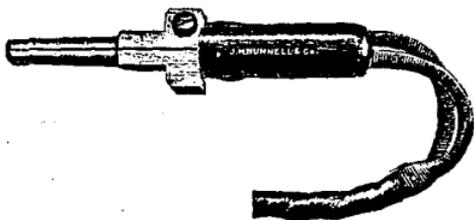
Schedule BA.

List No.	Price Each
9107 One Line.....	\$4.00
9108 Two Line	7.00

IMPROVED LOOP PEG AND CORD.

Peg cannot turn and cut-out instrument.

Split Peg or Pin for use with Button Switch to loop in an instrument. Can be furnished with or without Cord.



No. 1235.

List No.	Schedule BA.	Price Each
1234 Loop Peg, without Cord		\$1.50
1235 Loop Peg, with 3-foot Cord.....		3.20

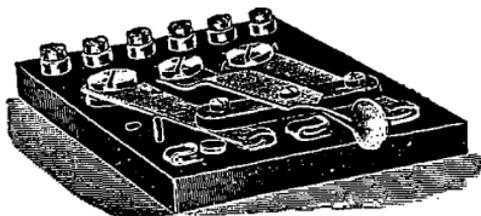


No. 633

TABLE JACK SWITCHES.

For Switching Resonator Set of Instruments to any desired line.

List No.	Schedule BA.	Price Each
633 3 Line Table Jack.....		\$4.50
634 Over 3 Lines per Line.....		1.50
635 Wedge with 4 Foot Cord.....		2.00



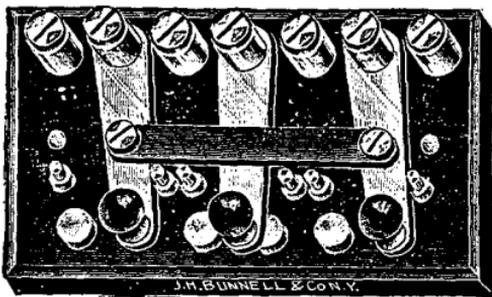
QUADRUPLEX SWITCHES.

Rubber Base, With Spring Clip Contact.

No. 1321.

List No.	Schedule BA.	Price Each
8602	Single 3 Point	\$3.60
1321	Double 3 Point	6.50

QUADRUPLEX SWITCHES.
Slate Base.

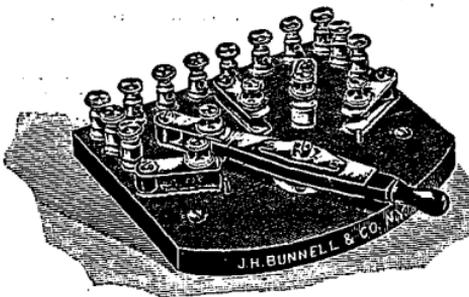


No. 1322.

List No.	Schedule BA.	Price Each
8528	3 Point, 1 Lever	\$2.00
8529	6 Point, 2 Lever	3.60
1322	7 Point, 3 Lever	5.00

QUICK SWITCHES.

For Train Dispatchers and similar Central Office Service. Throws an instrument into either one of two lines by one movement of the lever, without a break in either circuit.



No. 1319.

List No.	Schedule BA.	Price Each
1316	2 Line	\$ 7.00
1317	3 Line	12.00
1318	4 Line	18.00
1319	5 Line	24.00
1320	6 Line	30.00

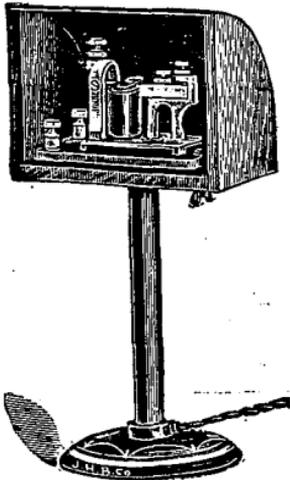
RESONATORS.

MASCOT RESONATOR.

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

Schedule BA.

List No.	Price Each
619 Without Sounder	\$4.00



No. 619.

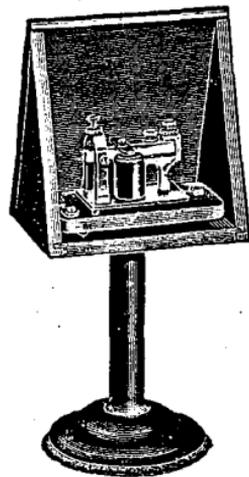
ACME PORTABLE RESONATOR.

(Western Union Standard E. M. 5 A.)

A very popular and efficient type.

Furnished with or without Message Rack or Back of Hood.

(Price does not include Sounder.)

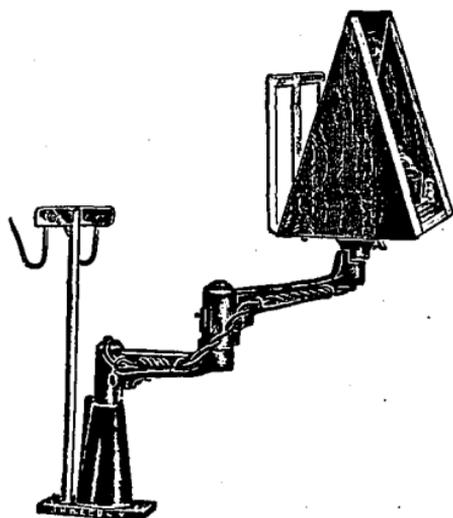


No. 7972.

Schedule BA.

List No.	Price Each
7972 Without Message Rack	\$6.00
7973 With Message Rack	7.50

ACME ADJUSTABLE RESONATOR.
(Western Union Standard E. M. 33 A.)



No. 7971.

With Double Swing Arm and Swivelled Hood.

This is the latest and best Resonator combining the good points of its predecessors with some unique and valuable features of its own.

The Stand and other metal parts are finished in black Japan, the Hood of finely finished resonant wood; making a very handsome and attractive combination.

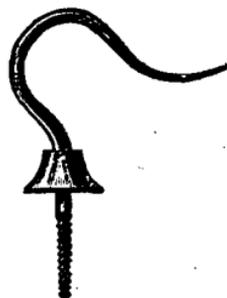
The height of the Hook Stand is ten and one-half inches; Arm Spread is fifteen and one-half inches.

Made in three styles as follows: — Without Message Rack or Stand; with Message Rack only; with Message Rack and Stand, as shown in illustration.

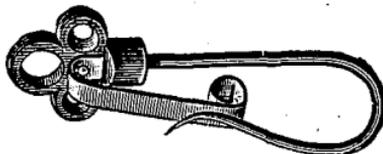
(PRICES DO NOT INCLUDE SOUNDER.)

List No.	Schedule BA.	Price Each
7969	Without Message Rack or Stand.....	\$ 9.50
7970	With Message Rack, without Stand.....	11.00
7971	With Message Rack and Stand.....	12.00

MESSAGE HOOKS.



No. 2114.



No. 2118.

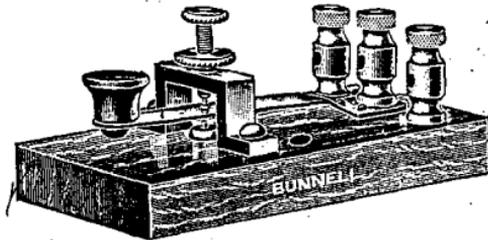


No. 2116.

List No.	Schedule BA.	Price per Dozen
2114	No. 1, Steel, Nickel Plated	\$0.50
2115	No. 1, Brass, Polished	1.20
2116	No. 2, Brass, Nickel Plated	2.40
2117	No. 2, Brass, Plain	2.00
2118	No. 3, Security Message Hook	2.00

STRAP KEYS.

Made with heavy cast brass Bridge and Strap, mounted on a finely finished Mahogany Base.



No. 1571.

Schedule BA.

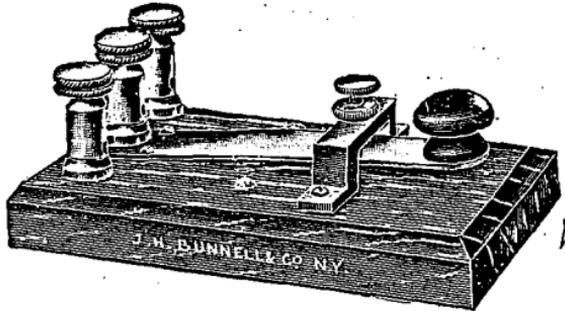
List No.	Price Each
1579 Open Circuit (Bottom Contact)	\$1.60
1570 Closed Circuit (Top Contact)	\$1.60
1571 Double Circuit (Top and Bottom Contacts)	\$2.00

EXTRA HEAVY RAILROAD STRAP KEY.

Double Circuit,
With Extra Large Contact Points.

Schedule BA.

List No.	Price Each
6337 Mounted on Mahogany Base	\$4.00



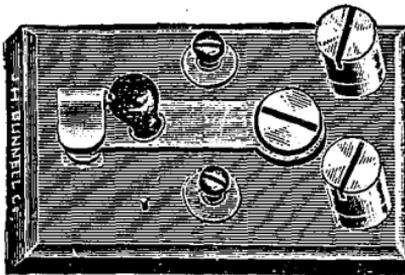
No. 6337.

ONE POINT SAFETY CONTACT SWITCH.

Oblong Form.

Schedule BA.

List No.	Price Each
2391 With Quad Binding Posts	\$1.40



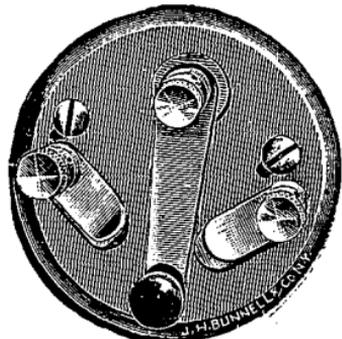
No. 2931.

TWO POINT SAFETY CONTACT SWITCH.

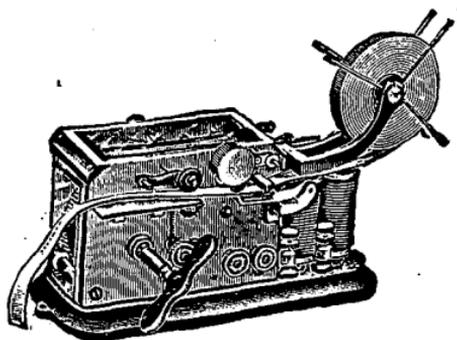
Round Form.

Schedule BA.

List No.	Price Each
2933 With Instrument Binding Posts	\$1.60



No. 2933.



No. 645

INK WRITING REGISTERS.

Best Improved Form.

Furnished With From One
to Five Pens.

Self-Starting and Stopping,
but if so desired we can
furnish the Single Pen Reg-
ister with Lever for Start-
ing and Stopping.

Schedule BA.

List No.	Price Each
645 Single Pen Register	\$75.00
646 Double Pen Register	80.00
647 Register Ink, 2 Ounce Bottle.....	.50
669 Register Ink, 1 Pint Bottle.....	2.80
671 Register Paper, ½ to 1 inch diameter, per pound.....	.24

Prices on Registers with more than two Pens, on Application.

RECORDING COMBINATION SETS.

South American Form.

Consists of our Ink Writing Register, Main Line Relay, Steel Lever Key, and Lightning Arrester, all mounted on a fine Mahogany Base.

Schedule BA.

List No.	Price per doz.
680 Recording Combination Set	\$110.00

AUTOMATIC PAPER WINDER.

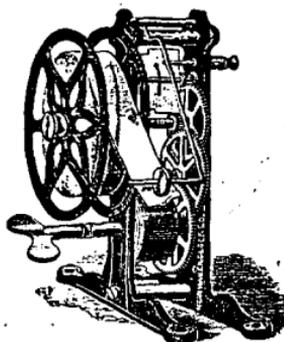
Made in Three Different Finishes.

Acts as a "take-up" Reel when used
in connection with Register.

Schedule BA.

List No.	Price Each
648 Japanned, Striped in Gilt....	\$ 6.00
649 Bronze, Hand Finished.....	12.00
650 Bronze, Nickel Plated	14.00

In ordering state width of paper to
be used.



No. 648.

POCKET GALVANOMETER.



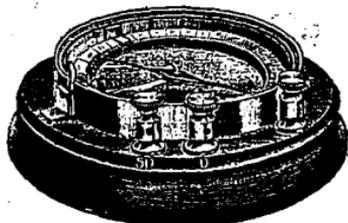
No. 1252.

About the size of an ordinary silver watch, and has a close fitting cover. Can be carried conveniently in vest pocket.

Schedule BA.

List No.	Price Each
1252	\$6.00

HORIZONTAL GALVANOMETER.



No. 1254.

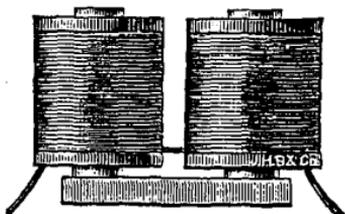
Has two Coils, one of 0 resistance and one of 50 Ohms, thus adapting its use to many useful tests of powerful as well as weak currents.

Schedule BA.

List No.	Price Each
1254	\$20.00

INSTRUMENT MAGNETS.

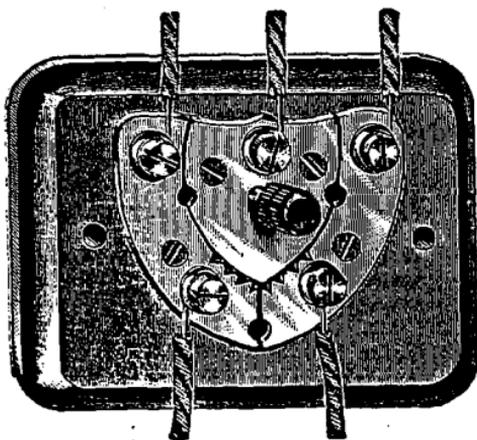
35W - 200
100W - 350



No. 2626.

List No.	Schedule BA.	Price Each
2626	5 Ohm Cloth Covered Sounder Magnets.....	\$1.00
6203	5 Ohm Rubber Covered Sounder Magnets.....	1.40
6204	20 Ohm Cloth Covered Sounder Magnets.....	1.30
6205	20 Ohm Rubber Covered Sounder Magnets.....	1.70
6206	150 Ohm Rubber Covered Relay Magnets.....	4.00
6207	250 Ohm Rubber Covered Relay Magnets.....	5.00

Special Magnets, any size, to order.



No. 1784.

**UNION LIGHTNING
ARRESTER AND
GROUND WIRE
SWITCH.**

Serves as a Peg Cut-out, Lightning Arrester and Ground Wire Switch. It is an excellent and cheap form for amateur and all short lines.

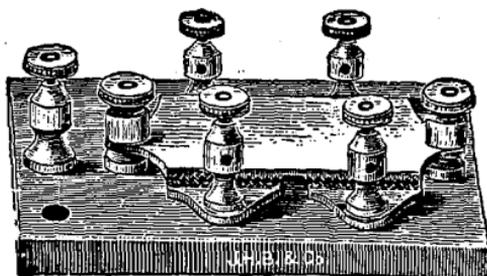
Schedule BA.

List No.	Price Each
1784 Union Arrester, Polished Brass	\$1.20
9111 Union Arrester, Nickel Plated...	1.40
1785 Extra Plugs ...	.20

**HEAVY PLATE
LIGHTNING
ARRESTER.**

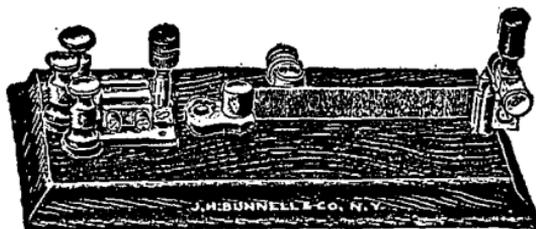
Schedule BA.

List No.	Price Each
1786 Polished Brass	\$4.00
9112 Nickel Plated	4.80



No. 1786.

OLD STYLE PLUG CUT-OUT.



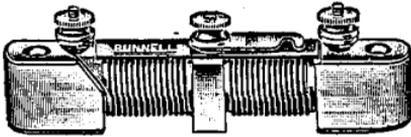
No. 1774.

Schedule BA.

List No.	Price Each
1773 One Line Cut-out with Plug.....	\$ 4.00
1774 With Plug and Lightning Arrester.....	7.00
1775 Two Line Cut-out with Plugs.....	7.50
1776 With Plugs and Lightning Arresters.....	12.00
1777 Cut-out Plug only	1.30

ARGUS LIGHTNING ARRESTERS.

Type "A."



No. 5221.

The Type "A" Argus Arrester is intended for use where space is limited. It can be easily mounted in Cable Boxes already in use without disturbing the box. Dimensions, 5 1/4 inches long, 3/4 inch wide, 1 inch high.

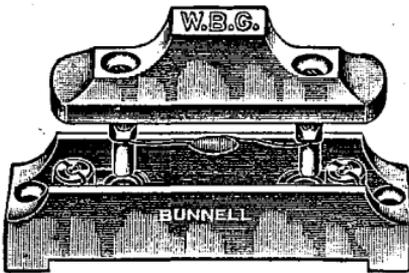
TYPE "B."

Same as Type "A" excepting that it has a Fuse Wire at one end cables from crosses with high

tension currents.

List No.	Schedule BG.	Price Each
5221	Type "A"	\$0.90
5223	Type "B"	1.00

W. B. G. ACCURATE FUSE PROTECTOR.



No. 5210.

It is especially effective in arresting and protecting instruments and delicate electrical apparatus against the sneak current, which is probably the most destructive and difficult to provide against. The accurate manner in which the W. B. G. Protector has completely overcome the damaging effects of the sneak currents as well as short circuits with high tension currents, has caused it to be recognized as the Standard Protector and is used by Telegraph and Telephone Companies as well as in Fire and Police Telegraph Systems.

SINGLE POLE, COVERED PIN PATTERN.

Porcelain Base and Cover Base, 4 inch by 1 inch. The Fuse being mounted on the cover, can be safely renewed without danger of coming in contact with circuit.

List No.	Schedule BG.	Price Each
5210	Complete with Fuse	\$0.55
5211	Renewal Fuse .....	.07

DOUBLE POLE, COVER PIN PATTERN.

5212	Complete with Fuse	\$1.10
5213	Renewal Fuse .....	.07

MUNICIPAL PIN PATTERN.

5214	Complete with Fuse	\$0.55
5215	Renewal Fuse .....	.07

SIMPLEX PATTERN.

5216	Complete with Fuse	\$0.30
5217	Renewal Fuse .....	.07

Usual Amperage of Fuses is .4 or .8 of an Ampere. State capacity required when ordering.

TELEPHONE AND FIRE ALARM PROTECTORS.



No. 8732.



No. 8733.



No. 8730.

List No.	Mfgr. No.	Schedule BG.	Price Each
8730	3100	Single Pole Cut-out	\$0.50
8731	3102	Single Pole, Combination Cut-out	1.10
8732	3104	D. P. Combination Cut-out	1.75
8733	3105	D. P. Combination Cut-out, with Arrester, without Sneak Coils	1.40

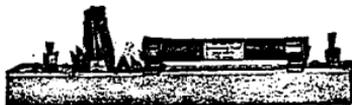
TELEPHONE AND FIRE ALARM FUSES.

List No.	Mfgr. No.	Schedule BG.	Price Each
8742	3001	1 to 4 Ampere Capacity	\$0.20

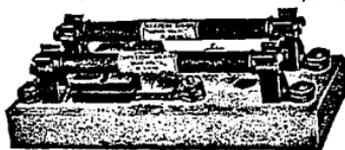
SNEAK COILS. For Combination Cut-outs.

List No.	Mfgr. No.	Schedule BG.	Price Each
8746	3110	$\frac{1}{10}$ to $\frac{5}{10}$ Ampere Capacity	\$0.18

TELEGRAPH PROTECTORS.



No. 8741.



No. 8737.

List No.	Mfgr. No.	Schedule BG.	Price Each
8734	2750	W. U. S. P. without Arrester	\$0.30
8735	2751	W. U. D. P. without Arrester	.50
8736	2752	W. U. S. P. with Arrester	.60
8737	2753	W. U. D. P. with Arrester	1.00
8738	2754	Postal Type "A," S. P. without Arrester	.40
8739	2755	Postal Type "C," S. P. without Arrester	.40
8740	2756	Postal Type "A," S. P. with Arrester	.75
8741	2757	Postal Type "C," S. P. with Arrester	.75

TELEGRAPH FUSES.

List No.	Mfgr. No.	Schedule BG.	Price Each
8751	2760	W. U. Type, $4\frac{1}{2}$ inches long	\$0.20
8752	2761	Postal Type, $4\frac{1}{8}$ inches long	.20
8753	2762	Postal Type, $5\frac{3}{32}$ inches on centres	.20

NOTE: Combination Cut-outs are complete with Fuses, all others are without Fuses. Fifty pieces of one catalog number constitutes a standard package on Cut-outs and 100 pieces on all Fuses.

TELEGRAPH INSTRUMENTS PARTS.

Orders for these Parts must specify Style of Instrument for which they are needed.

Schedule .BA.

List No.	Mfgr. No.	Price Each
688	Key Levers, complete with Tungsten Contacts.....	\$1.00
689	Circuit Closer, with Knob .....	.24
690	Circuit Closer, Knob only .....	.10
691	Lever Knob, 1½ inch diameter .....	.10
692	Trunnion Set Screws and Check Nut	each .14
693	Lever Adjusting Screw and Check Nut .....	.14
694	Tungsten Contact Points .....	.25
695	Wing Nuts .....	.08
696	Springs .....	.10
697	Leg Bolts, with Wing Nuts, Back \$0.15; Front.....	.40
698	Sounders, Lever (Brass), complete .....	.90
699	Levers (Aluminum), complete .....	.90
700	Armatures .....	.08
701	Bases .....	.25
702	Magnet complete, 4 Ohms	1.40
703	Magnet complete, 20 Ohms	1.70
704	Magnet, Rubber Cover, only .....	.18
705	Springs .....	.10
706	Adjusting Screw and Check Nut .....	.14
707	Relay Magnet complete, 150 Ohms	4.00
708	Magnet complete, 250 Ohms	5.00
709	Magnet Cover, only .....	.20
710	Bases .....	.50
711	Surbases, Japanned .....	.50
712	Silver Pointed Adjusting Screw and Check Nut.....	.30
713	Rubber Pointed Adjusting Screw and Check Nut.....	.24
714	Armatures with Silver Contacts .....	.40
715	Spectacles	1.20
716	Front Adjustment, complete	1.20
717	Back Adjustment, complete	1.00
718	Trunnion Seats .....	.40
719	Tension Springs .....	.10
720	Bronze Spring (Back Adjustment) .....	.15
721	Trunnion Screw, only .....	.14
722	Check Nut .....	.10
723	Top Screws for Binding Post .....	.08
724	Fine Flat Files for Relay Key and Transmitter, Points ..	.80
6221	Fine Flat File, with Pocket Knife Handle for Instru- ment Points	1.50

REGISTER PARTS AND SUPPLIES.

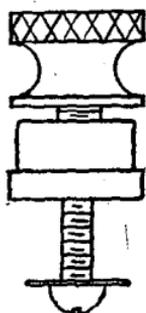
Schedule BA.

List No.	Price Each	
660	Register Winding Keys	\$1.50
631	Armature Adjusting Springs .....	.18
662	Register Main Spring	3.00
663	Single Pen Inking Roller	1.00
664	Single Pen Printing Roller .....	.80
665	Double Pen Inking Roller	1.00
666	Double Pen Printing Roller .....	.80
667	Dust Shield for Inking Wheel	1.00
670	Register Oil, Small Bottle .....	.30
675	Plate Glass Register Slides, per set	2.00
676	Register Oil Cans, Pocket Size, Nickel Plated.....	1.20

No. 675 should specify style of Register, whether for Side or Top.

BINDING POSTS.

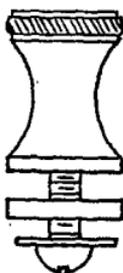
ILLUSTRATIONS—ACTUAL SIZE.



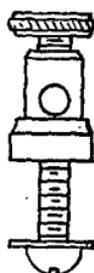
No. 4645



No. 4645 1/2



No. 4597



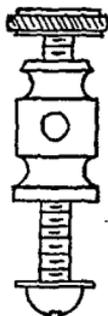
No. 4591



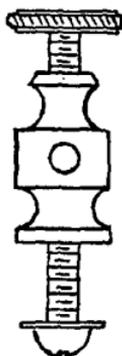
No. 8997



No. 4639



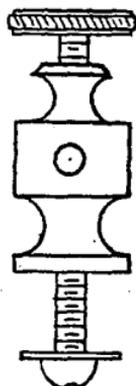
No. 4638



No. 4637



No. 4595



No. 4636

Standard Finish—Polished Brass.

For Nickel Plating add 33 1/3 per cent. to list prices.

Schedule BA.

List No.	Mfgr. No.		Price Each
4645	19	Large Quad.	\$.20
4645 1/2	19A	Small Quad. ....	.18
4597	14	Box Bell Type ....	.12
4591	8A	Telephone Type ....	.10
8997	24	Telephone Type ....	.12
4639	7B	Instrument Post ....	.10
4638	7A	Instrument Post ....	.14
4637	7	Instrument Post ....	.16
4595	12	English Pattern Post ....	.30
4636	6	Instrument Post18

BINDING POSTS.

ILLUSTRATIONS—ACTUAL SIZE.



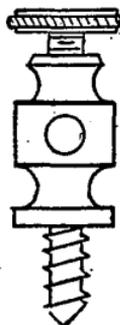
No. 4592



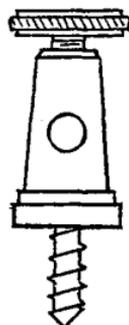
No. 4640



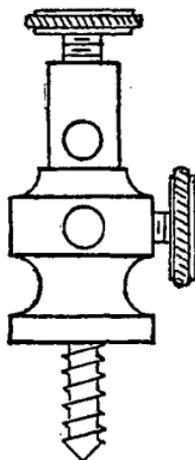
No. 4635



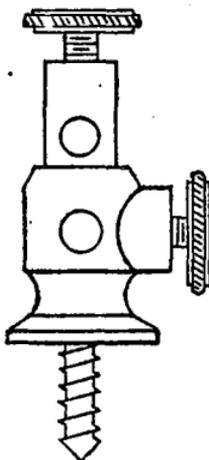
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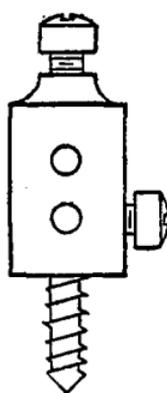
No. 4631



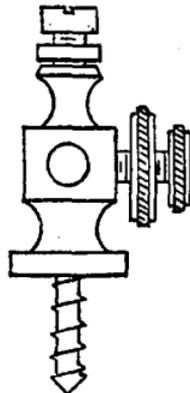
No. 4596



No. 4629



No. 4692



No. 4599

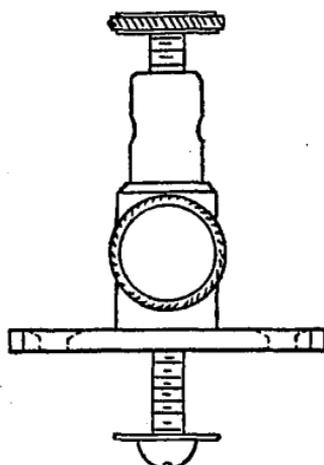
Standard Finish—Polished Brass.

For Nickel Plating add 33½ per cent. to list prices.

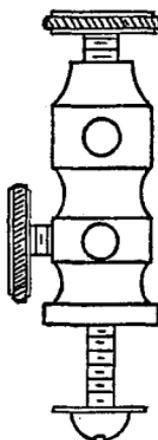
List No.	Mfgr. No.	Schedule BA.	Price Each
4592	9	Telephone Post	\$.12
4640	8	Telephone Post .....	.12
4635	5B	Wood Screw Post .....	.15
4634	5A	Wood Screw Post .....	.20
4631	5	Wood Screw Post .....	.40
4596	13	Finished Double Wood Screw Post....	.40
4629	4	Improved Double Wood Screw Post....	.30
4692	23	Double Post with Wood Screw.....	.22
4691	22	Same as No. 4692—but with Machine Screw .....	.20
4599	17	Lightning Arrester Post Wood Screw..	.32

BINDING POSTS AND CONNECTORS.

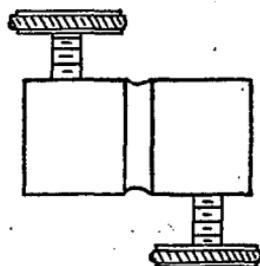
ILLUSTRATIONS—ACTUAL SIZE.



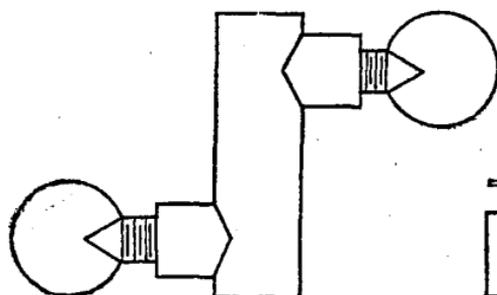
No. 4594



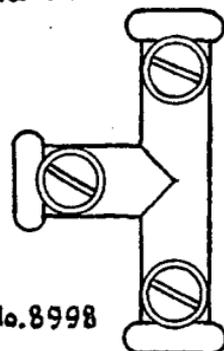
No. 4641



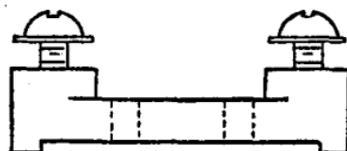
No. 4626



No. 4625



No. 8998



No. 4619

Standard Finish—Polished Brass.

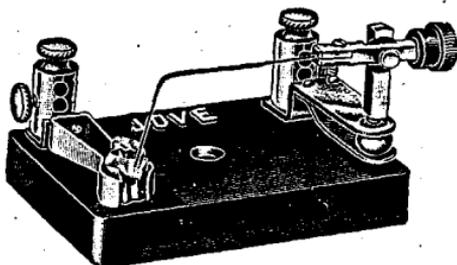
For Nickel Plating add 33½ per cent. to list prices.

Schedule BA.

List No.	Mfgr. No.		Price Each
4594	11	Flat Base Double Post	\$0.36
4641	20	Double Instrument Post .....	.30
4625	3	Plain Double Connector .....	.18
4626	3	Finished Double Connector .....	.24
8998	25	Plain Three Way Connector.....	.33
4619	26	Plain Terminal Connector .....	.24

THE "JOVE" CRYSTAL DETECTOR HOLDER.

(Ghegan Patent.)



No. 8854.

The simplest, handiest, and most perfect Crystal Detector Holder yet produced. Holds Crystals of different forms and sizes without any clamp screws.

Holds Crystals of different minerals at same time—change of contact from one to the other may be made instantly and a sensitive point quickly found—the correct pressure held con-

stantly—all without using a single screw or nut.

The "Jove" is the "Ideal" Detector Holder.

It is beautifully designed and handsomely finished.

The metal parts are finely nickel plated.

It is mounted on a handsome hard black moulded base which will hold its lustre indefinitely.

We have fitted this instrument with Double Binding Posts to facilitate rapid connections and to take tipped cords.

Two Contacting Spring Wires of different forms are sent with each Jove Detector Holder.

List No.

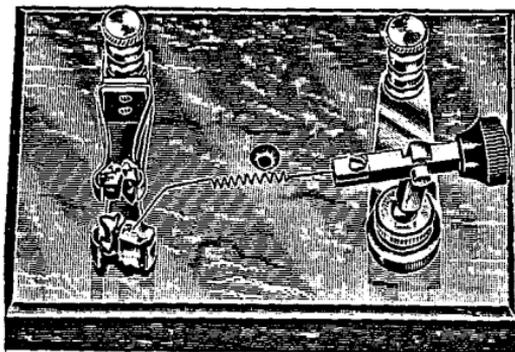
Schedule BA.

Price Each

8854 With Moulded Base (Postage Weight, 1 pound).....\$1.60

JUMBO-JOVE CRYSTAL DETECTOR HOLDER.

This Holder is mounted on a polished Marble Base, measuring 6 x 4 x $\frac{3}{4}$ inches. It has Double Binding Posts and a Double Clip for holding crystals, whereby several minerals may be held at one time and comparative tests of their efficiency quickly made. Can be furnished on either Electric Blue or Pure White Marble Base.



No. 8850.

It is very attractively designed and is by far not only the best but the handsomest Crystal Holder on the market.

List No.

Schedule BA.

Price Each

8850 \$8.00

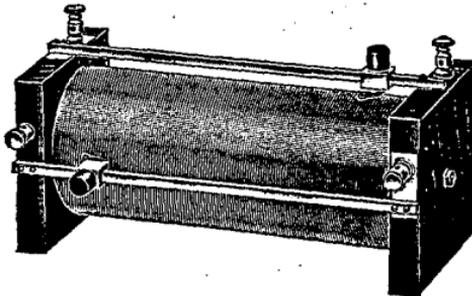
Postage weight, 3 pounds.

TUNING COILS.

A Tuning Coil is very essential to obtain satisfactory results. With it many interfering signals can be eliminated and the desired signals brought out clearer or louder.

Our Tuning Coils are made in the most approved manner for obtaining best results and are wound with bare copper wire, each turn being spaced apart from the next.

MASCOT TUNING COIL.



No. 7874.

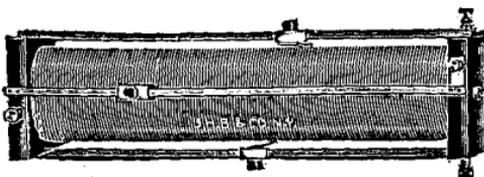
Is provided with Double Sliding Contacts. With suitable aerial will respond to wave lengths up to one thousand meters.

The ends are of polished mahogany with metal parts of polished brass and lacquered. Is substantially made throughout and attractive in appearance.

Wave length, 1,500 meters. Can be used as a Loading Coil with excellent results. Length, 8 3/4 inches.

List No.	Schedule BA.	Price Each
7874		\$3.50
	Potage weight, 3 pounds.	

STANDARD TUNING COIL.



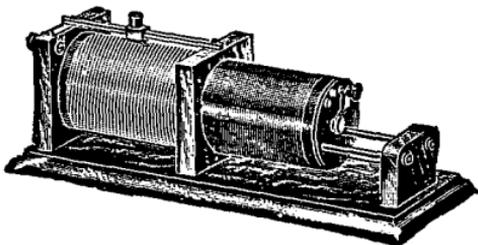
No. 7875.

This Coil is similar in appearance to the Mascot, but is larger and is furnished with a Third Slider, which adds to the selectiveness of the Coil, finer tuning being procured and by varying two of the Sliders the inductive effect of the loose coupler can be brought out, there-

by proving a very great advantage over the two-slide Coil. With 60-foot aerial will respond to wave lengths up to 2,500 meters.

List No.	Schedule BA.	Price Each
7875		\$6.00
	Postage weight, 4 pounds.	

THE DANDY RECEIVING TRANSFORMER.



No. 8833.

We have produced the Dandy Receiving Transformer for those desiring a substantially built loose coupler at a low price.

The Primary is of good size, wound with bare wire and using the well known Mascot Slider for varying the turns.

The Secondary is wound with silk covered wire

and 4 taps brought out to the end of the drum.

Has quick acting, self-adjusting spring type lever for varying the secondary inductance. Secondary leads are brought directly to binding posts on the back of the coupler, no loose or sliding contacts on secondary bearing rods to contend with. Finely finished in cherry, having all metal parts finished in polished brass. Wave length, 600 meters. Size over all—14 inches long by 5½ inches wide by 5¼ inches high.

List No.

Schedule BA.

Price Each

8833 (Postage weight, 6 pounds).....\$10.00

THE JOVE RECEIVING TRANSFORMER.

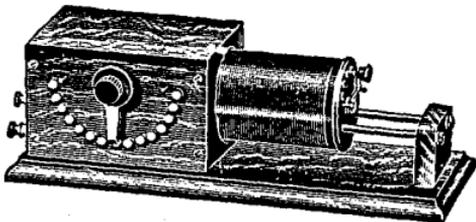
This Transformer is an improvement on the Dandy; in that it has a larger Primary and Secondary; as well as doing away with sliding contacts.

Has 15 Taps brought out to contact points mounted on the side of the Primary Cabinet and controlled by a Quick Acting Radial Switch,—making rapid variation a feature.

The Secondary is wound with fine silk covered wire having 6 Taps brought out to the contact points on the end of the Drum and controlled by a quick acting self-adjusting spring type Lever.

The Secondary is direct connected to binding posts mounted on the back of the Primary Cabinet, thus avoiding noises in the receivers and breaks in the messages due to loose and imperfect contacts. Handsomely finished in cherry having all metal parts highly finished in polished brass.

Has all the features of Receiving Transformers being sold at double the price. Wave length, 700 meters. Size over all, 14 inches long by 5½ inches wide by 4½ inches high.



No. 8834.

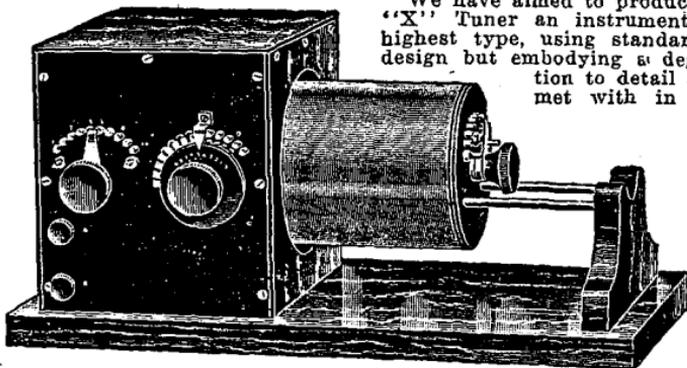
List No.

Schedule BA.

Price Each

8834 (Postage weight, 6 pounds).....\$14.00

TYPE "X" RECEIVING TRANSFORMER.



No. 8875.

We have aimed to produce in our Type "X" Tuner an instrument of the very highest type, using standard practice in design but embodying a degree of attention to detail and finish not met with in other instruments of this kind. The most unusual feature is the Dead End Switch on the Primary which divides the Primary into small groups of a few turns each and only connects into circuit such

number of groups as are required. The first group is still further divided by the 10-point Switch for close adjustment. The Tuner is constructed of highly finished mahogany with a bakelite panel front. The Secondary is provided with a 10-point Switch for adjustment. The Tuner will respond to wave lengths up to 3,000 meters with an average amateur antenna and, on account of the Dead End Switch above referred to, is also very efficient on the shorter waves in common use. This is an exceptional instrument of entirely new design and we recommend it to those discriminating purchasers who desire the very best in a Tuner of its type.

List No.	Schedule BG.	Price Each
8875	Type "X" Tuner, shipping weight, 12 pounds.....	\$32.00

BLITZEN AMPLIFYING COIL.

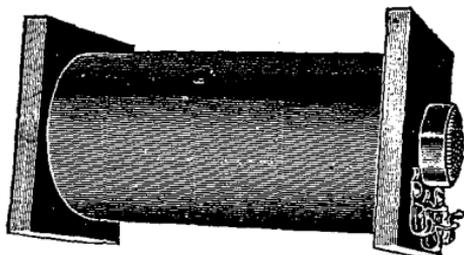
To the fortunate possessor of an Audion Detector this Coil offers a means of increasing the strength of signals many times above their original intensity. By its use you can hear clearly stations previously entirely out of range of your instruments.

It can be used to amplify the output of any Detector, Crystal, Audion, or any other, but an Audion Detector must be used on the secondary in addition to the first detector.

The connection and operation of the coils is simplicity itself; simply substitute the primary of the amplifying coil for the telephones of your set and connect the binding posts of an Audion Detector marked "Tuner" to the secondary of the amplifying coil.

As many as three coils can be connected between the same number of Audion Detectors and a still greater amplification secured, often times as much as twenty-five to one hundred times the original intensity being secured.

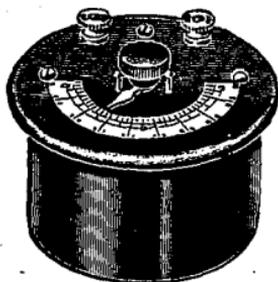
You can amplify signals of any kind, either damped or undamped, wireless telegraph or wireless telephone, without changing your set in any way except to add an Amplifying Coil and Audion Detector.



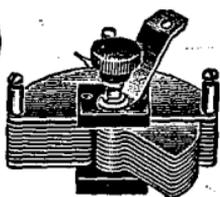
No. 8933.

List No.	Schedule BG.	Price Each
8933	Blitzen Amplifying Coil	\$10.50

THE DANDY ROTARY VARIABLE CONDENSER.



No. 8654.



No. 8655.

The Dandy Rotary Variable Condenser has genuine hard rubber top and knob. Scale and binding posts are of brass, heavily nickel plated.

Has 10 movable and 11 stationary plates mounted in a rubber finished, hard drawn dustproof case. The capacity is approximately .0006 Mfd. Combined with the mounting features of the Beeko Condenser, it is equipped with concealed stopping pins which only permit the Condenser to turn 180 degrees—a feat-

ure found only in condensers of higher prices.

Undoubtedly the **FINEST** low priced Variable Condenser made. Size, over all, 3 x 4 1/4 inches.

List No.	Schedule BA.	Price Each
8654	Mounted in Case (postage weight, 2 pounds).....	\$5.50
8655	Unmounted, without Case (postage weight, 1 pound)....	4.50

THE BEEKO ROTARY VARIABLE CONDENSER.

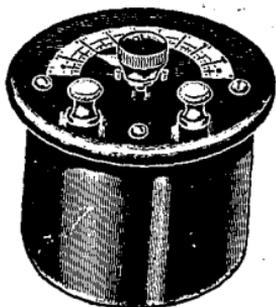
The Beeko Condenser has a hard drawn dust-proof metal case with popular plack rubber finish. Has genuine hard rubber top and knob with nickel plated binding posts and celluloid scale of 180 degrees with 90 scale divisions.

Contains 21 movable and 22 stationary aluminum plates, and when in a horizontal position the rotating plates will remain set at any point without the use of balancing weights.

The top is equipped with concealed stopping pins permitting the Condenser to turn but 180 degrees. Capacity is approximately .00125 mfd.

It is handsomely finished throughout and is without doubt the **FINEST** small Variable Condenser made. It is a valuable addition to any wireless set. These Condensers can be filled with oil and their efficiency thereby greatly increased.

Size, over all, 3 3/4 x 4 1/4 inches.



No. 8644.



No. 8643.

List No.	Schedule BA.	Price Each
8644	Mounted in Case (postage weight, 2 pounds).....	\$7.00
8643	Unmounted, without Case (postage weight, 1 pound)....	6.00

HOLTZER-CABOT RECEIVERS.

No. 7905.

The windings of the Holtzer-Cabot Receivers are all made of copper wire. Magnets are made of a special quality steel and of the proper strength to give best results with the diaphragms used. The spools and magnets are mounted in an aluminum cup. Diaphragms are permanently fastened in the ear pieces. Cores are ground to a proper height so that the adjustment is permanent. Ear pieces are of hard rubber and binding posts are placed external to the case so that cords can be replaced without opening receiver.

In designing the present type of Receiver, special attention has been paid to the "pitch" as well as sensitiveness. It has been determined that the human ear is more responsive to higher pitched notes than to lower ones and on this account, these telephones have a high natural period which makes them much more efficient on weak signals.

They are neat in appearance, the head bands are covered with hard rubber and are adjustable by two large knurled thumb nuts, the screws which clamp the bands are non-turning and the liability of catching the hair is reduced to a minimum. The weight of the set complete is 10½ ounces, the Receivers are fastened to the band by means of ball and socket joints, allowing them to move in any direction and the design is such that they may be worn comfortably for hours at a time.

List No.	Schedule BF.	Price Each
7905	2,000 Ohm Head Set, complete (postage weight, 2 lbs.)	\$16.60
7906	3,000 Ohm Head Set, complete (postage weight, 2 lbs.)	17.00

THE TRANSATLANTIC HEAD SET.

A professional Head Set constructed on the same general principals as the Navy Head Set; using high grade materials, and most careful workmanship in its construction. The receivers are a trifle larger than the "Navy" type. Resistance approximately 2,800 ohms per set. Used by numerous commercial land stations as well as the Eiffel Tower Station in Paris, France.



No. 8843.

List No.	Schedule BG.	Price Each
8843	Transatlantic Head Set	\$11.00
	Postage weight, 2 pounds.	



No. 8844.

THE SUPERIOR HEAD SET.

The case is made of aluminum, combining rigid construction and lightness. Interior parts are nickel plated and polished, giving them a very handsome appearance. Approximate resistance 2,000 ohms to the set. Diaphragms are .006 inch thick, tin plated. Receivers are fitted with hard rubber caps.

The head bands are of solid German silver and are attached to the receivers by means of a double swivel device, permitting of ready adjustment to any shaped head and of pressing the receivers close to the ears.

List No	Schedule BG.	Price Each
8844	2,000 Ohm Head Set (consists of Two 1,000 Ohm Receivers Double Head Band and Cord).....	\$6.70
8867	Same as No. 8844 but with Leather Head Band. (Postage weight, 2 pounds)	6.50
8845	1,000 Ohm Head Set with Single Leather Head Band and Cord. (Postage weight, 1 pound).....	3.90
8868	1,000 Ohm Superior Receiver only. (Postage weight, 1 lb. 2.60	

THE "NAVY" TYPE HEAD SET.

This type is without doubt one of the finest wireless head sets made to-day. Designed especially for professional work, it has many unique features. It possesses a peculiar soft tone—a great advantage for long distance reading. The case is of hard drawn aluminum. Ear caps are of hard rubber and instead of having one large hole in center are perforated by many small holes. This will protect the diaphragm should the receivers be accidentally laid on some protruding object.

Ball and swivel arrangement on back of receivers, permits of proper adjustment.

Head Band is the double adjustable type, hard rubber covered; not only absolutely sanitary but the best head band yet devised.

Magnets are made of special tungsten steel. Diaphragms are of special metal coated with pure tin to prevent rusting. Resistance approximately 3,200 ohms per set.



No. 8869.

Used by the United States and foreign governments, as well as universities and colleges.

List No.	Schedule BG.	Price Each
8869	Navy Head Set, complete. (Postage weight, 1 pound) ..	\$15.50

No. 55 HEAD SET WITH REGULAR HEAD BAND.

No. 8842.

A high grade low priced Head Set consisting of two 1,000 ohm receivers in hard rubber composition cases.

Magnets are made of best quality steel and constructed to insure practically permanent magnetism.

Spools are wound with high grade enameled copper Magnet Wire.

Diaphragms of the thin wireless type are used, and are flexible, non-rusting and correctly adjusted.

Adjustable Split Head Band of nickeled German silver and at-

tached to receivers by means of ball and socket joints.
A five foot cord of best quality, mercerized finish and equipped with a 'phone connecting block is also furnished.

Weight of complete double head set is 14 ounces.

No. 55 HEAD SET WITH CORONET HEAD BAND.

This set is the same as the No. 55 Set, except, that it is furnished with a nickeled German Silver Coronet Head Band, guaranteed not to catch the hair.

List No.	Schedule BF.	Price Each
8842	No. 55 Set, Regular Head Band, 2,000 Ohms.....	\$5.80
8893	No. 55 Set, Regular Head Band, 3,000 Ohms.....	6.90
8841	No. 55 Set, Coronet Head Band, 2,000 Ohms.....	6.40
8894	No. 55 Set, Coronet Head Band, 3,000 Ohms.....	7.50
8895	Single Head Set, Regular Head Band, 1,000 Ohms.....	3.00
8896	Single Head Set, Regular Head Band, 1,500 Ohms.....	3.60
8897	Single Receiver only, 1,000 Ohms.....	1.95
8898	Single Receiver only, 1,500 Ohms.....	2.50
8899	No. 55 Single Regular Head Band	1.10
8900	No. 55 Double Regular Head Band	1.40

STANDARD HEAD SET.**Schedule BA.**

List No.	Price Each
8612	Consists of Two 1,000 Ohm Receivers, Split Double Head Band and 5 ft. Cord
	\$8.00



No. 8612.



WATCH CASE RECEIVERS.

Furnished in Hard Rubber Composition Case with Screw Cap drilled for head band.

Can be furnished with or without ring as desired.

Schedule BA.

List No. Price Each
7807 Double Pole, Wound to 80 Ohms **\$1.00**
 Postage weight, 1 pound.

STANDARD RECEIVERS.

Our Standard Receivers are being used by the largest wireless companies and are the most sensitive receivers on the market.

No. 7807.

These receivers are drilled for our regular head band, and furnished of any resistance desired.

The 1000 ohms (each receiver) is the most generally used.

List No.	Schedule BA.	Price Each
7897	250 Ohm Receiver only	\$2.50
7898	500 Ohm Receiver only	2.75
7899	750 Ohm Receiver only	3.00
7900	1000 Ohm Receiver only	3.40
7901	1500 Ohm Receiver only	4.00
7902	2000 Ohm Receiver only	5.00

Postage weight, 1 pound.

MASCOT RECEIVERS.

These Receivers while low in price, are very sensitive, and will give as good results as many of the higher priced receivers. They are wound to 1000 ohms, and are drilled for head band.

List No.	Schedule BA.	Price Each
8613	1000 Ohm Receiver only. Postage weight, 1 pound.	\$2.00
8614	1000 Ohm Head Set (1 Receiver, Mascot Head Band and Cord). Postage weight, 1 pound.	3.40
8615	2000 Ohm Head Set (2 Receivers, Mascot Head Band and Cord). Postage weight, 2 pounds.	5.80

HEAD BANDS FOR RECEIVERS.

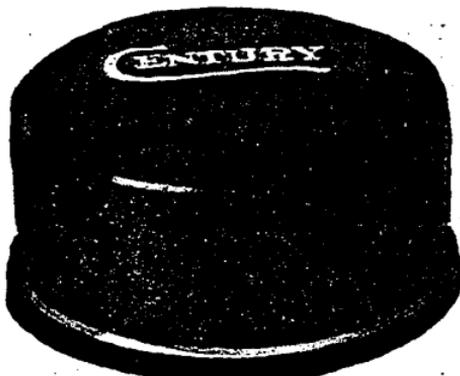
List No.	Schedule BA.	Price Each
7903	Adjustable Metal Head Band only, for 1 Receiver.	\$1.25
7904	Adjustable Metal Head Band only, for 2 Receivers.	1.50
7895	Non-adjustable Leather Covered Head Band only, for 1 Receiver	1.00
7896	Non-adjustable Leather Covered Head Band only, for 2 Receivers	1.20

Postage weight, 1 pound.

RECEIVER CORDS.

List No.	Schedule BA.	Price Each
7907	3 ft. Cotton, Single Receiver, with Tips.	\$0.30
7908	4 ft. Silk, Single Receiver, with Tips.	.50
7909	5 ft. Silk, Single Receiver, with Tips.	.60
7910	4 ft. Silk, Double Receiver, with Tips.	.70
7911	5 ft. Silk, Double Receiver, with Tips.	.80
7912	6 ft. Silk, Double Receiver, with Tips.	.90
8927	3 ft. Silk, Single Receiver, with Loops.	.50
8928	4 ft. Silk, Single Receiver, with Loops.	.55
8929	5 ft. Silk, Single Receiver, with Loops.	.65
8930	4 ft. Silk, Double Receiver, with Loops.	.70
8931	5 ft. Silk, Double Receiver, with Loops.	.80
8932	6 ft. Silk, Double Receiver, with Loops.	.90

CENTURY HIGH FREQUENCY BUZZER.



No. 8998.

Is used as an integral part of Radio Sets all over the World for detector test and adjustment. It is also used for Radio Class instruction to familiarize students with the true Wireless tone.

Efficiency of design, scientific selection of materials and painstaking workmanship all make themselves evident in the tone which is precisely like that emitted by commercial radio stations. It is operated on one or two Dry Cell and its pitch may be instantly varied to a soft, low hum to rest the ear or to a shrill note simulating that of the great high power stations. Its volume of sound may be adjusted so low that its operation only a few feet distant will not interfere with the reception of weak signals.

An ideal instrument not only for detector tests and adjustments, class instruction or individual code practice, but also as a 'driver' or source of Audio-Frequency waves for wave-meter determinations. With all these used in view, three connecting terminals are provided so that circuits may be had across the windings, across the contacts or through the entire instrument. The contacts are genuine platinum.

List No. **Schedule BF.** Price Each
9740 Century Buzzer\$2.00

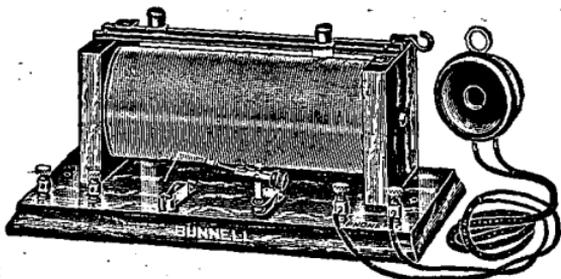
ERICSSON HIGH FREQUENCY BUZZER.

The Ericsson Buzzer has a high pitched note which approximates the group frequency of modern wireless stations. Provided with a simple and staple adjustment. Very compact and absolutely accurate. A high class buzzer for use as a test signal for wireless receiving circuits and for laboratory work.

List No. **Schedule BC.** Price Each
8999 Ericsson Buzzer\$3.00

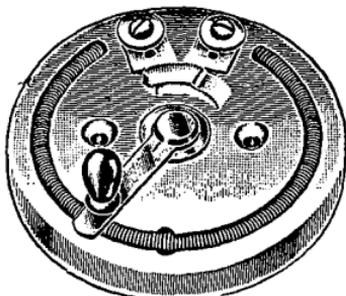
THE MASCOT RECEIVING SET.

This handsome little set is made up of the following instruments: The well known 'Mascot' tuning coil, the famous 'Jove' detector stand, a small fixed condenser, 80 ohm double pole watch case receiver and cord. In connecting this set we have used the best of all the two slide tuner 'hook-ups,' so that it is possible to obtain very good results with this instrument. Woodwork is a beautifully finished cherry and all metal parts are of highly polished and lacquered brass. Pronounced the 'Best little set for short distance work.'



No. 8995.

List No. **Schedule BA.** Price Each
8995 Mascot Receiving Set, complete.....\$7.50
8996 Mascot Receiving Set, without Receiver or Cord..... 6.00
 Postage weight: No. 8995, 5 pounds; No. 8996, 5 pounds.

BEEKO MINIATURE RHEOSTAT.

No. 453.

These Rheostats are mounted on Porcelain Bases, with all metal parts heavily nickel plated, and are suitable for regulating the filament voltage of the "Audion" Detector, Miniature Lamps, the speed of small motors or whenever a variable resistance is desired.

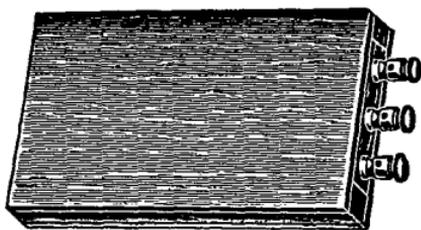
The resistance coil has about 150 convolutions, and as the change in resistance on movement of the lever is by single convolutions, it will admit of very fine adjustment.

Resistance, 11 ohms, continuous capacity, 2 amperes.

List No.	Schedule BA.	Price Each
453	Postage weight, 1 pound	\$1.00

MASCOT FIXED CONDENSER.

It is made up of two sections of the Western Union pattern high insulation resistance condenser, of .002 and .003 M. F., capacity respectively, or a total capacity of .005 M. F., and is furnished with three binding posts so that three variations are obtainable.



No. 7889.

List No.	Schedule BA.	Price Each
7889	Postage weight, 1 pound	\$2.00

BEEKO WIRELESS KEY.

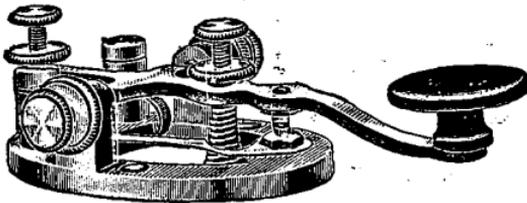
No. 7943.

Owing to the demand for an inexpensive Wireless Key for beginners, we have placed this key on the market.

List No.	Schedule BA.	Price Each
7943	Postage weight, 1 pound	\$1.40

THE MASCOT WIRELESS KEY.

The Latest in Wireless Keys.



No. 8650.

This Key has a base of extra heavy brass with solid brass trunnions.

A bronze lever, correctly designed and perfectly balanced is set in the sockets of the adjustable trunnion screws.

The lever is provided with an auxiliary copper conductor, preventing arcing at the trunnions.

Contact points are of No. 6 or No. 8 B&S Gage extra hardened coin silver, insulated with the highest grade of India Mica.

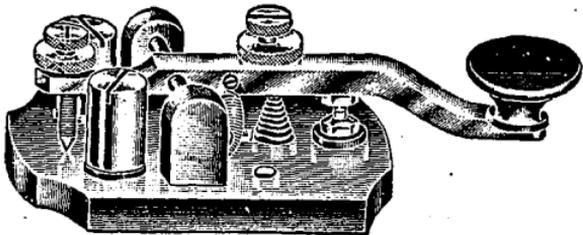
The sockets in which the contacts are set can be removed with a pair of pliers—the work of a moment when replacement becomes necessary. For lightness of touch and operating speed it is the equal of any Morse key made. Highly polished and beautifully finished in gold lacquer. It is the finest moderate priced key made.

List No.	Schedule BA.	Price Each
8650	With No. 8 Contacts	\$3.00
8949	No. 8 Renewal Contacts	Per pair .80
9026	With No. 6 Contacts	3.30
9027	No. 6 Renewal Contacts	Per pair 1.00

STANDARD WIRELESS KEY.

This key has an auxiliary conductor for leading heavy currents to the lever.

It is provided with large hardened contact points fitted in Removable Holders to facilitate renewal. Hand-somely finished in Gold Lacquer.



No. 7939.

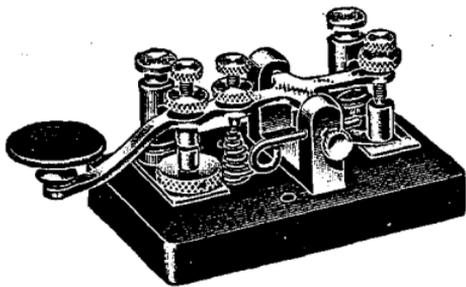
List No.	Schedule BA.	Price Each
7939	With No. 6 Coin Silver Contact Points.....	\$4.00

We also furnish the Standard Wireless Key with larger lever and trunnion posts and with $\frac{1}{4}$ inch and $\frac{3}{8}$ inch Coin Silver contact points, suitable for extra heavy currents.

List No.	Schedule BA.	Price Each
7940	With $\frac{1}{4}$ inch Contacts, to carry 10 Amperes.....	\$6.00
7941	With $\frac{3}{8}$ inch Contacts, to carry 20 Amperes.....	7.50
Postage weight, Nos. 7939, 7940, 7941, 1 pound.		
8950	Renewal Contacts for No. 7939 Key.....	1.00
8951	Renewal Contacts for No. 7940 Key.....	1.80
8952	Renewal Contacts for No. 7941 Key.....	2.80
Postage weight, 2 ounces.		

BUNNELL STRAIGHT LINE RADIO KEY.

(Ghegan Patent.)



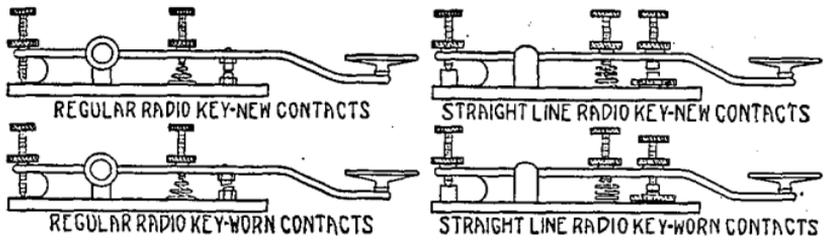
No. 9000

Mounted on polished Bakelite Base $3\frac{3}{4} \times 2\frac{1}{2}$ inches. Lever $5\frac{1}{4}$ inches over all.

The object of this device is to provide a Radio Key having removable or renewable contacts that can be kept in perfect alignment until completely worn out, which not only economises in fewer renewals but by giving better surface contacts between the points, eliminates the fading or changing of strength of signals caused by imperfect or unevenly worn points. This is accomplished by mounting the lower contact point on a ball bearing stud having a clamping device for holding it fixed when in proper adjustment with the upper contact.

The upper contact is not mounted directly to the lever but is attached to the end of a set screw passing through the lever directly over the lower contact.

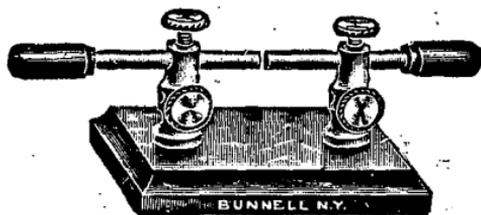
By this arrangement increased lever-play, caused by wearing of contacts is not taken up at the back adjustment screw as in the



ordinary key but, by lowering the upper contact which permits full surface contacts until points are used up something that is impossible with the regular style of key mounting as is demonstrated in the drawing.

This arrangement has the further advantage of keeping the lever knob always at the same height from the operating table which operators will find to be very desirable.

List No.	Schedule BA.	Price each
9000	Postage weight, 1 pound	\$9.00

ZINC SPARK GAPS.

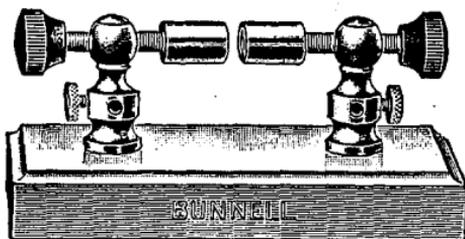
No. 7750.

The efficiency of zinc having been determined for use in spark gaps on secondary of Jump Spark Coils, we have produced five sizes of the "Zinc Spark Gap," all of which are mounted on Porcelain Bases, which as an insulator is far superior to marble, slate, or wood. The standards are brass, heavily nickel plated. When used with Jump Spark Coils the best results are obtained in connection with a Leyden Jar shunted across gap which will produce the good "fat" spark that is needed in Wireless Telegraphy.

BEEKO SPARK GAP.

Suitable for use on Coils up to 2 inches.

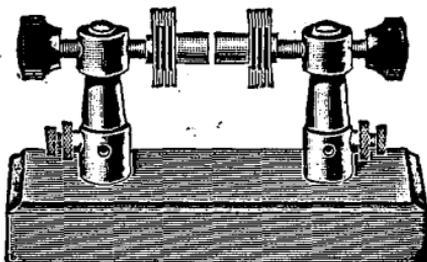
List No.	Schedule BA.	Price Each
7750	Posatge weight, 1 pound	\$1.00
8946	Renewal Electrodes. Postage weight, 2 oz. Per pr.	.50

MASCOT SPARK GAP.

No. 7751.

This gap is suitable for $\frac{1}{4}$ K. W. stations. The Zinc Electrodes are renewable and are mounted on threaded rods, allowing very fine adjustment. The Upright Posts are finely nicked and have concealed spring adjustment, so that once adjusted they will stay in place and no amount of vibration will jar them out of place.

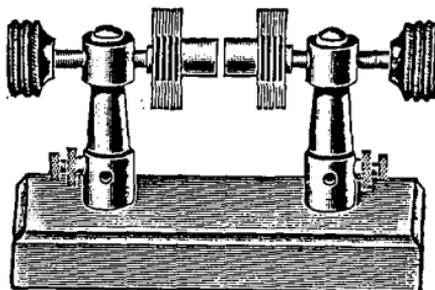
List No.	Schedule BA.	Price Each
7751	Mascot Spark Gap (Postage weight, 2 pounds).....	\$2.50
7776	Zinc Renewal Electrodes (Postage weight, 3 ounces)...	.50

DANDY SPARK GAP.

No. 8652.

The Dandy Spark Gap is mounted on a glazed porcelain base, absolutely proof against leakage. Electrodes are $\frac{3}{8}$ inches in diameter, with four 1 inch radiators on each. Uprights have concealed spring, making adjustment easy and permanent. Knobs are of genuine hard rubber, highly polished. All metal parts are beautifully finished in polished nickel.

List No.	Schedule BA.	Price, Each
8652	Postage weight, 3 pounds.....	\$3.00
8947	Renewal Electrodes. (Postage weight, 3 oz.) Per pr.	.40

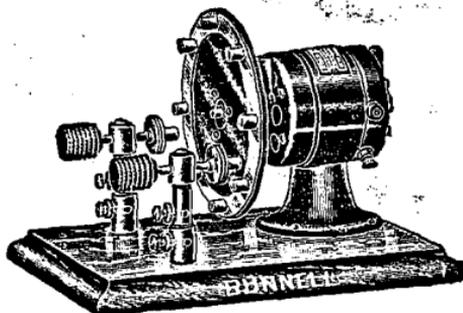
JOVE SPARK GAP.

No. 8653.

The Jove Spark Gap is similar to the Dandy Gap in design but is furnished with $\frac{1}{2}$ inch Electrodes, each of which has five $1\frac{1}{4}$ inch radiators. Has genuine hard rubber knobs, highly polished and knurled. Uprights have metal button on top for controlling concealed quick adjustment spring. Base is of glazed porcelain and all metal parts are beautifully finished in polished nickel—making this the finest moderate priced stationary spark gap on the market.

List No.	Schedule BA.	Price Each
8653	Postage weight, 3 pounds.....	\$3.50
8948	Renewal Electrodes. (Postage Weight, 3 oz.) Per pr.	.50

THE MASCOT ROTARY SPARK GAP.



No. 8800.

The Rotary Wheel is made of one piece of Polished Bakelite, 5 ½ inches in diameter, having a circular brass border on which 8 Zinc Electrodes are mounted.

Standards are of highly polished and lacquered brass 3 inches high; arranged for making rapid and permanent adjustment.

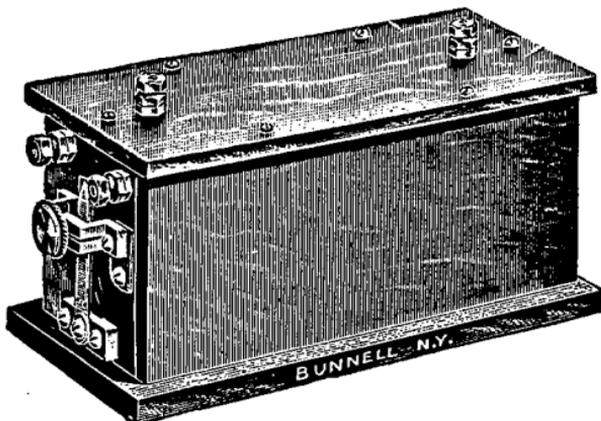
Insulated handles are turned from genuine hard rubber, beautifully knurled and polished, and are 7/8 inches in diameter by 1 inch long.

Can be furnished mounted complete on a polished and bevelled mahogany base with 110 volt alternating or direct current or 6 volt battery motor.

Schedule BA.

List No.		Price Each
8800	Complete with 110 Volt Motor and 3/8 inch Electrodes	\$30.00
8970	Complete with 6 Volt Battery Motor.....	30.00
8646	Rotary Disc only with 3/8 inch Electrodes and Standards	18.00
8649	Standard only with 3/8 inch Electrodes, each....	3.00
8803	110 Volt or Battery Motor only (without Base)	12.00

Postage weights: No. 8646, 3 pounds; No. 8649, 2 pounds.

BOX PATTERN JUMP SPARK COIL.

No. 7761.

This style coil is especially adapted for Wireless Telegraphy and is furnished in a neat polished oak case with brass trimmings and has condenser in base to decrease sparking at contact points. It will work on less current than any other coil on the market, requiring but 6 to 8 volts and $\frac{3}{4}$ of an ampere to 4 amperes, according to size of coil.

List No.	Schedule BA.	Price Each
7758	$\frac{1}{4}$ inch Box Coil (postage weight, 4 pounds).....	\$ 3.00
7759	$\frac{1}{2}$ inch Box Coil (postage weight, 5 pounds).....	3.60
7760	$\frac{3}{4}$ inch Box Coil (postage weight, 7 pounds).....	5.20
7761	1 inch Box Coil (postage weight, 7 pounds).....	6.00
7762	$1\frac{1}{2}$ inch Bod Coil (postage weight, 7 pounds).....	9.00
7763	2 inch Box Coil (postage weight, 7 pounds).....	12.60
7764	3 inch Box Coil (postage weight, 19 pounds).....	24.00
7765	4 inch Box Coil (postage weight, 22 pounds).....	34.00

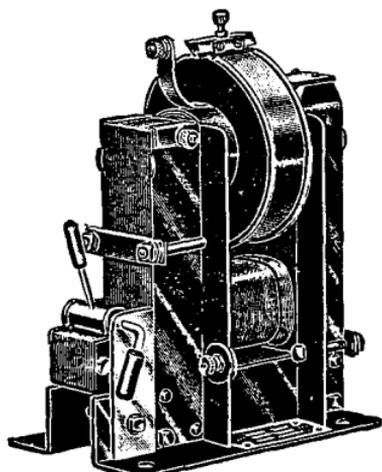
ONE-HALF K. W. TRANSFORMER COIL.

This coil is furnished with or without vibrator, and is made especially for electric light circuits of 110 volt or 220 volt direct or alternating current, for use in connection with the Electrolytic Interrupter. It will give a good "fat" spark and under favorable conditions will transmit a distance of 25 miles.

We can furnish this coil with vibrator for use in connection with a battery current of 6 volts and 6 amperes, and under favorable conditions it will transmit a distance of 10 miles.

List No.	Schedule BA.	Price Each
7766	Transformer Coil without Vibrator	\$10.00
7767	Transformer Coil with Vibrator	12.50

Postage weights: No. 7766, 10 pounds; No. 7767, 10 pounds.

THORDARSON TYPE "R" WIRELESS TRANSFORMER.

No. 8857.

As in the older model, the type "R" is air cooled. The design is very liberal, the factor of safety high, the materials used are the best obtainable. In appearance the type "R" represents a very great improvement over any other type of wireless transformer on the market. Brass, steel and aluminum have been judiciously utilized, not only with the idea of making this design most efficient, but handsome as well. Too often transformer part of the wireless equipment is crude and unsight-

ly. We have made the type "R" in keeping with the rest of the apparatus, a device to which the operator can point with pride. The essential feature of the "Thordarson" wireless transformer has always been its magnetic shunt control. This feature protects the transformer from all undue current surges, such as are present in operation. The type "R" transformers are designed to be connected direct to source of alternating current. No impedance or choke coil is necessary.

Four standard 60 cycle sizes are stocked, as follows:

Schedule BC.

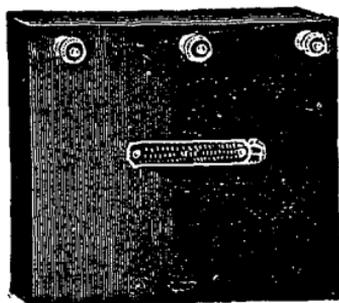
List No.	K. W.	Amperes	Weight	Secondary Voltage	Price Each
8857	$\frac{1}{2}$	1 to 6	28 lbs.	10,000	\$26.00
8858	$\frac{3}{4}$	2 to 9	31 lbs.	10,000	32.50
8859	1	2 $\frac{1}{2}$ to 14	46 lbs.	20,000	39.00
8860	2 $\frac{1}{2}$	6 to 22	60 lbs.	20,000	72.00

Other capacities and voltages made to order, extra.

With our transformers we recommend the use of high non-inductive resistances, connected in shunt across the primary terminals as a prevention of inductive kick-backs in the primary circuit.

Shipping weights: 37, 38, 53, and 90 lbs. respectively.

ANTENNA SERIES CONDENSER.



No. 8627.

For use with long antennae, for the reduction of the natural period to 200 meters or less. It is a moulded section, adjustable in capacity. Should be used in SERIES with the antenna. When the closed circuit is 200 meters or less, and it is desired to put the open circuit in resonance, capacities should be changed until the reading on a hot wire meter shows maximum radiation. The changes of capacity are made by connecting binding posts as marked. The use of this condenser solves the problem of the large antenna, permitting its retention for receiving, and making possible maximum radiation on low waves.

Over-all size, $6\frac{1}{2} \times 6\frac{1}{2} \times 1$ inches.

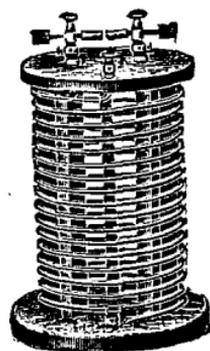
List No.	Schedule BD.	Price Each
8627	Postage weight, 4 pounds	\$4.20

MASCOT SENDING HELIX.

With or Without Spark Gap.

Height with Spark Gap, $12\frac{3}{8}$ inches; height without Spark Gap, $10\frac{1}{2}$ inches; diameter of Helix, 6 inches; diameter of Heads, $6\frac{1}{2}$ inches.

Contains 17 convolutions of No. 6B. and S. Aluminum Wire, and is suitable for coils giving up to 4 inch spark. Two flexible leads composed of 100 strands No. 34 B. and S. Copper Wires (insuring flexibility) and fitted with our new design spring clip are furnished with each Helix.



No. 7838.

List No.	Schedule BA.	Price Each
7838	Helix with Spark Gap	\$8.50
7839	Helix without Spark Gap	7.00
	Postage weight, 4 pounds.	



LEYDEN JARS.

We use only the best grade of Bohemian glass in the manufacture of our Leyden Jars, 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 covers are made of solid oak, well polished.

No. 7819.

List No.	Schedule BG.	Price Each
7818	Half Pint Leyden Jars (postage weight, 2 lbs.)	\$2.50
7819	One Pint Leyden Jars (postage weight, 3 lbs.)	3.00
7820	One Quart Leyden Jar (postage weight, 4 lbs.)	3.50
7821	Two Quart Leyden Jar (postage weight, 5 lbs.)	4.00

TIN FOIL.

For those wishing to make their Leyden Jars, Condensers, etc., we can furnish Tin Foil in the following sizes:

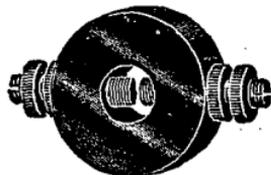
List No.	Schedule BA.	Price Each Price per lb.
7771	4 1/2 x 16 1/2 inches, medium weight.	\$0.60
7772	5 1/2 x 24 inches, heavy weight.	.60
7773	12 x 24 inches, medium weight.	.60

ANCHOR GAPS.

These gaps are useful for protecting the receiving instruments from damage by electrical storms, in which case it is connected directly between ground and aerial wires of the receiving set.

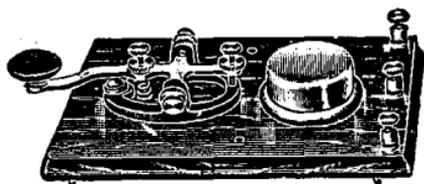
The two-point gap is most generally used, but on loop antennas the three-

point gap is required.



No. 7844.

List No.	Schedule BA.	Price Each
7844	Two Point Anchor Gap (postage weight, 1 lb.)	\$1.20
7845	Three Point Anchor Gap (postage weight, 1 lb.)	1.50

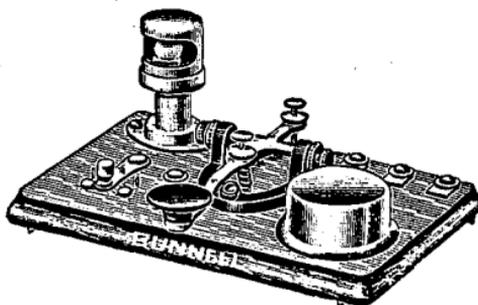
BUZZOPLEX AND "BLINKO" BUZZAPLEX.

No. 8656.

These instruments are identical except that the "Blinko" has a miniature lamp, mounted in a suitable holder, and a switch as well as the Dandy Morse Key and high frequency Buzzer, common to both.

The switch is to put either the lamp or buzzer in operation as may be desired.

The Buzzer is used for learning wireless or radio signals and the lamp for practice in flash or heliographic work.



No. 9028.

The instruments are provided with a third connecting post for connecting in one or more telephones so that by connecting a "JOVE" or other good dry cell to the terminals marked "BAT," and telephones to those marked "TEL," signals made by the key will sound exactly the same as wireless operators are hearing them on land and sea throughout the entire World.

Schedule BA.

List No.		Price Each
8656	Buzzoplex only without Battery.....	\$3.20
8814	Buzzoplex complete with Dry Battery.....	3.70
9028	Blinko Buzzoplex without Battery.....	4.80
9029	Blinko Buzzoplex complete with Battery.....	5.30

Postage weight, without battery, 2 pounds; with battery, 5 pounds.

BOOKS.

Schedule B.J.

Bangay—Elementary Principals of Wireless Telegraphy	\$1.00
Bucher—How to Conduct a Radio Club.....	.50
Bucher—How to Pass U. S. Government Wireless Examinations .....	.50
Bucher—Practical Wireless Telegraphy	1.50
Bucher—Vacuum Tubes in Wireless Communication	1.50
Bureau of Standards—Radio Instruments and Measurements, ..	1.25
Dodge—The Telegraph Instructor .....	.98
Edelman—Experimental Wireless Stations	1.50
Fleming—Radio Telegraphy and Radio Telephony.....	2.50
Fleming—The Principals of Electric Wave Telegraphy.....	10.00
Fleming—The Wireless Telegraphists' Pocket Book of Notes, Formulae and Calculations	2.00
Goldsmith—Radio Telephony	2.00
Goldsmith—The Proceedings of Institute of Radio Engineers	7.00
Hawkhead & Dowsett—Handbook of Technical Instructions for Wireless Telegraphists	2.00
Horstman & Tousley—Modern Electrical Construction	1.50
Horstman & Tousley—Practical Armature and Magnet Windings	1.50
Houston & Kennelly—Alternating Currents	1.00
Jones—Pocket Edition of Diagrams for Telegraph Engineers	2.00
Marconi—Victor Wireless Records (per set of 6 double faced records)	6.00
Maver—American Telegraphy	6.00
Meyer—Manual of Railway and Commercial Telegraphy.....	1.00
Meyer—The 20th Century Manual of Railway Station Service	1.25
Morgan—Wireless Telegraphy and Telephony	1.00
Norrie—Induction Coils and Coil Making	1.00
Phillips—The Telegraph Code	1.00
Pierce—Principals of Wireless Telegraphy	3.00
Stanley—Text Book of Wireless Telegraphy	2.25
Traffic Rules and Regulations for Marconi Operators.....	1.00
Weber—Handy Electrical Dictionary .....	.25
White—Military Signal Corps Manual	1.50
White—Practical Aviation for Military Airmen.....	1.50
Zenneck—Wireless Telegraphy	4.00

HAWKINS PRACTICAL LIBRARY OF ELECTRICITY.

In Handy Pocket Form.

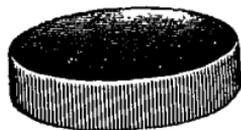
Guide No.	
1	The Principals of Elementary Electricity, Magnetism, etc. \$1.00
2	The Construction of Dynamos, Motors, Armatures, etc.... 1.00
3	Electrical Instruments, Practical Management of Dynamos, etc. 1.00
4	Distribution Systems, Wiring, Wiring Diagrams, etc.... 1.00
5	Principals of Alternating Currents and Alternators..... 1.00
6	Alternating Current Motors, Transformers, Converters, Rectifiers
7	Alternating Current Systems, Current Breakers, Measuring Instruments
8	Alternating Current Switch Boards, Wiring, Power Stations, etc. 1.00
9	Telephone, Telegraph, Wireless, Bells, Lighting Railways 1.00
10	Modern Practical Applications of Electricity, etc..... 1.00

AMATEUR SERIES.

No. 1.	Amateur Wireless Hand Book	\$0.25
No. 2.	Model Flying Mahines .....	.25
No. 3.	Lessons in Wireless Telegraphy .....	.25
No. 4.	Operation of Wireless Apparatus .....	.25
No. 5.	Wireless Construction and Installation .....	.25
No. 6.	Experimental Wireless Apparatus .....	.25
No. 7.	Home Made Electrical Apparatus, Vol. 1.....	.25
No. 8.	Home Made Electrical Apparatus, Vol. 2.....	.25
No. 9.	Home Made Electrical Apparatus, Vol. 3.....	.25

We can also furnish all other Standard Books not listed above.

WIRELESS PARTS.



No. 9013.



No. 9014.



No. 9015.



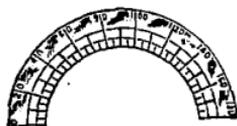
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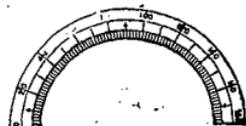
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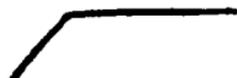
No. 9019.



No. 9020.



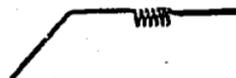
No. 9021.



No. 9022.



No. 9024.

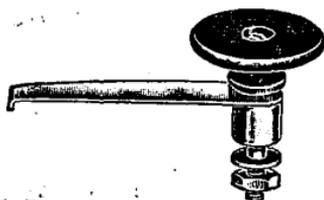


No. 9023.

Schedule BA.

List No.	Description	Price Each
9013	Flat Hard Rubber Knob, Knurled, $1\frac{1}{8}$ inch diameter.	\$0.40
9014	Mascot Hard Rubber Variable Condenser Knob with Pointer	1.50
9015	Dandy Hard Rubber Variable Condenser Knob	.35
9016	Beeko Hard Rubber Variable Condenser Knob with Pointer	1.00
9017	Stationary Plate for Beeko Variable Condenser	.20
9018	Movable Plate for Beeko Variable Condenser	.12
9019	N. P. Pointer for Dandy Variable Condenser	.18
9020	N. P. Brass Scale for Variable Condenser	.40
9021	Celluloid Scale for Beeko Variable Condenser	.20
9022	Cat Whisker	.10
9023	Cat Whisker with Coil Spring	.12
9024	Graphite Potentiometer Resistance 6000 Ohms	1.20
9025	Graphite Potentiometer Resistance 1000 Ohms	1.20

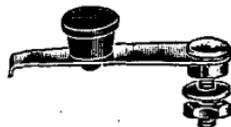
WIRELESS PARTS.



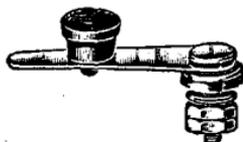
No. 8662.



No. 8666.



No. 8660.



No. 8658.



No. 7915.



No. 8664.



No. 3671.



No. 3670.

List No.	Schedule BA.	Price Each
8658	2 inch Switch Lever for No. 8664 Pts., Polished Brass..	\$0.35
8659	2 inch Switch Lever for No. 8665 Pts., Nickel Plated....	.45
8660	2 inch Spring Type Switch Lever for No. 8664 Points, Polished Brass .....	.40
8661	2 inch Spring Type Switch Lever for No. 8665 Points, Nickel Plated .....	.50
8662	2 3/8 inch Spring Type Switch Lever for No. 8666 Points, Polished Brass .....	.55
8663	2 3/8 inch Spring Type Switch Lever for No. 8667 Points, Nickel Plated .....	.65
8664	Switch Point 1/4 inch Head, 5/8 inch long, Polished Brass	.05
8665	Switch Point 1/4 inch Head, 5/8 inch long, Nickel Plated	.07
8666	Switch Point 1/4 inch Head, 7/8 inch long, Polished Brass	.08
8667	Switch Point 1/4 inch Head, 7/8 inch long, Nickel Plated	.10
7915	3/16 inch Sliders for Mascot Tuning Coil.....	.30
7916	1/4 inch Sliders 1 inch long.....	.35
8668	3/16 inch Sliders for Standard Tuning Coil.....	.32
8603	8 3/4 x 3/16 inch Rods with Sliders for Mascot Tuning Coil	.70
8604	15 x 3/16 inch Rods with Sliders for Standard Tuning Coil	.90
8692	12 x 1/4 inch Rods with Sliders	1.00
8693	15 x 1/4 inch Rods with Sliders	1.40
8696	8 3/4 x 3/16 inch Rod only .....	.35
8697	15 x 3/16 inch Rod only .....	.50
8698	12 x 1/4 inch Rod only .....	.50
8699	15 x 1/4 inch Rod only .....	.60
3670	Black Composition Binding Post with Machine Screw...	.10
3671	Black Composition Binding Post with Wood Screw.....	.10

ELECTROSE KNOBS.



No. 8669.



No. 8670.



No. 8671.



No. 8672.



No. 8673.



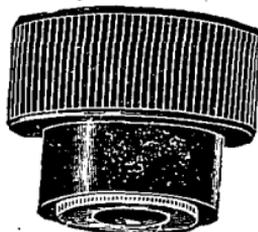
No. 8674



No. 8675.



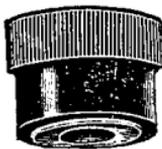
No. 8676.



No. 8677.



No. 8678.



No. 8679.



No. 8680.



No. 8681.



No. 8682.



No. 8684.



No. 8695.

(CUTS FULL SIZE.)

Schedule BA.

List No.	Mfrs. No.		List Price
8669	828	With 8 x 32 Female Thread.....	\$0.12
8670	809	With 8 x 32 Female Thread.....	.08
8671	771	With 8 x 32 Female Thread.....	.06
8672	827	With 8 x 32 Female Thread.....	.06
8673	703	With 8 x 32 Female Thread.....	.06
8674	832	With 8 x 32 Female Thread.....	.12
8675	810	With 8 x 32 Female Thread.....	.10
8676	945	With 8 x 32 Female Thread.....	.10
8677	1078	With 8 x 32 Female Thread.....	.24
8678	816	With 8 x 32 Female Thread.....	.08
8679	774	With 8 x 32 Female Thread.....	.10
8680	775	With 8 x 32 Female Thread.....	.10
8681	818	With 8 x 32 Female Thread.....	.10
8682	836	With 8 x 32 Female Thread.....	.12
8683	807	With 8 x 32 Male Thread.....	.12
8684	824	With 8 x 32 Female Thread.....	.06
8695		Nickel Plated Crystal Cap, 3/4 in. dia.....	.60

AERIAL INSULATORS.

These insulators have deep corrugations to reduce surface leakage and is the style universally used by commercial wireless stations. Heavy galvanized iron rings are moulded into each end.

No. 1 will stand a discharge of 20,000 volts, and a mechanical strain of 700 pounds.



No. 2 will stand a discharge of 30,000 volts, and a mechanical strain of 1,500 pounds.

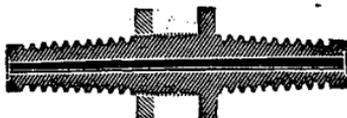


No. 3 will stand a discharge of 65,000 volts, and a mechanical strain of 1,500 pounds.

List No.	Schedule BA.	Price Each
7849	No. 1, 3 x 2 inches diameter (postage weight, 1 lb.)	\$0.45
7850	No. 2, 5 x 1½ inches diameter (postage weight, 1 lb.)	.45
7851	No. 3, 10¾ x 1½ inches diameter (postage weight, 2 lbs.)	.75



No. 8685.



No. 8689.



No. 8687.

List No.	Schedule BG.	Price Each
8685	Small Electrode Lead-in Insulator, 4¾ x 2 inches, with ¼ inch Wire Hole	\$1.25
8686	Similar to No. 8685 but 5¾ x 2 in. with ¼ in. Rod	1.75
8687	Medium Electrode Lead-in Insulator, 5¾ x 1½ inches with ¾ inch Wire Hole	2.20
8688	Similar to No. 8687 but 2½ x 6¼ in. with ¾ in. Rod	2.50
8689	Large Electrode Lead-in Insulator, 15 x 2¾ inches with ½ inch Wire Hole	6.25
8690	Similar to No. 8689 but 18 x 2¾ inches with ½ inch Rod	8.75

STRANDED BRONZE AERIAL WIRE.

Resembles hard drawn copper wire; has high tensile strength and conductivity, being about the same strength of phosphor bronze. Composed of seven strands, each No. 22 B. and S. gauge.

List No.	Schedule BA.	Price per 100 feet.
7782	Price per 100 feet. (Postage weight per 100 feet, 2 lbs.)	\$3.00

SOLID COPPER-CLAD AERIAL WIRE.

Has great tensile strength, being about three times that of aluminum wire. No. 14 is the size most generally used; runs about 35 feet to the pound.

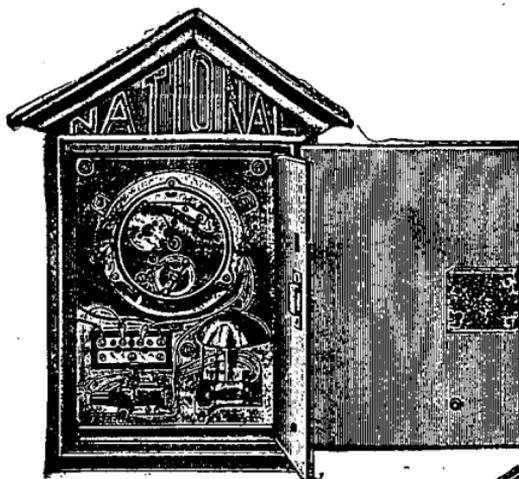
List No.	Schedule BA.	Price per pound.
7783	Price per pound. (Postage weight per lb., 2 lbs.)	\$1.00

ALUMINUM AERIAL WIRE.

No. 14 B. and S., about 240 feet to the pound.

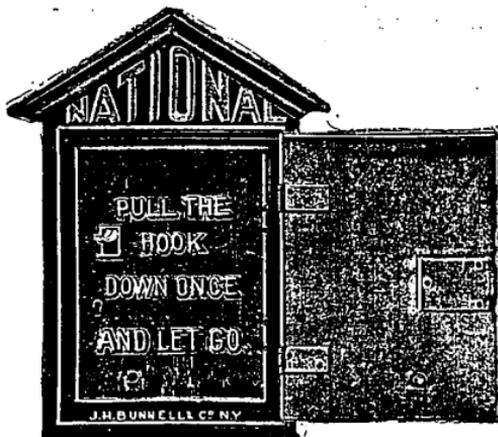
List No.	Schedule BA.	Price per pound.
7784	Price per pound. (Postage weight per lb., 2 lbs.)	\$1.20

"NATIONAL" FIRE ALARM BOX.



We consider this box unexcelled by any high priced box in use. Extremely simple, it is made up of but few parts, and the workmanship and material used are the best that can be procured. It is made up of three (3) iron boxes, one within the other. The inner round box contains a well made and handsomely finished clock mechanism. Has a glass front through which mechanism, and break wheel can be seen; and as this box is inside of the two other boxes the mechanism is absolutely protected from the elements.

The second box contains the first box, which is insulated from it; also a tap bell, lightning arrester with ground plate, and combined signal key and cut out. Heavy contacts are used on the key. This box is furnished with a good lock. Through the door of this box the hook projects which is used for pulling in the alarm.



The outside or street box is an extra heavy casting; japanned red, with mouldings and box number gilded. We fit the door of this box with a Trap Lock made entirely of bronze. It is our own design and made only by us.

Schedule BA.

List No.	Price Each
4957	\$100.00



FALCON BREAK GLASS BOX.**For Selective Ringing Systems.**

The latest and most perfect Simple Fire Alarm Box.

As soon as glass is broken mechanism acts automatically, sending in the number of the Box four times.

Once started the alarm mechanism cannot be interfered with.

Glass cannot be replaced without resetting mechanism nor can mechanism be reset without replacing glass.

By means of a special Key the circuit and mechanism may be tested without disturbing glass or interfering with regular fire alarm setting of the box.

The Falcon Box is thoroughly well made and is suitable for Public or Private Systems. Outer Box is of heavy cast iron so designed as to be practically waterproof. It is tapped top and



No. 8701.

bottom, for half or three-quarter inch Conduit.

The inner box contains our latest and best signal movements, having heavy gears made from the highest quality brass with solid insulated break wheel, hardened silver self-cleaning contacts mounted on phosphor-bronze springs with mica insulation, approved escapement, soldered connections, etc.

Contact springs are insulated from the mechanism and box so that grounding of circuit or shocks are impossible.

The Falcon Box is Fully Guaranteed under ordinary conditions for five years, provided the inner box is not opened or tampered with.

Every Falcon Box is thoroughly tested and sealed before leaving our works and we agree to repair or replace without charge any Falcon Box that fails to work satisfactorily that may be returned to us within five years from date of sale with seals unbroken.

The Falcon Fire Alarm Box is acceptable for factory Fire Alarm systems under the most exacting conditions.

Schedule BA.

List No.	Price Each
No. 8705 Falcon Fire Alarm Box.....	\$35.00

THE JOVE FIRE ALARM BOX.

Is the Highest Grade of Low Priced Non-Interfering
Pull Fire Alarm Box Ever Produced.

APPROVED BY STATE LABOR BUREAUS.



Surface Type.

The mechanism of the JOVE is very strong and reliable, being most carefully made of the best class of materials for the purpose.

It has hard silver, self-cleaning contacts mounted on the finest quality of phosphor bronze springs.

The mechanism and box are thoroughly insulated from any possible contact with the current carrying parts so that all danger of grounds or shocks is entirely eliminated. They have stood successfully a laboratory breakdown test of 600 volts alternating current.

We have so much confidence in the excellence of our Jove Box that we sell it under a long guarantee, giving a new box in exchange for any defective one that may be returned to us within five years from date of sale, with seal of movement cover unbroken. The perfect mounting of this box, in smooth, beautiful castings gives it an attractive appearance.

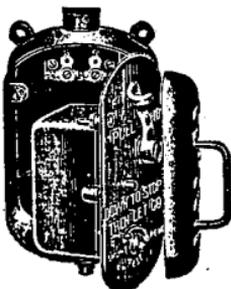
An outer door, with convenient grip for pulling it open protects the pull-lever from mischievous use or accidental damage. This door is normally held closed by a spring catch that yields to a pull.

Opening the outer or protecting door exposes the pull-lever for transmitting alarms. When this lever is pulled down to its stop and released the alarm signal giving the special box number will be transmitted four times and cannot be interfered with by any further manipulation of the lever.

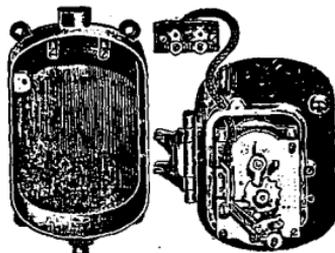


If handle is not pulled all the way down to its stop the signal will not be repeated four times, but a perfect signal will be sent once when pulled one-quarter the distance; twice when pulled half and three times on being pulled three quarters of the way to stop, and these signals cannot be interfered with after releasing the pull-lever.

A broken or imperfect signal cannot be sent no matter to what point the lever may be pulled or released from.



THE JOVE FIRE ALARM BOX—Continued.



Opening the outer door also exposes the testing key-hole.

By means of a special key which is furnished with each box, a test of either the electrical circuit or the box mechanism can be made without sending in an alarm.

This key also serves to open the screw-lock of inner door on the inside of which the mechanism is mounted.

This mechanism is protected by a cast iron cover fitted with gasket so as to be dust-proof.

One of the screws holding this cover in position is sealed and this seal should not be broken without our authority as the breaking of it releases us from the five years guarantee given on each Jove Fire Alarm Box.

When not otherwise specified the Jove Box will be furnished for closed circuit system.

As shown in the last illustration, we can furnish the outer casting of the Jove Box separately when so required. This should be a great convenience for installing, especially in new buildings, as these parts can always be furnished promptly so that the wiring work may be completed throughout and the mechanism need not be installed until everything else is ready. The outer casting is tapped at both ends for half or three-quarter inch conduit. It contains convenient connecting terminals, and notwithstanding its compactness, is roomy enough to pass wires through from one outlet to the other when necessary.



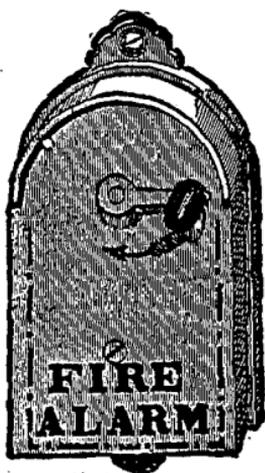
Flush Type.

The Jove Flush F. A. Box is also equipped with a drawn steel back for Flush Work. This box has $\frac{1}{2}$ to 1 inch knockouts and the hinged door is so constructed that it will lap over the hole in the wall to make a finished job.

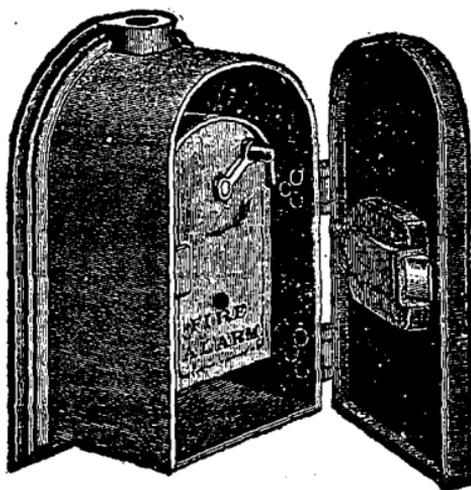
Always specify signal numbers and when ordering surface boxes, state whether boxes are to be tapped for $\frac{1}{2}$ or $\frac{3}{4}$ inch Conduit.

List No.	Schedule BG.	Price Each
8700	Jove Surface Type F. A. Box.....	\$19.00
8701	Jove Flush Type F. A. Box.....	24.00

TYPE 5 FIRE ALARM BOX.



No. 4878.



No. 4879.

This box has the appearance of a District Messenger Call Box, but the clock mechanism inside is very different. The movement is made up with extra heavy wheels and plates and a spring of great strength. Regular finish red japan and gilt stenciling.

We illustrate our outside Street Box which will take the No. 5 Fire or Burglar Alarm Box. Is fitted with a Yale lock and finish in red japan. Made with solid door or with upper half of door glass so that in emergency glass can be broken and inside box pulled.

List No.	Schedule BA.	Price Each
4878	No. 5 Fire Alarm Box.....	\$7.00
4879	Outer Box only with Yale Lock and Solid Door.....	7.50
4883	Outer Box, Half Glass Door.....	8.00

THE VULCAN 1914 MODEL FIRE ALARM SIGNAL BOX.



No. 782.

Pulling lever to send alarm winds this box, so that there is no danger of the mechanism failing to work, on account of being run down, as would be the case with boxes that require key winding.

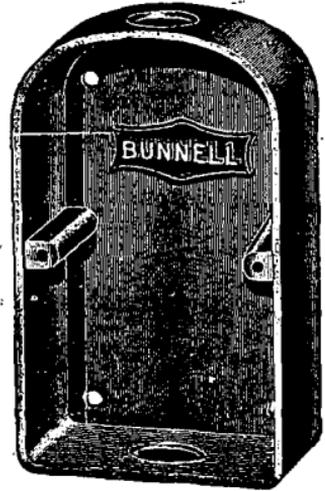
This box contains our latest improved mechanism with Brass Break Wheel, silver contacts, non-interfering pull and key test device. It is admittedly the best and most reliable low priced box ever produced.

Repeats signals one to five times according to distance handle may be pulled.

List No.	Schedule BA.	Price Each
782	\$12.00

BEEKO FIRE ALARM BOX.**"Break the Glass" Type.**

Surface Type Box
Complete.



Surface Type.
Back Box.

The Industrial Commission of the State of New York and Fire Prevention Bureau of the City of New York have approved this form of box for all simple ringing Fire Alarm Systems. Made of the finest materials and best workmanship, it is without question the best small "Break the Glass" station ever put on the market.

The castings are of very soft grey iron, well finished in a glossy red baked enamel.

A Back Box is supplied, when used for surface mounting, and is drilled top and bottom to take standard $\frac{1}{2}$ inch conduit.

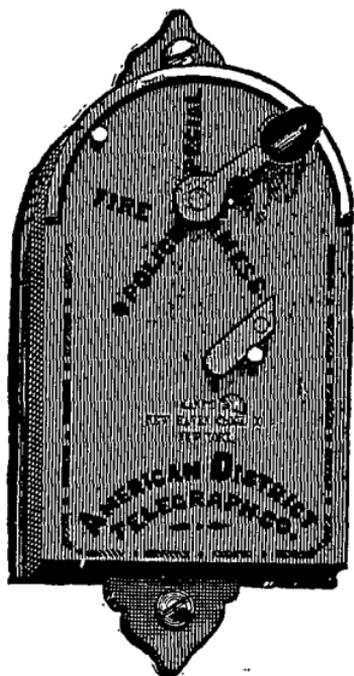
The frame, on which the movement is mounted, is drilled for mounting on the standard rectangular Push Switch Covers.

With these advantages the Beeko Fire Alarm Box can be installed in any building, new or old work, without the necessity of having or installing special fittings.

Schedule BG.

List No.	Price Each
8713 For Surface Work	\$8.00
8714 For Flush Work	8.00

DISTRICT CALL BOXES.



No. 1564.

With Special Electro-Mechanical Movements.

The movement used in our regular messenger box is the same as furnished the American District and Postal Telegraph Companies, etc.

We have expended much time and money in perfecting this simple mechanism, and our latest pattern is

PERFECTION.

Extra Heavy Plates and Gear Wheels, Polished Hardened Steel Verge, Screw Pillars, and Extra Heavy Springs, are some of the new features.

WE GUARANTEE EVERY MOVEMENT AS REPRESENTED.

These boxes are fitted with a 4 call movement, so that crank can be stopped at "Messenger," "Police," etc., as desired. They are also made with a gravity stop, (as shown in illustration) to prevent the crank passing the word Messenger, or by "throwing" stop over, special signals may be turned in up to 4 calls. We can also furnish with one round movement if desired.

Boxes are furnished regularly in Chocolate color, but can be furnished in special color, or stencilling at an additional charge.

List No.	Schedule BA.	Price Each
1563	Call Box without Gravity Stop.....	\$5.00
1564	Call Box with Gravity Stop.....	5.50

When sending orders state signal numbers, and whether open or closed circuits.

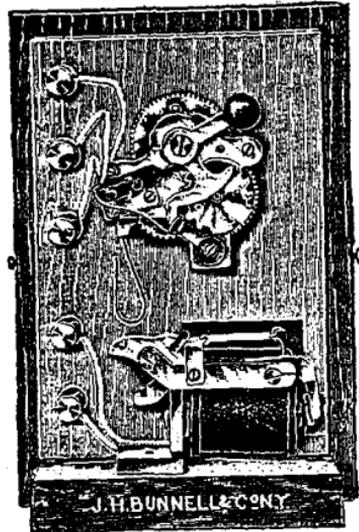
BUNNELL AUTOMATIC SIGNAL BOX.

BURGLAR ALARMS, FIRE ALARMS, ETC.

BEST AND CHEAPEST.



Showing Box Set.



Showing Box Tripped.

This Alarm Signal Box consists of a Messenger or Fire Alarm Movement having its escapement stem extended so as to be held set by a tripper controlled by the movement of the relay armature as shown in the illustrations.

They are made for closed circuit systems so that opening the relay circuit at any point, whether caused by cutting the wire or otherwise releases the trip and sends in the signal.

Prominent District Telegraph Companies who are using the Bunnell Automatic Signal Box do not hesitate to say it is the very best automatic signalling device ever produced, and has been found entirely reliable.

When so ordered the movements can be fitted with the McCullough Grounding Attachment.

Schedule BA.

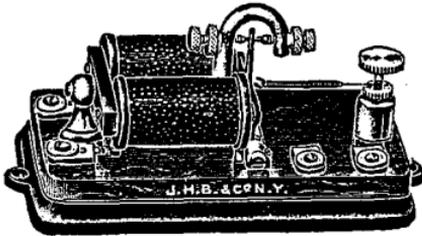
List No.

Price Each

410 Mounted in Oak Box with Hook-fastened Cover. . \$14.00

411 Mounted in Oak Box with Hook-fastened Cover
with McCullough Attachment 15.00

FIRE ALARM RELAYS.



No. 786.

These Relays have been approved by State and Municipal Departments for use in factories or other installations where high-grade, sensitive Relays are required. They have large magnets wound full with best quality of magnet wire to specified resistances, and work perfectly on a current of 25 Milliamperes,

which insures a saving in both the original cost and maintenance of the Main Batteries.

No. 1 FIRE ALARM RELAY (Ajax Type).

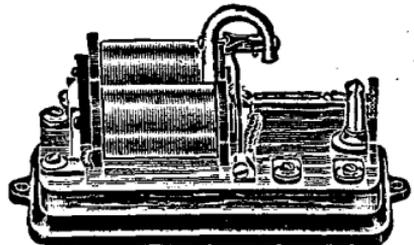
This relay is furnished regularly wound to 25 Ohms and is mounted on finely finished wood base, with japanned iron surbase. It is usually referred to as the "Trouble Bell" Relay.

The local contacts are of silver and are reversible, so that local circuit can be made normally open or closed as desired.

List No.	Schedule BA.	Price Each
786		\$7.00

No. 2 FIRE ALARM RELAY.

This relay is similar in construction to the No. 1 F. A. Type, except that it is furnished with large rubbing contacts that permit the carrying of heavy currents on local circuits. These contacts are fixed and so arranged that the local circuit is open when the main line circuit is closed.



No. 787.

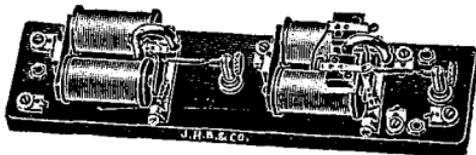
List No.	Schedule BA.	Price Each
787 No. 2 F. A. Relay 25 Ohms.....		\$8.00

No. 4 FIRE ALARM RELAY.

The same design of relay as the No. 2 F. A. Type but has magnets wound with enameled wire and is mounted on a slate base, making it fireproof throughout.

List No.	Schedule BA.	Price Each
788 No. 4 F. A. Relay 25 Ohms.....		\$9.50

No. 3 MASTER RELAY.



No. 789.

The upper relay of the No. 3 Master Combination Relay is similar to the No. 4 relay is wound to 25 ohms. Lower relay is specially constructed with two front contacts for operating two bell circuits. Wound to 50 ohms. Wound with enameled wire, silver contacts, W. U. Clamp Binding

Posts, slate base and soldered connections.

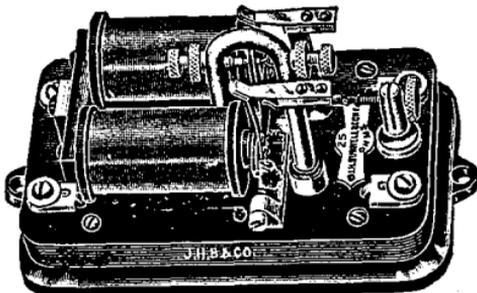
List No.	Schedule BA.	Price Each
789	No. 3 Master F. A. Relay 25 x 50 Ohms.....	\$18.00

No. 5 RELAY.

Same as No. 1 Ajax Relay but mounted on slate base and magnets wound with enameled wire.

Schedule BA.

List No.	Price Each
8702	No. 5 F. A. Relay; 25 Ohms .....\$8.50



No. 8703.

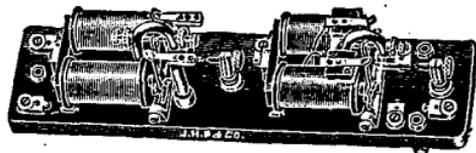
No. 6 RELAY.

The contacts are mounted on two brass uprights, in addition to the contact on the gooseneck. The contacts on the uprights are rubbing contacts while the center contact is a hardened silver point. With three distinct contacts in multiple there is no probability of the relay failing to operate. Mounted on slate base with iron surbase. Can be furnished without Iron Base but with brass studs as used on Master Relay, without extra charge.

List No.	Schedule BA.	Price Each
8703	No. 6 Relay; 25 Ohms.....	\$12.00
8712	No. 6 Relay; 1000 Ohms.....	14.00
8706	No. 6 Relay; 1200 Ohms.....	15.00

No. 7 MASTER RELAY.

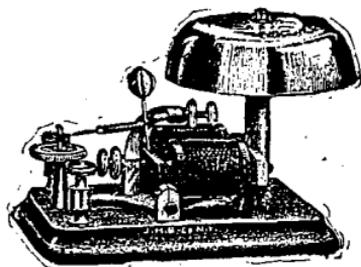
The upper Relay of the No. 7 Master Combination Relay is the triple contact No. 6 Relay, while the lower is the double contact type as used on the No. 3 Master Relay. Local con-



No. 8704.

contacts on both relays arranged to be normally open.

List No.	Schedule BA.	Price Each
8704	Upper Relay 1000 Ohms, Lower Relay 1000 Ohms.....	\$25.00
8707	Upper Relay 1200 Ohms, Lower Relay 1200 Ohms.....	26.00

AMERICAN DISTRICT OR RELAY BELL.

No. 5988.

(Single Stroke.)

Made with Cast Bronze Frame, mounted on Mahogany Base, and handsomely finished.

Schedule BA.

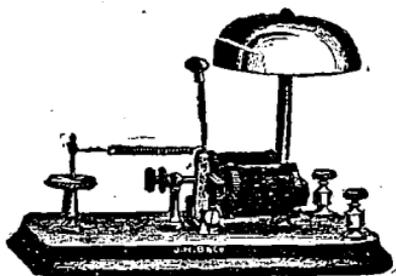
List No.	Price Each
5988 4 Ohm A. D. T. Bell....	\$4.50
5989 20 Ohm A. D. T. Bell....	4.80

TABLE BELL.

Similar to the A. D. T. Bell, but without Bronze Frame, and furnished regularly with 3 inch gong.

Schedule BA.

List No.	Price Each
8718 Wound to 4 Ohms...	\$4.50
8719 Wound to 20 Ohms...	4.80



No. 8718.

CYCLONE VIBRATING BELL.

The entirely new method of construction used enables you to get from this bell as great a volume of sound as has ever been produced by any vibrating bell made.

Approved in the State of New York for use on constant ringing systems and in the State of New Jersey for code-ringing systems. Bells will be furnished wound to 10 Ohms where not more than five bells are used. When six or more bells are on one line they are wound to 20 ohms resistance.



No. 1752.

List No.	Schedule BG.	Price Each
1750 6 inch—Steel Gong		\$14.50
1751 8 inch—Steel Gong		16.50
1752 10 inch—Steel Gong		20.00
1753 12 inch—Steel Gong		24.50

If Black Box is wanted add \$2.00 to list.

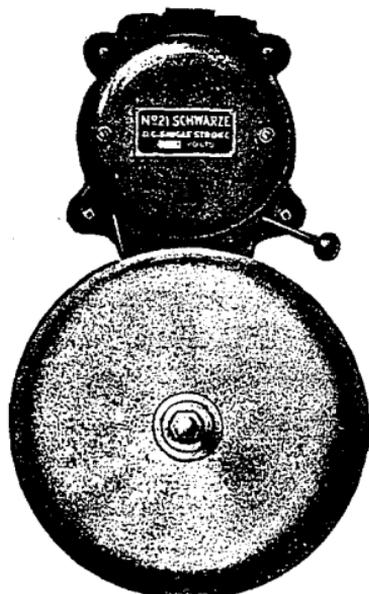
SINGLE STROKE BELL

Type 21.

This Bell is designed for Fire Alarm Service, Factory Signaling, Superintendent's Calls, etc. Has been approved by the N. Y. State Industrial Commission for use with interior Fire Alarm Systems.

Wound to 4 ohms and for operation on direct current only. For operation directly across 110 volts winding must be 500 ohms. Furnished complete with Conduit back box. With Oxid. Steel Gong.

List No.	Schedule BG.	Price Each
8780	6 inch	\$15.00
8781	8 inch	18.00
8782	10 inch	21.00
8783	12 inch	25.00
For 500 Ohms add to list.....		3.00
Without Back Box deduct....		2.00



No. 8780.

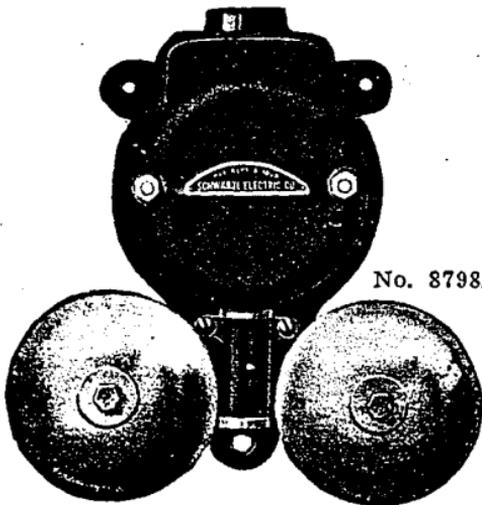
TROUBLE BELL

Double Gong—Type 20.

Primarily intended as a fire alarm trouble bell but can be used wherever a small bell is needed and where perfect action must be assured.

Schedule BG.

List No.	Price Each
8798 3 in. Cast Gongs	\$6.50
8799 2 x 3 inch. Rectangular Cast Gongs	7.00



No. 8798.

DOUBLE GONG VIBRATING BELL.

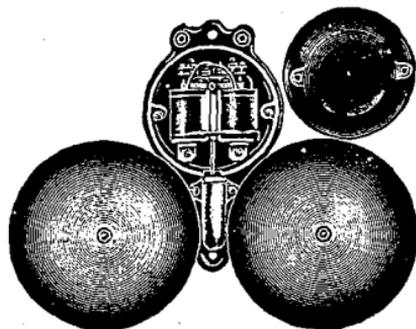
For Battery or High Tension Direct Current Circuits.

This Bell is entirely insulated from frame, is approved by the Underwriters' Laboratories, Inc., and listed among the devices to be used by the National Board of Fire Underwriters as "Standard."

Its quick response and instant stopping make it a valuable signal bell.

Type 22A. Schedule BG.

List No.	With Steel Gong
1732 6 inch	\$15.00
1733 8 inch	18.00
1734 10 inch	21.00



No. 1734.

INDUSTRIAL KLAXONS.

IN FACTORIES AND MILLS they have proved to be the ideal factory signal. They give the maximum of carrying power at a minimum of cost.

AS FIRE ALARMS operated on power circuit or storage batteries by fire alarm boxes in connection with any system. Klaxons are approved by the Dept. of Labor of New Jersey, operating in multiple on open circuits—and New York providing operation is in series on supervised closed circuits.

AS CALL SIGNALS to summon foremen, etc., to the nearest telephone or office. The Klaxons are installed in multiple on one circuit terminating in a push button or the Bunnell Signal Box at the telephone operator's desk. When a person is wanted, the Klaxon's call simultaneously, according to an assigned code number, locating him at once, no matter where he is.

AS TIME SIGNALS for starting and stopping work. Save money every day by keeping employees working full time.

ON MOVING CRANES, derricks and other machinery.

TO REPLACE TELEPHONE BELLS in noisy rooms Klaxons are being used, operated by a relay across the bell terminals which cuts in the Klaxon on the local battery.

IN SCHOOLS, HOTELS, and public rooming houses, fewer need be used and cannot be confused with other signals.

IN MINES AND QUARRIES they are ideal for time, blast and elevator signals, on electric locomotive, underground telephones, etc.

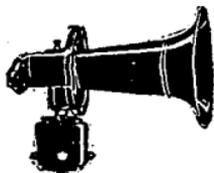
ON FARMS and ranches, in lumber yards and camps for a time signal, code signal, meal or telephone call, etc. Under ordinary conditions the Klaxon can be heard a mile away.

ON STREET CORNERS. Nowadays when motor fire apparatus is used the signal on the apparatus itself is not sufficient to clear the streets in time, particularly in congested districts. To overcome this, Klaxons are used and they operate as soon as the alarm is turned in and clear the streets before the arrival of fire apparatus.

FOR RAILROADS, in freight yards, to signal switching engines and crews; on draw bridges to signal boats and as a warning to track walkers.



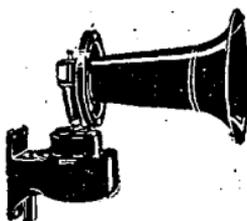
No. 8721.



No. 8722.



No. 8723.



No. 8724.



No. 8725.

KLAXONS.

List No.	Schedule B.J.	Price Each
8721	Type "S." New Jersey Fire Alarm	
	Type	\$22.00
8722	Type "L." Same as Type "S," but but with Long Projector.....	22.00
8723	Type "W." Weatherproof, with Conduit Entrance	22.00
8724	Type "WL." Same as Type "W," but with Long Projector.....	22.00
8725	Type "WS." Same as Type "W," but with Short Projector.....	22.00

ELECTRO MECHANICAL GONG.

Regular Type.

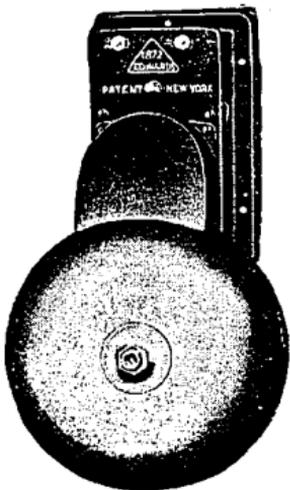
These Gongs are dust, insect, moisture and weatherproof.

The method of operation is: The hammer upon being released makes a full revolution passing under the gong to an incline plane, where it is raised and permitted to strike the gong with great force gathered in the revolution. The recoil causes it to drop and become locked in its normal position under the gong.

They can be arranged to operate as a single stroke or constant ringing gong, and can be furnished for either open or closed circuits.

Operates on exceedingly small current. Mechanism is entirely insulated from the case. Furnished in red enamel for fire alarm purposes, but can be furnished in black if desired. Strikes 350 blows to each winding.

Standard resistance 5 ohms, but will be furnished up to 10 ohms without extra charge.



No. 1423.

List No.		Schedule BG.	Price Each
1423	With 6 inch	Gong	\$40.30
1424	With 8 inch	Gong	41.35
1425	With 10 inch	Gong	43.50
1426	With 12 inch	Gong	47.60
1427	With 14 inch	Gong	55.60
1428	With 16 inch	Gong	103.00
1429	With 18 inch	Gong	111.00

ELECTRO MECHANICAL GONG.

Conduit Type.

This type is similar to the regular type, except that they are arranged for conduit wiring. Connectors for line wires are at side in conduit box where they are most accessible. They are ordinarily furnished with one opening for 1/2 inch conduit, but can be supplied with opening for 1/2 inch or 3/4 inch conduit on back or with two in sides of conduit box.

Can be furnished for use with either concealed or surface wiring.

Capacity 350 blows to each winding.

Standard finish red enamel. Black enamel can be furnished if specified.

Resistance up to 40 ohms furnished without extra charge.



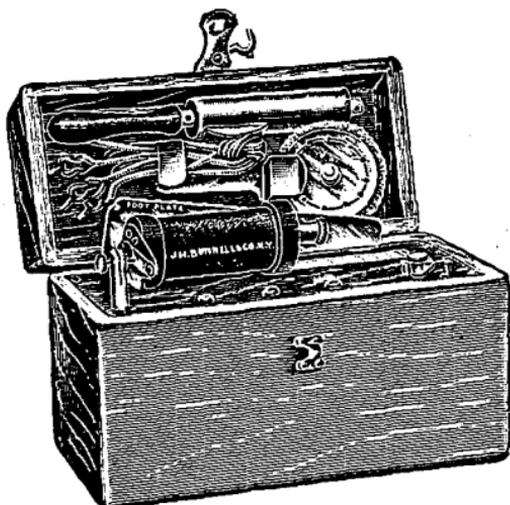
No. 1430.

List No.		Schedule BG.	Price Each
1430	With 6 inch	Gong	\$43.30
1431	With 8 inch	Gong	44.85
1432	With 10 inch	Gong	47.00
1433	With 12 inch	Gong	51.60
1434	With 14 inch	Gong	59.60
1435	With 16 inch	Gong	107.00
1436	With 18 inch	Gong	115.00

Grids, for above Gongs, can be furnished at the following prices:

9926	Grid for 6 inch	Gong	\$8.00
9927	Grid for 8 inch	Gong	13.50
9928	Grid for 10 inch	Gong	20.00
9929	Grid for 12 inch	Gong	26.50

THE NEW No. 7 AUTO-KURE MEDICAL BATTERY.



No. 1410.

A neat, compact and reliable battery, with power adjustable from the mildest perceptible current to the highest strength that is safe to use in home applications.

The attachments accompanying each Auto-Kure Battery are 2 Conducting Cords, 2 tube Hand Electrodes, 1 Foot Plate, 1 Sponge Electrode, 1 Insulated Handle to be used with the Sponge or Hand Electrodes.

A copy of Wells' Electropathic Guide furnished free with each complete apparatus.

Dimensions: $7\frac{1}{2} \times 5\frac{1}{4} \times 3\frac{1}{2}$ inches. Weight, complete, $4\frac{1}{4}$ pounds.

Schedule BG.

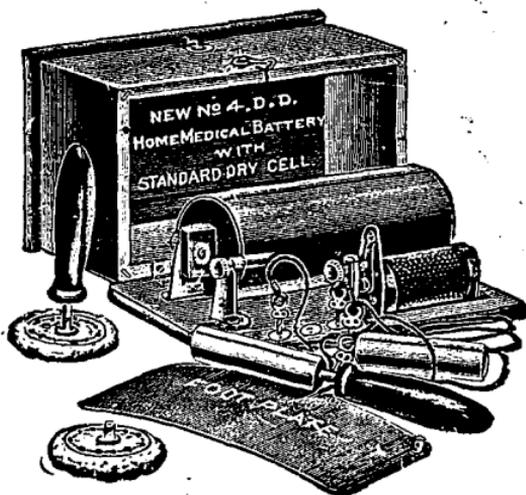
List No.		Price Each
1410	Auto Kure Battery, complete with Electrodes and Guide	\$5.00
5271	Mascot Dry Battery only .....	.40

Schedule BA.

1415	Foot Plate, only .....	.30
1411	Tube Hand Electrodes with Insulated Handle, per pair .....	.50
1264	Wells' Electropathic Guide, per copy .....	.50

For other Electrodes and Parts see pages 105 to 108.

THE NEW No. 4 D. D. HOME MEDICAL APPARATUS.



No. 1256.

The unusually complete and excellent set of electrodes furnished with this instrument makes it very convenient to use with or without assistance.

This Battery is adjustable for all round or flat Carbon Dry Cells. Beautifully finished in Cherry or Oak. Furnished complete with Standard Dry Cell, Sponge Electrodes with 2 handles, Tube Hand Electrodes and Handle, Connecting Cords, Foot Plate and Electropathic Guide.

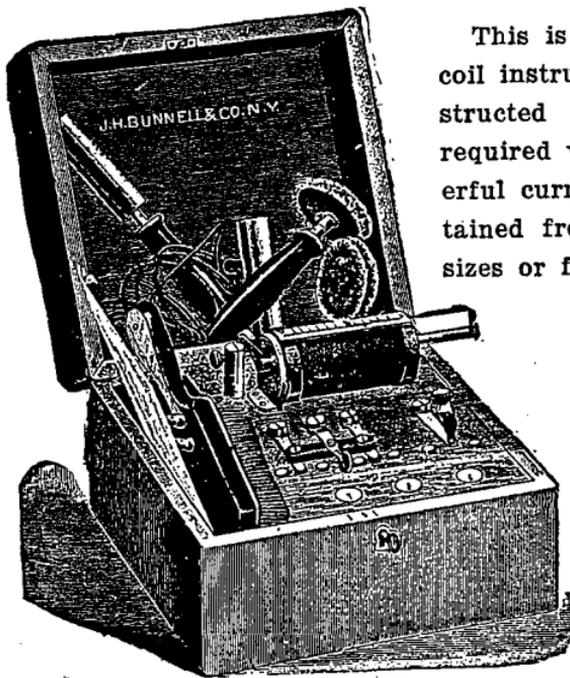
List No.	Schedule BG.	Price Each
1256	No. 4 D. D. Apparatus, complete.....	\$8.00
5273	Standard Dry Cell .....	.50

Schedule BA.

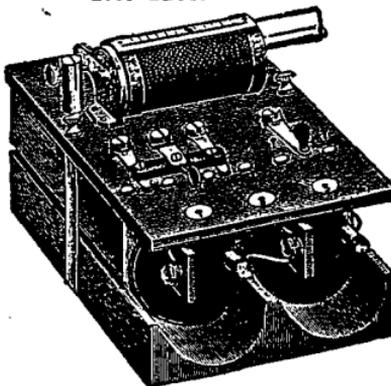
1261	Foot Plate .....	.40
1264	Electropathic Guide .....	.50

For other Electrodes and Parts see pages 105 to 108.

THE IMPROVED "No. 6" HOME DOUBLE-POWER MEDICAL BATTERY.



No. 1265.



This is a Double Cell, large coil instrument, especially constructed to furnish when required very much more powerful currents than can be obtained from any of the usual sizes or forms of Electro Medical Batteries.

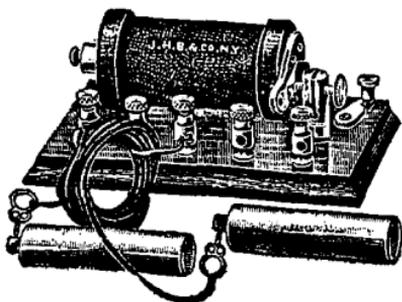
Its currents are also capable of graduation down to the mildest effects desired.

It comprises an extra large size and powerful induction coil operated by two Cells Dry Battery, Reversible Pole Changing Switch, Battery Switches, for reducing or increasing Battery Power, Conducting Cords, Hand Electrodes, Foot Plate, and Metallic Hair Brush Electrode.

List No.	Schedule BA.	Price Each
1265	No. 6 Medical Battery complete	\$15.00
5273	Standard Dry Cell .....	.50
1261	Foot Plate .....	.40
1264	Wells' Electropathic Guide .....	.50

For other Electrodes and Parts see pages 105 to 108.

STANDARD MEDICAL INDUCTION COIL.



No. 3445.

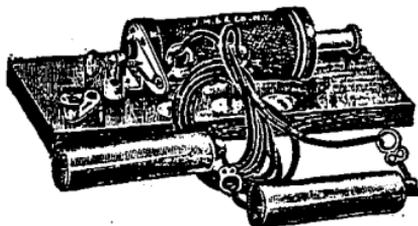
A finely finished and powerful instrument. The coil is mounted on a highly polished base and is provided with a switch for opening the primary circuit so the battery need not be disconnected.

It is arranged to give both primary and secondary currents, the strength of which may be regulated at pleasure. Two conducting cords with one insulated handle and nickeled electrodes are furnished with each instrument. Operates on one or two dry cells according to strength desired. Current can be varied by means of metal graduating tube.

List No.	Schedule BA.	Price Each
3445	Standard Induction Coil complete.....	\$5.00

"HOME" MEDICAL COIL

No. 4.

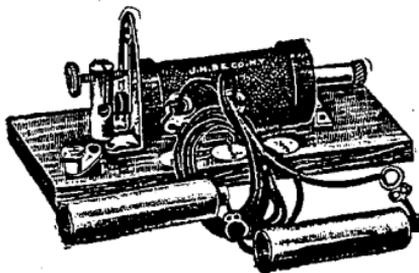


No. 3447.

The same size as furnished with our No. 4 D. D. Medical Battery. It has a switch on the base to open or close the circuit without disconnecting the battery. Gives Primary, Secondary and Combined Current of varying strength.

Schedule BA.	
List No.	Price Each
3447	Complete with Cord and Handles .....\$4.00

No. 5 MEDICAL COIL.



No. 3448.

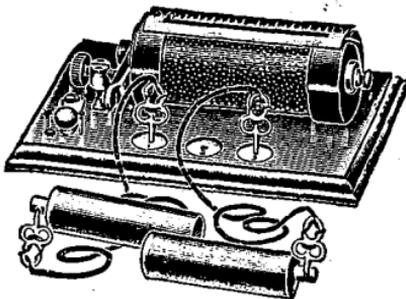
Well made and finely finished. Adopted for demonstration purposes as well as home use. Has switch on base to open or close the circuit without disconnecting the battery. Gives Primary, Secondary and Combined Currents of varying strength.

Schedule BA.	
List No.	Price Each
3448	Complete with Cord and Handles .....\$3.40

MASCOT MEDICAL INDUCTION COIL.

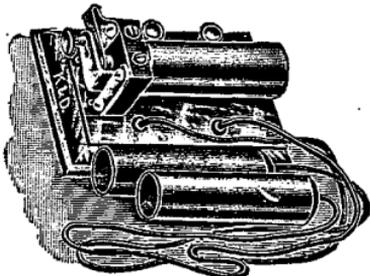
The latest production. Will give three distinct currents of electricity: Primary, secondary and combined primary and secondary. It is equipped with a graduating indicator on the coil, which shows the strength of the current in degrees, and the manipulation of this movable scale also regulates the strength of the current.

Schedule BA.	
List No.	Price Each
3449	With Cord and Handles \$4.00



No. 3449.

No. 25 HOUSEHOLD MEDICAL COIL.



No. 1284.

This apparatus will work efficiently on one dry cell or other battery. Give a smooth even current and has perfect regulation. Mounted on a polished wood base $2\frac{1}{2} \times 3\frac{1}{4}$ in. Handles and other parts nicked and highly polished. Full directions accompany each coil.

Schedule BC.

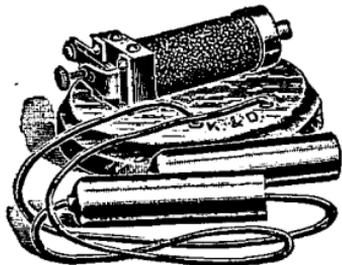
List No. Price Each
1284 Without Battery\$1.25

No. 26 HOUSEHOLD MEDICAL COIL.

Will work on one cell of dry or other battery. Coil has perfect regulation; the current at the handles varying from imperceptible to all that can be borne.

The coil and vibrator parts are very compactly built and equipped with silver contacts.

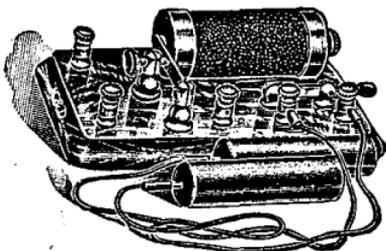
All metal parts nickel plated; coil ends finished in black enamel and the whole mounted on a polished wood base.



No. 3450.

List No. Schedule BC. Price Each
3450 Without Battery\$1.50

No. 28 HOUSEHOLD MEDICAL COIL.



No. 9162.

Mounted on a polished wood base and beautifully finished throughout. Coil ends and all metal trimmings are polished and nickel plated. Vibrator contacts are of silver. Three different currents may be obtained; primary, secondary, and the two combined; any of which may be further modified by drawing out the core shield.

The coil is provided with an efficient knife switch, a feature not usually found in coils of this type. Works well on one dry cell or other battery.

Each coil is packed in a neat hinged and clasped box, which serves as a carrying case when so desired.

List No. Schedule BC. Price Each
9162 Without Battery\$3.00

ELECTRODES.



No. 375.



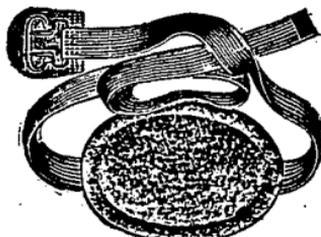
No. 1294.



No. 376.



No. 1295.



No. 381.



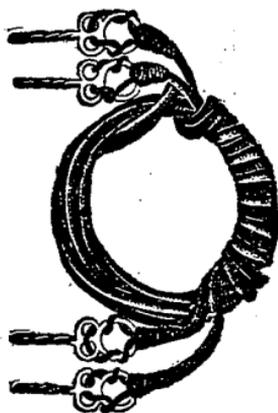
No. 379.



No. 377.



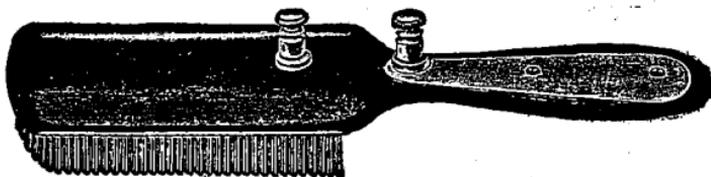
No. 378.



No. 9030.

List No.	Schedule BA.	Price Each
375	Arm Band Electrode	\$2.00
1294	Wrist or Ankle Electrode	1.80
376	Sponge Electrode .....	.40
1295	Flexible Oval Electrode, 3 x 5 inches.....	1.80
381	Flexible Rubber Back Electrode	2.00
379	For use with Hand or Sponge Electrode.....	.25
377	For use with No. 379 Wood Handle.....	.22
378	Telescopes into No. 377 Handle .....	.28
9030	3 ft. Medical Cords, one red, one green (pair).....	.60
9031	4 ft. Medical Cords, one red, one green (pair).....	.70
9032	5 ft. Medical Cords, one red, one green (pair).....	.80

ELECTRODES.



Schedule BA.

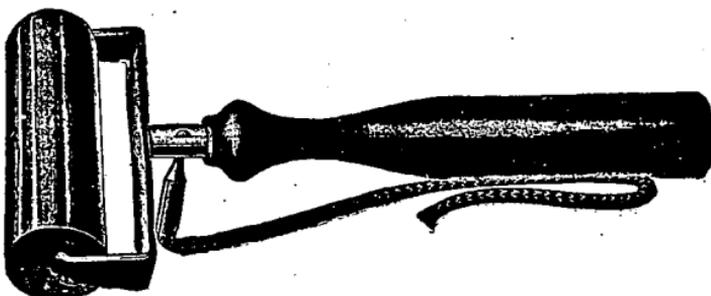
List No. 1291. Hair Brush Electrode. Price each.....\$1.20



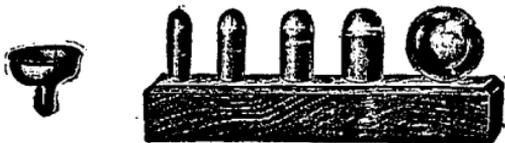
List No. 1293. Comb Electrode. Price each.....\$1.00



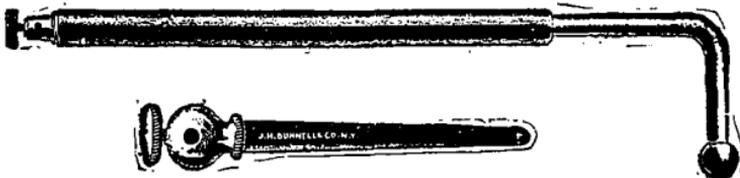
List No. 384. Ellipation Forceps, Nickel Plated. Price each \$0.60



List No. 1292. Massage Roller Electrode. Price each.....\$0.80



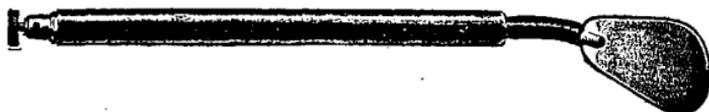
List No. 1310. Urethral Electrode, Insulated, with Four Bulbs,
Uterine Cup and Rectal Ball. Price each.....\$3.00



List No. 1303. Large Ear Electrode, Insulated. Price each..\$1.50

List No. 382. Small Ear Electrode, Insulated. Price each.. 1.20

ELECTRODES.



No. 1296.



No. 1297.



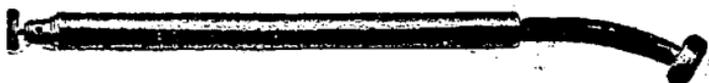
No. 1298.



No. 1299.



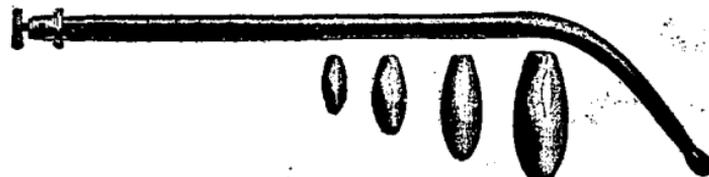
No. 1300.



No. 1301.



No. 1302.



No. 1309.

List No.	Schedule BA.	Price Each
1296	Tongue Electrode, Insulated	\$2.00
1297	Vaginal Electrode, Insulated	2.00
1298	Bipolar Vaginal Electrode	4.00
1299	Rectal Electrode, Insulated	1.60
1300	Rectal Electrode, Insulated	1.60
1301	Tonsil Electrode, Insulated	2.00
1302	Nasal Electrode, Insulated	1.60
1309	Uterine Electrode, with four extra olives.....	2.40

ELECTRODES.



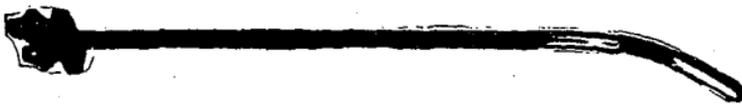
Schedule BA.

List No.		Price Each
1304	Needle Holder, Hard Rubber	\$1.40



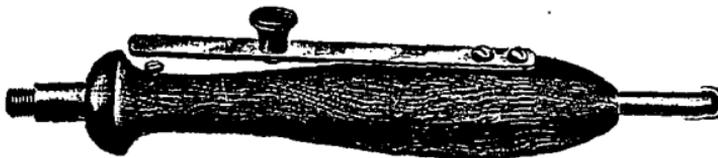
Schedule BA.

List No.		Price Each
1305	Needle Holder, with Current Breaker.....	\$2.00
	Extra Heavy Needle, for use with above.....	.20



Schedule BA.

List No.		Price Each
1307	Bipolar Intra-Uterine Electrode.....	\$6.00



Schedule BA.

List No.		Price Each
380	Sponge Handle, with Interrupter	\$0.90



Schedule BA.

List No.		Price Each
383	Tinsel Electrode	\$1.80



Schedule BA.

List No.		Price Each
1311	Rectal Electrode, all Metal, Nickel Plated.....	\$1.00

CROW FOOT OR GRAVITY BATTERY.

Most generally used for telegraph or closed circuit work.

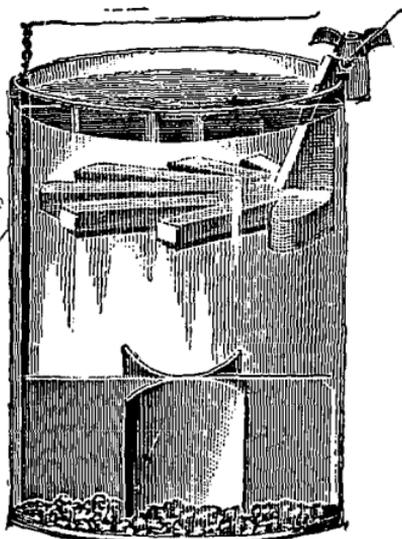
Large Regular Size 6x8 Inches.

Schedule BA.

List No.	Price Each
4900 Battery complete (no chemicals)...	\$1.70
4901 Zincs, weight 3 lbs.	.90
4902 Copper, 6 x 8 .....	.20
4903 Glass Jars, 6 x 8..	.60

Small Size 5 x 7 Inches.

4905 Battery Complete (no chemicals)...	\$1.30
4906 Zincs, weight 1 3/4 lb. ....	.60
4907 Copper, 5 x 7 .....	.20
4908 Glass Jars, 5 x 7..	.50
4987 Blue Vitrol, per lb.	.25



No. 4900.

OPEN CIRCUIT LIQUID BATTERIES.

Carbon Cylinder Battery.

Schedule BA.

List No.	Price Each
5417 Battery, complete ...	\$0.80
5418 Carbon Cylinder only	.40
5420 Zinc .....	.10
5421 Glass Jar .....	.20
5424 Sal-Ammoniac, per package .....	.10
6224 Sal-Ammoniac, per lb.	.24

NOTE—We use the utmost care in packing, and cannot assume the responsibility of Glass Jars broken in transit.



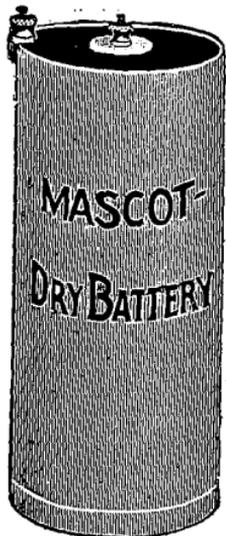
No. 5417.

DRY BATTERIES.

We are the pioneers in the manufacture of Dry Batteries, having produced the first dry cell made.

THE MASCOT

Dry Cell is our competition battery. It is carefully made by an improved process from selected materials. For an "all around" open circuit battery it will be found fully equal, if not superior, to many of the type advertised as "first class" batteries. We can highly recommend the "MASCOT" for all ordinary open circuit systems, such as Bell, Burglar Alarm, Annunciator, Telephone and Gas Lighting Work. E. M. F. $1\frac{1}{2}$ Volts. Current and short circuit, 15-20 Amperes. Size $2\frac{1}{2}$ x $6\frac{1}{2}$ inches.



No. 5271.

List No.	Schedule BG.	Price Each
5271		\$0.40

THE STANDARD

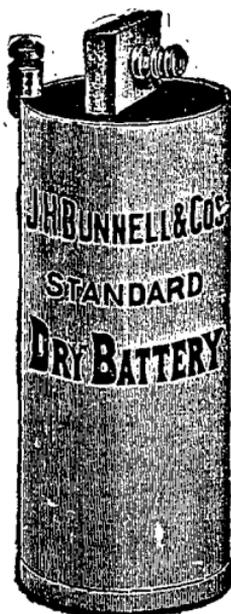
Battery is a higher grade of dry cell. It is made in one size only. $2\frac{1}{2}$ x $6\frac{1}{2}$ inches, and is constructed in the most careful manner from selected materials, by our own special process.

It has great strength and durability. We use it exclusively in our No. 4 DD and No. 6 Medical Batteries, and no other cell made is capable of giving as good satisfaction in this exacting work.

E. M. F. $1\frac{1}{2}$ Volts. Current on short circuit 20-25 Amperes.

List No.	Schedule BG.	Price Each
5273		\$0.50

The Standard Dry Cell can be furnished with Nickel Plated Binding Screws for use with our No. 4 DD Medical Battery when desired at 10 cents (list) additional.



No. 5273.

THE "JOVE" DRY BATTERY.

No. 6.
6 x 2½ inches,
25 to 30
Amperes.

No. 7. . . .
7 x 3 inches,
30 to 35
Amperes.



Made in Two
Sizes.

A
Round Battery
in a
Square Box.

It has the Greatest Voltage, Amperage and recuperating qualities.

It is unequalled for heavy work, such as Gas and Gasoline Engine ignition whether stationary or in Autos, Motor Boats, etc.

Can also be used for Telephone, Telegraph, Gas Lighting, Fire and Burglar Alarms or wherever an open circuit battery is suitable.

A trial order will convince the most skeptical. We guarantee every cell and will refund your money if not satisfied.

For the greater convenience of users and dealers we are now putting the cells in square cartons, as shown in the cut. They pack better in this form and make a much nicer shelf or window display.

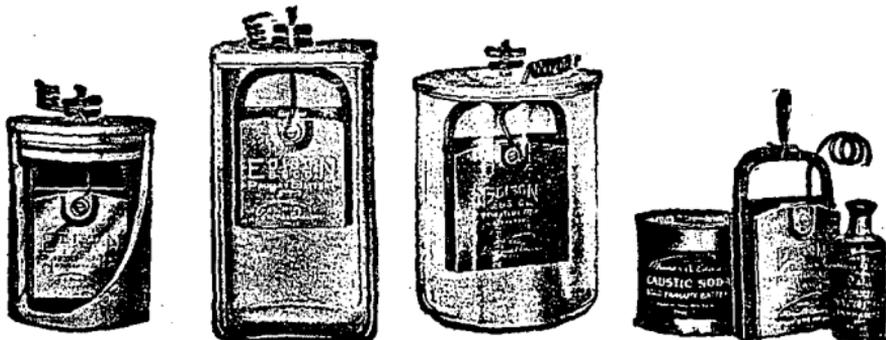
We are Pioneers in the making of Dry Cell Batteries and confidently assert that our New Jove Battery is the **BEST DRY CELL** ever produced.

Schedule BG.

List No.		Price Each
5274	No. 6, size 6 x 2½ inches	\$0.50
1420	No. 7 size 7 x 3 inches	1.00

Special Prices on All Dry Batteries for Quantities.

EDISON BSCO PRIMARY BATTERY.



Type 206. Types 202, 252. Types 208, 255. Complete Edison-BSCO Renewal.

Normal Working Voltage of All Sizes 0.67 Volts.

TYPE 202. 200 Ampere Hour.

Has rectangular heat resisting glass jar. Size, over all, $3\frac{3}{8} \times 6 \times 11$ inches.

List No.	Mfgr's. No.	Schedule B.J.	Price Each
7982	202	Complete Cell	\$4.05

TYPE 206. 200 Ampere Hour.

Has round porcelain jar and hollow rubber gasket ring. Will not splash. Size, over all, $5\frac{1}{4} \times 9$ inches.

8379	206	Complete Cell	\$3.50
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TYPE 208. 200 Ampere Hour.

Same as Type 206 but without Gasket.

8381	208	Complete Cell	\$3.30
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TYPE 200 RENEWALS.

For all 200 Ampere Hour Cells.

8382	200	Complete Renewal	\$2.25
8383	200	Zinc-Oxide Assembled	2.10
8384	200	Soda .....	.24
8385	200	Oil .....	.09

TYPE 252. 250 Ampere Hour.

With rectangular heat resisting glass jar. Size, over all, $3\frac{3}{8} \times 6 \times 12$ inches. Especially designed for Fire Alarm Service.

8386	252	Complete Cell	\$4.25
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TYPE 255. 250 Ampere Hour.

With round heat resisting glass jar. Size, over all, $6\frac{3}{4} \times 10\frac{1}{4}$ in.

8388	255	Complete Cell, Glass	\$4.25
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TYPE 250 RENEWALS.

For all 250 Ampere Hour Cells.

8390	250	Complete Renewal	\$2.45
8391	250	Zinc-Oxide Assembled	2.30
8392	250	Soda .....	.27
8393	250	Oil .....	.09

EDISON BSCO PRIMARY BATTERIES.

Types
401 and 501.Types
404 and 504.Types
402 and 502.**TYPE 401. 400 Ampere Hour.**With Porcelain or Glass Jar. Size, over all, $6\frac{3}{4}$ x $12\frac{1}{2}$ inches.

List No.	Mfgr's No.	Schedule B.J.	Price Each
8394	401	Complete with Round Porcelain Jar..	\$5.70
8395	401	Complete with Glass Jar	5.40

TYPE 404. 400 Ampere Hour.With barrel shaped heating resisting glass jar. Size, over all, 7 x $11\frac{1}{2}$ inches.

8307	404	Complete Cell	\$5.55
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TYPE 402. 400 Ampere Hour.With rectangular heat resisting glass jar. Size, over all, $5\frac{3}{8}$ x $6\frac{3}{8}$ x $12\frac{1}{2}$ inches.

8765	402	Complete Cell	\$5.70
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TYPE 400 RENEWALS. For all 400 Ampere Hour Cells.

8398	400	Complete Renewal	\$3.15
8399	400	Zinc-Oxide Assembled	3.00
8400	400	Soda .....	.36
8401	400	Oil .....	.09

500 Ampere Hour Types.**TYPE 501.**With round heat resisting glass jar. Size, over all, $6\frac{3}{4}$ x 12 in.

8766	501	Complete Cell	\$6.15
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TYPE 504.Has barrel shaped heat resisting glass jar. Size, over all, 7 x $11\frac{1}{2}$ in.

8767	504	Complete Cell	\$6.00
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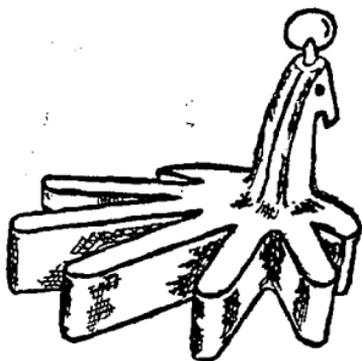
TYPE 502.With rectangular heat resisting glass jar. Size, over all, $5\frac{3}{8}$ x $6\frac{3}{8}$ x $12\frac{1}{2}$ inches.

8768	502	Complete Cell	\$6.15
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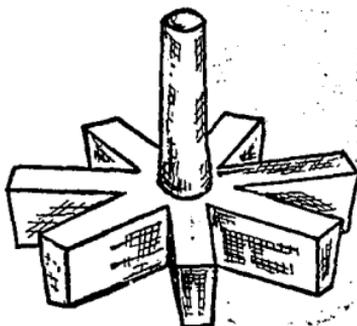
TYPE 500 RENEWALS. For all 500 Ampere Hour Cells.

8769	500	Renewal Complete	\$3.00
8770	500	Zinc-Oxide Assembled	3.45
8771	500	Soda .....	.42
8772	500	Oil .....	.09

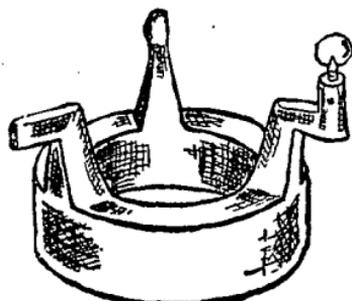
ZINCS.



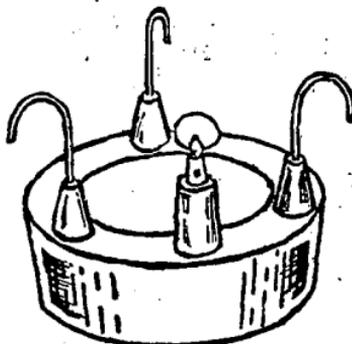
No. 5128.



No. 4898.



No. 5132.



No. 8761.

Schedule BG.

List No.		Price Each
4898	Star Zinc, 2 lbs.	\$0.70
5127	Crowfoot Zinc, 1 ¼ lbs. ....	.60
5128	Crowfoot Zinc, 3 lbs. ....	.90
5130	Lockwood Zinc, 2 lbs. ....	.70
5131	Gamewell Zinc, 3 lbs. ....	.90
5132	Gamewell Zinc, 4 lbs.	1.20
5139	Carbon Battery Zinc, 2 lbs. ....	.70
5140	Callaud Star Zinc, 2 lbs. ....	.70
8760	Baltimore Zinc, 3 lbs. with Wire Hanger. ....	.90
8761	Baltimore Zinc, 4 lbs. with Wire Hanger.	1.20

Price and Illustrations on other Types of Zincs, Special Zincs
and Zinc Plates—on Application.

ZINCS.



Schedule BG.

ROLLED ROD ZINC WITH WING NUT.

List No. 5762\$0.12



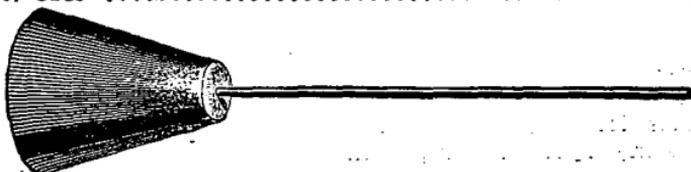
ROLLED PENCIL ZINC WITH THUMB SCREW.

List No. 5138\$0.10



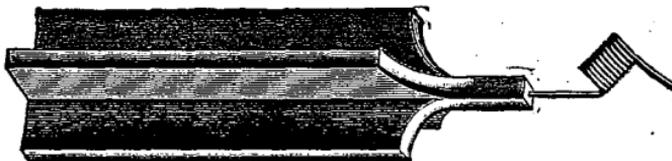
MICROPHONE ZINC WITH THUMB SCREW.

List No. 5149\$0.12



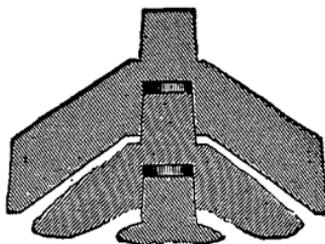
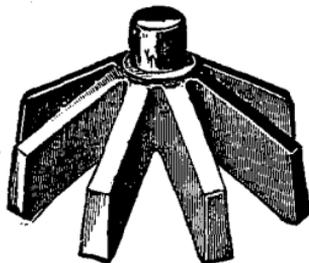
FULLER ZINC.

List No. 5133. 1½ pounds\$0.40



DANIELL'S ZINC.

List No. 5134. 2¼ pounds\$0.80



WASTELESS ZINC.

List No. 8764. 2½ pounds\$0.80

STORAGE BATTERIES.



These batteries are especially adapted for use in connection with Automobile Ignition, Wireless Telegraph Sets, Christmas Tree Lighting, etc., etc.

The general dislike to Storage Batteries has been due to their constant tendency to become ruined by sulphation. This has been entirely eliminated, however, in these batteries, with the result that they will give perfect satisfaction.

When exhausted they can be recharged from any direct current electric light circuit, and with care will last for many years.

List No.	Schedule BK.	Price Each
7922	4 volt, 40 Amp. Hour Battery Set, size $5\frac{1}{4} \times 7\frac{1}{8} \times 8$ in.	\$16.00
7923	4 volt, 60 Amp. Hour Battery Set, size $6\frac{3}{4} \times 7\frac{1}{8} \times 8$ in.	20.00
7924	6 volt, 40 Amp. Hour Battery Set, size $4\frac{7}{8} \times 7\frac{1}{4} \times 9\frac{1}{8}$ in. ...	17.90
7925	6 volt, 60 Amp. Hour Battery Set, size $6\frac{9}{16} \times 7\frac{1}{4} \times 9\frac{1}{8}$ in.	21.50
7841	6 volt, 80 Amp. Hour Battery Set, size $7\frac{11}{16} \times 7\frac{1}{4} \times 9\frac{1}{8}$ in. ..	25.30
7743	6 volt 110 Amp. Hour Battery Set, size $9\frac{1}{4} \times 7\frac{1}{4} \times 9\frac{1}{8}$ in. ...	29.00

Ampere capacity is figured at a discharge of 1 Ampere.

NOTICE.—We use the utmost care in packing, but will not be responsible for batteries in transportation, due to the possibility of case being upset, causing acid to spill, etc.

SYRINGEMETER.

A gauge determining the state of the charge in a storage battery. By its use the exact strength of batteries is known and the inconvenience occasioned by exhausted batteries is overcome.

Shows the "Full Charge and Exhausted Battery" in red markings.

A fully charged battery shows a proper density of .1225. Best results are obtained at this density.

List No.	Schedule BA.	Price Each
8580	Syringemeter, complete	\$1.00
8581	Extra Bulbs .....	.40
8582	Extra Hydrometer .....	.50

GRADEMETER.

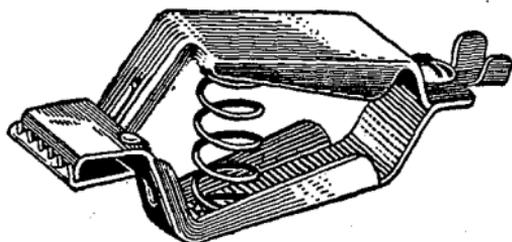
The numbers on scale show the per cent. of grade on which an automobile is traveling.

Is in a substantial metal case, nickel plated, $5\frac{1}{2}$ inches long, $\frac{3}{8}$ inch wide.



List No.	Schedule BE.	Price Each
8585	\$1.50

UNIVERSAL BATTERY CHARGING CLIP.



No. 9118.

May be used over and over again. The sides are lead plated and the springs treated with an acid resisting compound. A screw connection is provided for the cord. It is not necessary to clean dirty terminals — the teeth bite through the corrosion and make a good contact. Using these Clips it is unnecessary to remove the battery from the car.

To charge batteries in series, provide a number of pieces of flexible wire or cord 15 to 20 inches long, and equip with clips on each end. Use these jumpers to connect the batteries by snapping the Clips over the lugs or terminals.

List No.		Schedule BG.	Price Each
9118	Type 13-A.	15 Ampere. Spread of jaws, $\frac{3}{4}$ in.....	\$0.20
9119	Type 21-A.	35 Ampere. Spread of jaws, $1\frac{1}{2}$ in.....	.30
9120	Type 11-A.	100 Ampere. Spread of jaws, 1 in.....	1.00

STAGE CONNECTORS.

Convenient for temporary connections, which have to be made and broken frequently: such as stage lighting, storage battery connections, small motors, etc.

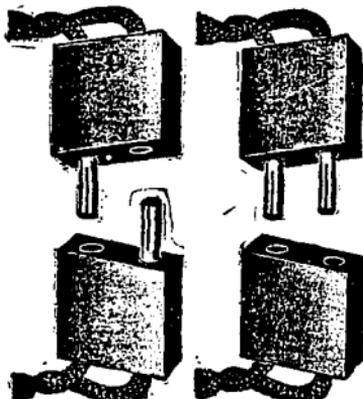
Made of hard black fibre for use on 125 volt circuits.

Size of Nos. 7650 and 7652, $1\frac{3}{4} \times 1\frac{1}{8} \times \frac{5}{16}$ inches.

Size of Nos. 7651 and 7653 $2 \times 1\frac{1}{4} \times \frac{1}{2}$ inches.

Schedule BA.

List No.		Price Each
7650	Capacity, 10 amperes....	\$0.50
7651	Capacity, 30 amperes....	.85
7652	Capacity 10 amperes....	.50
7653	Capacity 30 amperes....	.85



No. 7650.

No. 7652

THE UNIVERSAL TOOL.

Embodies Pocket Knife, Leather Punch, Swedging Awl, Wire Cutter, Wire Pliers, Alligator Wrench, Scraping Hook, Screw Driver, Screw Bit, all contained within the dimensions of an ordinary pocket knife.



No. 7840.

Schedule BA.

7840	\$3.00
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BATTERY SWITCHES.



No. 8912.



No. 8910.



No. 8908.



No. 8909.



No. 8907.

PORCELAIN BASE—FRONT CONNECTIONS—25 AMPERE.

Schedule BG.

List No.	Mfgr. No.		Std. Pkge.	Price Each
8907	707	Single Pole, Single Throw	150	\$0.25
8908	708	Single Pole, Double Throw	100	.40
8909	709	Double Pole, Single Throw	100	.44
8910	710	Double Pole, Double Throw	50	.62
8911	711	Three Pole, Single Throw	50	.70
8912	712	Three Pole, Double Throw	50	1.10

FIBRE BASE—FRONT CONNECTIONS.

Schedule BG.

List No.	Mfgr. No.		Std. Pkge.	Price Each
8913	7	Single Pole, Single Throw	200	\$0.28
8914	8	Single Pole, Double Throw	100	.42
8915	9	Double Pole, Single Throw	100	.52
8916	10	Double Pole, Double Throw	50	1.00
8917	40	Three Pole, Single Throw	50	.94
8918	41	Three Pole, Double Throw	25	1.60
8919	42	Four Pole, Single Throw	25	1.40
8920	43	Four Pole, Double Throw	10	2.25

UNMOUNTED—BACK CONNECTIONS.

For Mounting on Switchboards.

Schedule BG.

List No.	Mfgr. No.		Std. Pkge.	Price Each
8921	777	Single Pole, Single Throw	150	\$0.60
8922	778	Single Pole, Double Throw	100	.90
8923	779	Double Pole, Single Throw	100	1.00
8924	780	Double Pole, Double Throw	50	1.50
8925	781	Three Pole, Single Throw	50	1.60
8926	782	Three Pole, Double Throw	50	2.20

Back connected Switches have $1\frac{1}{4}$ inch break and $1\frac{3}{16}$ inch separation. They can be furnished in either plain, polished copper or nickel plated finish, but will be furnished in Polished Copper unless otherwise specified. Plain copper is slightly lower in price while nickel is somewhat higher.

WOOD BASE SWITCHES.

Oak base, with heavy brass lever and knob heavily nickel plated.



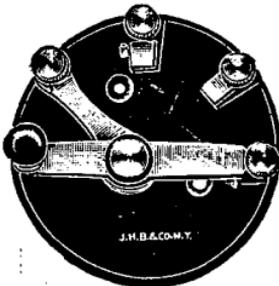
No. 3451.

Schedule BA.

List No.		Price Each
3451	1-Point Switch	\$0.24
3452	2-Point Switch	.27
3453	3-Point Switch	.30
3454	4-Point Switch	.33
3455	5-Point Switch	.40
3456	6-Point Switch	.45

COMPETITION WOOD BASE SWITCHES.

Schedule BA.



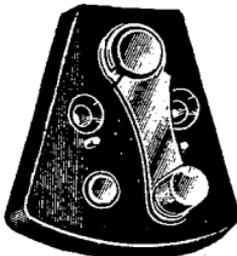
No. 1763.

List No.		Price per 100
8542	1-Point	\$13.20
8543	2-Point	14.40
8544	3-Point	15.60
8545	4-Point	25.20

RUBBER BASE SWITCHES.

With Binding Post Connections.

Schedule BA.



No. 1768.

List No.		Price Each
1761	1-Point	\$1.50
1762	2-Point	1.75
1763	3-Point	2.00
1764	4-Point	2.25
1765	5-Point	2.50
1766	6-Point	2.75

KEYSTONE SWITCH.

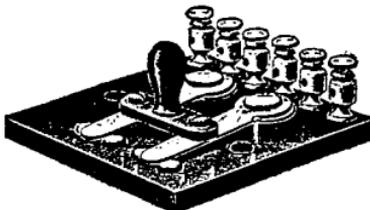
With Back Connections.

Schedule BA.

List No.		Price Each
1767	1-Point	\$0.32
1768	2-Point	.36
1769	3-Point	.40
1770	4-Point	.80

POLE CHANGING SWITCHES.

WOOD BASE.



No. 1758.

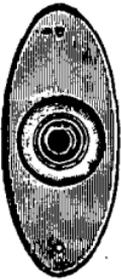
List No.	Schedule BA.	Price Each
1759	With Back Connections	\$1.25
1760	With Binding Posts	1.80

RUBBER BASE.

List No.	Schedule BA.	Price Each
1757	With Back Connections	\$1.70
1758	With Binding Posts	2.20

STAMPED METAL PUSH BUTTONS.

With Loose Backs, furnished in Polished Brass, Old Brass or Oxidized Copper.



No. 6296.



No. 1143.



No. 1151.



No. 1142.

List No.	Size		Schedule BG.	Price Each
6296	Size 4 3/4	x 2	inches.....	\$0.41
1143	Size 4 3/4	x 2	inches.....	.41
1151	Size 4 3/4	x 2	inches.....	.41
1142	Size 4 3/4	x 2	inches.....	.41



No. 1148.



No. 1147.



No. 1140.



No. 1152.

1148	Size 4	x 2	inches.....	\$0.41
1147	Size 4	x 2	inches.....	.41
1140	Size 4	x 2	inches.....	.41
1152	Size 4 3/4	x 2	inches.....	.41



No. 6297.



No. 6298.



No. 6299.



No. 1181.

6297	Size 4 3/4	x 2 1/4	inches.....	\$0.41
6298	Size 4 3/4	x 2	inches.....	.41
6299	Size 4 1/8	x 1 1/8	inches.....	.30
1181	Size 2 1/4		inches diameter.....	.17

CAST BRONZE PUSH BUTTONS.

Furnished in Polished Brass, Old Brass, or Oxidized Copper.



No. 6300.



No. 6310.



No. 6314.



No. 6303.



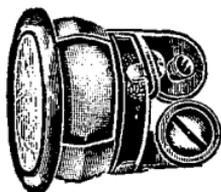
No. 6301.

Schedule BA.

List No.		Price Each
6300	Size, 5 $\frac{7}{8}$ x 2 $\frac{5}{8}$ inches. Screw Cap.....	\$1.40
6301	Size, 3 x 1 $\frac{1}{2}$ inches. Screw Cap.....	.97
6303	1 Button. Size, 2 $\frac{7}{8}$ x 1 $\frac{15}{16}$ inches. Solid.....	1.08
6304	2 Button. Size, 3 $\frac{1}{2}$ x 1 $\frac{15}{16}$ inches. Solid.....	1.40
6305	3 Button. Size, 7 $\frac{3}{4}$ x 1 $\frac{15}{16}$ inches. Solid.....	2.30
6306	4 Button. Size, 9 $\frac{7}{8}$ x 1 $\frac{15}{16}$ inches. Solid.....	2.80
6310	"Doctor's Bell." Size, 4 $\frac{1}{2}$ x 2 $\frac{1}{4}$ inches. Loose Back....	1.40
6311	"Janitor's Bell." Size, 4 $\frac{1}{2}$ x 2 $\frac{1}{4}$ inches. Loose Back....	1.40
6312	"Night Bell." Size, 4 $\frac{1}{2}$ x 2 $\frac{1}{4}$ inches. Loose Back....	1.40
6313	"Dentist's Bell." Size, 4 $\frac{1}{2}$ x 2 $\frac{1}{4}$ inches. Loose Back....	1.40
6314	Size, 3 $\frac{7}{8}$ x 2 inches. Loose Back.....	.82

Nos. 6303 to 6306 have caps attached to plate by screws from the rear, the backs are held firmly in place, and have six-inch lead wires extending from the springs through the back.

MIDGET PUSH BUTTONS.



No. 3887.



No. 6329.



No. 5153.

Schedule BA.

List No.		Price Each
3887	Midget, fits $\frac{3}{4}$ inch hole, dark or light Pearl Center...	\$0.42
3888	Midget Jr., fits $\frac{5}{8}$ inch hole, dark or light Pearl Center	.23
5152	Rubber, fits 1 $\frac{1}{8}$ inch hole.....	.36
5153	Wood, fits 1 $\frac{1}{8}$ inch hole.....	.20
6329	New Mite, fits $\frac{1}{2}$ inch hole, dark or light Pearl Center	.20

CAST BRONZE PUSH BUTTONS. Screw Cap.



No. 1165.



No. 1166.



No. 1167.

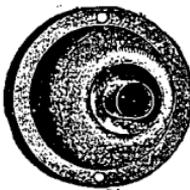
Schedule BA.

List No.		Price Each
1165	Diameter, $2\frac{3}{8}$ inches	\$0.87
1166	Diameter, $2\frac{3}{8}$ inches	.82
1167	Diameter, $2\frac{3}{8}$ inches	.82
1168	Diameter, $1\frac{1}{2}$ inches	.65

CAST BRONZE PUSH BUTTONS. Loose Back.



No. 1155.



No. 1156.



No. 1158.

Schedule BA.

List No.		Price Each
1155	Size, $2\frac{1}{4}$ inches diameter	\$0.41
1156	Size, $2\frac{1}{4}$ inches diameter	.41
1157	Size, $1\frac{3}{4}$ inches diameter	.35
1158	Size, $2\frac{1}{2}$ inches diameter	.41

IMPROVED WATER TIGHT PUSH BUTTON. Navy Standard.



No. 6320.

Screw cap, rubber gaskets under base and between the base and screw cap. Hard rubber back and heavy nickel silver springs. Push center covered by pigskin which is held in place by rim and four screws. Diameter, $2\frac{5}{8}$ inches.

Schedule BA.

List No.		Price Each
6320	With Platinum Contact Points	\$2.10
9738	With Silver Contact Points	1.60

WOOD PUSH BUTTONS.



No. 5159.

Furnished in Stained Cherry, Oak, Ash, Maple, Walnut or Mahogany. Diameter, 2 inches.

Schedule BA.

List No.	Price Each
5159	\$0.11

FIBRE BACKS FOR METAL PUSH BUTTONS.



No. 6323.

Complete with Spring and Screws.

Schedule BA.

List No.		Price Each
6322	1 inch diameter...	\$0.10
6323	1 5/16 inch diameter...	.08
6324	1 7/16 inch diameter...	.08
6325	1 9/16 inch diameter...	.08
6326	1 3/4 inch diameter...	.08

CAR AND ELEVATOR PUSH.



No. 6330.

Fits 1/2 inch hole, has nickel rim with black center and is made with or without binding posts.

Schedule BA.

List No.	Price Each
6330 With Binding Post..	\$0.30
6331 Without Binding Post	.29

MOULDED COMPOSITION PUSH BUTTON.



No. 7682.

Jet Black Polished, White Porcelain Center.

This is a very neat, finely finished Push. All metal parts are moulded in base, which is grooved for wires. Has brass Connecting Screws. No possibility of short circuits.

Diameter, 1 1/4 inches.

Schedule BA.

List No.	Price Each
7682	\$0.17

PUSH BUTTON CENTERS.



No. 1170.

Schedule BA.

List No.	Price per 100
1170 Black Composition ..	\$1.80
1171 White Porcelain.....	2.40
6327 Hard Rubber	4.80

PLATE FOR PUSH BUTTONS.

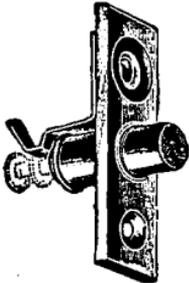


No. 5155.

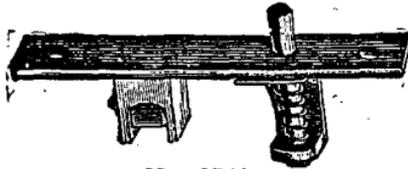
Schedule BA.

List No.	Price Each
5155 For 5/8 inch Button..	\$0.15
5156 For 3/4 inch Button..	.15
Lettering, per letter.....	.09

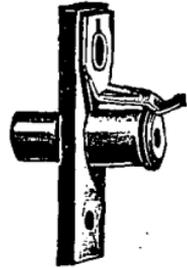
BURGLAR ALARM SPRINGS.



No. 3803.



No. 3749.



No. 3801.

DOOR SPRINGS.
Schedule BA.

List No.		Price Each
3801	Open Circuit	\$0.23
3802	Closed Circuit .....	.29
3803	Make and Break.....	.29
3749	Open Circuit, extra heavy	.40
3750	Open Circuit, cylindrical	.17



No. 3750.

WINDOW SPRINGS.

Schedule BA.

List No.		Price Each
3799	Single	\$0.32
3800	Double .....	.35



No. 3799.

UNIVERSAL SPRING.

Can be used for Screens, Shades, etc.

The two contacts are separated by fibre piece; when withdrawn, circuit is instantly closed.

Schedule BA.

List No.		Price Each
8541	.....	\$0.24



No. 8541.

TRANSOM SPRING.

Schedule BA.

List No.		Price Each
6335	.....	\$0.87



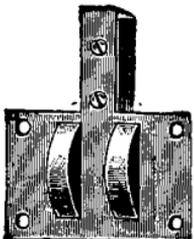
No. 6336.

DOOR TRIP.

For use in stores to announce the opening of door. Opens circuit when door passes the trip.

Schedule BA.

List No.		Price Each
6336	.....	\$0.63



No. 3800.

ELECTRIC FLOOR ALARM MATTING.

Electric Matting, Applegate's Patent.

Used in connection with Burglar Alarms for the protection of residences, stores, offices, etc. In rolls 50 feet in length, 2, 2½ and 3 feet wide.

Schedule BA.

List No.		Price Each
3805	per square foot.....	\$0.80

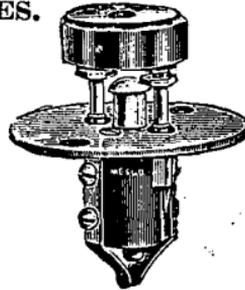


No. 6335.

FLOOR PUSHES.



No. 1618.

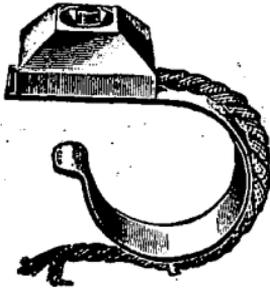


No. 1619.

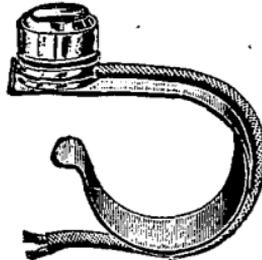
Nickel Plated. For use under dining-room tables.

List No.	Schedule BA.	Price Each
1618	Plain Floor Push	\$0.50
1619	Combination Floor Push.....	.58

ELECTRIC TABLE CLAMPS.



No. 1622.



No. 1621.

For use on Dining Tables, Card Tables, Desk, etc, in connection with Combination Floor Pushes.

List No.	Schedule BA.	Price Each
1621	Table Clamp, N. P., with Pearl Center.....	\$0.68
1622	Table Clamp, N. P., with Black Center.....	.72

PEAR PUSHES AND ROSETTE.



No. 2074.



No. 2078.



No. 2080.

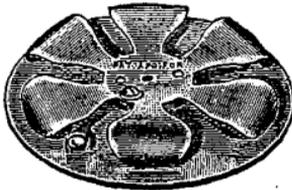


No. 2079.

List No.	Schedule BA.	Price Each
2074	Plain Wood Pear Push	\$0.20
2078	Fancy Wood Pear Push .....	.30
2080	Double Wood Pear Push .....	.50
2079	Wood Rosette for Flexible Cord.....	.12

THE DAISY FLOOR TREAD.

DIAMETER, 3 3/4 INCHES.



No. 9129.

Bottom covered with thick felt to prevent scratching floor.

Designed to be used in dining rooms or other places where floor pushes are used, it can be installed and used underneath the rug without the undersirable feature of damaging valuable rugs by putting holes in them for the cord and extension plug, which is necessary when old style extension floor pushes are used.

They are put up one each in a neat slide cover lock corner wooden box.

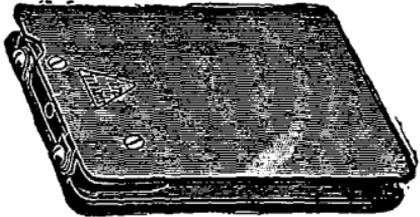
List No.	Schedule BA.	Price Each
9129	Polished Brass Finish	\$1.40

THE RELIABLE FLOOR TREAD.

Make positive contact with slight pressure. For use in closing circuit in connection with Electric Bells. Has felt covered bottom, cannot scratch floor.

Size, 4 x 2 1/2 inches by 3/8 inch thick.

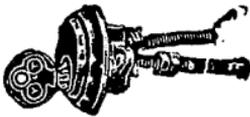
Schedule BA.



No. 6333.

List No.	Price Each
6333	\$1.20

BURGLAR ALARM LOCK SWITCHES.



These Switches are placed on the doors of stores, residences and other buildings connected with burglar alarm systems, so that persons having the proper keys can go in or out of the building without ringing the alarm.

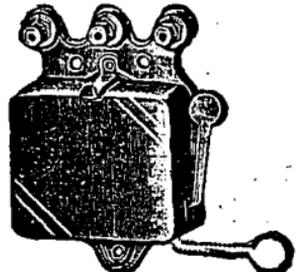
List No.	Schedule BA.	Price Each
1572	Yale Lock (3 Keys), with 12 inch Rod.....	\$4.40

AUTOMATIC DROP OR CONSTANT RINGING ATTACHMENT FOR BURGLAR ALARM.

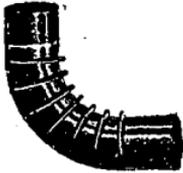
This apparatus is used for closing a bell or magneto circuit automatically, and holding it closed as long as desired.

Schedule BA.

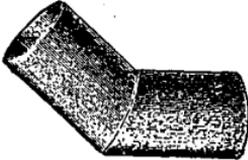
List No.	Price Each	
1578	Iron Box for Battery Circuit..\$1.55	
6340	Iron Box for Magneto Circuit, 80 ohms	2.05
6341	Wood Box for Battery Circuit	2.05
6342	Wood Box for Magneto Circuit, 80 ohms	3.50



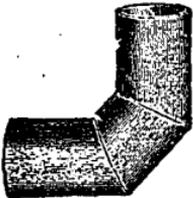
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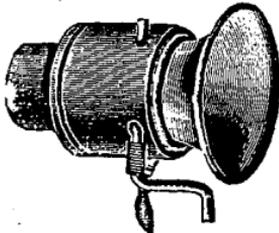
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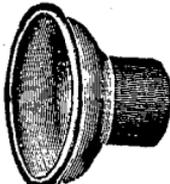
No. 5184.



No. 5187.



No. 5200.



No. 6356.



No. 6357.

TIN SPEAKING TUBE.



5-foot Lengths—Lock Seam.

Schedule BJ.

List No.	Price per 100 ft.
5174 1-inch Lock Seam Tube.....	\$4.00

List No.	Price Each
5190 1-inch Square Elbows	\$0.06
5193 1-inch Stamped Elbows.....	.07
5181 1-inch Stamped Tees .....	.12
5184 1-inch Obtuse Elbows.....	.08
5187 1-inch Hexagonal Elbows.....	.08

SPEAKING TUBE WHISTLES.

Schedule BJ.

5200 Porcelain, Japanned Body.....	\$0.22
5202 Spun Metal, Nickeled Body....	.35

Furnished with or without indicators or blank

FLEXIBLE WALL TERMINAL.

With Whistle or Open Mouthpiece, for use on End of Speaking Tube Line.

Schedule BA.

5206 2 feet long, complete.....	\$1.70
5207 2½ feet long, complete.....	2.00
5208 3 feet long, complete.....	2.30

TUBE HOLDER.

For Flexible Terminal.

5204 Bronze or Nickel Plated.....	\$0.36
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BRONZE OR NICKEL MOUTHPIECES.

Schedule BJ.

6356 Standard Pattern	\$0.12
6357 Box Pattern, open20
6358 Box Pattern, with cover.....	.40

FLANGE OR ROSETTE.

For Mouthpiece or Whistles.

6359 Bronze or Nickel Plated.....	.06
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STAPLES, STRAPS AND HOOKS.

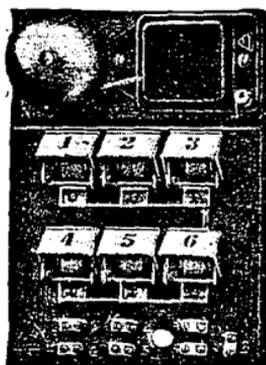
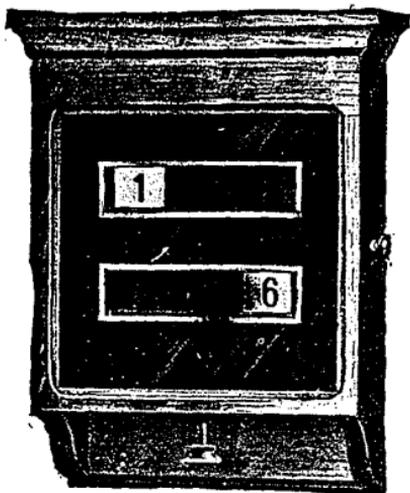
For Fastening Tube to Wall.

7264 Tube Staples. Price per lb....	\$0.24
5165 Tinned Straps. Price per lb....	.40
7263 Iron Hooks. Price per doz....	.24

STAPLE DRIVER.

5167	\$0.40
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GRAVITY DROP ANNUNCIATORS.



The Back Board.
No. 6269.

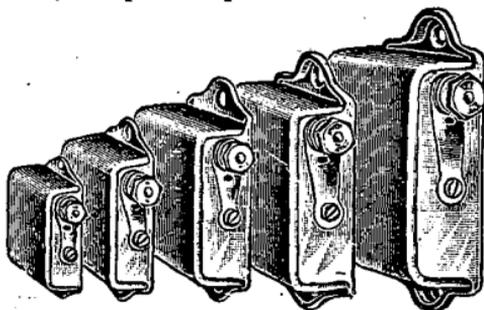
Easiest to install and at a minimum expense.

All drops, connectors and bell, mounted on background, which may be first secured to wall, connections and bell test made; and case then fastened to background by substantial neat appearing brass hooks, completing work. The case is of selected oak, of neat design and nicely finished.

The Gravity Drop gives the largest and clearest indication and the tags are easily exchanged.

List No.	Schedule BG.	Price Each
6265	2 Drop	\$5.60
6266	3 Drop	6.50
6267	4 Drop	7.40
6268	5 Drop	8.50
6269	6 Drop	9.30
6270	8 Drop	11.00
6271	10 Drop	12.90
8729	12 Drop	14.70

For 13 to 55 Drops, add \$1.25 per drop; for 56 drops and over, add \$1.60 per drop.

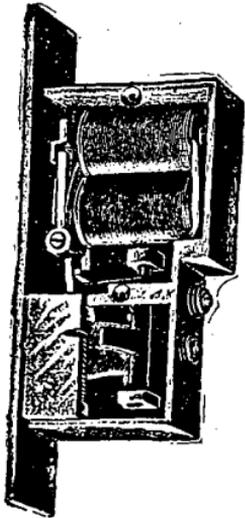


LUNGEN BUZZERS.

The cover, and base are made of stamped cold rolled steel. The tension is easily altered. Contact adjustment is held securely by a spring nut. The ribbed edges of the cover spring tightly over the base, making the buzzer dust and insect proof.

List No.	Schedule BJ.	Price Each
1401	No. 0, Small, Full Nickel	\$1.25
6282	No. 1, Japanned Base, Nickel Cover .....	.95
1402	No. 2, Japanned Base, Nickel Cover	1.15
1403	No. 3, Japanned Base and Cover	1.35
1404	No. 4, Japanned Base and Cover	1.45

BUNNELL ELECTRIC DOOR OPENER.



These door openers are so constructed that positive action is assured when the current is applied. The lock releasing device is operated by the armature and is so easily controlled that two cells of open circuit battery (will release it on short lines and not over four cells) are required for the longest circuits with heavy doors.

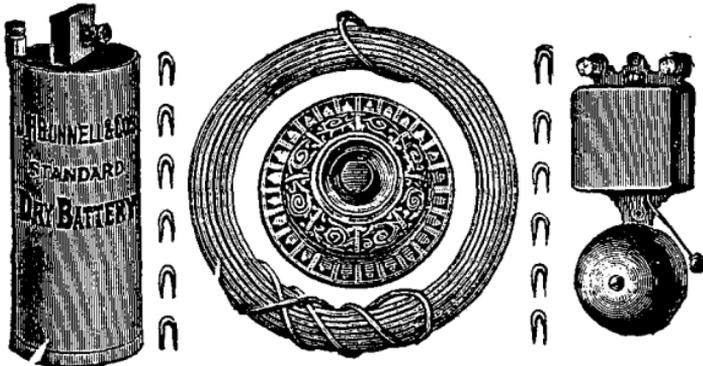
It is intended for either mortising or rim fitting in a door frame and is used in place of the latch plate.

Casing is a heavy brass casting and all parts are so substantially constructed as to make this door opener practically indestructible.

List No.	Schedule BG.	Price Each
9049	Mortise Door Opener	\$2.50

List No.	Schedule BA.	Price Each
3793	Rim Door Opener.....	4.00
3794	Push-out Spring only .....	.36

ELECTRIC CALL BELL OUTFIT.

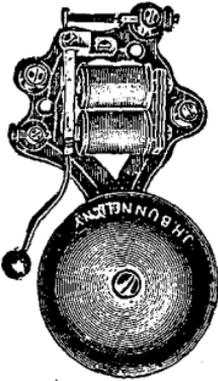


Complete outfit, consisting of 3-inch Iron Box Bell. Cell of Mascot Dry Battery. Brass or Oxidized Copper Push Button. Seventy-five feet No. 18 Bell Wire. Small package of staples and Screws, and diagram for installing same.

List No.	Schedule BF.	Price Each
1577	Packed neatly in box	\$2.00

Complete outfit, consisting of 2½-inch Iron Box Bell. Cell of Mascot Dry Battery. Wood Push Button. Fifty feet No. 18 Bell Wire. Small package of Staples and Screws, and diagram for installing same.

List No.	Schedule BF.	Price Each
6283	Packed neatly in box	\$1.60

BEEKO IRON FRAME BELLS.

The contact points are of hardened coin silver, the superiority of which as contact metal has been amply proven.

Constructed with pivoted armature working brass adjustable screws. Binding posts are non-turnable and magnets are wound full.

The frame is beautifully finished in black japan with gilt stripes and all other parts are heavily nickel plated.

Class A and B Iron Frame Bells are alike with the exception that Class A Bells have Heavy Bell Metal Gongs, while Class B are furnished with Pressed Steel Gongs.

CLASS A BELLS.**Schedule BG.**

List No.	Size	Frame	Resistance	Price Each
1347	2½ inches	No. 1	1.7 Ohms	\$3.30
1348	3 inches	No. 1	1.7 Ohms	3.55
1349	4 inches	No. 1	1.7 Ohms	4.05
1350	5 inches	No. 2	2.15 Ohms	5.50
1351	6 inches	No. 2	2.15 Ohms	6.20
1353	8 inches	No. 3	3.05 Ohms	9.70
1355	10 inches	No. 4	3.12 Ohms	16.60
1356	12 inches	No. 5	3.12 Ohms	20.75

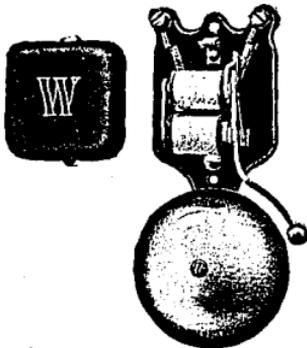
CLASS B BELLS.**Schedule BG.**

List No.	Size	Frame	Resistance	Price Each
1357	2½ inches	No. 1	1.7 Ohms	\$3.00
1358	3 inches	No. 1	1.7 Ohms	3.20
1359	4 inches	No. 1	1.7 Ohms	3.40
1360	5 inches	No. 2	2.15 Ohms	4.50
1361	6 inches	No. 2	2.15 Ohms	4.75
1363	8 inches	No. 3	3.05 Ohms	8.60
1364	10 inches	No. 4	3.12 Ohms	14.25
9704	12 inches	No. 5	3.12 Ohms	15.85

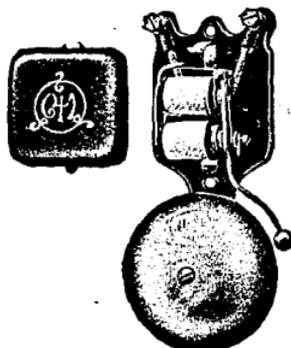
For Special Resistance Windings, Add to the above List Price, as follows, Ohms Resistance:

Size Gong	0-10	11-20	21-50	51-100	100-150	151-200	201-300
2½, 3, 4 in.	\$1.20	\$1.80	\$2.30	\$3.20	\$3.50	\$3.70	\$3.80
5 and 6 in.	2.50	3.50	3.65	3.80	4.00	4.20	4.40
8 inches	3.50	4.70	5.60	6.10	6.30	6.50	7.10
10 and 12 in.	4.75	5.25	5.75	7.40	7.00	7.80	8.00

IRON BOX BELLS AND BUZZERS.



No. 1374.



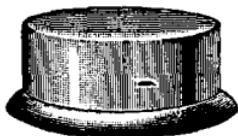
No. 1370.

We furnish these in three styles, namely: Class A, B and C, the difference being as follows: Class C Bells and Buzzers have non-adjustable contacts and non-pivoted armature. Class B has adjustable contact while Class A has adjustable contacts, pivoted armature and four ohm magnets.

Schedule BJ.

List No.	CLASS C.	Price Each
1374	Size 2½ inch Gong	\$0.85
1375	Size 3 inch Gong .....	.90
6277	Size 4 inch Gong	1.20
1376	Buzzer .....	.80
6278	Fancy Gong	1.45
CLASS B.		
1370	Size 2½ inch Gong	\$0.90
1371	Size 3 inch Gong .....	.95
1372	Size 4 inch Gong	1.25
1373	Buzzer .....	.85
3013	Fancy Gong	1.50
CLASS A.		
1366	Size 2½ inch Gong	\$1.35
1367	Size 3 inch Gong	1.45
1368	Size 4 inch Gong	1.70
1369	Buzzer	1.35
1362	Fancy Gong	1.95

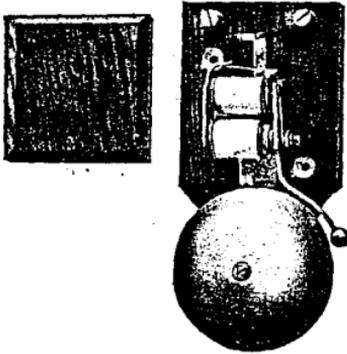
NUTMEG WATCH CASE BUZZER.



No. 9130.

Has the same type or movement as our regular Class B Bells and Buzzers but smaller in size. Cover fits tightly over raised portion of base making it dust proof. Base and cap made of sheet brass and furnished in nickel plate or brushed brass.

List No.	Schedule BJ.	Price Each
9130	Nutmeg Buzzer	\$0.75

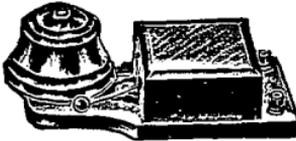


WOOD BOX BELLS.

Schedule BJ.

List No.	Price Each
1377 2½ inch Gong	.....\$1.41
3102 3 inch Gong	..... 1.43
3103 4 inch Gong	..... 1.72
6270 Fancy Gong	..... 2.05

SPECIAL TONE IRON AND WOOD BOX BELLS.



No. 1383 Mikado Gong.



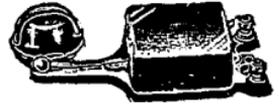
No. 1384 Tea Gong.



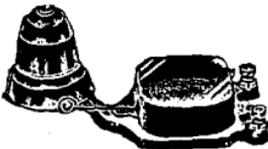
No. 1378 Dome Gong.



No. 1379 Rectangular Gong.



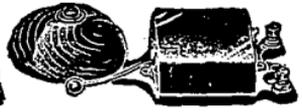
No. 1380 Sleigh.



No. 1381 Garland Gong.



No. 1382 Swiss Gong.



No. 6280 Wood Gong.

Schedule BJ.

Price Each
 Iron Box Bell with any of above special Tone Gongs (Class B) \$1.42
 Wood Box Bell with any of above special Tone Gongs (Class B) 2.05

MONITOR IRON BASE BELL.

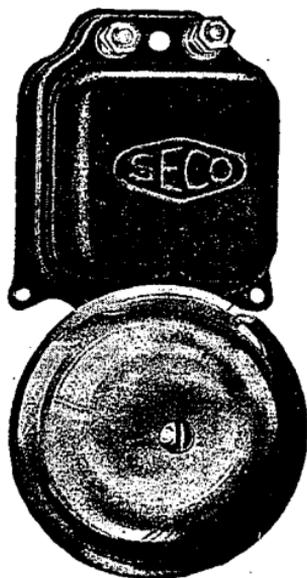
A neat compact reliable bell, with non-turning contact spring and binding posts. Has nickel plated gong and japanned base.



Schedule BJ.

List No.	Price Each
6281 Monitor Bell	.....\$1.00





No. 8774.

THE CYCLONE BOX BELL.

The Latest in Iron Box Bells.

In construction it is similar to the famous Cyclone Bell and has the same loud tone and rapid action.

Base and cap are of heavy stamped steel with an extremely glossy black japanned finish. It is made with the base raised to a height of about $\frac{1}{2}$ inch, with the movement, gong and cap mounted on top; which gives it a handsome appearance as well as additional strength. All interior parts are copperized to prevent corrosion.

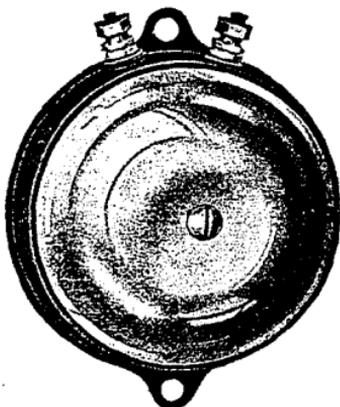
There is no question but that this is the best Box Bell ever marketed.

Schedule BJ.

List No.		Price Each
8773	2½ inch Seco Bell.....	\$0.90
8774	3 inch Seco Bell.....	.95
8775	Fancy Gong Seco Bell.....	1.50
8776	Seco Buzzer .....	.85

THE TURTLE BACK BELL.

Adapted for Elevators, Mills, and Street Cars, where dust is prevalent. Has Cast Bell Metal Gong that will not rust and is fastened to back of casting to prevent theft or meddling. For direct current battery circuits only. Resistance 11 ohms.



No. 8777.

Schedule BG.

List No.		Price Each
8777	Type 8 Gong	\$7.64

MAGNETO BUZZER.

For use on Alternating Current or through a Bell Ringing Transformer.

Schedule BG.

List No.		Price Each
8778	Type 16 A. C. Buzzer, 80 Ohms..	\$4.63

For use on Direct Current Circuits.

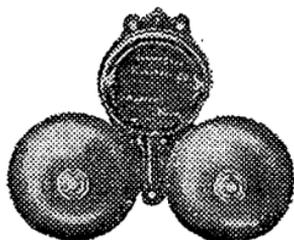
Schedule BG.

List No.		Price Each
8779	Type 11 D. C. Buzzer.....	\$4.07



No. 8778.

UNIVERSAL DOUBLE GONG BELLS.



Schedule BG.

List No.	Mfgr's No.		Price Each
8787	1	2½ inch cast.....	\$5.46
8788	2	3 inch cast.....	5.72
8789	2	4 inch steel.....	6.82
8790	2	5 inch steel.....	8.13
8791	22	6 inch steel.....	15.60
8792	22	8 inch steel.....	18.72
8793	22	10 inch steel.....	23.88

Standard Windings, No. 1, 7 ohms; No. 2, 11 ohms; No. 3, 9 ohms.

MAGNETO EXTENSION BELL

Type 12.

For Telephone Service.

Standard Winding 80 ohms, prices for other windings on application.

Schedule BG.

List No.		Price Each
8794	2½ inch Cast Gongs..	\$5.69
8795	3 inch Cast Gongs..	6.50
8786	4 inch Steel Gongs..	7.00
8797	5 inch Steel Gongs..	7.80



SINGLE STROKE BELL.

Type 21.

For Battery and High Voltage,
Direct Current.

Standard Wiring 4 ohms for operation in 6 to 8 volt battery.

Can be wound to operate in series. 14 4 ohm bells operating from 110 volt D. C. or in multiple on D. C. up to 550 volts.

Schedule BG.

List No.		Price Each
9260	6 inch, 4 ohm.....	\$14.69
9261	8 inch, 4 ohm.....	15.73
9262	10 inch, 4 ohm.....	18.07
9263	12 inch, 4 ohm.....	20.28



BELL RINGING TRANSFORMERS.

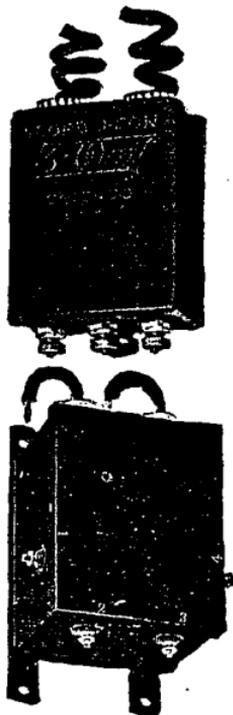
For Alternating Current Only.

Standard 100 to 125 Volts 60 Cycles.

The use of batteries for signaling purposes is expensive. Batteries have to be renewed frequently and require more or less attention. A transformer needs no attention and when once installed may be forgotten.

The "3-Way" possesses flexibility not obtained by the single voltage type. Voltage can be varied to meet changing conditions as met with in long lines. Another feature is that in changing over a three wire bell circuit having two independent lines, the "3-way" transformer may be used without the necessity of any change in the existing wiring.

For large buildings and heavier signal work, such as schools, factories, etc., the larger types are recommended.



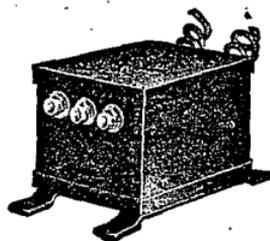
Schedule BG.

List No.	Type	Secondary Voltage	Capacity Watts	Price Each
9147.	3-Way	6-18-14	25	\$2.50

Schedule BJ.

9148	C	6	60	6.00
9149	D	6-14-20	60	7.00
9150	S. S.	6-12-18-24	100	9.00
9151	3 S	10-25-35	100	10.00

To determine the capacity in watts required to operate a number of bells use this formula: For direct current bells, add the total diameter of all bells and multiply by two, which gives the required number of watts. For alternating current bells, the total diameter will equal the watts required. Direct current bells larger than 5 inches in diameter cannot be successfully operated by a transformer.



TOY TRANSFORMERS.

For Alternating Current Only.

Standard 100—125 Volt, 60 Cycles.

THE "DANDITTOY."



The latest design in toy transformers built to meet the demand for a popular-priced high grade device.

It is equipped with a voltage regulator giving eleven different voltages in steps of $2\frac{1}{2}$ volts, starting at $2\frac{1}{2}$ volts and going up to $27\frac{1}{2}$ volts. This device will run all electrical toys excepting the heavier train outfits, for which we recommend our larger sizes.

Schedule BJ.

List No.		Price Each
9152	Size, $3\frac{1}{4} \times 3 \times 3$ inches, weight	
	3 lbs.	\$3.00

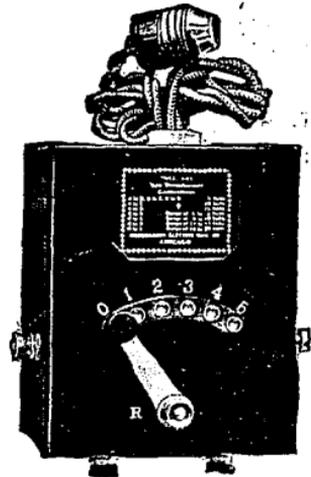
STANDARD TYPE TOY TRANSFORMERS.

These are intended for running all classes of toys, trains, motors, lighting small lamps, etc.

The secondary voltages may be varied from 2 to 28 volts in steps of 2 volts each. Any of the different voltages may be simultaneously.

Schedule BJ.

List No.	Mfgr's No.	Watts	Price Each
9153	1-D	100	\$5.50
9154	2-D	150	7.50
9155	5-D	75	4.00

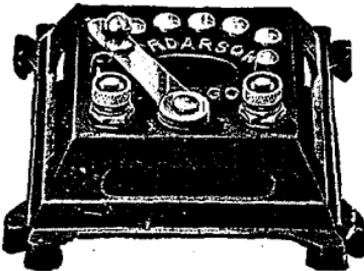


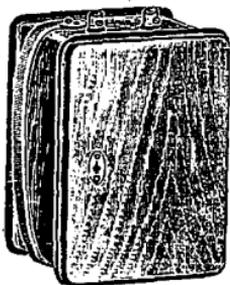
TOY RHEOSTAT.

Are designed to be used in connection with any kind of toy transformer, dry or storage cell for regulating the speed of toy trains, motors, etc.

Schedule BJ.

List No.	Price Each
9156	Size, $4 \times 4 \times 1\frac{1}{4}$ in.
	\$0.95



TESTING MAGNETOS.

No. 7635.

For Testing Electric Light Circuits, Armatures, etc.

First class in every respect, and will ring through the resistance specified.

List No.	Schedule BA.	Price Each
7635	10,000 ohms	\$ 8.25
7636	15,000 ohms	8.60
7637	25,000 ohms	9.05
7638	35,000 ohms	9.70
7639	50,000 ohms	10.25

TESTING OR FIELD TELEPHONE.

Complete with Solid Back Transmitter, Double Pole Receiver, leather strap hanger and powerful Generator and ringer. Has automatic switch to cut in and out the battery. Dimensions $7\frac{1}{2} \times 5\frac{1}{4} \times 5$ inches. Complete with battery for talking.

List No.	Schedule BA.	Price Each
3560	80 Ohm 3 Bar Series.....	\$25.00
3561	1000 Ohm 3 Bar Bridging	28.00
7640	1000 Ohm 4 Bar Bridging	31.00



No. 3560.

HI-LO TELEPHONE BRACKET.

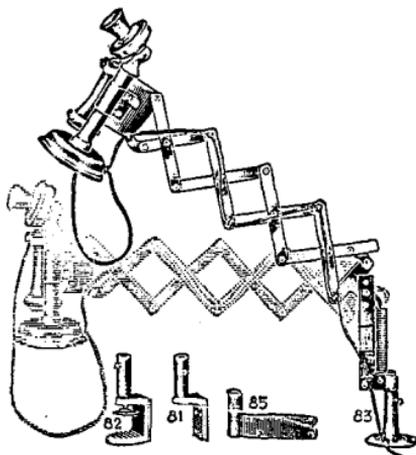
Can be moved up and down, in and out, down and up. A Universal Arm. It can be furnished with any mounting desired.

Schedule BD.

List No.	Price Each
10018	With 28 inch Arm \$4.50
10019	With 32 inch Arm 5.00
10020	With 36 inch Arm 5.50

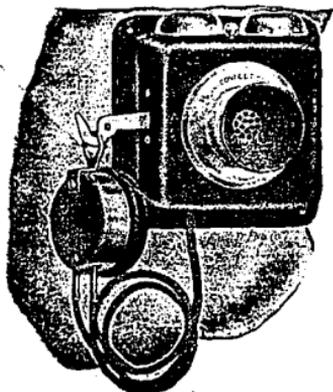
When ordering, state style of desk, bracket is to be used on or how it is to be installed and we will furnish proper mounting.

For special screw clamp mounting add 25 cents to list.

**GLASS MOUTHPIECES.**

Made of clear crystal glass. Have a threaded metal section for screwing into transmitter front. May be wiped clean without removal from transmitter.

List No.	Schedule BD.	Price Each
9752	Glass Mouthpiece	\$0.25



No. 10016.

THE DUPLEX TELEPHONES,

Our Duplex represents the best value in small telephones upon the market. It is fitted with high grade transmitter, electromagnetic watch case receiver, green silk cord, induction coil, etc. Has rubber finished metal case and nickel trim.

Schedule BG.

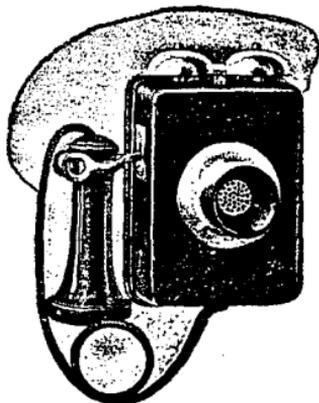
- | | |
|---|----------------|
| List No. | Price per Pair |
| 10016 Duplex Telephone with-
out Induction Coil... | \$12.00 |
| 10017 Duplex Telephone with
Induction Coil | 12.50 |

THE STANDARD TELEPHONES.

Designed for heavy service. The case is metal and the finish dull black with nickel trim. Fitted with a long distance transmitter, induction coil and bipolar receiver. Price includes one button.

Schedule BG.

- | | |
|--------------------------------|------------|
| List No. | Price Each |
| 10021 Standard Telephone. | \$9.00 |
| 10022 Extra Buttons | .50 |



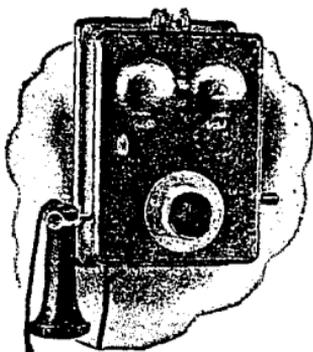
No. 10021.

COMPETITION MAGNETO TELEPHONE.

A low priced, reliable telephone with magneto calls for lines up to 15 miles. Will work on grounded circuits with several instruments on the line. Batteries can be placed in any convenient place and wired direct to battery binding posts at base of instruments.

Schedule BA.

- | | |
|----------------------------------|------------|
| List No. | Price Each |
| 3481 Series, 3 Bar 80 Ohm Ringer | \$15.00 |



No. 3481.

BI-POLAR RECEIVER.

The working parts are complete in themselves and independent of the case. The shell being used simply as a handle or protection to the works. Destroy the case and the receiver will still operate successfully. As shown in cut no binding posts are used. The adjustment is permanent and is not affected by atmospheric changes. No metal parts exposed.



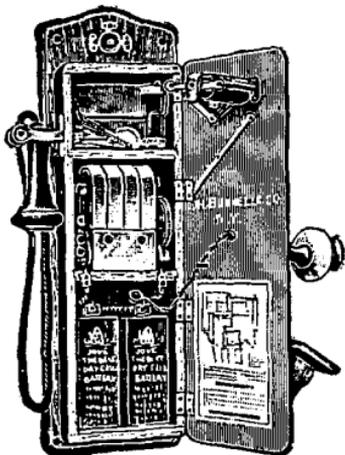
No. 3479.

- | | | |
|--------------------|---------------------|------------|
| List No. | Schedule BA. | Price Each |
| 3479 80 Ohms | | \$2.00 |

MAGNETO WALL TELEPHONES.

Standard Long Distance Receiver and Solid Back Transmitter, suitable for long distance service on heavily loaded lines.

Finished in Golden Oak with nickel trimmings.



No. 6171.

Our 4 Bar Generator Bridging Sets will operate from 10 to 12 Telephones on a line, while the 5 Bar Set will operate from 20 to 25 Telephones on a line.

Schedule BA.

List No.		Price Each
6170	3 Bar Generator with 80 Ohm Series Ringer	\$25.00
6171	4 Bar Generator with 1000 Ohm Bridging Ringer	28.00
6172	4 Bar Generator with 1600 Ohm Bridging Ringer	29.50
6173	5 Bar Generator with 1600 Ohm Bridging Ringer	30.60
6174	5 Bar Generator with 2500 Ohm Bridging Ringer	32.00

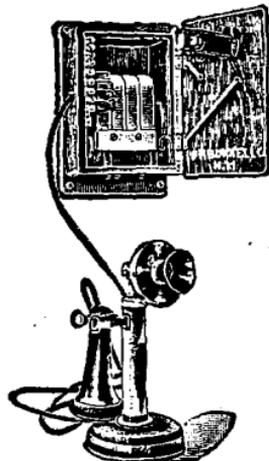
MAGNETO DESK TELEPHONES.

Desk Set finished in black rubber, mounted with nickel trimmings. Cable furnished in green silk.

Magneto box finished in golden oak.

Schedule BK.

List No.		Price Each
6178	Desk Stand only, with Terminal Block, no Magneto...	\$16.50
6179	Desk Set with 3 Bar, 80 Ohm Series Generator	29.00
6180	Desk Set with 4 Bar, 1000 Ohm Bridging Generator	32.50
6181	Desk Set with 4 Bar, 1600 Ohm Bridging Generator	33.00
8530	Desk Set with 5 Bar, 1600 Ohm Bridging Generator	35.00
8531	Desk Set with 5 Bar, 2500 Ohm Bridging Generator	36.60



No. 6180.

NEW YORK POLARITY INDICATOR.



No. 4643.

This indicator can be carried in the vest pocket. Size, $3\frac{1}{2}$ x 1 inch. The nickel plated shell will cover and protect the glass tubes from injury while being carried in the pocket or tool bag.

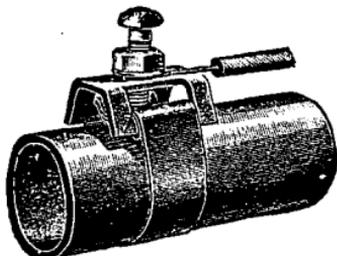
List No.	Schedule BA.	Price Each
4643	For use with Battery.....	\$2.00
4644	For 50 to 600 volts, direct current.....	2.00

NEW YORK GROUND CLAMPS.

Approved by National Board of Underwriters.

Style A for connecting Telephone and Telegraph Ground Wires to Pipes or Cables.

Schedule BA.



No. 7280 (Patented).

List No.	Price Each
7250 For Pipe up to $1\frac{1}{2}$ inch....	\$0.12
7281 For Pipe up to $2\frac{1}{2}$ inch....	.15

ALL-IN-ONE GROUND CLAMPS.

For connecting Electric Light Ground Wires to Water Pipes, Lead Covered Cables and Ground Rod. Adjustable to different sized pipes. Easily applied.

List No.	Schedule BM.	Price Each
7685	Size A, for $\frac{1}{2}$ to 1-inch Pipe.....	\$0.25
7686	Size B, for $\frac{1}{2}$ to 2-inch Pipe.....	.30
7687	Size C, for $\frac{1}{2}$ to 3-inch Pipe.....	.35

FLEXIBLE CONDUCTING CORDS.

Furnished in either Green or Red.



No. 2231.



No. 3229.

List No.	Schedule BA.	Price per Yard
3229	No. 1 Single Conductor composed of 16 No. 33 copper wires with inner cotton and outer silk braid.....	\$0.12
3230	No. 2 Single Conductor, composed of 16 No. 31 copper wires with inner cotton and outer silk braid.....	.12
3231	No. 3 Double Conductor Bell Cord, each conductor composed of 5 No. 30 copper wires with cotton braid, laid together flat with outer wires of silk.....	.14
3232	No. 4 Double Conductor, each composed of 16 No. 33 copper wires with cotton braid, laid together flat, with outer braid of silk.....	.16
3237	No. 15 Single Conductor Tinsel, composed of 24 threads of copper tinsel with outer silk braid.....	.15
3244	No. 25 Single Conductor Tinsel, composed of 18 threads of copper tinsel and 4 No. 36 copper wires twisted together with outer braid of silk.....	.15

ANNUNCIATOR OR BELL WIRE.

Schedule BG.

Double cotton wrapped, waxed and paraffined. In any standard color. No. 18 is most generally used for bell work, etc.

On spools of about 7 lbs. each.

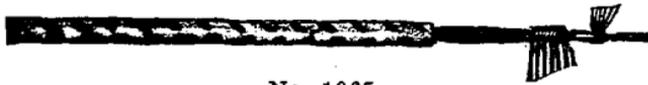
List No.	Size B. & S.	Feet Per lb.	Price Per lb.
1970	16	105	\$0.64
1971	18	155	.66
1973	20	230	.70

If furnished in 1 lb. Coils add 2 cents per lb. to list.

If furnished in 1/2 lb. Coils add 4 cents per lb. to list.



OFFICE WIRE.



No. 1965.

Insulation consisting of two cotton winds in reverse directions saturated with a moisture proof compound, and an outer braid of any standard color finished in beeswax compound.

List No.	Size B. & S.	Feet Per lb.	Price Per lb.
1965	14	52	\$0.66
1966	16	71	.68
1967	18	98	.70



No. 1976.

DOUBLE CONDUCTOR OFFICE WIRE.

List No.	Size B. & S.	Feet Per lb.	Price Per lb.
1968	16	35	\$0.70
1969	18	45	.72

OFFICE OR INTERIOR CABLES.

These cables are designed for interior use only and under conditions of entire freedom from dampness. The conductors are made of No. 18 Annunciator Wires with outside braid of any desired standard color.

List No.	Approximate number of feet per lb.:	Price per lb.
1976	(Any number of Conductors).....	\$0.75
4 Conductors..	.25 ft. 16 Conductors..	.8 ft.
6 Conductors..	.19 ft. 18 Conductors..	.7 ft.
8 Conductors..	.15 ft. 20 Conductors..	.6 1/2 ft.
10 Conductors..	.12 ft. 24 Conductors..	.5 1/2 ft.
12 Conductors..	.10 ft. 26 Conductors..	.5 ft.
14 Conductors..	.9 ft. 30 Conductors..	.4 1/2 ft.

ELEVATOR ANNUNCIATOR CABLES.

This type of Cable is designed for connecting the movable Elevator Car with the signal buttons upon the different floors, and is constructed to secure the greatest amount of strength and flexibility.

List No. 7367 Per foot for each Conductor.....\$0.05
Always state number of Conductors wanted.

**WEATHERPROOF INSULATED SOLID
COPPER WIRE.**



Schedule BG.
Combines the highest degree of insulation with durability and resistance to abrasion from mechanical injury.

It is either double or triple braided, thoroughly saturated with compound and has a black and highly polished finish.

7362	1662	.63	.63	.65
------	----	-------	-----	-----	-----	-----

PRICE PER POUND.

List No.	Size B & S.	Triple Braid	Double Braid	Slow Burning	Twisted Pairs
7358	4/0 to 8	\$0.48	\$0.49	\$0.49	\$0.50
7359	10	.51	.52	.52	.53
7360	12	.54	.55	.55	.56
7361	14	.58	.59	.59	.60
7362	16	.62	.63	.63	.65
7363	18	.65	.66	.66	.68

FOR STRANDED WIRES

add the following extras to the corresponding sizes of solid wires:

No. 10 and larger.....	\$0.01	No. 15 and 16	\$0.03
No. 11 and 12 .....	.01	No. 17 and 18 .....	.04
No. 13 and 14 .....	.02		

WEATHERPROOF WIRE.

Size B & S	Area Cir. Mils.	Double Braid Approx. Pounds 1,000 ft.	Triple Braid Approx. Pounds Per Mile	Solid Copper Wire Approx. Pounds 1,000 ft.	Triple Braid Approx. Pounds Per Mile
4	41738	151	795	164	865
5	33088	122	646	135	710
6	26244	100	529	112	590
8	16512	66	349	75	395
9	13087	54	283	62	325
10	10384	46	241	53	280
12	6528.6	30	158	35	185
14	4108.8	20	107	25	130
16	2580.6	16	83	20	105
18	1624.1	12	64	16	85

**WEATHERPROOF INSULATED GALVANIZED IRON
TELEPHONE AND TELEGRAPH WIRE.**

Extra Best Best (E.B.B.) Quality.

Price Per Pound, in full Coils only.

Size B.W.G.	List No.	Double Braid	List No.	Triple Braid
8	9832	\$0.21	9840	\$0.25
9	9833	.24	9841	.28
10	9834	.27	9842	.31
12	9836	.30	9844	.33
14	9837	.36	9845	.40

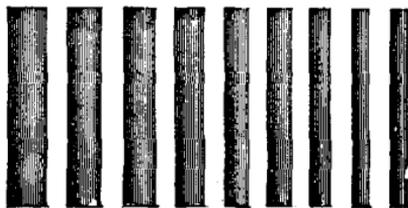
WEATHERPROOF IRON WIRE.

Size B.W.G.	Double Braid. Approx. per Mile	Size B.W.G.	Triple Braid. Approx. per Mile
8	470 lbs.	8	525 lbs.
9	400 lbs.	9	450 lbs.
10	350 lbs.	10	400 lbs.
12	225 lbs.	12	260 lbs.
14	145 lbs.	14	175 lbs.
16	100 lbs.	16	125 lbs.
18	65 lbs.	18	85 lbs.

GALVANIZED TELEPHONE AND TELEGRAPH WIRE.



½ mile coil.



Nos. 8 9 10 11 12 13 14 15 16

Schedule B.J.

Extra Best			Best Best.			Steel.		
List No.	No.	Price Per lb.	List No.	No.	Price Per lb.	List No.	No.	Price Per lb.
1898	4	\$0.15	9821	4	\$0.13	1899	4	\$0.12
1900	6	.14	1901	6	.12	1902	6	.11
1903	8	.14	1904	8	.12	1905	8	.11
1906	9	.14	1907	9	.12	1908	9	.11
1909	10	.14	1910	10	.12	1911	10	.11
1915	12	.15	1916	12	.14	1917	12	.13
1918	14	.16	1919	14	.15	1920	14	.14

**Properties of Galvanized Telephone and Telegraph Wires
Based on Standard Specifications.**

Size B.W.G.	Diameter in Mils.	Area in Circular Mils.	Approx. Weight per 1,000 ft.	Weight in lbs. per Mile
7	180	32,400	87	463
8	165	27,225	74	390
9	148	21,904	60	314
10	134	17,956	49	258
11	120	14,400	39	206
12	109	11,881	32	170
13	95	9,025	25	129
14	83	6,889	19	99
15	72	5,184	14	74
16	65	4,225	11	61

Size B.W.G.	Approximate Breaking Strain in Pounds			Resistance per Mile (International Ohms) at 68° F. or 20° C.		
	Ex. B.B.	B.B.	Steel	Ex. B.B.	B.B.	Steel
7	1,158	1,296	1,389	10.15	12.10	14.04
8	975	1,092	1,170	12.05	14.36	16.71
9	785	879	942	14.97	17.84	20.70
10	645	722	774	18.22	21.71	25.29
11	515	577	618	22.82	27.19	31.55
12	425	476	510	27.65	32.94	38.23
13	310	347	372	37.90	45.16	52.41
14	247	277	297	47.48	56.56	65.66
15	185	207	222	63.52	75.68	87.84
16	152	171	183	77.05	91.30	106.55

TELEPHONE WIRE.

Schedule B.J.



No. 19 Pothead Wire, Plain Rubber—Paired.

No. 19 Interior Telephone Wire Rubber and Dry Braid—Paired.
Standard Colors—Oak, Maroon and Olive.No. 18 Telephone Drop Wire—Rubber and Saturated Braid.
Raised Thread Tracer.

TWISTED PAIRS, SOLID, NO TEST.

PRICES PER 1,000 FEET.

List No.	B & S Gauge	Diam. over Rubber	Pothead Wire	Interior Telephone Wire	Telephone Drop Wire
9849	20	$\frac{3}{32}$	\$10.70	\$16.80	\$20.30
9850	19	$\frac{5}{32}$	10.60	16.70	20.10
9851	18	$\frac{7}{64}$	12.00	18.50	21.80
9852	18	$\frac{4}{32}$	13.10	19.80	23.50
9853	16	$\frac{3}{32}$	13.30	20.00	23.70
9854	16	$\frac{7}{64}$	14.70	22.00	27.10

Single Conductors carry one-half the price of Twisted Pairs.
Triple Conductors carry one and one-half times the price of Twisted Pairs.

BARE COPPER WIRE TABLE.

B & S Gauge	Diam. in Inches	Diam. in Millimeters	B & S Gauge	Diam. in Inches	Diam. in Millimeters
2	.2576	6.543	20	.0320	.8128
4	.2043	5.189	22	.0253	.6426
6	.1620	4.115	24	.0201	.5105
8	.1285	3.264	26	.0159	.4039
10	.1019	2.588	28	.0126	.3200
12	.0808	2.052	30	.0100	.2540
14	.0641	1.628	32	.00795	.2019
16	.0508	1.290	34	.00630	.1600
18	.0403	1.024	36	.0050	.1270

HARD DRAWN COPPER TELEGRAPH AND TELEPHONE WIRE.

No.	Diam. in Decimal of an in.	Approx. Weight per Mile in lbs.	No.	British Imper. or English Standard Gauge.	Legal Diam. in Decimal of an in.	Approx. Weight per Mile in lbs.
8	.1285	264	8	.160	.409	
9	.1144	209	9	.144	331	
10	.1019	166	10	.128	262	
12	.0808	104	12	.104	173	
14	.0641	66	14	.080	102	

MAGNET WIRE.



Schedule BE.

STOCK SIZES AND TYPES.

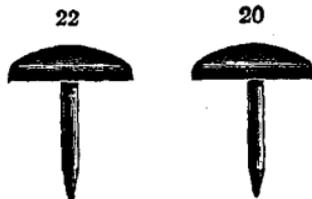
PRICE PER POUND.

B & S Gauge	Single Cotton	Double Cotton	Single Silk	Double Silk	Plain Enamel	Bare
12	\$0.90	\$0.94	.....	.....	.....	\$0.88
14	.94	1.00	.....	.....	.....	.90
16	.98	1.06	\$1.32	\$1.60	\$0.96	.92
18	1.02	1.12	1.37	1.64	.98	.96
19	1.04	1.16	1.40	1.66	1.00	.98
20	1.07	1.20	1.43	1.72	1.03	1.00
21	1.12	1.26	1.54	1.88	1.06	1.03
22	1.19	1.32	1.66	2.08	1.09	1.06
23	1.26	1.38	1.78	2.30	1.12	1.09
24	1.30	1.46	1.84	2.52	1.16	1.12
25	1.36	1.58	1.94	2.72	1.20	1.16
26	1.42	1.74	2.04	2.92	1.26	1.20
27	1.46	1.88	2.22	3.16	1.34	1.25
28	1.54	2.04	2.42	3.38	1.42	1.30
29	1.62	2.16	2.56	3.60	1.54	1.35
30	1.70	2.28	2.72	3.92	1.70	1.40
31	1.82	2.44	2.92	4.32	1.92	1.45
32	2.20	2.70	3.26	4.82	2.14	1.50
33	2.36	3.00	3.62	5.62	2.40	1.55
34	2.60	3.32	4.06	6.72	2.80	1.60
35	2.78	3.72	4.72	7.52	3.24	1.70
36	2.96	4.12	5.42	8.72	3.72	1.80

MAGNET WIRE DATA.

APPROXIMATE NUMBER OF FEET PER POUND.

Size B & S	Bare	Single Cotton	Double Cotton	Single Silk	Double Silk	Plain Enamel
12	50.69	50	49	.....	.....	.....
14	80.38	78	78	.....	.....	.....
16	128.14	124	123	125	125	126
18	203.76	195	192	199	196	201
19	257	251	248	257	253	260
20	324	307	301	318	312	320
21	408	387	381	402	396	404
22	515	483	475	507	501	509
23	649	611	591	636	629	642
24	819	771	737	802	792	810
25	1,032	969	917	1,003	987	1,019
26	1,302	1,224	1,142	1,267	1,248	1,286
27	1,642	1,533	1,406	1,590	1,561	1,620
28	2,071	1,896	1,729	2,008	1,964	2,042
29	2,611	2,370	2,151	2,510	2,437	2,570
30	3,293	2,942	2,639	3,160	3,047	3,240
31	4,152	3,632	3,200	4,000	3,765	4,082
32	5,236	4,655	3,879	5,020	4,720	5,132
33	6,602	5,688	4,655	6,242	5,817	6,445
34	8,328	7,112	5,564	7,757	7,250	8,093
35	10,501	8,532	6,566	9,661	8,826	10,197
36	13,238	9,842	7,530	11,918	10,661	12,813

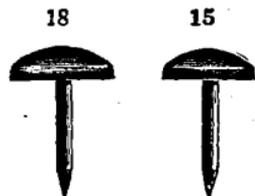
"MILONITE" PERFECTION NAILS.

Easy to handle. Prevent short circuiting. Color matches wire or wall. Wire can be taken down without cutting or injuring insulation.

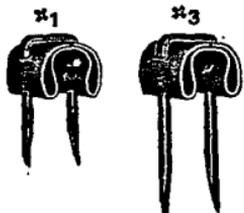
List No.	Mfg'r's No.	Schedule BC.	Price Per 1000
9810	15	Plain Tops	\$1.50
9811	18	Plain Tops	1.50
9812	20	Plain Tops	1.75
9813	22	Plain Tops	2.00

The following finishes can be furnished at 20 cents list per 1000 extra.

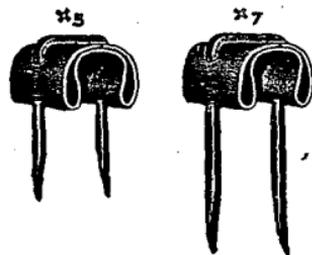
White Mottled—
(Spanish finish with Plain Tops)
Style A—(Spanish Grain)
Style B—(Straight Grain)
Style C—(Pebbled Grain)

**INSULATED SADDLE STAPLES.**

Designed for use on all low voltage circuits of interior wiring, such as telephone, telegraph, messenger call, annunciator and bell work.



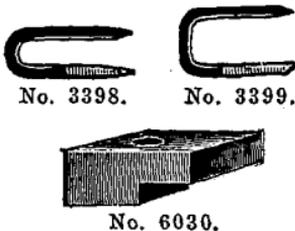
List No.	No.	Schedule BA.	Price per 100
3380	No. 1	1/2 inch long	\$0.30
7241	No. 3	3/4 inch long	.30
7242	No. 5	5/8 inch long	.34
7243	No. 7	7/8 inch long	.34

OFFICE WIRE STAPLES.

List No.	Schedule BE.	Price Each
3398	1/8 x 1/16 in. long, coppered, in 1/4 lb. pkges	\$0.12
3399	1/4 x 1/2 in. long, tinned, in 1/4 lb. pkges	.12
9814	Same as No. 3398, in 1 lb. pkges.	.40
9815	Same as No. 3399, in 1 lb. pkges.	.40

HARD FIBRE CLEATS.

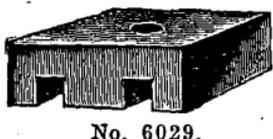
Neat, durable, easy to install, good insulators, and on account of the finished appearance they make, are just the thing for office or residence installation for bell wiring, annunciator systems, etc.



List No.	Schedule BA.	Price per 100
6028	Style A 1 Wire Cleat, 3/4 x 1 1/2 x 1/2 in. high	\$1.80
6029	Style B 2 Wire Cleat, 3/4 x 1 1/2 x 1/2 in. high	1.80
6030	Style C Corner Cleat, 1 1/2 x 1 1/2 x 1/2 in. high	1.60
6031	Style D 3 Wire Cleat, 1 1/8 x 1 1/2 x 1/2 in. high	3.60
6032	Style E 2 Wire Cleat, 1 1/8 x 9/16 x 1/2 in. high	6.00

LEATHER NAIL HEADS.

For Porcelain Insulators and Cleat Work.



List No.	Schedule BA.	Per Box
3401	In boxes of about 1000	\$0.60

CHRISTMAS TREE AND DECORATIVE OUTFITS.

For 110 Volts Incandescent Lamp Circuits.



The outfit consists of one or more Festoons of mercerized cotton covered flexible wire, each Festoon with 8 Pendant Porcelain Sockets wired thereto and an attaching plug to be screwed into a convenient Lamp Socket. Additional Festoons to any number may be connected.

Eight round Mazda Lamps in assorted colors are furnished with each festoon, at the following prices; or we can furnish Fancy Shaped Lamps, such as Fruits, Flowers, Birds, Animals or Figures at an additional cost.

Schedule BA.

List No.	Festoon	Sockets	Lamps	Price Each
7438	1	8	8	\$4.00
7439	2	16	16	8.00
7440	3	24	24	12.00
7441	4	32	32	16.00

BATTERY CHRISTMAS TREE LIGHTING OUTFITS.

Outfit consists of Mercerized Cotton Cord with 8 Sockets and 8 one inch Round Mazda Lamps, assorted colors and box for 3 Cells Dry Battery (no battery included).

List No.	Schedule BA.	Price Each
7443	8 Light 3½ Volt Outfit (less Batteries).....	\$3.00
7445	8 Light 6 Volt Outfit (less Batteries).....	3.50

SEPARATE LAMPS FOR CHRISTMAS TREE OUTFITS.

List No.	Schedule BF.	Price Each
10023	1 inch 3½ Volt Round Mazda Lamp, Clear.....	\$0.19
10024	1 inch 3½ Volt Round Mazda Lamp, Colored.....	.21
10025	1 inch 14 Volt Round Mazda Lamp, Clear.....	.21
10026	1 inch 14 Volt Mazda Lamp, Colored.....	.23
10027	14 Volt Mazda Small Fruit Shaped Lamps, Assorted....	.40
10028	14 Volt Mazda Large Fruit Shaped Lamps, Assorted....	.50
10029	14 Volt Mazda Rose, Rosebud or Lily Shaped Lamps, Assorted.....	.50
10030	14 Volt Mazda Bird Shaped Lamps, Assorted.....	.70
10031	14 Volt Mazda Animal Shaped Lamps, Assorted.....	.60
10032	14 Volt Mazda Figure Shaped Lamps, Assorted.....	.60

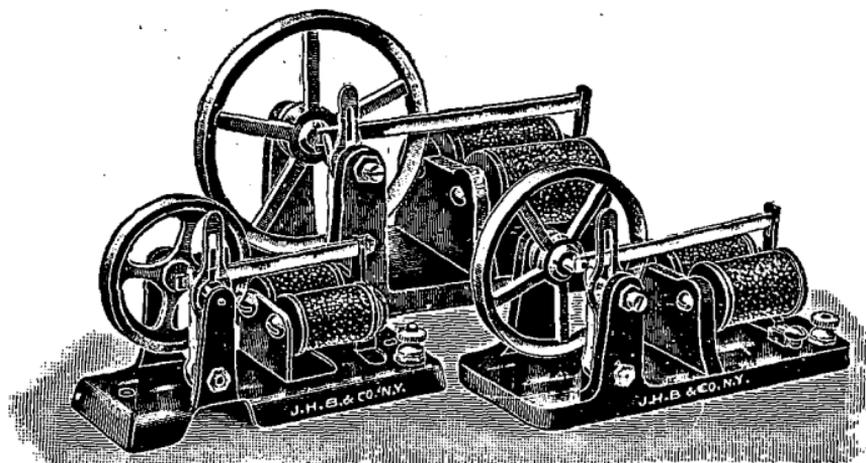
LAMP COLORING SOLUTION.

A high grade fluid for coloring incandescent lamps that is widely used and giving good satisfaction.

Furnished in Blue, Green, Purple, Amber, Red, Ruby, Violet, Canary, Pink and Frosting, in bottles as follows:

List No.	4 oz.	6 oz.	8 oz.	16 oz.	32 oz.
7454	\$0.70	\$1.00	\$1.30	\$2.00	\$3.50

BEEKO ELECTRIC ENGINES.

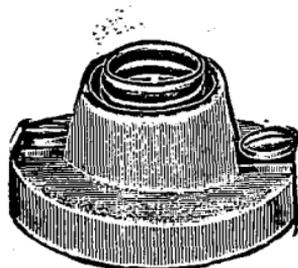


MADE IN THREE SIZES. CUT ONE-THIRD SIZE.

The most attractive toy ever produced. Has variable speed and reverse lever. Is finely finished and handsomely decorated. Will run a number of small toys at one time. Runs for weeks on one to three cells of good dry battery.

List No.	Schedule BA.	Price Each
450	Small Size	\$1.20
451	Medium Size	2.00
452	Large Size	2.50

MINIATURE AND CANDELABRA SOCKETS AND RECEPTACLES.



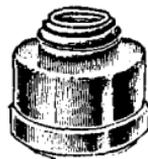
No. 4714.



No. 7431.



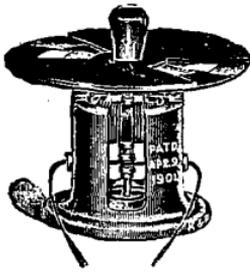
No. 7432.



No. 7434.

List No.	Schedule BA.	Price Each
4714	Flat Porcelain Miniature Receptacle	\$0.10
4713	Flat Porcelain Candelabra Receptacle .....	.10
7431	Miniature Weatherproof Socket .....	.15
7432	Candelabra Weatherproof Socket .....	.15
7433	Christmas Tree Receptacles .....	.10
7434	Brass Miniature Socket .....	.30
7435	Brass Candelabra Socket .....	.30

No. 16 ELECTRIC TOP.



No. 6379.

Will run at high speed for hours. Four color disks are furnished. When the top is in motion, a slight pressure of the finger on the edge of the disk produces most beautiful color effects—interesting and instructive. When the top is at rest, the current is automatically shut off—no danger to the battery from this cause.

Runs efficiently on one cell, dry or other battery. Finished in red enamel; polished nickel trimmings.

Schedule BC.

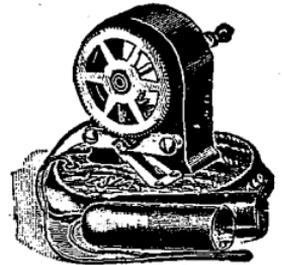
List No.	Price Each
6379	\$1.25

No. 30 "TESLA" MAGNETO ELECTRIC MACHINE.

Operated by crank; wheel and pinion have cut teeth, insuring smooth action. Substantial brass bearings. Well made throughout. Finished in red enamel, nickel trimmings. Polished wood base.

Schedule BC.

List No.	Price Each
1283	\$1.50



No. 1283

BATTERY MOTORS.

No. 37 Rex Motor.

Finished in black enamel. Screws and bearings nickel plated; mounted on a polished wood stand. Runs on a single cell of dry battery. Is packed in a neatly labelled box measuring 3 x 3 1/2 - x 3 1/2 inches.

Schedule BC.

List No.	Price Each
2944	\$1.25



No. 2944.

No. 38 REX MOTOR.

The same as No. 37 Motor, except that it has a neat switch on base; it may be started and stopped without disconnecting the wires.

Schedule BC.

List No.	Price Each
8366	\$1.50



No. 6366.



No. 1124.

No. 39 AJAX MOTOR.

The most accurate, best finished, small motor made. Finished in black enamel, with nickel plated trimmings. Mounted on polished wood base. Runs on a single cell of dry battery.

Schedule BC.

List No.	Price Each
1124	\$1.75

No. 42 AJAX MOTOR.

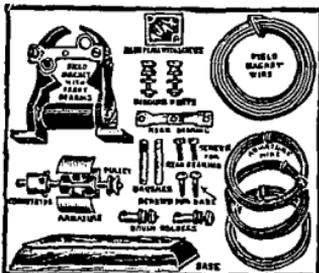
The same as No. 39 Motor, except that it has a neat switch on base. Weighs 1 pound.

Schedule BC.

List No.	Price Each
8387	\$2.00



No. 6367.



No. 2945.

No. 43 AJAX PARTS.

The parts are of standard finish and are ready to wind and assemble. Complete directions accompany each set, any ingenious boy can produce a complete Ajax Motor.

Schedule BC.

List No.	Price Each
2945	\$1.50

No. 1 STANDARD MOTOR.

Will run on a single cell of battery, although two may be used if desired. Is especially adapted for propelling mechanical toys, advertising devices, etc.

Finished in black enamel, with nickel plated trimmings. Weight 1½ pounds; occupies a space of 3½ inches square. Speed with average load, about 2200 R. P. M.

Schedule BC.

List No.	Price each
1112	\$3.50

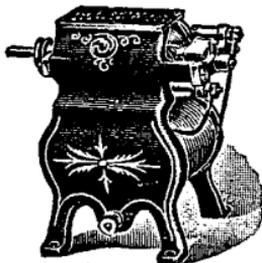


No. 1112.

No. 2 STANDARD MOTOR.

Similar in design to No. 1, but larger and more efficient. Weight 2¾ pounds; occupies a space 4 inches square. Speed with average load on 4 Volts, 2 Amperes about 2800 R. P. M.

List No.	Schedule BC.	Price Each
1113		\$6.00



No. 1114.

No. 3 STANDARD MOTOR.

Suitable for operating small mechanical devices, Fans, etc. Finished in black enamel, with brass trimmings. Weight 6½ pounds; occupies a space 5½ x 4 x 5½ inches. Speed with average load on 6 Volts, 1.6 Amperes about 1800 R. P. M.

List No.	Schedule B. C.	Price Each
1114		\$9.00

No. 4 STANDARD MOTOR.

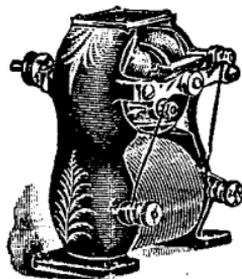
Similar in design to No. 3, but larger and more powerful. Weight 8 pounds; occupies space 6 x 4½ x 6 inches. Speed with average load on 6 Volts, 1.6 Amperes about 1800 R. P. M.

List No.	Schedule BC.	Price Each
1115		\$11.00

No. 6 STANDARD MOTOR.

A powerful motor occupying small space. Finished in black enamel with brass trimmings. Weight 3½ pounds; occupies space 3½ x 3½ x 4¾ inches. Speed with average load on 6 Volts, 2 Amperes about 2400 R. P. M.

List No.	Schedule B. C.	Price Each
6369		\$7.00



No. 6369.

No. 8 KENT DYNAMO OR MOTOR.

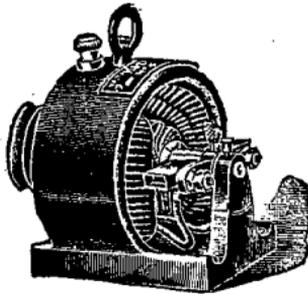
Is designed for use either as a dynamo or motor. Different binding posts are used, and the armature runs in a different direction when used as a motor or dynamo. Finished in black enamel with nickeled trimmings. As a dynamo it will develop from 2 to 12 Volts and 2 Amperes, and will operate from 1 to 10, 3 C. P. lamps. As a motor it will operate any small mechanism requiring light power. Speed with average load on 6 Volts, 1.5 Amperes about 1200 R. P. M. Furnished with two-groove pulley 1¾ and ¾ inches, respectively. Weight 8 pounds.

List No.	Schedule BC.	Price Each
1617		\$12.00



No. 1617.

No. 5 K. & D. MOTOR.



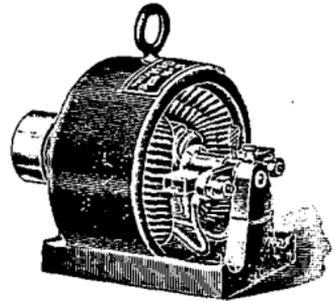
No. 1121.

This motor is designed on the lines of large machines, and is constructed with care in every detail. The armature is of the drum type, having 6 sections. The commutator segments are of hard copper, insulated with mica. The brush holders are of the radial type on an adjustable arm. Brushes are of woven wire and are self-adjusting. Finished in black enamel. Weight 9 pounds. Speed with average load on 6 volts, 2 amperes about 1800 R. P. M. Length of shaft 6 inches, diameter $\frac{1}{4}$ inch. Furnished with Grooved Pulley $1\frac{1}{2}$ inches, Drum or Flat Pulley $\frac{3}{4}$ inch wide, if desired.

List No.	Schedule BC.	Price Each
1121		\$10.00

No. 9 K. & D. DYNAMO.

The same frame, field and other parts are used in this machine as in the No. 5 Motor, but it is shunt wound to obtain best results as a generator. It is particularly desirable for experimental purposes. It will light to full power 12 6-volt 3 candle power lamps. For electroplating purposes, it will operate a 5 gallon solution successfully. Finished in black enamel. Fitted with $1\frac{1}{2}$ inch grooved or flat pulley as desired. At speed of 2,200 R.P.M. the output is 36 watts (6 volts, 6 amperes).



No. 2936.

List No.	Schedule BC.	Price Each
2936		\$10.00

No. 19 K. & D. PLATING DYNAMO.

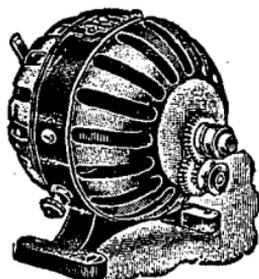
In appearance, this machine is a duplicate of the No. 5 Motor; but differs in the winding.

For electro-plating, the dynamo has many advantages over primary batteries. Noxious fumes, renewal of elements, etc., are entirely dispensed with when using this machine.

The current is under perfect control and is ready at all times. Dynamo is especially wound for electro-plating, and meets the requirements admirably. To regulate the current flowing through the solution a suitable rheostat must be used. The No. 24A K&D Rheostat serves this purpose perfectly. At speed of 2200 R. P. M. it generates a current of 2 volts, 6 amperes.

Furnished with $1\frac{1}{2}$ inch grooved or flat pulley, as desired.

List No.	Schedule BC.	Price Each
\$163		\$10.00

No. 36 K. & D. MOTOR.**With Starting, Stopping and Reversing Switch.**

No. 6373.

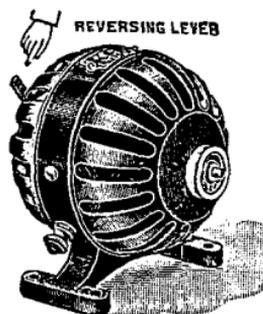
Also by a simple arrangement of gears, two reductions of speed are obtained, making three speeds in all. The gears giving these reductions are cut from solid metal and run smoothly. Electrically and mechanically the motor is well designed. It is wound for battery current only, and runs to full efficiency on two or three cells of good battery. The reversing and reducing speed features of this motor make it particularly desirable for propelling models, etc. Finished in black enamel with nicked trimmings. Weight one pound, height $3\frac{1}{4}$ inches.

List No.	Schedule BC.	Price Each
6373		\$4.00

No. 35 K. & D. MOTOR.**With Starting, Stopping and Reversing Switch.**

This motor is the same as the No. 36 without the reducing gears, and will meet the requirements of those who desire a high grade reversible motor.

The field pieces are of the best wrought metal. The armature is of the best charcoal iron, laminated, slot wound, perfectly balanced. The commutator has extra heavy, hard copper segments, carefully insulated with mica.

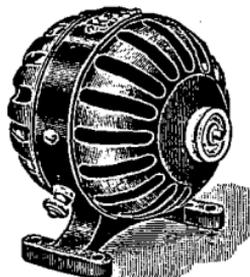


No. 6374.

List No.	Schedule BC.	Price Each
6374		\$3.50

No. 35A K. & D. MOTOR.

This motor is the same as the No. 35, but is without the switch. Weight 15 ounces. Height $3\frac{1}{4}$ inches.



No. 6375.

List No.	Schedule BC.	Price Each
6375		\$3.00

No. 13 K. & D. MOTOR.



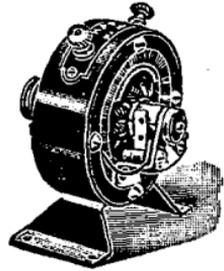
No. 6370.

Built on the lines of large machines. It stands $3\frac{3}{8}$ inches high, and weighs 20 ounces. With the exception of the base, no cast iron is used in its construction. The field is made of the best charcoal iron, annular field coil carefully taped and shellacked. The armature is laminated, slot wound. Has self-lubricating bearings, the cups having neat and efficient covers. Grooved brass pulley $\frac{5}{8}$ inch in diameter. For its size and weight, this is the most powerful motor made.

List No.	Schedule BC.	Price Each
6370		\$4.00

No. 14 K. & D. MOTOR.

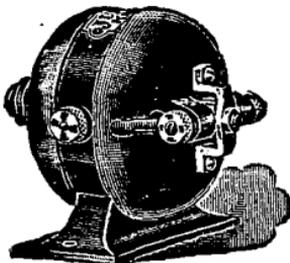
No cast iron is used in the construction of this machine. Best charcoal iron fields, with annular field coil carefully taped and shellacked. The bearings are self-lubricating and have neat dust-proof covers. Brushes are self-adjusting. Grooved pulley $\frac{5}{8}$ inch diameter. Weight 18 ounces. Stands $3\frac{3}{8}$ inches high. A powerful small motor.



No. 6371.

List No.	Schedule BC.	Price Each
6371		\$3.00

No. 17 JUNO MOTOR.

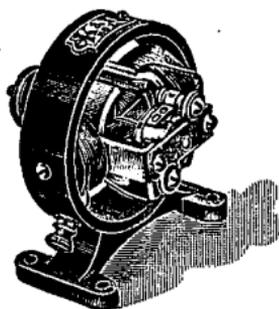


No. 6372.

This is a particularly well-designed motor, of the enclosed type. The field magnet is cast in one piece of special metal. The field coils are form wound and taped. Iron-clad drum armature, laminated. Has steel shaft with two-groove pulley. The commutator is easily accessible from the outside. Brushes are woven wire of the radial type, self-adjusting. With 4 volts 1.5 amperes has speed of about 2,000 R. P. M. on average load. Size $3\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2}$ inches.

List No.	Schedule BC.	Price Each
6372		\$4.00

No. 34 K. & D. MOTOR.



No. 6376.

This is the No. 36 Motor, without switch, reducing gears or end covers. In this form it affords a very light motor for the power it is capable of developing. Desirable for running boat models, etc., where minimum weight is an object.

Finished in black enamel and nickel. Weight 14 ounces. Height 3 1/4 inches.

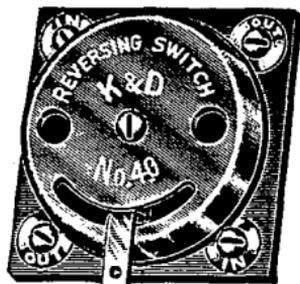
Schedule BC.

List No.	Price Each
6376	\$2.75

No. 40 K. & D. REVERSING SWITCH.

This is a new and neat little switch. It is suitable for use as a pole-changing switch in any position where the current to be carried does not exceed 15 amperes. It is also suitable as a starting, stopping and reversing switch for small motors.

The base is of hard fibre; the exposed metal parts are nickel plated.



No. 6377.

Schedule BC.

List No.	Price Each
6377	\$1.00

No. 41 K. & D. REVERSING SWITCH.



No. 6378.

This switch is of the same construction as No. 40 except that it has no cover, and is provided with a polished wood base. Of same efficiency as No. 40.

Schedule BC.

List No.	Price Each
6378	\$0.85

TYPE "D" NEW-LIFE VIBRATOR.

The Type "D" Vibrator was especially designed to meet the demand for a light, efficient and low-priced vibrator for general family use and for the professional hair dresser and masseur who calls on patients at their homes. While this type has no speed regulator, it is equipped with a push button switch in the handle, which starts and stops it instantly. Operates from any ordinary electric light socket.

Outfit consists of one vibrator, cord, plug and six applicators, all nicely fitted in a satin lined leatherette carrying case, with handle.



No. 9131.

List No.	Schedule B.J.	Price Each
9131 Type D Vibrator		\$13.50

TYPE "C" NEW-LIFE VIBRATOR.

The Type "C" NEW-LIFE Vibrator is especially adapted for use by physicians, professional masseurs, nurses, Turkish baths and sanitariums. It is of heavier construction, and has a more powerful motor than the vibrators designed for home use. The deep penetrating vibrations of the Type "C" Vibrator make it particularly



No. 9132.

suitable for cases requiring energetic treatment. Outfit consists of one vibrator cord, plug and six applicators, all nicely fitted in a black leatherette carrying case, satin lined.

Schedule B.J.

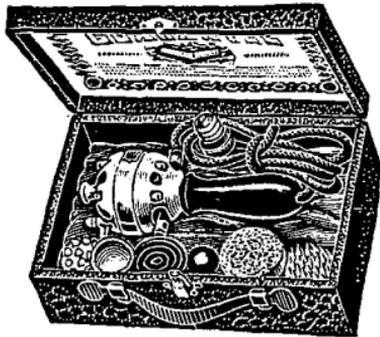
List No.	Price Each
9132 Type C Vibrator...	\$25.00



TYPE "A" NEW-LIFE VIBRATOR.

Especially designed for home use. A compact, strong and beautiful instrument that will prove a blessing to every member of the family.

Operates from any ordinary electric light socket, and a regulating switch permits motor to run fast or slow. Each outfit consists of one vibrator, cord, plug, and six applicators, all nicely fitted in a handsome carrying case of black leatherette, satin lined.

**Schedule BJ.**

List No. **9133** Type A Vibrator.....\$18.50..

Price Each

No. 9133.

TYPE "F" NEW-LIFE VIBRATOR.

The Type "F" NEW-LIFE is similar in design to the Type "D," except that it has a speed controlling device which permits of gradation of speed.

The Type "F" is a great home favorite and when its wonderful curative value is once realized, it will be a source of great benefit to every member of the family.



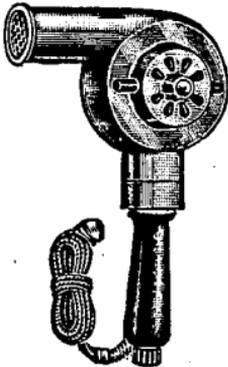
No. 9134.

Outfit consists of one vibrator, cord, plug, and six applicators, all neatly packed in a black leatherette carrying case, satin lined.

Schedule BJ.

List No. **9134**. Type F Vibrator. Price Each\$16.50





No. 9146.

Cyclone

ELECTRIC

HOT AND COLD AIR BLAST HAIR DRYER

No. 2.

The volume of both hot and cold air delivered by the CYCLONE is just sufficient to give a pleasing result, and not too strong.

Motor is designed to operate on either direct or alternating currents of from 105 to 120 volts, 60 cycles. Special windings may be had at a slight advance in price.

List No.	Schedule BJ.	Price Each
9146	Cyclone Hair Dryer	\$16.50

SEW-E-Z

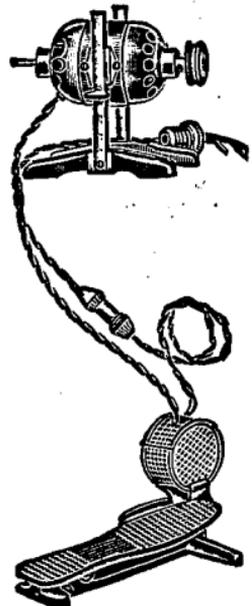
FAN, EMERY WHEEL AND BUFFING ATTACHMENTS.



Fit any Jack Rabbit Type Sew-E-Z Sewing Motor.

Sew-E-Z will not only eliminate drudgery from your sewing but you can with these attachments, immediately convert it into an efficient 8 inch fan motor, an excellent grinding motor that will insure sharp carving knives at all times or a handy buffing motor with which to polish your silverware—advantages, that you will always appreciate.

List No.	Schedule BJ.	Price Each
9143	Complete Fan, Guard and Blade...	\$2.50
9144	Combination Emery Wheel and Buffer	1.25



TAILOR TYPE SEW-E-Z.

Presents to the owners of Tailor Shops, Glove and Overall Factories, Shirt Houses, etc., operating light tailor type machines, a wonderful opportunity to reduce overhead and at the same time improve working conditions for employees.

Fits and operates perfectly all types of light tailor type machines.

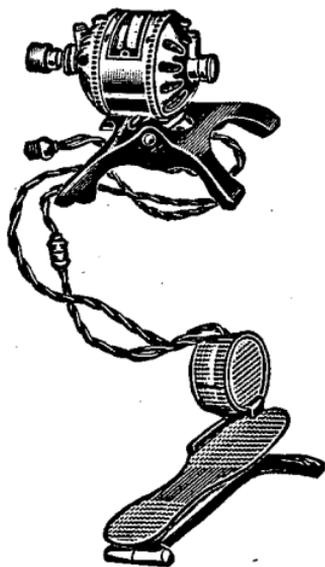
Motor wound for 115 volts A.C. or D.C. 25 to 60 cycles. Equipped with friction attachment for winding bobbin.

List No.	Schedule BJ.	Price Each
9145	Tailor Type Sew-E-Z Complete...	\$24.00

SEW-E-Z ELECTRIC SEWING MOTOR.

SEW-E-Z ELECTRIC SEWING MOTOR.

Jack Rabbit Type.



No. 9137.

For all styles and models of sewing machines. Easily recognized as one of the cleverest devices invented for the home. Fits any sewing machine (new or old) and immediately converts it into an electrically self-operated labor-saver. Requires neither screws, bolts, nor clamps, to fasten. Simply set it on your machine next the hand wheel so that the little cork pulley bears lightly against the latter. Place the self starter in any convenient position on the floor and attach plug to any electric light socket. **Forever Eliminates all Sewing Drudgery.** Sew-E-Z will do all your sewing from the finest lingerie to the heaviest fabric. Enables you to sew from morn till night without getting the least bit tired. All you have to do is to guide your sewing.

The starter enables you to sew as slowly as you do now without the motor or as fast as you wish up to 800 stitches a minute. Speed is regulated entirely by the pressure from your foot on the little self starter.

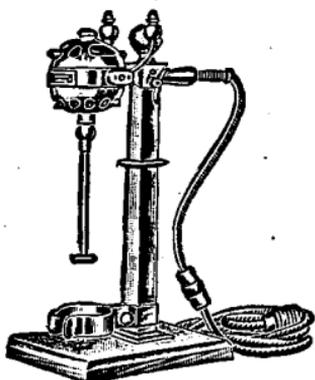
FROM SUN TO SUN— ONE CENT A RUN.

That's all it costs to operate—scarcely more than a six candle-power lamp, and it means more to your health and comfort than would a thousand times its cost in seaside or mountain air. Operates on 110 volts, alternating or direct current. Handsomely finished in polished nickel with black enamel base.

Schedule B.J.

List No. Price Each
9137 Sew-E-Z Motor\$15.75





No. 9140.

Cyclone

ELECTRIC

DRINK MIXER.

Permits the serving of more people in a given time, pleases the customers and brings them back for more—to see their drink whipped into a smooth creamy beverage by the electric motor-driven agitator, whirling at the rate of ten thousand revolutions per minute—to get the flavor the like of which cannot be obtained in any other way.

List No.	Schedule B.J.	Price Each
9138	Model 1 (Non-detachable Agitator) Nickel Plated Marble Base	\$16.50
9139	Model 1 (Non-Detachable Agitator) Silver Plated onyx Base	19.50
9140	Model 2 (Detachable Agitator) Nickel Plated Marble Base	20.00
9141	Model 2 (Detachable Agitator) Silver Plated Onyx Base	23.00

PORTABLE ELECTRIC VACUUM CLEANERS.

So much has been written and spoken about Electric Cleaners that little need be said here, other than to give the outstanding features of the machines.

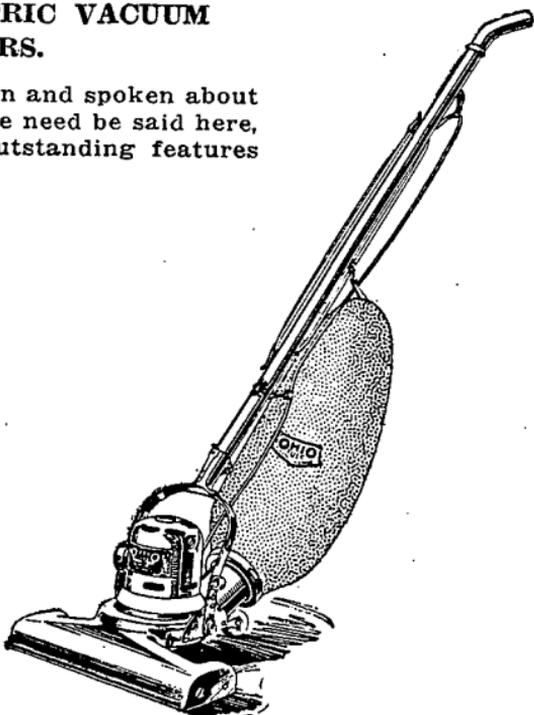
THE OHIO TUEC CLEANER.

**A Splendid Machine—
Built on Honor—
Fully Guaranteed.**

Equipped with an automatic motor switch, belt driven brush, together with its powerful suction, it is Master of all Household Cleaning.

Schedule B.J.

List No.	Price Each
9114	Cleaner only \$45.00
9115	Full Set of Attachments ... 10.00



PELOUZE "STANDARD" IRON.

Schedule BJ.



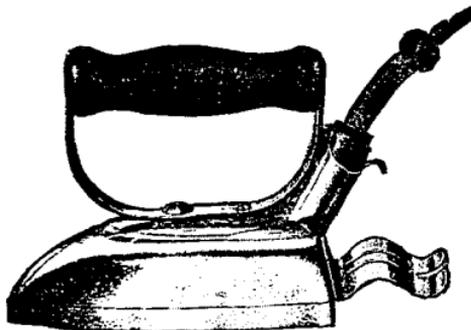
The only Electric Iron in which the Current and Temperature can be controlled at the iron by a simple movement of the hand while ironing. A great convenience in operating—Saves Current, Time and Trouble.

No stand required, simply tip iron back until it rests on handle. Saves constant lifting.

List No.	Mfgr's No.	Weight	Watts	Style	Price Each
7090	4	4 lbs.	250	Sewing Room	\$6.00
7093	6 ½	6 ½ lbs.	500	Domestic	6.50
7095	9	9 lbs.	650	Commercial	8.50

PELOUZE "IDEAL" IRON.

Schedule BJ.



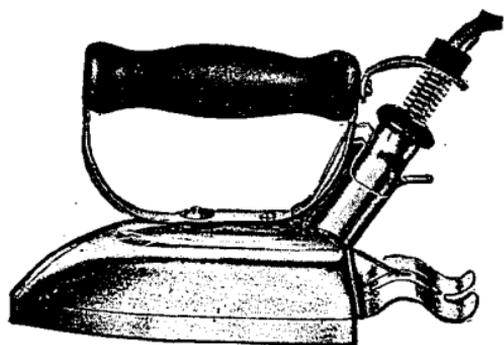
No. 9164.

The new IDEAL IRON is very attractive, practical and durable. No extra stand is required—simply tip iron on end. Heats with great speed. Has large storage capacity. Furnished with the patented "quick break" switch plug—just pull the knob on tension spring.

List No.	Mfgr's No.	Price Each
9164	B-6 Nickel Finish	500 Watts \$6.00

Always specify voltage desired when ordering.

PELOUZE "AUTOMATIC" IRON.



No. 9165.

Schedule BJ.

The new Pelouze Automatic is the modern up-to-date electric Iron.

By means of its automatic feature, the current is shut off instantly by tipping the iron slightly on heel.

The operation releases the attachment plug by making a "Quick Break,"

thereby preventing arcing and damage to contacts.

To connect iron with current again, simply push attachment plug into place.

No extra stand required—tip iron on end, which also automatically shuts off the current.

Iron heats with great speed and has large storage capacity.

List No. Mfgr's No.

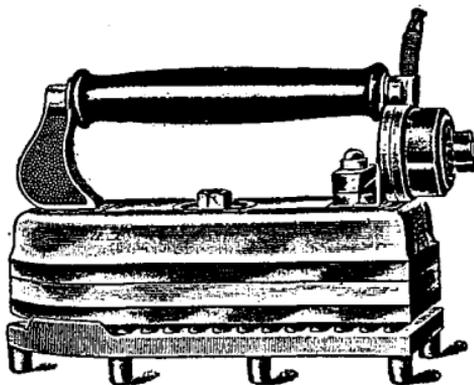
Price Each

9165 A-6 Nickel Finish, 500 Watts.....**\$6.50**

"PELOUZE" TAILORING IRONS.

Schedule BJ.

The Pelouze Tailor Irons are made in two styles; with switch at Iron for single heat, on and off, or with three-heat dial snap switch. All three heats may be kept under perfect control. The low heat is arranged to keep the Iron at perfect working temperature indefinitely when left standing. Made in two designs and weights.



No. 7097.

Price
Each

List No.	Mfgr's No.				Price Each
9166	S15	15 lbs.,	8½x5½	Bottoms, 1 Heat, 750 W....	\$15.00
9167	T15	15 lbs.,	8½x5½	Bottoms, 3 Heats, 750 W....	17.00
9168	S20	20 lbs.,	11 x3¾	Bottoms, 1 Heat, 800 W....	16.00
7097	T20	20 lbs.,	11 x3¾	Bottoms, 3 Heats, 800 W....	18.00

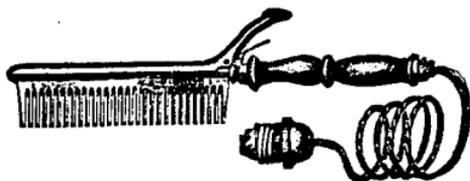
Always specify voltage desired when ordering.

Curling Iron, Hair Drier and Waver Rod

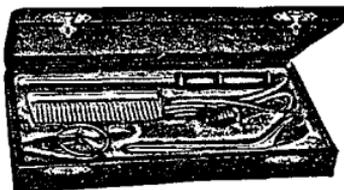
"All Three In One."



To use the Curling Iron simply remove the Comb. To use the Waver Rod remove the Shield and Comb. Makes beautiful lasting waves or curls. The heater and cord revolve together so that the cord does not kink while in use. The Comb is aluminum. All other parts are beautifully nickel plated. The handle is ebonized.



No. 7949.



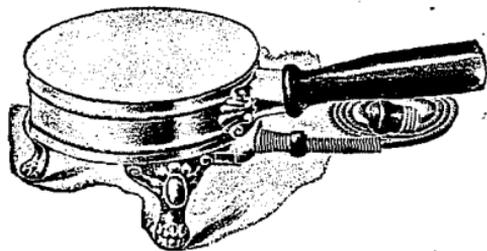
Acts as a tonic for the hair and scalp—makes the hair luxuriant. Dries the hair quickly after shampooing.

Saves time and labor—works perfectly.

Current consumption only 22 watts.

List No.	Mfgr's No.	Schedule B.J.	Price Each
7949	552	Complete in Card Board Box.....	\$6.00
9169	552C	Complete in Genuine Leather, Silk Plush Lined Case.....	8.50
7947	532	Curling Iron only, less Comb and Case	5.50

Always specify voltage desired when ordering.



No. 7101.

COPPER-TOP DISC STOVE.

Schedule BJ.

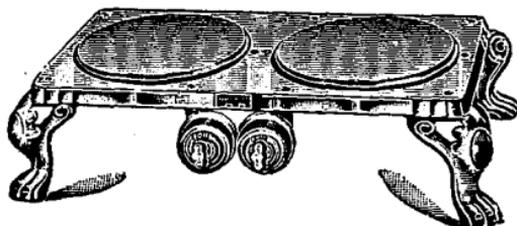
It is the only disc stove having a copper top, and is therefore more efficient and heats with much greater speed than the ordinary stove with the cast iron top.

List No.	Mfgr's No.	Watts	Diam. of Top	Weight	Price Each
7090	51	250	4½ in.	2½ lbs.	\$5.50
7101	52	475	6 in.	4½ lbs.	6.50

PELOUZE HOT PLATES

Schedule BJ.

No. 7957.



Single Pelouze Hot Plates, 3 Heats.

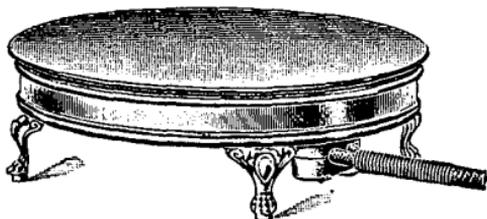
List No.	Mfgr's No.	Watts	Size	Weight	Price Each
7966	54	160-320-640	10½x10½	14 lbs.	\$10.00
7956	55	200-400-800	10½x10½	14 lbs.	10.00

Double Hot Plate, 3 Heats, as shown in cut.

List No.	Mfgr's No.	Watts	Size	Weight	Price Each
7957	56	200-400-800	10½x20	24 lbs.	\$21.00

COMMERCIAL DISC STOVE.

Schedule BJ.



No. 9170.

The industrial type of disc heater is especially designed for use in laboratories, restaurants and factories. They are manufactured in two sizes—8 and 10 inch—and each size is made in two styles.

With a single snap switch attached to the disc for one heat; also with three heats and an indicating dial switch directly attached. Furnished in nickel plate with cast bronze mountings. Solid copper top.

List No.	Mfgr's No.	Heats	Watts	Diameter	Price Each
9170	53-S	1	650	8 inch	\$14.50
9171	53-T	3	167-325-650	8 inch	16.50

Always specify voltage desired when ordering.

NEW "PELOUZE" TOASTER.



No. 7954.

List No.	Mfgr's No.	Watts	Weight	Price Each
7954	543	450	3 lbs.	\$6.00

Schedule BJ.

This Toaster is regarded by many as the most attractive on the market. Its design is artistic and it conforms nicely to other "Pelouze" devices.

It is beautifully nickel-plated throughout.

Makes delicious toast with unusual speed.

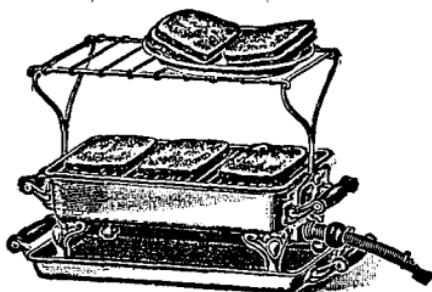
Toast four pieces at one time.

Two ebonized handles add to its convenience.

STOVE-TOASTER AND GRIDDLE.

Schedule BJ.

As its name implies, this device embodies three distinct uses. As a toaster it is very rapid with delicious results. It will cook most everything with remarkable speed, such as lobster, eggs, chops, etc. As a griddle it will bake golden brown griddle cakes in 15 seconds.



No. 7946.

It is handsomely designed and finished in full nickel-plate throughout. The legs and handle mountings are cast. Appropriate for the handsomest homes—appeals to those who prefer something better than the ordinary.

List No.	Mfgr's No.	Watts	Size	Weight	Price Each
7946	531	450	6 ½ x 12 in.	6 lbs.	\$10.00

Always specify voltage desired when ordering.



No. 7118.

List No.	Mfgr's No.	Capacity	Watts	Weight	Price Each
7118	533	7 Cups	300	7½ lbs.	\$12.00
7122	534	10 Cups	300	8½ lbs.	14.00

"PELOUZE" COFFEE PERCOLATOR.

Schedule B.J.

This Percolator has the distinction of making most delicious coffee, ready to serve, before the water percolating has reached the boiling point.

It is well known that when coffee boils in making it loses its aroma and fragrance, much of which is carried off in steam.

The design is graceful and ornamental. Made of spun copper, beautifully nickel plated, with cast legs.

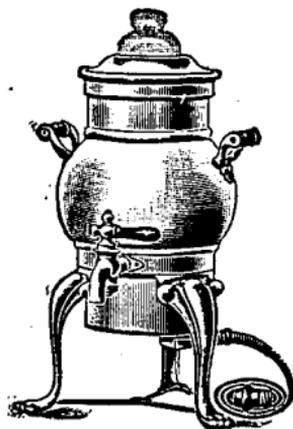
"PELOUZE" ELECTRIC COFFEE URN.

Schedule B.J.

The manner in which coffee is drawn from the nickel plated faucet, makes it convenient and pleasant to use.

The water doesn't boil before the coffee is made and therefore all the aroma and fragrance of the coffee are retained.

It is made of spun copper, finished in full nickel plate.



No. 9174.

List No.	Mfgr's No.	Capacity	Watts	Weight	Price Each
9174	529	7 Cups	300	7 lbs.	\$16.50
9175	530	10 Cups	300	7½ lbs.	18.00

ELECTRIC CHAFING DISH.



No. 7735.

The new Pelouze Electric Chafing Dish with self-contained heater is extremely attractive in appearance. It is made of spun copper, beautifully nickel plated. The legs and mountings are cast.

The heater is so efficient that it will boil water in seven minutes, with a current consumption of only 475 watts.

List No.	Mfgr's No.	Capacity	Watts	Weight	Price Each
7735	537	3 pts.	475	8½ lbs.	\$15.00
7736	538	Colonial top—square handle	.....	.....	16.50

Always specify voltage desired when ordering.



No. 7116.

List No.	Mfgr's No.	Capacity	Watts	Weight	Price Each
7116	540	3 Pints	300	7½ lbs.	\$13.50

ELECTRIC TEA KETTLE.**Schedule B.J.**

The Pelouze Tea Kettle with self-contained heater is attractively designed. It is very efficient and will boil water in seven minutes.

It is finished in full nickel plate outside, and block tin coated inside. The mountings and legs of the stove are of cast bronze.

ELECTRIC TEA SAMOVAR.**Schedule B.J.**

Perfect tea, like perfect coffee, requires a special device that is adapted for this particular purpose. Every woman knows tea leaves should not steep too long and that the ordinary tea ball is drippy and inconvenient to use.

In the Pelouze Tea-Ball Pot the tea-ball remains in the pot permanently. When the tea has steeped enough it is raised from the water and suspended above it by means of a holding device inside the cover.



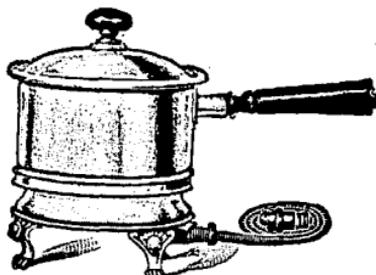
No. 7117.

List No.	Mfgr's No.	Capacity	Watts	Weight	Price Each
7117	539	6 Cups	300	4½ lbs.	\$13.50

BOILER OR STEW PAN.**Schedule B.J.**

This device, is adapted for soups, boiling eggs, cooking breakfast cereals and other similar purposes. It is indispensable in electric cooking. It is very efficient and cooks with great speed.

The body and cover are made of spun copper heavily nickel plated outside, block tin lined inside and fitted with ebonized knob and handle.



No. 7105.

List No.	Mfgr's No.	Capacity	Watts	Weight	Price Each
7105	541	3 Pints	300	6½ lbs.	\$13.50

Always specify voltage desired when ordering.



No. 9179.

PELOUZE ELECTRIC HEATING PAD.

Schedule BJ.

The Pelouze Electric Heating Pad has many advantages over the ordinary hot water bottle. The heat is dry and uniform—supplied from a soft, light, flexible eider-down pad.

Each pad is provided with a simple three heat switch for low, medium and high heats.

The Pelouze Pad is provided with two automatic Thermostats, which are designed to prevent the heat from rising above 180 degrees.

List No.	Mfgr's No.	Heats	Size	Watts	Price Each
9179	546T	3	12x15	50	\$7.50
9177	546S	1	12x15	50	6.50
Rubber Cover for Pad					
					1.00

EGG BOILER.

Schedule BJ.

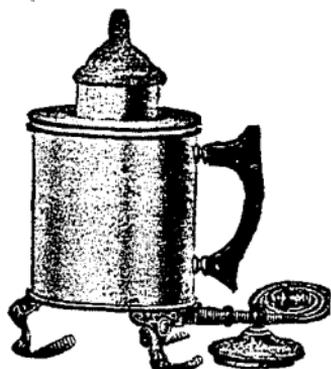
This device is proving very popular as a most practical and efficient means of boiling eggs. The vessel is made in two parts, one vessel within the other, with an air space between. It consumes very little current and operates with great speed.

The egg tray can be removed and the vessel used for heating liquids, or for sterilizing purposes. It is finished in full nickel plate—very attractive.



No. 9180.

List No.	Mfgr's No.	Capacity	Watts	Weight	Price Each
9180	545	1½ Pints	250	4½ lbs.	\$9.00
7103	528	Water Cup without Egg Tray.....8.50			



No. 9181.

NURSERY MILK WARMER.

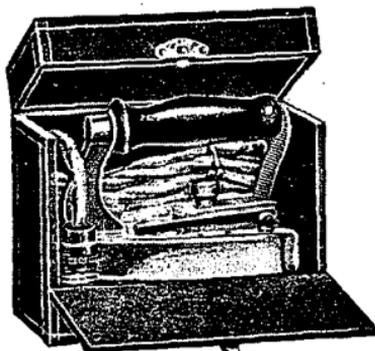
Schedule BJ.

The nursery Milk Warmer contains a one pint "Hygea" nursing bottle. When it is used for other purposes such as boiling eggs and heating liquids, the bottle is removed and a tightly fitting cover takes its place.

This device is made double—one vessel within the other, with air space between, which holds the heat long after current is detached.

List No.	Mfgr's No.	Capacity	Watts	Weight	Price Each
9181	553	1½ Pints	250	4½ lbs.	\$8.00

Always specify voltage desired when ordering.



No. 9178.

TRAVELING IRON.

The "Pelouze" 4-pound Traveling Iron will be found most useful for pressing skirts or trousers. It is always ready.

This iron is provided with legs so that the Iron may be inverted for heating liquids or for passing over the surface delicate handkerchiefs, lace, etc.

Packed in attractive leatherette hinged box.

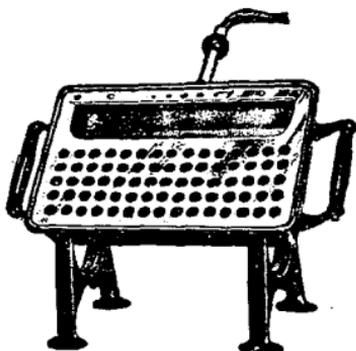
List No.	Mfgr's No.	Schedule BJ.	Price Each
9178	4L	Complete in Case	\$7.00
7953	4S	Complete with 4 lb. Iron, Comb and Curler, and Water Cup.....	11.75

PELOUZE "PETITE" RADIATOR

The "Petite" Radiator is designed for use in bathrooms and other places of small dimensions.

It is most efficient and practical—can be attached to any lamp socket. Handles are provided for lifting.

It is handsomely finished and very ornamental in appearance.



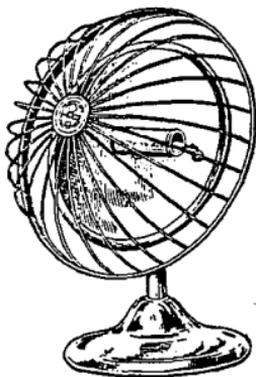
No. 9176.

List No.	Mfgr's No.	Schedule BJ.	Price Each
9176	555	Size 5 x 11 inches; 400 watts.....	\$6.50

MAJESTIC ELECTRIC HEATER.

The Majestic Heater is useful all over the house, in the living room, the bath, the bedroom, the nursery, or anywhere that instantaneous heat is desired.

Strongly made and handsomely finished in oxidized copper with a parabolical reflector of polished copper. Supplied with 8 ft. of cord and attachment plug to connect to any lamp socket.



No. 9182.

List No.	Schedule BJ.	Price Each
9182 Model 7.	615 Watts, 110 Volts...	\$10.00

Always specify voltage desired when ordering.

ELECTRIC SOLDERING COPPERS.

Schedule BC.

TYPE 100.

70 Watts. Total Length, 13 $\frac{3}{4}$ in.
Total Weight, 12 oz. Diam. Tip, $\frac{1}{2}$ in.
Equal to a $\frac{3}{4}$ lb. soldering copper.
For telephone switchboards, instrument work,
small fuses, etc.

List No. Price Each
9183 Soldering Copper complete \$7.00
9184 Extra Tip only40

TYPE 200.

150 Watts. Total Length, 14 $\frac{1}{8}$ in.
Total Weight, 18 oz. Diam. Tip, $\frac{7}{8}$ in.
Equal to a 1 $\frac{1}{2}$ lb. copper. For light gen-
eral work.

List No. Price Each
9185 Soldering Copper complete \$9.25
9186 Extra Tip only65

TYPE 300.

250 Watts. Total Length, 14 $\frac{3}{4}$ in.
Total Weight, 29 oz. Diam. Tip, 1 $\frac{1}{8}$ in.
Equal to a 2 lb. copper. For medium gen-
eral work.

List No. Price Each
9187 Soldering Copper complete \$11.50
9188 Extra Tip only 1.15

TYPE 400.

350 Watts. Total Length, 14 $\frac{3}{4}$ in.
Total Weight, 46 oz. Diam. Tip, 1 $\frac{1}{2}$ in.
Equal to a 3 lb. soldering copper. For
heavy work.

List No. Price Each
9189 Soldering Copper complete \$13.50
9190 Extra Tip only 1.35

TYPE 500.

120 Watts. Total Length, 11 $\frac{3}{8}$ in.
Total Weight, 16 oz. Diam. Tip, $\frac{7}{8}$ in.
Same as Type 200 Copper, but recommend-
ed for use where shortness is desired.

List No. Price Each
9191 Soldering Copper complete \$8.00
9192 Extra Tip only60

TYPE 600.

55 Watts. Total Length, 13 $\frac{3}{4}$ in.
Total Weight, 9 oz. Diam. Tip, $\frac{7}{16}$ in.
Equal to a $\frac{1}{2}$ lb. soldering copper. Intend-
ed for extremely light and delicate work.

List No. Price Each
9193 Soldering Copper complete \$6.50
9194 Extra Tip only35

TYPE 700.

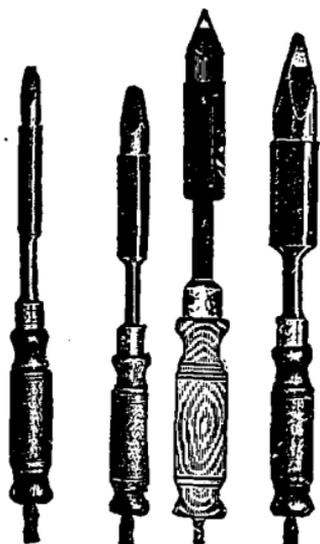
60 Watts. Total Length, 10 in.
Total Weight, 9 oz. Diam. Tip, $\frac{1}{2}$ in.
Equal to a $\frac{3}{4}$ lb. copper. For bench work
or Lineman's tool kit.

List No. Price Each
9195 Soldering Copper complete \$6.50
9196 Extra Tip only35

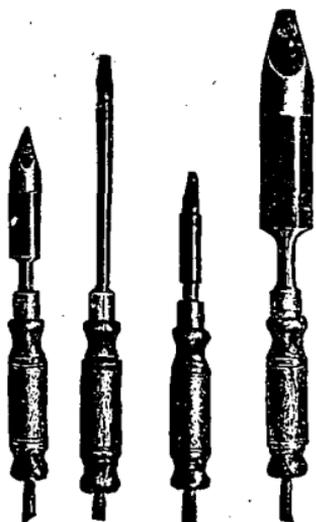
TYPE 800.

500 Watts. Total Length, 15 $\frac{9}{16}$ in.
Total Weight, 65 oz. Diam. Tip, 1 $\frac{3}{4}$ in.
Equal to a 5 lb. copper. Intended for all
kinds of extra heavy soldering.

List No. Price Each
9197 Soldering Copper complete \$18.00
9198 Extra Tip only 2.40



Type 100. Type 200. Type 300. Type 400.



Type 500. Type 600. Type 700. Type 800.



VEST POCKET DAYLOS.

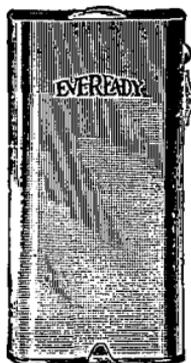
Schedule B.J.



No. 9199.



No. 8640.



No. 8440.



No. 9200.

Size $\frac{5}{8}$ x $1\frac{1}{2}$ x $2\frac{1}{2}$ inches.

List No.	Mfgr's No.		Unit Package	Price Each
8440	6900	Nickel Plated, complete	10	\$1.10
8640	6970	Nickel Plated, complete	10	1.10
9199	6990	Nickel Plated, complete	10	1.40
9200	6980	Silver Plated, complete	10	1.75
8448	700	Renewal Tungsten Battery	5	.40
8449	1179	Renewal Mazda Bulb	10	.20

Size $\frac{3}{4}$ x $1\frac{3}{4}$ x 3 inches.

8441	6961	Nickel Plated, complete	10	1.10
8641	6971	Nickel Plated, complete	10	1.10
9201	6981	Silver Plated, complete	10	1.75
9202	6991	Nickel Plated, complete	10	1.40
8447	750	Renewal Tungsten Battery	10	.40
8450	1180	Renewal Mazda Bulb	10	.20

Size $\frac{3}{4}$ x $2\frac{1}{4}$ x 3 inches.

8442	6962	Nickel Plated, complete	10	1.40
8642	6972	Nickel Plated, complete	10	1.40
9203	6992	Nickel Plated, complete	10	1.75
9204	6982	Silver Plated, complete	10	2.00
8448	751	Renewal Tungsten Battery	10	.45
8451	1181	Renewal Mazda Bulb	10	.20



DAYLOS.

With Tungsten Batteries and Mazda Bulbs.



No. 9210.



No. 9247.



No. 9206.

List No.	Mfgr's No.	Schedule BJ. Size 1 1/4 x 5 inches.	Unit Package	Price Each
8408	2602	Vulcanized Fibre Case, complete....	10	\$1.50
9205	2630	Nickel Plated Case, complete	10	1.75
8424	791	Renewal Tungsten Battery	10	.40
8188	1197	Renewal Mazda Bulb	10	.20
Size 1 1/2 x 6 1/2 inches.				
8409	2604	Vulcanized Fibre Case, complete....	10	1.75
8410	2625	Alligator Cloth Case, complete.....	10	1.40
9206	2624	Black Cloth Case, complete.....	10	1.40
9207	2622	Snake Cloth Case, complete.....	10	1.40
9208	2628	Enameled Metal Case, complete....	10	1.10
9209	2631	Nickel Plated Case, complete.....	10	2.00
8425	790	Renewal Tungsten Battery.....	10	.40
8429	1198	Renewal Mazda Bulb	10	.20
Size 1 1/2 x 8 1/2 inches.				
9200	6980	Silver Plated, complete	5	1.95
8412	2606	Leatherette Covered Case, complete	5	1.75
8413	2612	Vulcanized Fibre Case, complete....	5	2.10
8414	2626	Cloth Covered Case, complete.....	5	1.65
8415	2627	Enameled Metal Case, complete....	5	1.35
9210	2632	Nickel Plated Brass Case, complete	5	2.50
8426	705	Renewal Tungsten Battery.....	10	.80
8430	1193	Renewal Mazda Bulb	10	.20
Size 1 1/2 x 11 inches.				
8417	2614	Vulcanized Fibre Case, complete....		2.50
8427	711	Renewal Tungsten Battery .....		.85
8431	1199	Renewal Mazda Bulb	10	.20
Size 1 1/2 x 13 inches.				
8419	2615	Vulcanized Fibre Case, complete....		3.25
8428	715	Renewal Tungsten Battery		1.00
8190	1195	Renewal Mazda Bulb	10	.20

Soldier Boy with Belt Clip. Size 5 3/4 inches.

List No.	Mfgr's No.		Unit Package	Price Each
9247	2629	Gun Metal Finish	10	\$2.10
9248	2639	Nickel Finish	10	2.10
8424	791	Renewal Tungsten Battery	10	.40
8188	1197	Renewal Mazda Bulb	10	.20



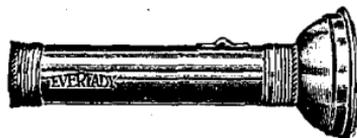
MINER'S DAYLOS.



No. 8421.



No. 9212.



No. 9214.



No. 9215.

Schedule B.J.

Size 1½ x 6½ inches.

List No.	Mfgr's No.		Unit Package	Price Each
8420	2616	Vulcanized Fibre Case, complete....	5	\$2.10
9211	2634	Nickel Plated Case, complete	5	2.75
8425	790	Renewal Tungsten Battery	10	.40
8429	1198	Renewal Mazda Bulb	10	.20
Size 1½ x 8½ inches.				
8421	2619	Vulcanized Fibre Case, complete....	5	2.50
9212	2633	Nickel Plated Case, complete.....	5	3.25
8426	705	Renewal Tungsten Battery	10	.60
8430	1193	Renewal Mazda Bulb	10	.20
Size 1½ x 11 inches.				
8422	2621	Vulcanized Fibre Case, complete....		3.25
8421	711	Renewal Tungsten Battery .....		.65
8431	1199	Renewal Mazda Bulb	10	.20
Size 1½ x 13 inches.				
8423	2623	Vulcanized Fibre Case, complete....		3.75
8428	715	Renewal Tungsten Battery		1.00
8190	1195	Renewal Mazda Bulb	10	.20

LARGE "DAYLOS" FOR SPECIAL SERVICE.

Size 1½ x 6¾ inches.

List No.	Mfgr's No.		Unit Package	Price Each
9213	2638	Nickel Plated Brass Case, complete	5	\$3.90
8425	790	Renewal Tungsten Battery	10	.40
8429	1198	Renewal Mazda Bulb	10	.20
Size 1½ x 8½ inches.				
9214	2637	Nickel Plated Brass Case, complete	5	4.50
9215	2659	Vulcanized Fibre Case, complete....	5	4.25
8426	705	Renewal Tungsten Battery	10	.60
8430	1193	Renewal Mazda Bulb	10	.20
Size 1½ x 13 inches.				
9216	2653	Vulcanized Fibre Case, complete....		5.25
8428	715	Renewal Tungsten Battery		1.00
8190	1195	Renewal Mazda Bulb	10	.20



COAT POCKET DAYLOS.



No. 8432.



No. 9226.



No. 9227.

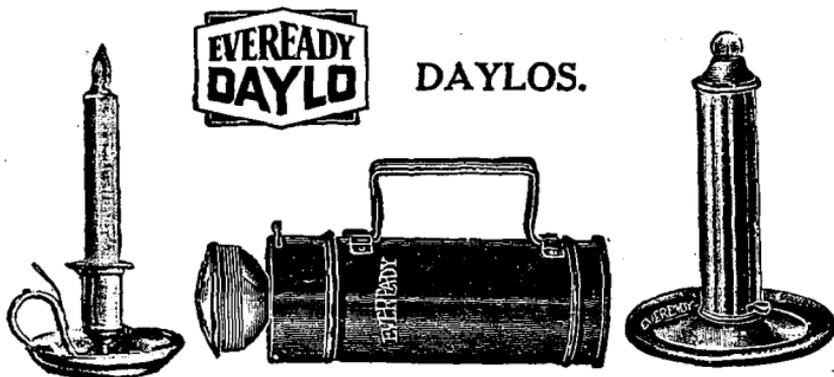
Schedule B.J.

List No.	Mfgr's No.	Size	Unit Package	Price Each
		Size 1½ x 1¾ x 3½ inches.		
8432	6902	Black Cloth Covered, complete.....		\$1.50
9217	6952	Snake Cloth Covered, complete.....		1.50
9218	6953	Alligator Cloth Covered, complete..		1.50
8443	792	Renewal Tungsten Battery	5	.40
8188	1197	Renewal Mazda Bulb	10	.20
9219	6954	Nickel Plated, complete		1.50
8443	792	Renewal Tungsten Battery	5	.40
	1182	Renewal Mazda Bulb	10	.20
		Size 1 x 2¼ x 3½ inches.		
8435	6901	Alligator Cloth Covered, complete..		1.50
8436	6903	Black Cloth Covered, complete.....		1.50
8437	6909	Vulcanized Fibre Covered, complete		2.00
9220	6904	Alligator Cloth Covered, complete..		1.50
8444	703	Renewal Tungsten Battery	5	.45
8189	1190	Renewal Mazda Bulb	10	.20
		Size 1½ x 2¼ x 5 inches.		
8439	1991	Black Cloth Covered, complete.....		1.75
9221	1992	Snake Cloth Covered, complete.....		1.75
9222	1993	Alligator Cloth Covered, complete..		1.75
8445	793	Renewal Tungsten Battery .....		.45
8188	1197	Renewal Mazda Bulb	10	.20

MILITARY DAYLO.

(With Clip to attach to belt or coat button.)

List No.	Mfgr's No.	Size	Unit Package	Price Each
		Size 3¾ x 2½ inches.		
9226	3650	With Compass, Gun Metal	5	\$5.00
9227	3651	Without Compass, Gun Metal	5	3.00
9244	3660	With Compass, Nickel Plated.....	5	5.00
9245	3661	Without Compass, Nickel Plated....	5	3.00
8444	703	Renewal Tungsten Battery	5	.45
8189	1190	Renewal Mazda Bulb	10	.20



No. 8456.

No. 9242.

No. 9223.

DAYLO CANDLES.

Just the thing for the guest chamber.
Battery concealed in the candle.

List No.	Mfgr's No.	Schedule BJ.	Unit Package	Price Each
8456	1650	Complete with Switch		\$5.25
8462	753	Renewal Tungsten Battery .....		.60
8191	1113	Renewal Mazda Bulb .....		.45
9223	1657	Complete with Switch		1.50
8424	791	Renewal Tungsten Battery	10	.40
9224	1192	Renewal Mazda Bulb	10	.20

PISTOL DAYLO.

Modeled after an automatic magazine pistol of the latest type.
The trigger acts as a switch to turn on the light.

List No.	Mfgr's No.	Schedule BJ.	Unit Package	Price Each
9225	2675	Pistol Daylo	10	\$2.00
8447	750	Renewal Tungsten Battery	10	.40
8450	1180	Renewal Mazda Bulb	10	.20

FOUNTAIN PEN DAYLO.

This DAYLO is equipped with a clip so it can be carried in the vest pocket the same as the ordinary fountain pen.

List No.	Mfgr's No.	Schedule BJ.	Unit Package	Price Each
9228	2683	Black with Clip Contact, complete... ..	10	1.50
9229	2684	Nickeled with Clip Contact, complete	10	1.50
9230	706	Renewal Tungsten Battery	5	.35
8449	1179	Renewal Mazda Bulb	10	.20

HANDY LAMP.

For use in connection with standard 6 inch dry cell, which will give about 50 hours continuous burning. Black enamel finish.

List No.	Mfgr's No.	Schedule BJ.	Unit Package	Price Each
9242	4716	Reflector on Top, less battery		\$1.50
9243	4718	Reflector on Side, Bail Handle, less battery		2.00
9246	1451	Renewal Mazda Bulb	10	.20



DAYLO LANTERNS.



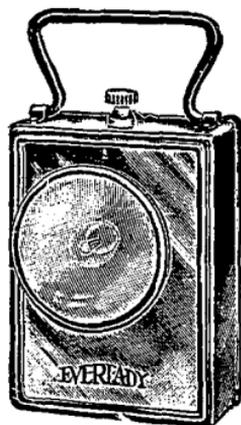
No. 9231.



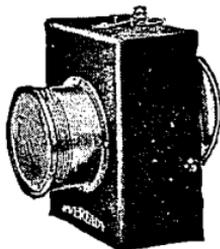
No. 9233.

Schedule BJ.

List No.	Mfgr's No.		Unit Package	Price Each
9231	4702	Complete with 5 Cell Battery.....		\$7.50
9232	710	Renewal Tungsten Battery.....		1.10
8190	1195	Renewal Mazda Bulb	10	.20
9233	4708	Complete with 3 Cell Battery.....		5.00
9234	775	Renewal Tungsten Battery .....		.65
8464	1199	Renewal Mazda Bulb	10	.20



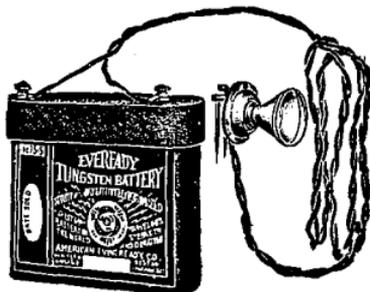
9235	4706	4 x 2 3/4 x 2 1/2 inches, complete	5	3.00
8444	703	Renewal Tungsten Battery	5	.45
8189	1190	Renewal Mazda Bulb	10	.20
9236	4707	4 3/4 x 4 1/2 x 3 1/2 inches, complete	5	5.00
8459	734	Renewal Tungsten Battery	5	.65
8464	1199	Renewal Mazda Bulb	10	.20



No. 8453.



DAYLO LANTERNS.

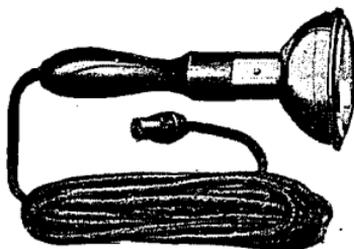


No. 8454.



No. 9237.

List No.	Mfrg's No.	Schedule B.J.	Unit Package	Price Each
8453	4703	Complete with 3 Cell Battery.....		\$4.00
8450	734	Renewal Tungsten Battery	5	.65
8430	1199	Renewal Mazda Bulb	10	.20
8463	4704	Complete with 5 Cell Battery.....		6.00
8460	719	Renewal Tungsten Battery		1.10
8190	1195	Renewal Mazda Bulb	10	.20
9237	4709	Lantern Complete with 3 Cell Battery	6	2.25
8459	734	Renewal Tungsten Battery	5	.65
8464	1199	Renewal Mazda Bulb	10	.20
9238	4712	Lantern Complete with 5 Cell Battery	6	3.00
8460	719	Renewal Tungsten Battery		1.10
8190	1195	Renewal Mazda Bulb	10	.20
8454	2876	Cap Light with 5 Cell Battery.....		7.50
8461	731	Renewal Tungsten Battery		1.10
8190	1195	Renewal Mazda Bulb	10	.20
8467	2877	Cap Light with 3 Cell Battery.....		7.00
8459	734	Renewal Tungsten Battery	5	.65
8460	1199	Renewal Mazda Bulb	10	.20



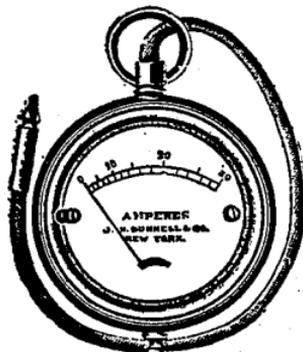
No. 9239

TROUBLE LAMP.

List No. 9239. Mfrg's No. 3751. With 6 Volt, 4 C. P. Single Contact Bulb and attaching plug. Price each\$3.75

List No. 9240. Mfrg's No. 3752. With 6 Volt, 4 C. P. Double Contact Bulb and attaching plug. Price each\$3.75

POCKET VOLTMETERS AND AMMETERS.



No. 7256.

J. H. B. Pocket Ammeter.

Will show exact condition of your batteries. Has a range of from 0 to 35 Amperes, but are not recommended for storage batteries.

List No. **Schedule BJ.** Price Each
7256 Pocket Ammeter\$1.00

J. H. B. Pocket Voltmeter.

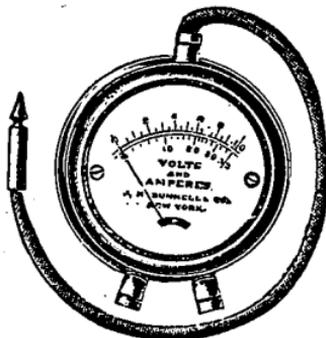
A convenient little meter for testing your batteries. Has a range 0 to 10 Volts. A voltmeter should always be used in testing storage batteries.

List No. **Schedule BJ.** Price Each
7257 Pocket Voltmeter\$1.10

J. H. B. Combination Volt-Ammeter.

Range 0 to 10 Volts, 0 to 35 Amperes. The Voltage side is used for Storage Batteries. The Ampere side is used for Dry Batteries. Guaranteed for one year.

List No. **Schedule BJ.** Price Each
7258 Combination Meter\$1.30



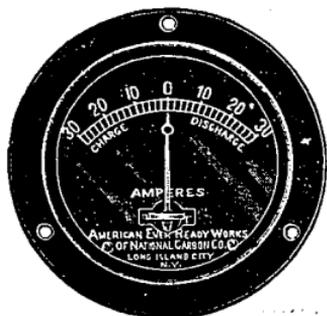
No. 7258.

EVEREADY BATTERY METER.

The dominant feature of this new instrument is its practical simplicity. The movement of the pointer has been rendered extremely "dead beat" through the use of an aluminum vane moving in partially closed air chamber. The etched metal scale is proportional, each division being large and clear—an aid to easy reading. With no current flowing the pointer instantly returns to zero—not to the right or the left of it, but **RIGHT ON ZERO!** Knowledge of the battery's condition is absolute at all times. No guesswork.

Dimensions: Flush Type—Case diameter, 2 1/8 inches. Flange diameter, 2 3/4 inches.

Dimensions: Surface Type—Case diameter, 2 1/8 inches.



No. 10036.

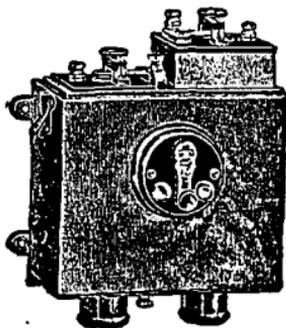
List No. **Schedule BJ.** Price Each

Flush Type.

10033	Range 10-0-10	Amperes.....	\$3.50
10034	Range 15-0-15	Amperes.....	3.50
10035	Range 20-0-20	Amperes.....	3.50
10036	Range 30-0-30	Amperes.....	3.50

Surface Type.

10037	Range 10-0-10	Amperes.....	3.50
10038	Range 15-0-15	Amperes.....	3.50
10039	Range 20-0-20	Amperes.....	3.50
10040	Range 30-0-30	Amperes.....	3.50



No. 7048.

The Standard Box Type Coil for stationary and marine engine use, equipped with latest style Hammer Break Vibrator. Will run longer without adjustment than any coil on the market.

Consumes but 4-10 amperes of current.

Schedule BA.

List No.	Price Each
7052	\$4.50

DASH COILS.

Great Efficiency, Perfect Unit System.

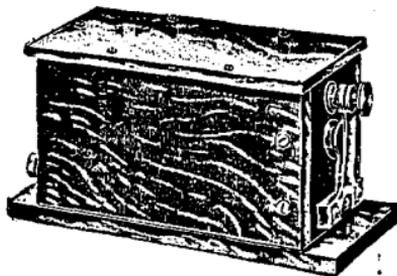
All Units are interchangeable and can be removed without disconnecting a wire.

Schedule BQ.

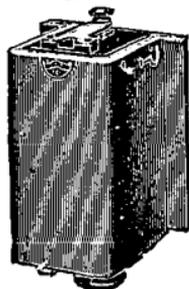
List No.	Price Each
7047 1 Cylinder, with Switch.....	\$12.00
7048 2 Cylinders, with Switch.....	19.00
7049 3 Cylinders, with Switch.....	26.00
7050 4 Cylinders, with Switch.....	33.00
7051 6 Cylinders, with Switch.....	46.00

No. 55 MIDGET SINGLE VIBRATOR.

Size 7 x 3 x 3½ inches high.



No. 7052.



No. 7053.

MARINE TYPE COIL.

With Weatherproof Cover over vibrator and insulation cap on high tension terminals.

Any number of coils can be mounted side by side. High grade in all respects.

Schedule BA.

List No.	Price Each
7053 1 Cylinder	\$10.00
7054 2 Cylinders	17.50
7055 4 Cylinders	33.00

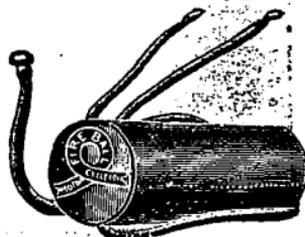
MOTOR-CYCLE COIL.

This coil is guaranteed to give good results on any type of motor-cycle engine.

Size 7¼ x 2¾ inches. Weight, 2 pounds.

Schedule BA.

List No.	Price Each
7056	\$7.50



No. 7056.

THE COMET MAGNETO.

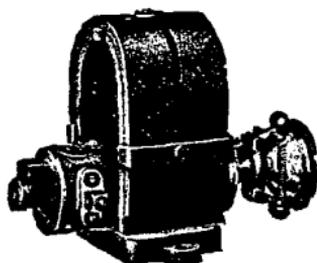
These Magneto are made with a completely enclosed armature, so that dirt and moisture can not get in.

Furnished with round belt governor for $\frac{3}{8}$ in. round belt. Size, 4 x $5\frac{1}{2}$ x 9 inches.

Type "M" for make and break spark only, requiring a speed of 1500 R. P. M.

Type "L" for jump spark only requiring a speed of 2000 to 2500 R. P. M.

List No.	Schedule BC.	Price Each
7060	Type "M"	\$18.00
7061	Type "L"	19.20



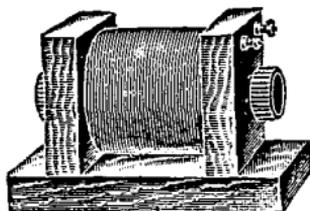
No. 7060.

PRIMARY SPARK COIL.

The No. 27A Edison Type Coil has the highest efficiency for "make and break" spark ignition, and is used most generally for stationary or marine engines.

Schedule BA.

List No.	Price Each
1110	\$5.00

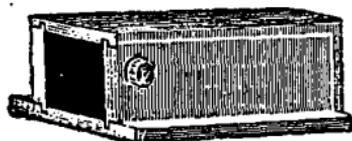


No. 1110.

ECONOMY PRIMARY SPARK COIL.

For "Make and Break" or "Wipe" Spark ignition. Is most generally used for stationary or marine engines.

In oak box filled with water-proof compound. Size, $6\frac{1}{2}$ x $2\frac{3}{4}$ x $2\frac{3}{4}$ inches. Consumes less current than any other coil on the market, requiring but $1\frac{1}{2}$ Ampere of current at six Volts pressure to produce a hot "fat" spark.



No. 6355.

List No.	Schedule BA.	Price Each
6355		\$2.55

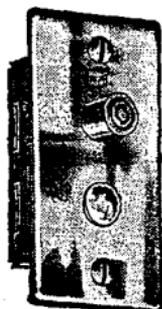
MINIATURE PUSH BUTTON SWITCHES.

These little switches are for use on battery circuits of low potential of about six amperes, and are used largely to control the lights on automobiles and motor boats.

The blade has a quick snap and has only two positions "on" and "off," so it is impossible for the blade to hang just off the contacts and thus cause an arc.

The buttons are of metal and hence are unbreakable. One button is of white nickel and the other is of black nickel finish.

List No.	Mfr's No.	Schedule BJ.	Price Each
8590	2709	Single Gang Switch with Plate. Size, $2\frac{1}{16}$ x 1 inches	\$0.60
8591	2962	Two Gang Switch with Plate. Size, $2\frac{1}{16}$ x $2\frac{1}{4}$ inches	1.20
8592	2963	Three Gang Switch with Plate. Size, $2\frac{1}{16}$ x $2\frac{7}{8}$ inches	1.80
8593	2964	Four Gang Switch with Plate. Size, $2\frac{1}{16}$ x $3\frac{3}{4}$ inches	2.40
8594	2965	Five Gang Switch with Plate. Size, $2\frac{1}{16}$ x $4\frac{3}{4}$ inches	3.00
8595	2966	Six Gang Switch with Plate. Size, $2\frac{1}{16}$ x $5\frac{1}{8}$ inches	3.60



No. 8590.

ELECTRIC ATTACHMENT FOR AUTOMOBILE GAS AND OIL LAMPS.

Changes lamps at will from gas or oil to electricity and back again, without loss of time, labor, etc. They are all equipped with the latest connector, described herewith (without bulb).

To use gas burner attachment place attachment around burner nipple and insert bulb directly over the center of burner. When you desire to use gas remove bulb and slide attachment down, leaving in lamp.

To use Oil Lamp attachment place clamp around nose of burner, connecting wires through burner apertures. When using oil, remove entire electric attachment.



No. 7063.

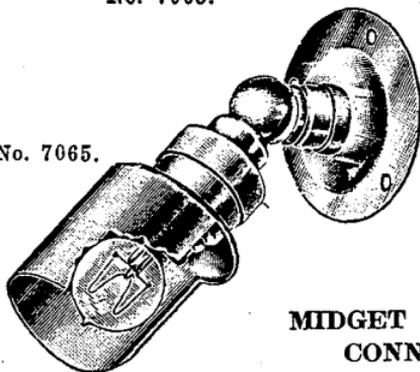
List No.	Schedule BA.	Price Each
7063	Candelabra Base, for Oil Lamp..	\$0.50
7064	Candelabra Base, for Gas Lamp..	.50
	Ediswan Base, for Oil Lamp....	.60
	Ediswan Base, for Gas Lamp....	.60

GAUGE LAMPS.

Has improved reflector shade, which places the light exactly where wanted, and by an innovation in the base plates the wires may be run in any direction.

Furnished with 2, 4, 6 or 8 volt Tungsten Bulb.

No. 7065.

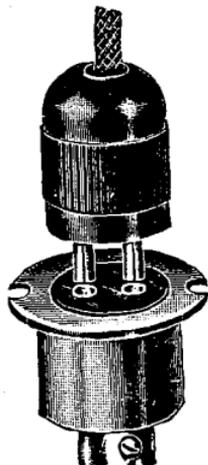


List No.	Schedule BA.	Price Each
7065	\$1.10

MIDGET SEPARABLE CONNECTORS.

Used extensively on auto and boat, lighting and ignition circuits. Binding posts enable one to mend a broken wire anywhere any time without soldering.

List No.	Schedule BG.	Price Each
7066	Size, 1 1/8 x 1/2 in.....	\$0.33
7067	Size, 2 x 5/8 in.....	.40

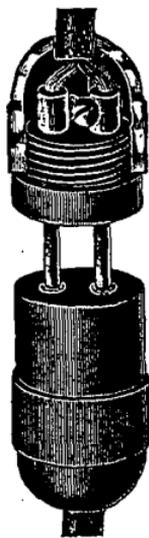


No. 7068.

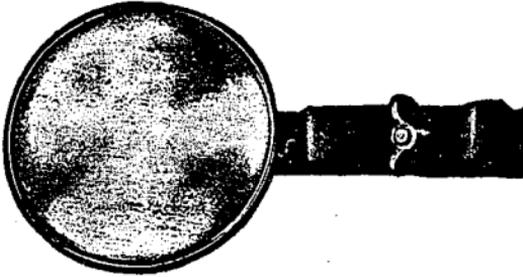
COMBINATION SWITCH CONNECTOR AND FLUSH SOCKET.

Makes an ideal socket or dashboard connector and can be used to supply current or as a switch. Fits hole 3/4 inch by 5/8 inch diameter.

List No.	Schedule BG.	Price Each
7068	\$0.53



No. 7066.



WINDSHIELD MIRROR

Made of very substantial metal and is equipped with a 4-inch diminishing mirror. The clamp is made to fit the round and square upright of the windshield. Finely finished in black enamel.

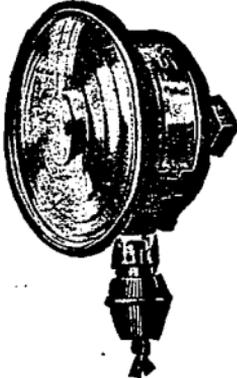
Schedule BA.

List No. Price Each
9757 4-inch Windshield Mirror\$0.60

MODEL 50 ELECTRIC TAIL LAMP.

Has a 3 1/2-inch removable ruby lens. This lamp will give sufficient illumination to the license plate and comes ready to attach to the Ford car. Strongly made and handsomely finished in black enamel.

List No. Schedule BA. Price Each
9758 Model 50 Lamp, less Bulb.....\$0.90



MODEL 51 ELECTRIC TAIL LAMP.

This Lamp has the same specifications as the Model 50 lamp, but is also equipped with the latest type on and off switch, so that the lamp can be very easily disconnected. Will fit most all cars.

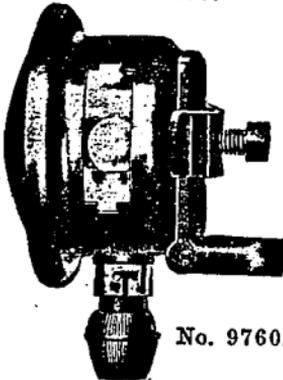
List No. Schedule BA. Price Each
9759 Model 51 Lamp, with Bulb.....\$1.00

No. 9759.

MODEL 52-S ELECTRIC TAIL LAMP.

It is the same in all respects as the Model 51 lamp, but has a combination round and flat prop for fastening to any car.

List No. Schedule BA. Price Each
9760 Model 52-S Lamp, with Bulb.....\$1.00



No. 9760.

Model 53-Duplex ELECTRIC TAIL LAMP.

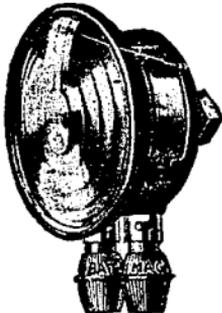
Equipped with 2 bulbs, one for operation on 2 dry cells, the other to be directly connected to the magneto. A throw of the battery switch gives a continuous light while a throw of the magneto switch gives you light from the magneto when running. Same construction as Model 51 lamp. Fits 1915-16-17 Ford cars.

List No. Schedule BA. Price Each
9761 Model 53 Lamp, with Bulbs.....\$1.70

Model 53-S Duplex Electric Tail Lamp.

This model is constructed and operates the same as Model 53 Duplex Lamp. In addition it is equipped with a spade bracket to fit practically all cars.

List No. Schedule BA. Price Each
9762 Model 53-S, with Bulbs.....\$1.70



No. 9761.

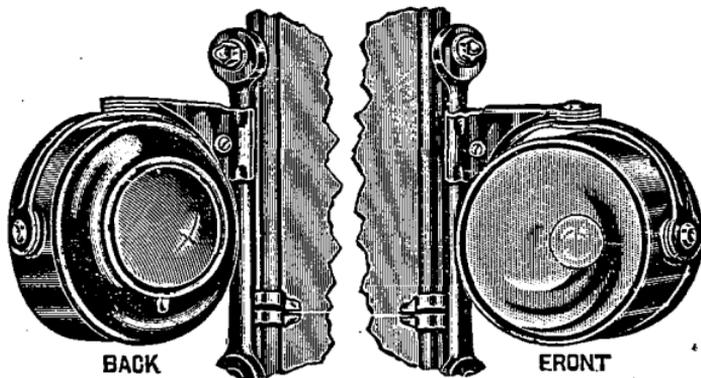
MODEL 60 ELECTRIC TAIL LAMP.

Will fit most all cars and comes ready to attach to license plate. The light being thrown on the license tag from the top gives better illumination than if thrown from the side.

Model 60 is fitted with round and flat prop for fastening to any car.

List No. Schedule BA. Price Each
9763 Model 60, with Bulb.....\$1.25
9764 Model 60-S, with Bulb..... 1.35

V-RAY SEARCHLIGHT.



At last! A real searchlight. Brand new in design, in construction, in finish and efficiency. A decided departure from the ordinary "spotlight." This is in every sense of the word a searchlight. It is designed with scientific accuracy, and for but one purpose—to project an intense, piercing "searchlight" beam.

From the illustration you will readily appreciate the beauty of the new Stewart V-Ray Searchlight.

Note how clean-cut and compact it is.

It is light in weight, well proportioned, and the embodiment of convenience.

Symmetrical in design, it looks like a part of the car and not like an after-thought addition.

The Stewart V-Ray Searchlight is correctly balanced below the bracket on a three-point suspension principle. It "stays set" in the desired position.

Without tugging or pulling, but with ease, you can throw the penetrating V-Ray Searchlight in any direction—front, down, back or to either side.

It has a full six-inch curved lens—not plain window glass. A three and one-half inch reducing mirror is located in the center of the back. No extra charge for the mirror. The switch is so located that your hands finds it instantly in the dark.

An important feature is the focusing device which permits replacing the bulb with any bulb on the car; and it takes only a few seconds' time. The reflector is silver plated—not merely polished tin.

The Stewart V-Ray Searchlight is moisture and dust-proof. It comes complete with mirror, electric cord and bracket which fits practically every make of car—and the retail price is so low that every car owner can afford one.

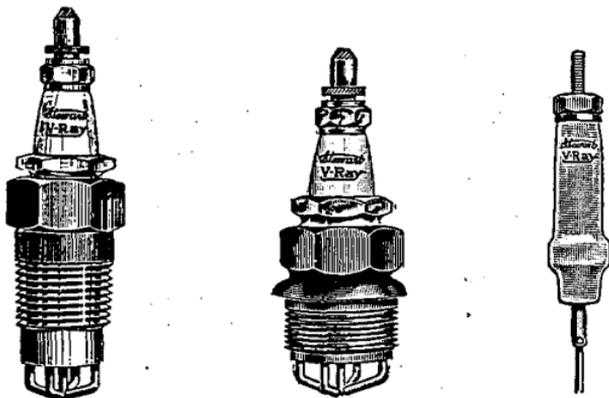
List No.

Schedule BE.

Price Each

9367 Stewart V-Ray Searchlight\$5.00

V-RAY SPARK PLUGS.



STEWART V-RAY SPARK PLUGS ARE BUILT BETTER THAN OTHER PLUGS.

The porcelain core is of Petrifint, the hardest known of insulating mediums. It is very close-grained and will not absorb oil, which causes short-circuiting. It is as nearly fracture-proof as science can make it.

Between the porcelain core and the spark plug body are two copper-asbestos gaskets, instead of only one as in most other plugs. The center sparking point, which goes down through the porcelain core, is also packed with an asbestos gasket. This method of packing with gaskets makes the plug absolutely gas-tight.

The fact that there are four sparking points in the Stewart V-Spark Plug not only insures a steady, continuous spark, but also increases its life to more than four times that of any other plug.

The Stewart V-Ray Spark Plug is fitted with a universal terminal which fits practically every cable terminal in use.

The Stewart V-Ray Spark Plug, owing to its superior construction and its four sparkling points, will last four times longer than any other plug. That makes it the cheapest plug to use.

There can be no question about which plug will give the best service on every type of motor.

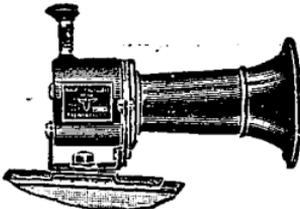
Get a set at once. The economy and general improvement in the running of your motor will be noticed at once.

The Stewart V-Ray Spark Plug is made in all standard sizes to fit any make of car.

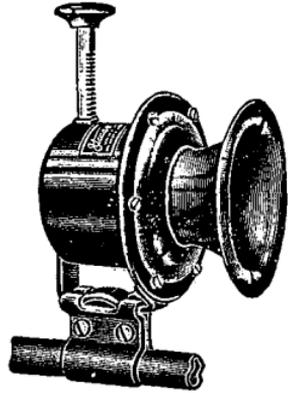
Schedule BE.

List No.		Price Each
9368	Standard Model, with Petrifint Core, furnished in all sizes	\$1.00
9369	Ford Model, with $\frac{1}{2}$ inch Pipe Thread Extension, can be used on Overland, Maxwell, Reo and any car taking $\frac{1}{2}$ inch thread extension type plug.....	1.00
9370	Motorcycle Type, with Petrifint Core.....	1.00

HAND OPERATED WARNING SIGNAL.



No. 9371.



No. 9372.

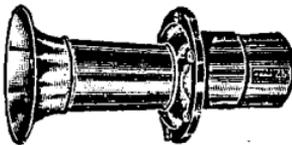
Has a double supporting bracket. No matter what the pressure may be on the plunger, it does not affect or weaken the bracket.

Bracket is also made with a swivel—one part fastens on the rail of the car and follows its shape, while the part holding the horn swivels on this rail bracket and can be so adjusted that the horn always points straight ahead directly in front of the car.

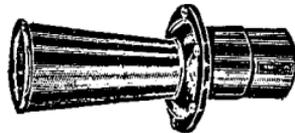
One complete pressure of the plunger produces 192 distinct sound impulses in the large diaphragm. The result is a wonderfully effective warning signal—a full round hearty tone, deep and penetrating, and surpassing anything that has ever been put on the market.

List No.	Schedule BE.	Price Each
9371	Auto Model Hand Signal	\$3.50
9372	Motorcycle Model Hand Signal with Short Projector and Special Bracket	3.50

MOTOR DRIVEN WARNING SIGNAL.



No. 9373.



No. 9374.

Superior to all others; first, because its motor is entirely enclosed in its own case. The shaft can never get out of alignment. It is the most economical in amount of current required to run it. Runs at highest speed with the very smallest amperage. Brushes are of especially large size. Rear bearing provided with ball thrust. Friction eliminated. Motor will not stick, due to superior bearings and ample lubrication. Large sized oil well keeps shaft always lubricated. No oil gets into rest of mechanism. Weighs half as much as other motor-driven warning signals, sound considered.

Not an "electric horn" with only a common vibrator or buzzer," but, a Warning Signal that contains a REAL MOTOR.

A big Push Button that sticks up like a "mushroom," and which can be operated by the slightest touch of the hand, arm, elbow or finger.

List No.	Schedule BE.	Price Each
9373	Motor Signal	\$6.00
9374	Motor Signal for mounting under Hood.....	6.00

AUTOMOBILE CABLES.



Primary.



Plain Magneto.



Light Secondary.



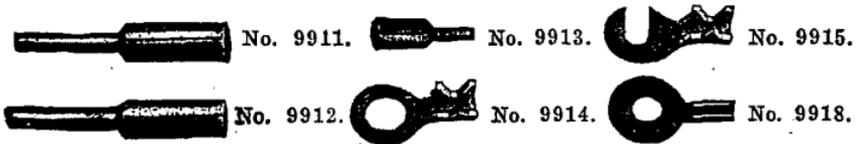
Heavy Secondary.



Duplex Lighting.

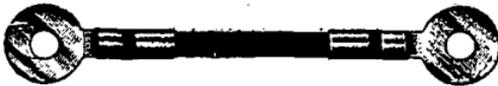
List No.	Schedule BF.	Price per 100 ft.
10041	No. 14 B. & S. Sgl. Cond., Sgl. Braid Primary, .024 Rubber Wall	\$2.80
10042	No. 14 B. & S. Sgl. Cond., Sgl. Braid Primary, .037 Rubber Wall	3.00
10043	No. 14 B. & S. Sgl. Cond., Dbl. Braid Primary, .024 Rubber Wall	3.40
10044	No. 14 B. & S. Sgl. Cond., Dbl. Braid Primary, .037 Rubber Wall	3.60
10045	No. 12 B. & S. Sgl. Cond., Sgl. Braid Primary, .024 Rubber Wall	4.00
10046	No. 12 B. & S. Sgl. Cond., Sgl. Braid Primary, .037 Rubber Wall	4.50
10047	No. 12 B. & S. Sgl. Cond., Dbl. Braid Primary, .024 Rubber Wall	4.80
10048	No. 12 B. & S. Sgl. Cond., Dbl. Braid Primary, .037 Rubber Wall	5.60
10049	No. 14 B. & S. Single Conductor, Single Braid Magneto, $\frac{5}{16}$ inch	4.80
10050	No. 14 B. & S. Single Conductor, Double Braid Magneto, $\frac{5}{16}$ inch	5.20
10051	No. 14 B. & S. Single Conductor, Dbl. Braid Secondary, $\frac{3}{8}$ inch	6.80
10052	No. 14 B. & S. Single Conductor, Dbl. Braid Secondary, $\frac{13}{32}$ in.	7.50
10053	No. 14 B. & S. Single Conductor, Dbl. Braid Secondary, $\frac{15}{32}$ in.	9.00
10054	No. 14 B. & S. Single Conductor, Plain Primary Cable, 5 M. M.	2.40
10055	No. 14 B. & S. Single Conductor, Plain Magneto Cable, 7 M. M.	3.40
10056	No. 14 B. & S. Single Conductor, Plain Magneto Cable, 9 M. M.	4.80
10057	No. 14 B. & S. Duplex Lighting Cable, Double Braid, .024 Rubber Wall	6.40
10058	No. 14 B. & S. Duplex Lighting Cable, Double Braid, .037 Rubber Wall	7.00
10059	No. 12 B. & S. Duplex Lighting Cable, Double Braid, .024 Rubber Wall	9.20
10060	No. 12 B. & S. Duplex Lighting Cable, Double Braid, .037 Rubber Wall	10.00
10061	No. 14 B. & S. Three Cond. Primary Cable, .024 Rubber Wall.	11.00
10062	No. 14 B. & S. Four Cond. Primary Cable, .024 Rubber Wall..	14.00

BUNNELL TERMINALS AND CONNECTORS.



List No.	Schedule BC.	Code Word	Price Per 100
9911	Solid Tip, Brass, N. P. Small Hole, for Silk Cord	Beryl	\$1.50
9912	Solid Tip, Brass, N. P., for Silk or Cotton Cord	Consol	1.50
9913	Small, Solid Tip, Brass, Nickel Plated.....	Benign	3.50
9914	20 B. & S. Gauge, Copper, for No. 10 Screw....	Exclaim	1.20
9915	22 B. & S. Gauge, Copper, for No. 4 Screw....	Evoke	1.00
9916	Same as No. 9915, for No. 6 Screw.....	Erosion	1.00
9917	Same as No. 9915, for No. 8 Screw.....	Esquire	1.00
9918	26 B. & S. Gauge, Brass, for No. 7 Screw.....	Emit	.90
9919	Same as No. 9918, for No. 6 Screw.....	Emotion	.90

No. 1 BATTERY CONNECTOR.



No. 9920.

Terminals are of stamped copper. Connected with No. 18 cotton covered lamp cord.

Schedule BA.

List No.	Price per 100
9920	\$2.00

"JOVE" QUICK ACTION CONNECTOR.

Stamped from sheet copper, with all parts, except terminals, well insulated.

Schedule BA.

List No.	Price per 100
7644	\$2.00



No. 7644.

FLEXIBLE BATTERY CONNECTOR.



The tension of spring is sufficient to maintain a perfect contact even if the nuts should work loose and become lost.

Schedule BF.

List No.	Price per 100
8579	\$3.00

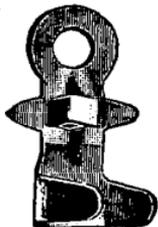
BULLDOG BATTERY CONNECTOR.

The best connector on the market. Dispenses with thumb nuts and all ignition troubles caused by loose battery connections.

List No.	Schedule BJ.	Price Each
7681		\$0.05



No. 7681.



No. 7083.



No. 7082.



No. 7081.

COPPER AUTOMOBILE TERMINALS.

Schedule BA.

List No.	Price per 100
7081 Small	\$0.50
7082 Medium	1.00
7083 Large	1.40
7084 Extra Large	2.40

AUTO FUSES.

Schedule BB.



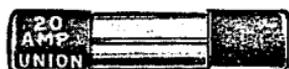
No. 1A— $\frac{3}{8}$ x $\frac{1}{4}$
Glass Tube, 1-50 Volts



No. 2A— $1\frac{1}{16}$ x $\frac{1}{4}$
Glass Tube, 1-50 Volts



No. 3A— $1\frac{1}{4}$ x $\frac{1}{4}$
Glass Tube, 1-50 Volts



No. 4A— $1\frac{1}{4}$ x $\frac{1}{4}$
Fibre Tube, 1-50 Volts



No. 4AG— $1\frac{1}{4}$ x $\frac{1}{4}$
Glass Tube, 1-50 Volts



No. 5A— $1\frac{1}{2}$ x $\frac{3}{8}$
Fibre Tube, 1-50 Volts



No. 5AG— $1\frac{1}{2}$ x $\frac{3}{8}$
Glass Tube, 1-50 Volts

List No.	Type	Mfgs. No.	Amp.	Std. Pkge.	List per 100
10063	1A	5303	3	100	\$5.00
10064	1A	5305	5	100	5.00
10065	1A	5310	10	100	5.00
10066	1A	5315	15	100	5.00
10067	1A	5320	20	100	5.00
10068	2A	5323	3	100	5.00
10069	2A	5325	5	100	5.00
10070	2A	5330	10	100	5.00
10071	2A	5335	15	100	5.00
10072	2A	5340	20	100	5.00
10073	3A	5343	3	100	5.00
10074	3A	5345	5	100	5.00
10075	3A	5350	10	100	5.00
10076	3A	5355	15	100	5.00
10077	3A	5360	20	100	5.00
10078	4A	5203	3	100	18.00
10079	4A	5205	5	100	18.00
10080	4A	5210	10	100	18.00
10081	4A	5212	12	100	18.00
10082	4A	5215	15	100	18.00
10083	4AG	5503	3	100	10.00
10084	4AG	5505	5	100	10.00
10085	4AG	5510	10	100	10.00
10086	4AG	5515	15	100	10.00
10087	4AG	5520	20	100	10.00
10088	5A	5243	3	100	18.00
10089	5A	5245	5	100	18.00
10090	5A	5250	10	100	18.00
10091	5A	5255	15	100	18.00
10092	5A	5260	20	100	18.00
10093	5AG	5523	3	100	10.00
10094	5AG	5525	5	100	10.00
10095	5AG	5530	10	100	10.00
10096	5AG	5555	15	100	10.00
10097	5AG	5560	20	100	10.00
10098	5AG	5565	25	100	10.00
10099	5AG	5570	30	100	10.00
10100	6A	5403	3	100	25.00
10101	6A	5405	5	100	25.00
10102	6A	5406	6	100	25.00
10103	6A	5410	10	100	25.00
10104	6A	5415	15	100	25.00
10105	6A	5420	20	100	25.00
10106	6A	5425	25	100	25.00
10107	6A	5430	30	100	25.00
10108	6AG	5443	3	100	20.00
10109	6AG	5445	5	100	20.00
10110	6AG	5446	6	100	20.00
10111	6AG	5450	10	100	20.00
10112	6AG	5455	15	100	20.00
10113	6AG	5460	20	100	20.00
10114	6AG	5465	25	100	20.00
10115	6AG	5470	30	100	20.00

MAZDA MINIATURE LAMPS.

Schedule B.J.



FE3 3/4



G3 1/2.



G4 1/2.



G-6.



G-8.

Description and Use

For Two-Cell Flashlight Batteries.

List No.	Mazda No.		Rating		Bulb	Price Each Clear
			Volts	Amps.		
10116	1	Flat End Opal Back Bulb	2.5	0.35	FE3 3/4	\$0.17
10117	6	Flat End Opal Back Bulb	2.5	0.25	FE4 1/4	.17
10118	11	Round Clear Bulb	2.7	0.35	G3 1/2	.17
10119	16	Round Clear Bulb	2.9	0.35	G4 1/2	.17

For Three-Cell Flashlight Batteries.

10120	2	Flat End Opal Back Bulb	3.8	0.35	FE3 3/4	.17
10121	12	Round Clear Bulb	3.8	0.35	G3 1/2	.17
10122	17	Round Clear Bulb	3.8	0.35	G4 1/2	.17
10123	18	Round Clear Bulb	4.0	0.35	G4 1/2	.17

For Five-Cell Flashlight Batteries.

10124	31	Round Clear Bulb	6.2	0.35	G5 1/2	.17
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For One-Cell Standard Dry Battery.

10125	32	Round Clear Bulb	1.50	0.60	G5 1/2	.17
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For Two Cells of Standard Dry Batteries.

10126	34	Round Clear Bulb	3.0	0.42	G5 1/2	.17
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Rear and Spedometer.

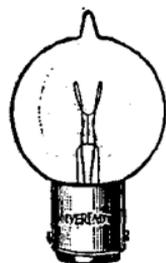
List No.	Mazda No.	Bayonet Candelabra Base	Ratings			Bulb	Unit Pkg. Qty.	Price Each Clear
			Volts	Amps.	Approx. C.P.			
10127	61	S.C.	3-4	0.84	2	G-6	10	\$0.25
10128	62	D.C.	3-4	0.84	2	G-6	10	.25
10129	63	S.C.	6-8	0.42	2	G-6	10	.25
10130	64	D.C.	6-8	0.42	2	G-6	10	.25
10131	65	S.C.	6-8	0.84	4	G-6	10	.30
10132	66	D.C.	6-8	0.84	4	G-6	10	.30
10133	67	S.C.	12-16	0.26	3	G-6	10	.30
10134	68	D.C.	12-16	0.26	3	G-6	10	.30

Side Lights.

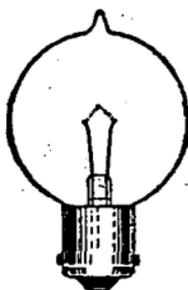
10135	81	S.C.	6-8	0.84	5	G-8	10	.25
10136	82	D.C.	6-8	0.84	5	G-8	10	.25
10137	83	S.C.	6-8	1.25	7	G-8	10	.30
10138	84	D.C.	6-8	1.25	7	G-8	10	.30
10139	85	S.C.	6-8	1.00	7	G-8 Focusing	10	.40
10140	86	D.C.	6-8	1.00	7	G-8 Focusing	10	.40
10141	89	S.C.	12-16	0.42	6	G-8	10	.30
10142	90	D.C.	12-16	0.42	6	G-8	10	.30

MAZDA MINIATURE LAMPS.

Schedule B.J.



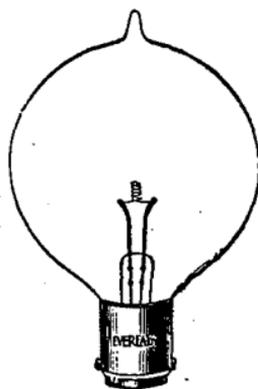
G-8 Mazda B.



G-10 Mazda B.



G-12 Mazda C.



G16 1/2 Mazda B.

MAZDA "B" LAMPS.

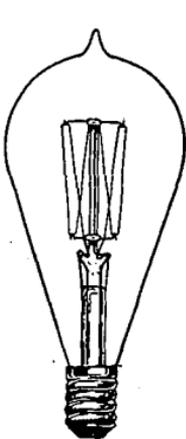
List No.	Mazda No.	Bayonet Candelabra Base	Rating			Bulb	Unit Pkg. Qty.	Price Each Clear
			Volts	Amps.	Approx. C-P.			
10143	123	S.C.	6-8	2.0	14	G-12	5	\$0.45
10144	124	D.C.	6-8	2.0	14	G-12	5	.45
10145	125	S.C.	6-8	2.5	17	G-12	5	.40
10146	126	D.C.	6-8	2.5	17	G-12	5	.40
10147	165	S.C.	6-8	2.5	17	G-16 1/2	5	.40
10148	166	D.C.	6-8	2.5	17	G-16 1/2	5	.40
10149	167	S.C.	6-8	3.0	20	G-16 1/2	5	.45
10150	168	D.C.	6-8	3.0	20	G-16 1/2	5	.45
10151	169	S.C.	6-8	3.5	24	G-16 1/2	5	.45
10152	170	D.C.	6-8	3.5	24	G-16 1/2	5	.45
10153	171	S.C.	6-8	4.0	27	G-16 1/2	5	.50
10154	172	D.C.	6-8	4.0	27	G-16 1/2	5	.50
10155	136	D.C.	9	2	21	G-12	5	.40
10156	174	D.C.	9	2	21	G-16 1/2	5	.40
10157	139	S.C.	12-16	1.00	16	G-12	5	.43
10158	140	D.C.	12-16	1.00	16	G-12	5	.43
10159	175	S.C.	12-16	1.00	16	G-16 1/2	5	.43
10160	176	D.C.	12-16	1.00	16	G-16 1/2	5	.43
10161	177	S.C.	12-16	1.50	24	G-16 1/2	5	.48
10162	178	D.C.	12-16	1.50	24	G-16 1/2	5	.48

MAZDA "C" LAMPS—(Gas Filled).

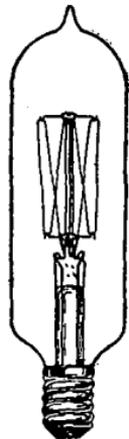
10193	87	S.C.	6-8	1.5	12	G-8	10	.50
10194	88	S.C.	6-8	1.5	12	G-8	10	.50
10163	103	S.C.	6-8	2.5	20	G-10	10	.50
10164	104	D.C.	6-8	2.5	20	G-10	10	.50
10165	127	S.C.	6-8	1.5	12	G-12	5	.60
10166	128	D.C.	6-8	1.5	12	G-12	5	.60
16167	129	S.C.	6-8	2.5	20	G-12	5	.42
10168	130	D.C.	6-8	2.5	20	G-12	5	.42
10169	131	S.C.	6-8	3.5	28	G-12	5	.75
10170	132	D.C.	6-8	3.5	28	G-12	5	.75
10171	133	S.C.	6-8	4.0	32	G-12	5	.80
10172	134	D.C.	6-8	4.0	32	G-12	5	.80
10173	138	D.C.	9	2.0	27	G-12	5	.42
10174	105	S.C.	12-16	1.25	25	G-10	10	.50
10175	106	D.C.	12-16	1.25	25	G-10	10	.50
10176	141	S.C.	12-16	1.50	30	G-12	5	.45
10177	142	D.C.	12-16	1.50	30	G-12	5	.45
10178	143	S.C.	12-16	2.00	39	G-12	5	1.00
10179	144	D.C.	12-16	2.00	39	G-12	5	1.00

DECORATIVE TYPE
MAZDA CANDELABRA LAMPS.

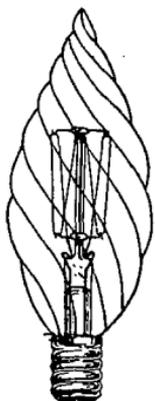
Schedule B.J.



Style F.



Style E.



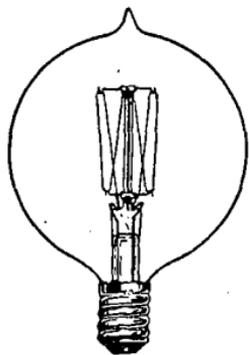
Style D.



Style G.

105—125 Volts.

Unit Package
 Quantity, 5 Lamps.



Style B.

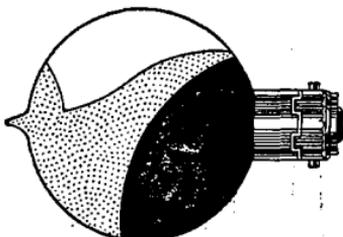
Regularly fitted
 with Unskirted
 Candelabra Screw
 Base (Style 500).

Style	Watts	Watts per Spherical C-P.	Type and Size of Bulb	Diam. Bulb. Inches	Maximum Over All Length Inches	Clear		Frosted	
						List No.	Price Each	List No.	Price Each
B	15	1.50	B-9½	1¼	3¾	9972	\$0.70	9977	\$0.75
D	15	1.50	D-10	1¼	3¾	9973	.70	9978	.75
E	15	1.50	T-8	1	3¾	9974	.70	9979	.75
F	15	1.50	S-12½	2¼	3½	9975	.70	9980	.75
G	15	1.50	G-16½	1¾	3¾	9976	.70	9981	.75

Prices for other Voltages and Colored Lamps on application.

DON'T BREAK THE LAW.

Use "VICTORIA" NON-GLARE AUTO BULBS.

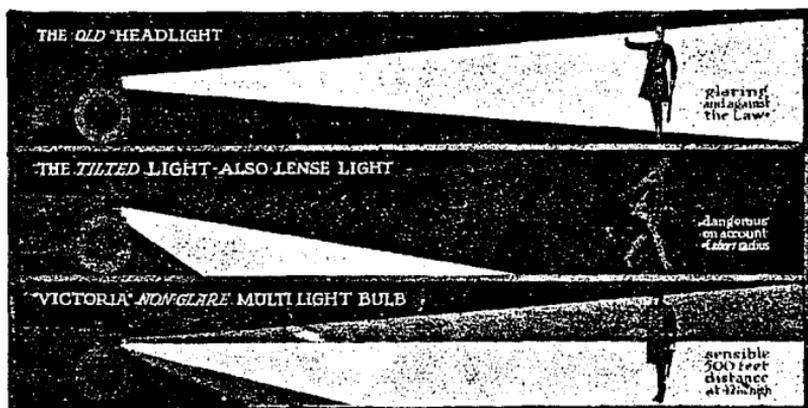


At last the headlight problem has been solved. You no longer require expensive so-called non-glare lenses. Lenses only partly kill the glare and totally kill that beam of light you depend upon to light dangerous points in the road.

Forget your headlight troubles. Buy two "Victoria Non-Glare Bulbs" and use them in place of the glaring clear bulbs that are now in your lamps.

The thinking man—the gentleman—needs only to be reminded that the courtesy of the road forbids the wilful blinding of pedestrians and other motorists.

Every man must be impressed by the personal danger involved. "VICTORIA" Bulbs fully control the entire beam of light, preventing that blinding glare. They conform with every law that is in effect and have received the highest endorsement from both legislature and lighting experts.



Can be furnished up to 24 candlepower and any voltage; double or single contact swivel interlocking base. When ordering state voltage—contact—candlepower—or simply mention name and model of car.

List No.	Schedule B.J.	Price Each
9747	Victoria Non-Glare Bulb	\$1.00



No. 7287.

MAZDA LAMPS.

Schedule B.J.



No. 9990.

110 to 125 Volts.

List No.	Size of Lamps in Watts	Watts per Spherical C.P.	Type and Size Bulb	Diameter Bulb Inches	Max. Over All Length Inches	Standard Package Quantity	Price Each Clear	Price Each Frosted
7170	10	1.67	S-17	2 1/8	4 5/8	100	\$0.35	\$0.33
7171	15	1.47	S-17	2 1/8	4 5/8	100	.35	.33
7284	25	1.37	S-19	2 3/8	5 1/4	100	.35	.33
7285	40	1.33	S-19	2 3/8	5 1/4	100	.35	.33
9982	50	1.32	S-19	2 3/8	5 1/4	100	.35	.33
7287	60	1.29	S-21	2 5/8	5 1/2	100	.40	.45
7288	100	1.24	S-30	3 3/4	7 7/8	24	.55	.92
9983	25	1.65	S-19	2 3/8	5 1/4	100	.40	.43

220 to 250 Volts.

9984	50	1.49	S-19	2 3/8	5 1/4	100	.40	.43
9985	100	1.39	S-30	3 3/4	7 7/8	24	1.00	1.07
9986	150	1.33	S-35	4 3/8	8 3/4	24	1.50	1.60
9987	250	1.20	S-40	5	10	12	2.50	2.65

MAZDA C LAMPS.

110 to 125 Volts.

9988	75	1.09	PS-22	2 3/4	6 1/8	50	.70	.75
9989	100	1.00	PS-25	3 1/8	7 1/8	24	1.10	1.15
9990	150	0.92	PS-25	3 1/8	7 1/8	24	1.65	1.70
9991	200	0.86	PS-30	3 3/4	8 3/8	24	2.20	2.27
9992	300	0.78	PS-35	4 3/8	9 3/4	24	3.25	3.35
9993	400	0.82	PS-40	5	10	12	4.30	4.45
9994	500	0.78	PS-40	5	10	12	4.70	4.85
9995	750	0.74	PS-52	6 1/2	13 3/8	8	6.50	6.75
9996	1000	0.70	PS-52	6 1/2	13 3/8	8	7.50	7.75

220 to 250 Volts.

9997	200	1.00	PS-30	3 3/4	8 3/8	24	2.40	2.47
9998	300	0.92	PS-35	4 3/8	9 3/4	24	3.90	4.00
9999	400	0.86	PS-40	5	10	12	5.10	5.25
10000	500	0.85	PS-40	5	10	12	5.60	5.75
10001	750	0.82	PS-52	6 1/2	13 3/8	8	7.70	7.95
10002	1000	0.78	PS-52	6 1/2	13 3/8	8	9.00	9.25

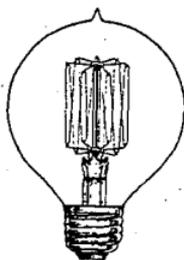
MAZDA C-2 LAMPS.

110 to 125 Volts.

10003	75		PS-22		6 1/8	50	.80	.90
10004	100		PS-25		7 1/8	24	1.25	1.35
10005	150		PS-25		7 1/8	24	1.90	2.00
10006	200		PS-30		8 3/8	24	2.50	2.64
10007	300		PS-35		9 3/4	24	3.75	3.95
10008	500		PS-40		10	12	5.50	5.80

MAZDA LAMPS.

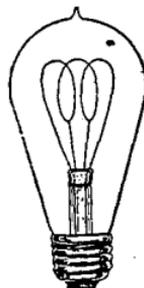
Schedule BJ.



No. 8470.



No. 10011.



No. 10014.

110 to 125 Volt Round.

List No.	Size of Lamp in Watts	Watts per Spherical C-P.	* G- Type and Size Bulb	Diameter Bulb Inches	Maximum Over All Length, Inches	Standard Package Quantity	Price Each Clear	Price Each Frosted
8469	15	1.43	G-25	3 1/8	4 3/8	50	\$.55	\$.60
8470	25	1.35	G-25	3 1/8	4 3/8	50	.55	.60
8471	40	1.33	G-25	3 1/8	4 3/8	50	.55	.60
8472	60	1.28	G-30	3 3/8	5 1/8	24	.75	.82
8473	100	1.13	G-35	4 3/8	7 1/4	24	1.05	1.15
220 to 250 Volt Round.								
10009	25	1.63	G-25	3 1/8	4 3/8	50	.65	.70
10010	50	1.51	G-25	3 1/8	4 3/8	50	.65	.70
110 to 125 Volt Tubular.								
10011	25	1.38	T-10	1 1/4	5 7/8	100	.60	.65
10012	25	....	T-8	1	12	50	1.20	1.30
10013	40	....	T-8	1	12	50	1.20	1.30

* Lamps of these wattages can be supplied in G-18 1/2 Bulb at an efficiency in watts per spherical C-P. of 1.53 and 1.45 respectively. (Standard Package Quantity 100). At \$0.50 Clear and \$0.53 Frosted.

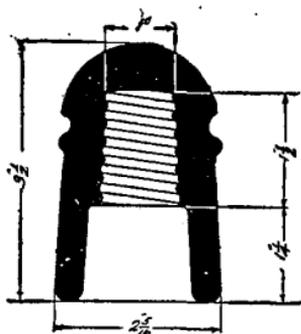
GEM LAMPS.

110 to 125 Volt Straight Side.

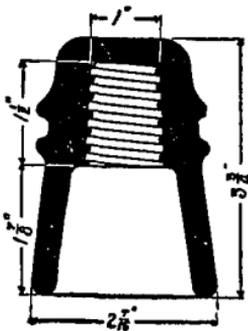
List No.	Size of Lamp in Watts	Efficiency W. P. C.	G- Type and Size Bulb	Diameter Bulb Inches	Maximum Over All Length, Inches	Standard Package Quantity	Price Each Clear	Price Each Frosted
8173	20	4.00	S-17	2 1/8	4 1/8	200	\$.26	\$.29
8174	30	3.00	S-17	2 1/8	4 1/8	200	.26	.29
8175	40	2.56	S-19	2 3/8	5 1/8	200	.26	.29
8176	50	2.50	S-19	2 3/8	5 1/8	200	.26	.29
8177	56	2.50	S-19	2 3/8	5 7/8	200	.26	.29
110 to 125 Volt Straight Side—Mill Type.								
10014	60	2.6	S-19	2 3/8	5 7/8	200	.26	.29
110 to 125 Volt Round.								
10015	50	2.5	G-25	3 1/8	4 3/8	100	.33	.36

Pin or Bracket Type Glass Insulators.

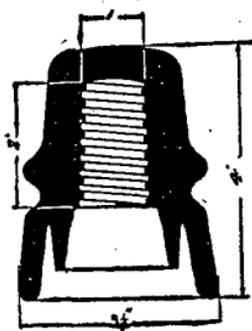
Schedule BF.



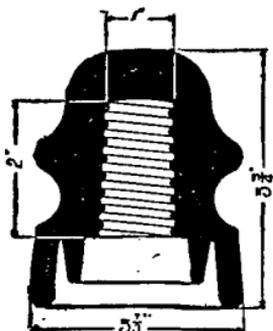
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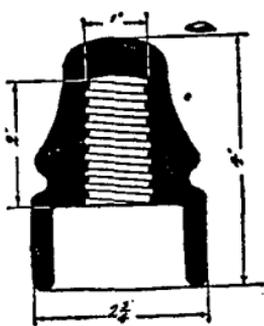
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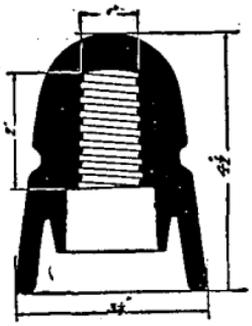
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No. 3815.



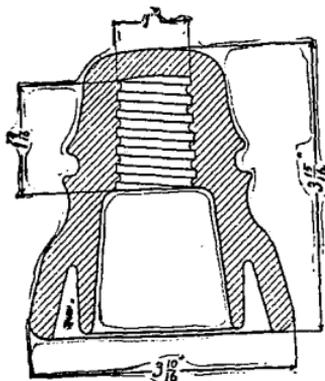
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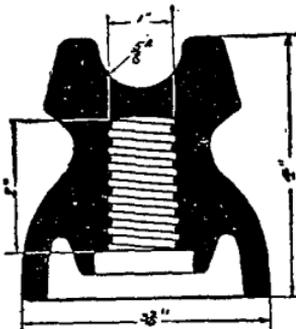
No. 9389.

List No.	Mfr. No.	Description	Standard Package	Approx. Weight Per 1000 Packed	Price Per 1000
3809	9	Pony	350 or 400	750 lbs.	\$90.20
3812	30	Long Distance	300	1000 lbs.	94.60
3814	36	D. G. D. P.	175 or 200	1450 lbs.	112.20
3815	38	Ex. D. G. D. P.	165 or 200	1375 lbs.	112.20
3806	40	Regular	250	1100 lbs.	94.60
9389	44	W. U. D. P.	200	1700 lbs.	154.00

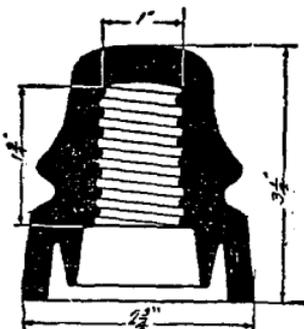
Pin or Bracket Type Glass Insulators.



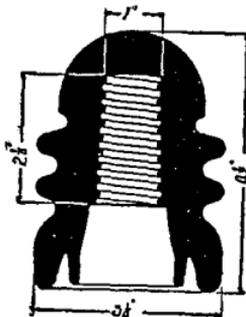
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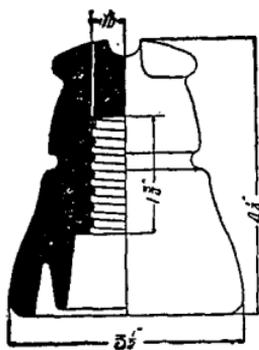
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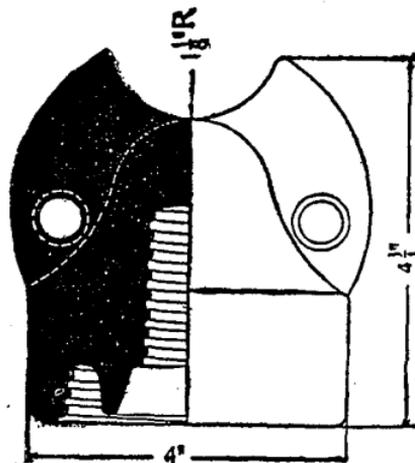
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No. 9393.



No. 9391.



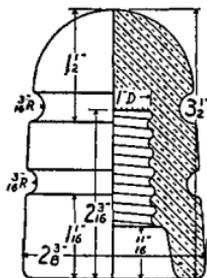
No. 3813.

Schedule BF.

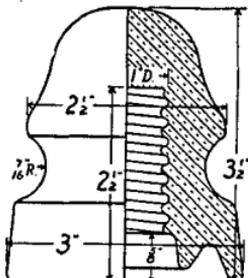
List No.	Mfr. No.	Description	Std. Pkg.	Gross M	Per 1000
9390	48	W. U. Standard.....	200	1550 lbs.	\$154.00
3816	32	P. Pony	275 or 300	950 lbs.	94.00
9391	600	Postal Teleg.	200	1700 lbs.	154.00
9392	2	Cable	125	1925 lbs.	220.00
9393	53	Transposition	125	1900 lbs.	264.00
3813	7	Columbia	78	2900 lbs.	440.00

Pin or Bracket Type Porcelain Insulators.

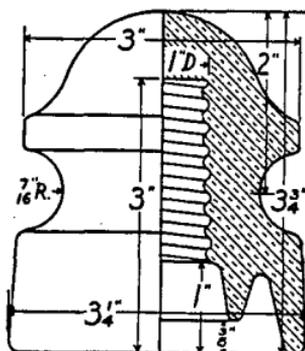
TELEGRAPH, TELEPHONE AND ELECTRIC LIGHT SERVICE.



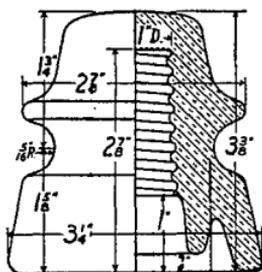
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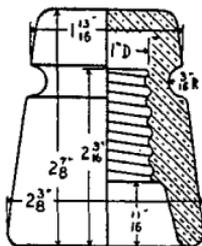
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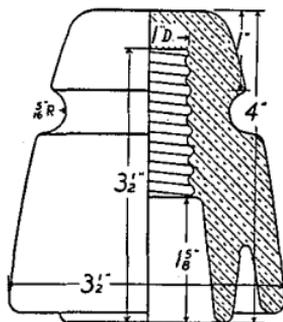
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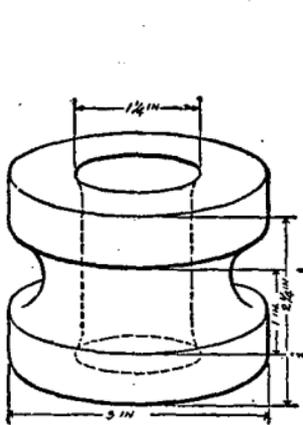


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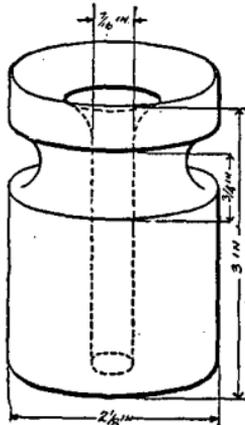
Schedule Bg.

List No.	Mfgr's No.	Weight		Number in Barrel	Price per 1000
		Net per 1000	Gross per 1000		
9375	1011	750 lbs.	925 lbs.	400	\$100.00
9376	1077	940 lbs.	1185 lbs.	300	200.00
9377	1111	1125 lbs.	1400 lbs.	275	200.00
9378	1012	570 lbs.	700 lbs.	500	100.00
9379	1101	1250 lbs.	1500 lbs.	225	220.00
9380	1094	1550 lbs.	2150 lbs.	160	250.00

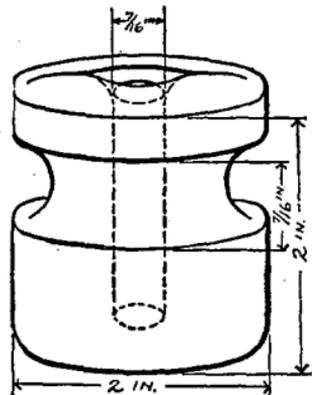
STANDARD PORCELAIN INSULATORS.



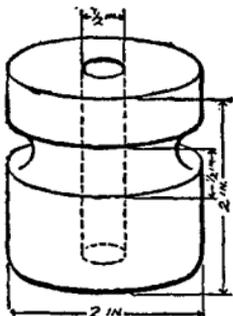
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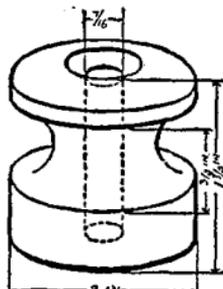
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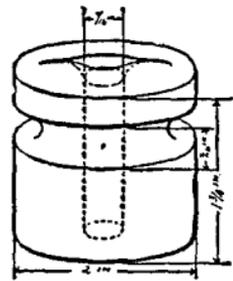
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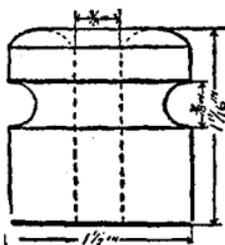
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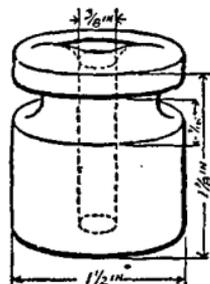
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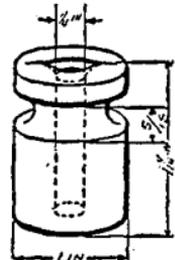
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No. 3895.



No. 3896.



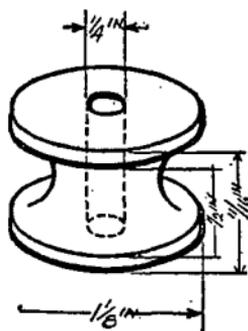
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Schedule B.J.

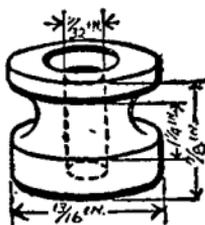
List No.	Mfgr. No.	Std. Pkge.	Price per 1000
3889	0	450	\$158.00
3890	1	675	95.00
3891	2	1050	65.00
3892	3	1200	54.00
3893	3 W. G.	1200	54.00
3894	3 1/2	1050	65.00
3895	4	2200	22.00
3896	4 1/2	1900	25.00
3897	5	6000	13.00

STANDARD PORCELAIN INSULATORS.

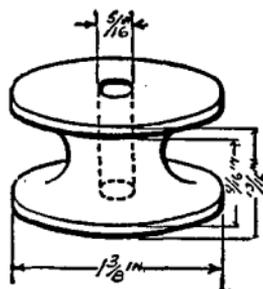
Schedule BJ.



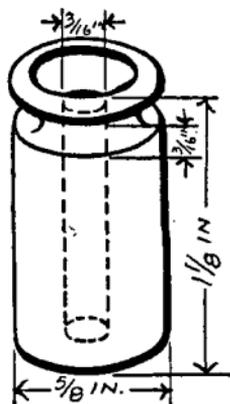
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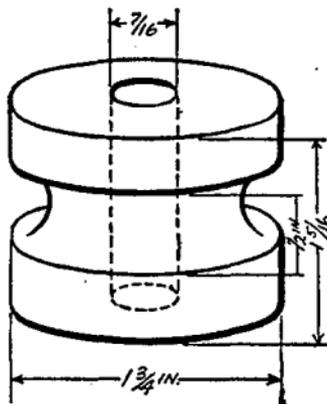
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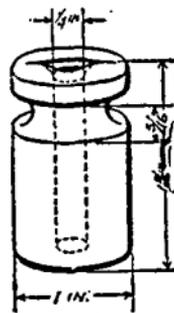
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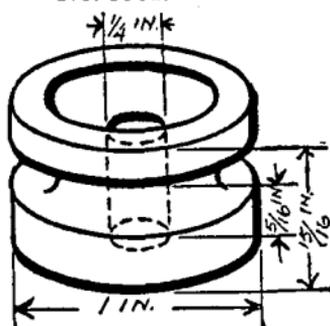
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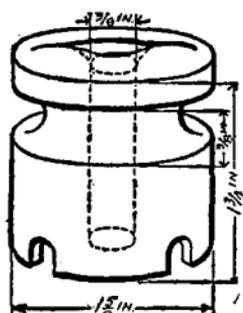
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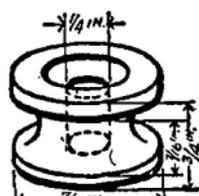
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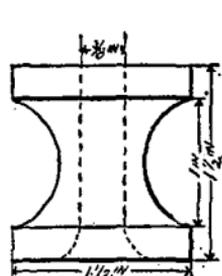
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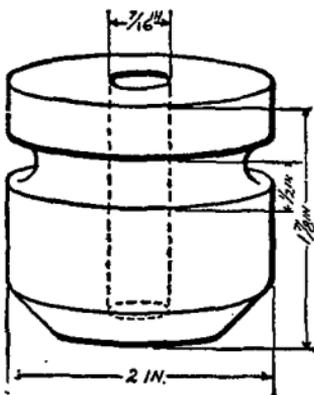
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List No.	Mfr. No.	Std. Pkge.	Price per 1000
3942	11	9000	\$22.00
3899	6	13000	11.00
3943	12	8000	24.00
3902	9	12000	16.00
3946	15	2200	35.00
3898	5 1/2	5300	13.00
9394	5 1/2	4500	16.00
3901	8	9000	13.00
3940	10	2000	30.00
3900	7	13500	13.00

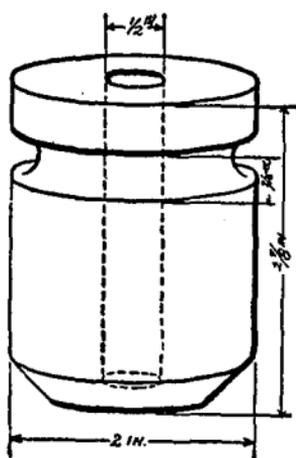
STANDARD PORCELAIN INSULATORS.



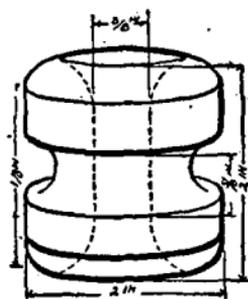
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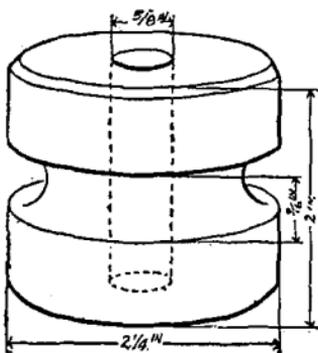
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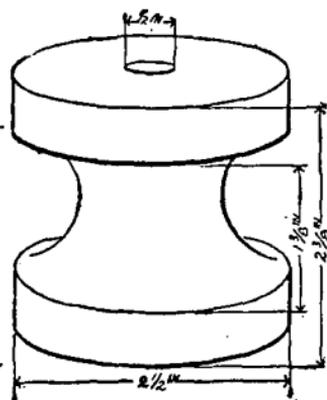
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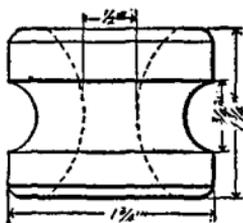
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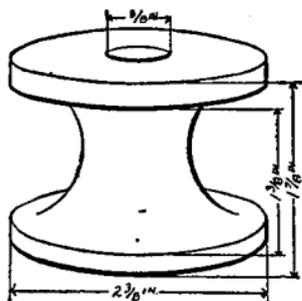


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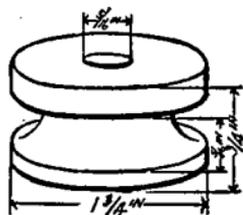
Schedule BJ.

List No.	Mfgr. No.	Std. Pkge.	Price per 1000
3055	24	1200	\$47.00
3051	20	1100	53.00
3090	36	1800	35.00
3050	19	1000	65.00
3080	26	800	81.00
3952	21	700	114.00
3083	29	575	132.00

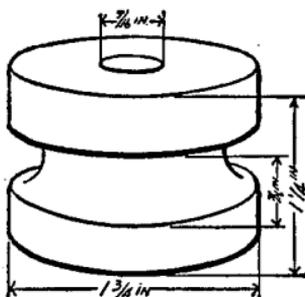
STANDARD PORCELAIN INSULATORS.



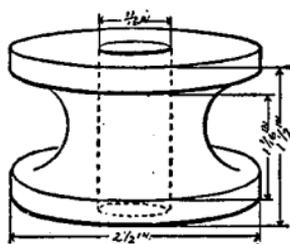
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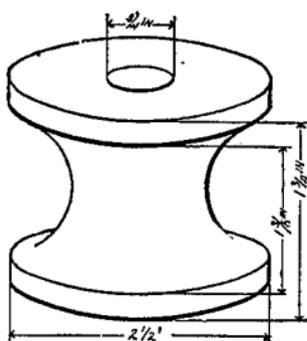
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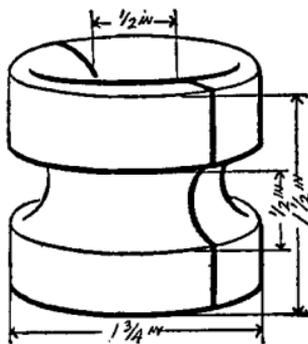
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No. 3993.



No. 3991.

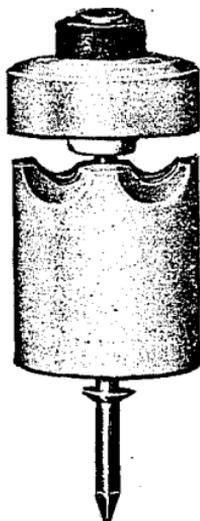
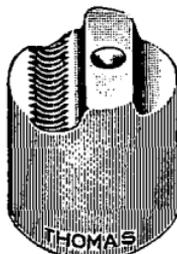
Schedule BJ.

List No.	Mfgr. No.	Standard Package	Price Per 1000
3988	34	700	\$81.00
3999	45	2800	19.00
4001	47	1500	35.00
3979	25	750	81.00
3993	39	650	99.00
3991	37 (Split)	1300	50.00

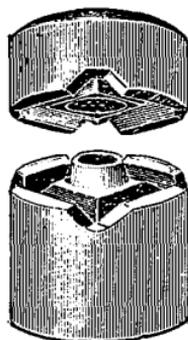
SPLIT PORCELAIN KNOBS.



No. 9395.



No. 9404.



No. 7239.

Schedule B.J.

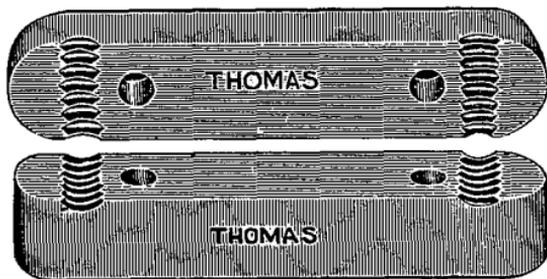
List No.	Mfgr's No.	Size Wire	Std. Pkge.	Price 1000
7233	5½	Old Code Split No. 12 or 14	3250	\$22.00
9395	5½	New Code Split No. 12 or 14	3000	24.00
8167	101	Reversible Split No. 12 or 14	3700	26.00
8168	102	Reversible Split No. 8 or 10	1800	48.00
8169	103	Reversible Split No. 4 or 6	800	99.00
7238	1849	B & D Split No. 12 or 14	3250	24.00
7239	9419	Standard Split No. 10 or 12	1500	41.00
7240	9420	Standard Split No. 4 or 6	875	63.00
9396	55½	Standard Split No. 12 or 14	2500	32.00
9397	5517	T. P. I. Split No. 12 or 14	3750	32.00
9398	5135	T. P. I. Split No. 8 or 10	1500	48.00
9399	5147	T. P. I. Split No. 4 or 6	900	69.00
9400.	Unit No. 1	New Code Split No. 12 or 14	4000	30.00
9401	Nail-it No. 1	New Code Split No. 12 or 14	4000	32.00
9402	Screw-it No. 1	New Code Split No. 12 or 14	4000	42.00
9403	Wedge	New Code Split No. 12 or 14	3000	26.00
9404	Newedge	New Code Split No. 12 or 14	2500	32.00

Packed in unit packages of 500; eight unit packages equal one standard package.

Knobs packed in boxes of 1000, add \$0.50 net for each box.

Knobs packed in boxes of 1000, add \$0.40 net for each box.

Knobs packed in barrels add \$1.00 net for each barrel.



STANDARD CLEATS.

Schedule BJ.

List No.	Mfgr's No.		Size	Wire	Std. Pkge.	Price Per 1000
3493	334	2 Wire	Unglazed,	12 or 18 Wire	2000	\$21.00
3492	334	2 Wire	Glazed,	12 or 18 Wire	2000	34.00
3500	334	3 Wire	Unglazed,	12 or 18 Wire	2000	21.00
3499	334	3 Wire	Glazed,	12 or 18 Wire	2000	34.00
9405	335	2 Wire	Unglazed,	6 or 8 Wire	1000	43.00
9406	335	2 Wire	Glazed,	6 or 8 Wire	1000	69.00
9407	335	3 Wire	Unglazed,	6 or 8 Wire	1000	43.00
9408	335	3 Wire	Glazed,	6 or 8 Wire	1000	69.00
9409	Mill Type	3 Wire	Unglazed,	12 or 18 Wire	2000	26.00
9410	Mill Type	3 Wire	Glazed,	12 or 18 Wire	2000	34.00
9411	Mill Type	3 Wire	Unglazed,	8 or 12 Wire	2000	29.00
9412	Mill Type	3 Wire	Glazed,	8 or 12 Wire	2000	42.00

B. & D. ONE WIRE CLEATS.

3501	1	Style A	14 to 6 Wire.....	2300	39.00
3502	1 1/2	Style A	6 to 2 Wire.....	1550	54.00
3503	2	Style A	2 to 0 Wire.....	1350	65.00
3504	2 1/2	Style A	0 to 3/0 Wire.....	900	78.00



PORCELAIN TUBES.

Schedule BG.

Price per 100.

Length Under Head	5/16 Hole, 9/16 Outside Diam.	3/8 Hole, 1 1/16 Outside Diam.	1/2 Hole, 1 3/16 Outside Diam.	5/8 Hole, 1 5/8 Outside Diam.	3/4 Hole, 1 7/8 Outside Diam.	1 Hole, 1 7/8 Outside Diam.	1 1/4 Hole, 1 15/16 Outside Diam.	1 1/2 Hole, 2 3/16 Outside Diam.	1 3/4 Hole, 2 9/16 Outside Diam.	2 Hole, 2 15/16 Outside Diam.
2 1/2 in.	\$1.60	\$2.20	\$3.00	\$4.00	\$6.50	\$9.10	\$12.20	\$15.60	\$19.80	\$23.40
3 in.	1.90	2.60	3.40	4.70	7.20	10.40	13.80	17.40	22.00	25.80
4 in.	2.70	3.20	4.10	5.50	8.80	13.00	15.60	19.20	23.90	27.70
5 in.	3.30	3.80	4.80	6.40	10.40	16.30	18.10	23.30	28.10	31.70
6 in.	4.00	4.80	5.50	7.30	12.40	18.60	20.00	26.20	31.30	34.90
8 in.	7.20	8.40	9.60	10.80	15.60	21.80	24.00	30.40	35.10	38.90
10 in.	9.60	10.80	12.00	18.00	21.80	25.00	31.20	35.60	40.80	44.80
12 in.	14.40	15.60	16.80	24.00	28.10	34.30	45.60	49.20	54.80	58.80
14 in.	24.20	27.70	31.10	43.20	49.50	54.00	76.10	81.50	87.80	92.40
16 in.	34.70	38.90	43.20	51.90	58.50	67.40	90.00	131.40	149.10	165.80
18 in.	38.90	43.20	51.90	60.50	67.40	76.40	103.70	147.20	165.80	180.90
20 in.	43.20	47.60	56.30	64.80	71.90	85.30	114.10	162.50	180.90	196.00
22 in.	49.70	54.00	60.50	69.20	81.00	92.20	124.40	178.00	196.00	211.10
24 in.	56.30	60.50	64.80	73.50	80.00	100.00	134.80	193.60	211.10	226.20

For Curved and Curved End Tubes—multiply list by 3. For Headless Tubes—multiply list by 4. For Split Regular Tubes—multiply list by 10. For Cross Over Split Tubes—multiply list by 12.

Standard Package Quantities. Weights and prices on tubes other than those listed here, on application.

"DIAMOND SPECIAL" LINEMAN'S SIDE CUTTING PLIER.

For Use on Bare Wire.



One of the most popular pliers in use today. Its handles are shaped to the curvature of the hand, a much desired feature. Powerful leverage and keen re-inforced cutting knives make this plier adaptable for heavy cutting in telephone and telegraph work.

Schedule BG.

List No.				Price Each
9449	5 inch.	Weight, 3	lbs. per dozen....	\$3.00
9450	6 inch.	Weight, 5	lbs. per dozen.....	3.38
9451	7 inch.	Weight, 7 ½	lbs. per dozen.....	3.75
9452	8 inch.	Weight, 12	lbs. per dozen.....	4.50
9453	9 inch.	Weight, 12 ½	lbs. per dozen.....	5.25
9454	10 inch.	Weight, 18	lbs. per dozen.....	6.00

"DIAMOND SPECIAL" LINEMAN'S SIDE CUTTING PLIER.

With Sleeve-Joint Twister.

**Schedule BG.**

List No.				Price Each
9455	6 inch.	Weight, 5	lbs. per dozen.....	\$4.12
9456	7 inch.	Weight, 7 ½	lbs. per dozen.....	4.50
9457	8 inch.	Weight, 12	lbs. per dozen.....	5.25
9458	9 inch.	Weight, 13	lbs. per dozen.....	6.00

6 inch is for No. 17 B. & S. or 19 B. W. G. Sleeves

7 inch is for No. 12 B. & S. or 14 B. W. G. Sleeves

8 inch is for No. 10 B. & S. or 12 B. W. G. Sleeves

9 inch is for No. 10 B. & S. or 12 B. W. G. Sleeves

“DREADNOUGHT” LINEMAN’S PLIERS.

The **FINEST** Plier Made.



This wonderful plier is made of Chrome Nickel Steel, a steel that maintains a great degree of hardness without the danger of brittle cutting edges. It costs more to make—to forge, to machine and for tools—but the results warrant it. We obtain a plier that will stand unusual strains and maintain enduring cutting edges. We prove this.

Every Dreadnought Plier is individually treated and hand fitted by skilled mechanics. Before leaving our factory the cutters are tested to cut hardened and tempered steel wire. They are file-tested to prove them permanently hard. Then the whole plier is subjected to a strength test of a special testing contrivance, a test so severe that no human hand could equal it.

Every Dreadnought is joined with a rivet as hard as file steel. These rivets, electrically heated and riveted, assure the pliers working freely and true.

The newly designed “Don’t Slip” Handles placed exclusively on the Dreadnought is an added feature. This handle is a design patent and the trademark “Nickel-Dreadnought-Steel” is registered at the Patent Office. This protects you against cheap imitations made to deceive.

See the “Dreadnought” and you will appreciate it.

Schedule BG.

List No.	Size	Weight, per Dozen	Price Each
9413	6 inches	5 $\frac{3}{4}$ lbs.	\$2.20
9414	7 inches	8 $\frac{1}{4}$ lbs.	2.50
9415	8 inches	11 $\frac{1}{2}$ lbs.	3.00

ELECTRICIAN'S PLIERS.



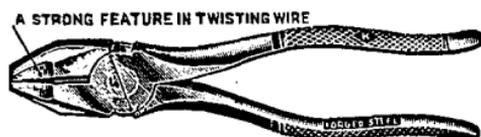
No. 9426.

Built on graceful lines with shapely beveled nose. Suited for electricians who do not require the heavier patterns necessary for the lineman. Forged of special plier steel, scientifically tempered and carefully machined. Have "Don't Slip" Handles. Made in polished steel, black, and polished nickel finish.

Schedule BG.

List No.	Size	Weight, per doz.	Finish	Price Each
9422	4 inches	2 pounds	Polished Steel	\$1.20
9423	5 inches	3 pounds	Polished Steel	1.25
9424	6½ inches	5½ pounds	Polished Steel	1.35
9425	7 inches	6¾ pounds	Polished Steel	1.50
9426	8 inches	9½ pounds	Polished Steel	1.75
9427	4 inches	2 pounds	Black	1.00
9428	5 inches	3 pounds	Black	1.10
9429	6½ inches	5½ pounds	Black	1.20
9430	7 inches	6¾ pounds	Black	1.35
9431	8 inches	9½ pounds	Black	1.50

HEAVY LINEMAN'S PLIERS.



No. 9418.

Forged from special plier steel with heavy leads, cutting edges, and jaws accurately machined. An extremely serviceable tool. The Depression next to the cutting edge is useful in twisting wire. Fitted with large special rivets, making an easy working tool with an everlasting joint. The cutters are subjected to severe tests and guaranteed to be hard. Furnished with "Don't Slip" Knurled Handles. Polished Steel Finish.

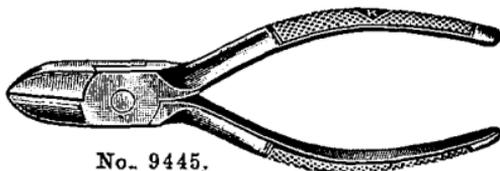
Schedule BG.

List No.	Price Each
9416 Size, 6 inches; weight, 5¾ pounds per dozen.....	\$1.50
9417 Size, 7 inches; weight, 8¾ pounds per dozen.....	2.00
9418 Size, 8½ inches; weight, 11½ pounds per dozen.....	2.40

VERY LONG REACH FLAT NOSE SIDE CUTTING PLIERS.

The long slender jaws enable one to reach far beyond the capacity of the ordinary plier. Polished Finish and "Don't Slip" Handles.

List No.	Schedule BG.	Price Each
9444	7 inches, 3½ lbs. per dozen.....	\$2.00



No. 9444.

DIAGONAL CUTTING PLIERS.

Electrician's diagonal plier, close cutting; forged from steel. A beautiful and serviceable tool supplied in polished finish and with "Don't Slip" Handles.

List No.	Schedule BG.	Price Each
9445	5 inches, 2½ lbs. per dozen.....	\$1.00
9446	5½ inches, 3¼ lbs. per dozen.....	1.80
9447	6 inches, 4 lbs. per dozen.....	2.00

LONG NEEDLE-NOSE PLIERS.

List No.	Schedule BG.	Price Each
9462	5 inches, weight 2½ lbs. per dozen.....	\$2.10
9463	6 inches, weight 3 lbs. per dozen.....	2.25
9464	7 inches, weight 3¼ lbs. per dozen.....	2.70

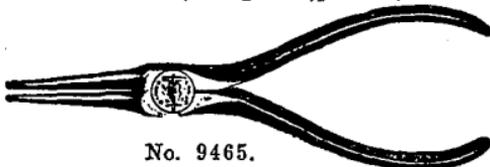


No. 9459.

LONG NOSE PLIERS.

A special feature is its adaptability to stripping the ends of insulated wire. Perfectly tempered and hardened, so that the jaw will not spring when pressure is applied.

List No.	Schedule BG.	Price Each
9459	5 inches, weight 2¾ lbs. per dozen.....	\$2.10
9460	6 inches, weight 3 lbs. per dozen.....	2.25
9461	7 inches, weight 3¼ lbs. per dozen.....	2.70



No. 9465.

ROUND NOSE PLIERS.

This plier has extra long nose, tapered, and is very handy for making loops on ends of wire to fit over binding posts, etc.

List No.	Schedule BG.	Price Each
9465	5 inches, weight 3 lbs. per dozen.....	\$2.70
9466	5½ inches, weight 3 lbs. per dozen.....	2.85

LONG FLAT NOSE PLIERS.

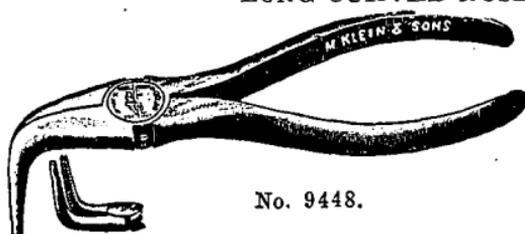
Extra long and wide flat nose makes this an exceptionally useful plier.

List No.	Schedule BG.	Price Each
9467	5 inches, weight 3 lbs. per dozen.....	\$2.10
9468	6 inches, weight 3½ lbs. per dozen.....	2.25
9469	7 inches, weight 3¾ lbs. per dozen.....	2.70

LONG CURVED NOSE PLIERS.

A handy plier for working around switchboards and telephones, due to the nose being bent at an angle of 45 degrees.

Made of highest quality steel; polished head and black handles.



No. 9448.

Schedule BG.

List No.	Price Each
9448	6 inches, 2¾ lbs. per dozen.....\$3.00

SPlicing CLAMPS.

All Splicing Clamps have Polished Heads and Black Handles.
Schedule BG.



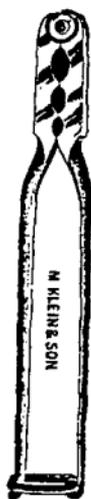
No. 9470.



No. 9471.



No. 9472.



No. 9473.



No. 9476.



No. 9477.

List No.

Price Each

9470. Size, 7 inches; weight, 4½ pounds per dozen.....\$2.80

For Nos. 10 to 16 B. & S. Gauge Copper and 12 to 18 B. W. G. Iron wires.

List No.

Price Each

9471 Size, 10½ inches; weight, 14¾ pounds per dozen...\$3.75

For Telephone and Telegraph Line Work. For Nos. 6 to 14 B. W. G. Iron Wire and Nos. 4 to 12 B. & S. Gauge Copper Wire.

List No.

Price Each

9472 Size, 10¾ inches; weight, 14¾ pounds per dozen. ..\$3.75

For general line work. Has three oval and two round holes to accommodate Nos. 4 to 14 B. W. G. Iron and Nos. 2 to 12 B. & S. Gauge Copper Wires.

List No.

Price Each

9473 Size, 10¾ inches; weight, 14¾ pounds per dozen... ..\$3.75

Intended for heavy wiring. Takes iron wires from 2 to 6 B. W. G. and Copper Wires from 0 to 4 B. & S. Gauge.

List No.

Price Each

9476 Size, 10½ inches; weight, 14 pounds per dozen.. ..\$3.75

For heavy telephone and telegraph work. Twists Copper Wire Sleeves Nos. 6 to 12 B. & S. Gauge and Iron Wire Sleeves from 8 to 14 B. W. G.

List No.

Price Each

9477 Size, 10½ inch; weight, 14 pounds per dozen.....\$3.75

Twists Copper Wire Joints from 6 to 17 B. & S. Gauge and Iron Wire Joints from 8 to 18 B. W. G.

COMBINATION WIRE AND SLEEVE CLAMPS.

All Clamps have Polished Heads and Black Handles.
Schedule BG.



No. 9478.



No. 9479.



No. 9480.



No. 9481.



No. 9482.



No. 9483.

List No.

Price Each

9478 Size, 9 inches; weight, 10 $\frac{1}{4}$ pounds per dozen.....\$4.15

Has four round holes for 6 to 12 B. & S. Gauge Copper and 8 to 14 B. W. G. Iron Wires. Reverse side twists 10 to 14 B. & S. Gauge Copper and 12 to 16 B. W. G. Iron Wire Sleeves.

List No.

Price Each

9479 Size, 10 $\frac{3}{4}$ inches; weight, 15 $\frac{1}{2}$ pounds per dozen.....\$4.50

For all bare wires usually handled by telegraph and telephone lineman. Large hole can be used for serving guy wire or messenger strand. Takes iron wires from 6 to 14 B. W. G. and copper wires from 4 to 12 B. & S. Reverse side twists copper wire sleeves Nos. 8 to 14 B. & S. and Iron Wire Sleeves Nos. 10 to 16 B. W. G.

List No.

Price Each

9480 Size, 10 $\frac{3}{4}$ inches; weight, 15 $\frac{1}{2}$ pounds per dozen.....\$4.50

Has five holes for Iron Wires Nos. 6 to 14 B. W. G. and Copper Wires Nos. 4 to 12 B. & S. Gauge and Iron Sleeves Nos. 8 to 14 B. W. G.

List No.

Price Each

9481 Size, 11 $\frac{1}{4}$ inches; weight, 17 $\frac{1}{2}$ pounds per dozen.....\$5.25

Adapted for heavy work. Has one oval and five round holes for Iron Wires Nos. 6 to 14 B. W. G. and Copper Wires Nos. 4 to 12 B. & S. Gauge. Reverse adapted for twisting Copper Sleeves Nos. 6 to 12 B. & S. and Iron Sleeves 8 to 14 B. W. G.

List No.

Price Each

9482 Size, 11 $\frac{1}{4}$ inches; weight, 17 $\frac{1}{2}$ pounds per dozen.....\$5.65

For Nos. 6 to 16 B. W. G. Iron and Nos. 4 to 14 B. & S. Copper Wires. Takes Nos. 6 to 14 B. & S. Copper and Nos. 8 to 16 B. W. G. Iron Wire Sleeves.

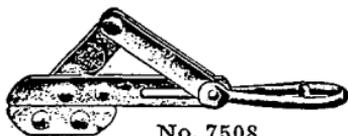
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Price Each

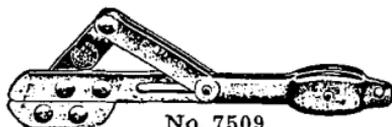
9483 Size, 11 $\frac{1}{4}$ inches; weight, 17 $\frac{1}{2}$ pounds per dozen.....\$5.65

Same as No. 9482 but for heavier work. For Nos. 6 to 14 B. W. G. Iron Wire and Nos. 4 to 12 B. & S. Gauge Copper Wire. Reverse side has five chambers for Nos. 6 to 14 B. & S. Gauge Copper Sleeves and Nos. 8 to 16 B. W. G. Iron Sleeves.

BUFFALO GRIPS.



No. 7508.



No. 7509.

One of the most popular tools of its class ever placed on the market.
Will instantaneously grip the wire.

List No.	Schedule BG.	Price Each
7508	No. 1 Opening with 0.22 inch, for No. 6 Wire and smaller	\$4.00
7509	No. 1 with Pulley, will accommodate rope $\frac{3}{8}$ inch.....	5.00
7510	No. 2 Opening 0.35 inch for No. 0 Wire and smaller....	6.25
7511	No. 2 with Pulley, will accommodate rope $\frac{7}{16}$ inch.....	7.50
7512	No. 3 Opening 0.48 inch for No. 0000 Wire and smaller	9.50
7513	No. 3 with Pulley, will accommodate rope $\frac{5}{8}$ inch.....	10.65

BUFFALO GRIPS FOR INSULATED WIRE.

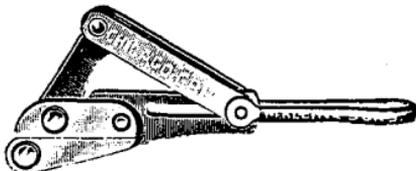
Will not injure the insulation.

7514	No. 4 Opening $\frac{1}{2}$ inch	\$6.10
7515	No. 4 with Pulley	6.00
7516	No. 5 Opening $1\frac{1}{16}$ inch	7.60
7517	No. 5 with Pulley	8.40

KLEIN'S CHICAGO GRIPS.

For Bare Wires.

"The harder the pull, the tighter the hold."

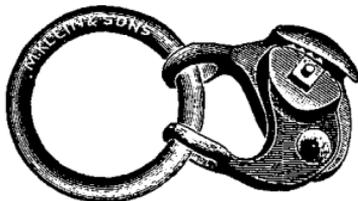


List No.	Schedule BG.	Price Each
9484	For No. 10 Wire and smaller.....	\$4.20
9485	For No. 6 Wire and smaller.....	4.60
9486	For No. 0 Wire and smaller.....	6.75
9487	For No. 0000 Wire and smaller.....	9.75

CHICAGO GRIPS WITH PULLEYS.



List No.	Schedule BG.	Price Each
9488	For No. 10 Wire, for $\frac{1}{4}$ inch rope.....	\$ 5.65
9489	For No. 6 Wire, for $\frac{3}{8}$ inch rope.....	6.00
9490	For No. 0 Wire, for $\frac{1}{2}$ inch rope.....	7.50
9491	For No. 0000 Wire, for $\frac{5}{8}$ inch rope.....	10.35



No. 9492.

"COME-ALONG" GRIPS.

	Schedule BG.	
List No.		Price Each
9492	For No. 8 Wire and smaller	\$1.20
9493	For No. 6 Wire and smaller	1.50
9494	For No. 0 Wire and smaller	1.90

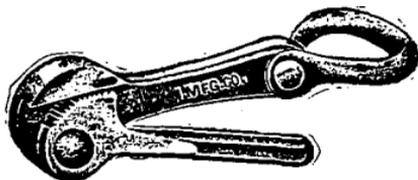
HAVEN'S STEEL GRIPS.

A Popular Grip for all around work.

	Schedule BG.	
List No.		Price Each
9495	For No. 8 Wire and smaller	\$3.00
9496	For 1/2 inch Wire and finer	4.20



No. 9495.

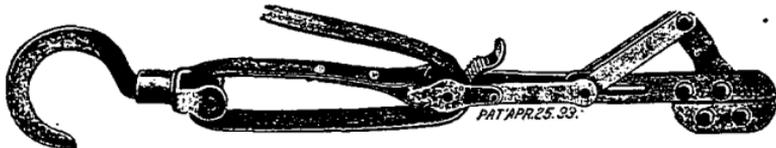


No. 2279.

ECCENTRIC CLAMPS.

	Schedule BG.	
List No.		Price Each
2279	For No. 8 Wire and smaller, with round clevis for blocks	\$1.95
9497	For No. 8 Wire and smaller, with oblong clevis for Jack strap	1.95

LINEMAN'S TOOLS.



No. 2291.

	Schedule BD.	
List No.		Price Each
2291	Lineman's Tool. For No. 10 Wire	\$10.50
2292	Lineman's Tool. For No. 6 Wire	11.25
2293	Lineman's Tool. For No. 0 Wire	12.40

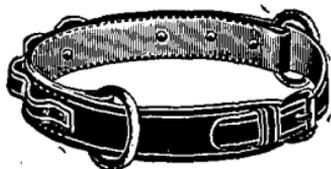
HOWE IMPROVED WIRE TOOLS.

Can be Fitted with Any Wire Pulling Tool.



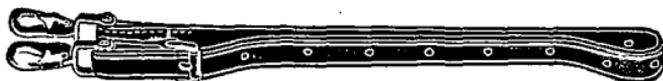
For pulling up and holding line and guy wires, the use of rolls gives several times the power of the old methods; the grip is self-adjusting, and will hold in any position, at any point of the strap; the hook adds greatly to the advantages of the whole tool.

	Schedule BG.	
List No.		Price Each
9498	Single purchase. Strap 1 1/4 inch wide, 9 feet long	\$6.00
9499	Double purchase. Strap 1 1/8 inch wide, 10 feet long	7.50

TOOL BELTS.—The Double Safety Tool Belts.

Without question the highest grade tool belt made. It is 2¼ inches wide and made of selected black harness leather, lock stitched and riveted together. Outer loop layer is 1¼ inches wide and has 6 tool loops. Before leaving the factory each belt is tested to sustain a weight of 2,000 pounds.

List No.	Schedule BG.	Price Each
9504	2¼ inch Double Safety Tool Belt.....	\$5.50
9505	2¼ inch Safety Tool Belt	5.00
9506	3½ inch Safety Tool Belt	6.10

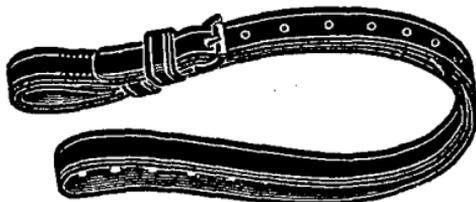
SAFETY STRAPS.

These straps are cut out of high grade harness leather, securely sewed, riveted and double reinforced. Equipped with heavy roller snaps. One snap is stationary; and the other one loose; so that the strap can be adjusted by the buckle, either shortening or lengthening it. Also furnished with regular snaps.

List No.	Schedule BG.	Price Each
9507	1¾ inch x 6 ft. Safety Strap with Roller Snaps.....	\$5.00
9508	2 inch x 6 ft. Safety Strap with Roller Snaps.....	6.30
5619	1¾ inch x 6 ft. Safety Strap with Regular Snaps.....	4.50
9509	2 inch x 6 ft. Safety Strap with Regular Snaps.....	5.80

JACK OR VISE STRAPS

Made of selected harness leather and equipped with strong japanned hardware. Holes punched in strap for adjusting.



List No.	Schedule BG.	Price Each
9510	Vise Strap, 5½ ft. long.....	\$2.60
9511	Vise Strap, 7 ft. long.....	3.00
9512	Vise Strap, 8 ft. long.....	4.00

**PLIER POCKETS.**

Made of good quality leather and strongly sewed.

Schedule BG.

List No.	Price Each
5615 Plier Pocket, open at bottom.....	\$0.80
9513 Plier Pocket, closed at bottom.....	.80

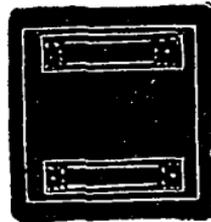
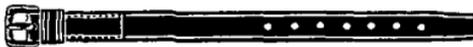
CLIMBERS.

Lengths from 15 to 18 inches, from instep to tip of shank by ½ inch variations.



List No.	Schedule BG.	Price per Pair
7505	Klein's Eastern Climber, Punched Loop.....	\$5.25
7504	Klein's Eastern Climber, Riveted Loop.....	6.00
2356	Stephen's Eastern Climber	4.50
9500	Reidy's Eastern Climber	3.00
9501	Smith's Eastern Climber	3.00

STRAPS AND PADS.



List No.	Schedule BG.	Price Each
5613	Plain Climber Straps, Set of Four.....	\$3.60
7498	Plain Climber Pads, per Pair.....	.90
7499	Felt Lined Climber Pads, per Pair	1.20
9502	Sheep Lined Climber Pads, per Pair.....	1.20
5622	Reel Strap, W. U. Style, per Set	14.00
5620	Combined Safety and Jack Strap with Snaps...	6.00

KLEIN'S COMBINATION LAG SCREW WRENCH.

Forged from select bar steel. Slot is formed in a cross shape and will fit machine bolts, nuts or lag screws from ¾ to ½ inch. Small end of the wrench is arranged for ⅝ inch machine bolts or lag screws.



The round hole allows the end of the bolt to come through as the nut is run on.

List No.	Schedule BG.	Price Each
2362	Lag Screw and Nut Wrench	\$3.75

TIE AND SPLICING WRENCH.



For "Tieing in" with Nos. 7 to 11 B. & S. Gauge Wire. For splicing Nos. 8 to 9 B. W. G. or 6 to 8 B. & S. Gauges Wires and for

twisting Nos. 9 and 10 B. & S. Gauge Sleeves.

List No.	Schedule BG.	Price Each
5400	Tie and Splicing Wrench	\$4.20

No. 28 ALCOHOL TORCH.

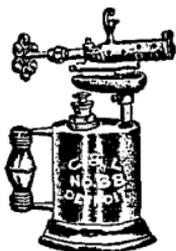
Produces a fine, pointed flame of intense heat, excellent for fine soldering. The ideal torch for electricians or for any work requiring a concentrated flame. Torch is made of brass, nickel plated.

**Schedule BG.**

List No.	Price Each
9527 Size, 1 3/4 x 7 1/4 inch	\$3.12

No. 38 TORCH.

This torch is considered one of the best pint size torches made. Has many improvements, including improved burner, automatic air pump, check valve, etc. Has hook on burner for holding soldering coppers.

**Schedule BG.**

List No.	Price Each
7475 Shipping weight, 2 3/4 lbs.....	\$8.64

No. 32 TORCH.

A quart size torch that leaves nothing to be desired in the way of a perfect fire and rapid adjustment.

Furnished with hook for holding coppers.

**Schedule BG.**

List No.	Price Each
7473 Shipping weight, 4 1/4 lbs... ..	\$9.60

No. 48 TORCH.

Where lightness and compactness is desired this torch will meet all requirements. It is oblong, being 1 7/8 inches thick, 5 inches long and 8 inches high, to base of hook.

Finished in Polished Brass. Capacity one pint.

**Schedule BG.**

List No.	Price Each
7477 Shipping weight, 3 3/4 lbs.....	\$11.04

No. 96 TORCH.



A quart size kerosene torch that will be appreciated by all users. Produces an intensely hot, clear blue flame, about 6 in. long, generating sufficient heat for brazing or for outside use under severe conditions.

List No. **Schedule BG.** Price Each
9528 Shipping weight, 3 1/4 lbs. . . \$10.56

No. 112 TORCH.



A very good torch at a low price. Has burner of bronze metal with metal wheel handle and stuffing box on needle to prevent leakage. Produces a steady flame of intense heat and is supplied with detachable soldering copper attachment. Capacity one quart.

List No. **Schedule BG.** Price Each
9529 Shipping weight, 4 1/4 lbs. \$8.64

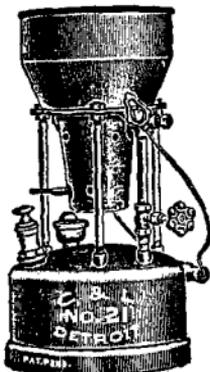
No. 114 TORCH.



This torch is the same construction and appearance as the No. 112 Torch, but has a capacity of only one pint.

Schedule BG.
 List No. **Schedule BG.** Price Each
9530 Shipping weight, 3 lbs. \$7.68

No. 21 COIL FIRE POT.



The latest improved Coil Fire Pot, made with seamless drawn steel tank, large funnel, large valve, heavy top plate and one piece steel shield. Has patented automatic brass pumps. Capacity one gallon.

Schedule BG.
 List No. **Schedule BG.** Price Each
9531 Shipping weight, 9 3/4 lbs. \$12.72

SOLDERING SPECIALTIES.



STICKS.

List No.	Schedule BG.	Price Each
3469	Allen 1 x 5 1/2 inches.....	\$0.30
9789	Crescent .....	.20
9790	Star .....	.20

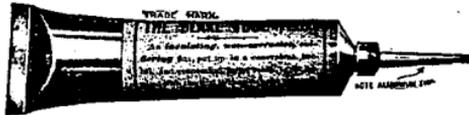
SALTS.

List No.	Schedule BG.	Price Each
9791	Allen, 1/2 pound bottle	\$0.60
9792	Allen, 1 pound bottle.....	.80
7647	Crescent, 1/2 pound bottle .....	.50
7648	Crescent, 1 pound bottle .....	.60

LIQUID.

List No.	Schedule BG.	Per lb.
9793	Allen, 5 pound bottle	\$0.60
9794	Allen, 10 pound can .....	.55

PASTE.



List No.	Schedule BG.	Price Each
9795	Allen, 2 ounce tube	\$0.33
9796	Allen, 1 ounce can .....	.20

9797	Allen, 2 ounce can.....	.30
9798	Allen, 4 ounce can.....	.50
9799	Allen, 1/2 pound can.....	.75
9800	Allen, 1 pound can.....	1.20
8186	Crescent, 2 1/2 ounce box .....	.30
9801	Crescent, 8 ounce box .....	.60
9802	Crescent, 16 ounce box	1.00
9803	Star, 2 ounce box.....	.24
9804	Star, 4 ounce box.....	.30
9805	Star, 8 ounce box.....	.50
9806	Star, 1 pound box.....	.90
9942	Blake Tube Flux.....	.40
3470	Burnley, 2 ounce can....	.15
9807	Burnley, 4 ounce can....	.20
9808	Burnley, 1/2 pound can....	.36
9809	Burnley, 1 pound can....	.60



SELF-FLUXING WIRE SOLDER.



Absolutely non-corrosive—suitable for telephone and electrical work.

No time is lost in preparing or applying the flux. Can be used without soldering iron. Cheaper to use than plain wire or bar solder.

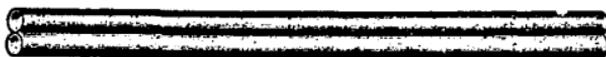
Kester Rosin Core Solder

List No.	Mfr's No.	Schedule BG.	Price per lb.
9772	1	.240 inch diameter, 18 inch sticks.....	\$0.90
9773	2	.160 inch diameter, 18 inch sticks.....	1.00
9774	3	.123 inch diameter, 1 lb. coils.....	1.00
9775	4	.104 inch diameter, flat wire, 1 lb. coils.....	1.10
9776	5	.092 inch diameter, round wire, 1 lb. coils.....	1.10

HALF AND HALF SOLDER.

List No.	Schedule BG.	Price per lb.
9777	Half and Half Bar Solder.....	\$0.80
9778	Electricians' Wire Solder.....	.70

DOUBLE TUBE COPPER SLEEVES.



List No.	Schedule BG.	Price per 1000
9779	For No. 2 B. & S. Gauge. Length, 9 1/2 inches.....	\$280.00
9780	For No. 4 B. & S. Gauge. Length, 6 3/4 inches.....	128.00
9781	For No. 6 B. & S. Gauge. Length, 6 3/4 inches.....	98.00
9782	For No. 8 B. & S. Gauge. Length, 5 1/2 inches.....	65.00
9783	For No. 9 B. & S. Gauge. Length, 5 1/4 inches.....	58.50
9784	For No. 10 B. & S. Gauge. Length, 4 3/4 inches.....	40.50
9785	For No. 12 B. & S. Gauge. Length, 4 1/2 inches.....	33.00

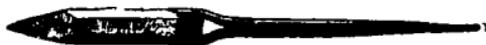
TINNED STEEL SLEEVES FOR IRON WIRE.

List No.	Price per 1000
9786	For No. 10 B. W. G. Gauge. Length, 5 1/2 inches..... \$29.00
9787	For No. 12 B. W. G. Gauge. Length, 4 3/4 inches..... 27.00
9788	For No. 14 B. W. G. Gauge. Length, 4 1/2 inches..... 27.00

SOLDERING COPPERS.

Schedule BG.

They are made of drawn copper bolts of best quality and are shaped under a hammer. By this method they are as solid as the metal can be made.



They should not be compared with such as are cast from copper ingots

List No.	Mfr's No.	Weight	Price per lb.
9934	1	1 lb. per pair.....	\$0.90
9935	1 1/2	1 1/2 lbs. per pair.....	.86
9936	2	2 lbs. per pair.....	.82
9937	2 1/2	2 1/2 lbs. per pair.....	.82
9938	3	3 lbs. per pair.....	.80
9939	4	4 lbs. per pair.....	.76
9940	5	5 lbs. per pair.....	.76
9941	6	6 lbs. per pair.....	.76

TAPE.



No. 5589.



No. 5593.

Schedule BG.

List No.		Price per lb.
7731	Mascot Friction Tape, 1/4 lb. rolls.....	\$0.65
5589	Mascot Friction Tape, 1/2 lb. rolls.....	.65
9770	Dandy Friction Tape, 1/2 lb. rolls.....	.70
8165	Mascot Rubber Tape, 1/2 lb. rolls.....	.70
9771	Dandy Slicing Tape, 1/2 lb. rolls.....	.65



No. 5590.



No. 5592.

Schedule BG.

List No.		Price per lb.
5590	Grimshaw Black Tape, 1/2 lb. rolls.....	\$1.40
5591	Grimshaw White Tape, 1/2 lb. rolls.....	1.40
5593	Manson Black Tape, 1/2 lb. rolls.....	.90
5596	Competition Black Tape, 1/2 lb. rolls.....	.90
5595	Kerite Black Tape, 1/2 lb. rolls.....	1.20
5597	Grimshaw Splicing Compound, 1/2 lb. rolls.....	1.50
5598	Competition Splicing Compound, 1/2 lb. rolls....	1.20
5592	Okonite Splicing Compound, 1/2 lb. rolls.....	1.20

ELECTRICIAN'S TOOL BAG.

The Best Tool Bag Made.



This bag is a pleasing combination of all the good features of the various russet leather bags on the market into an extremely heavy bag of fine black harness leather, which will stand the roughest and hardest usage and still look well.

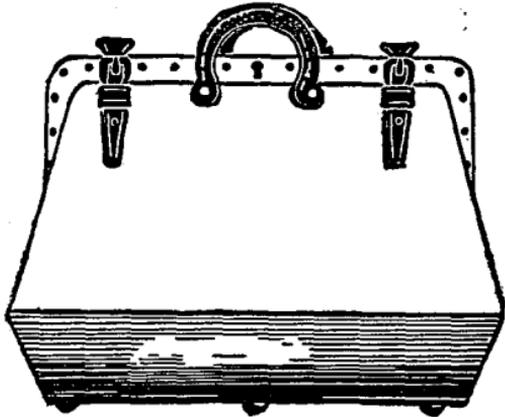
Equipped with a shoulder strap and pad; a carrying handle and a saw or bit holder. The bottom is of three ply leather and fitted with steel studs. Retaining straps

pass clear around the bag so that it may be safely loaded to the limit of its capacity and be securely intact.

List No.	Schedule BE.	Price Each
9514	14 x 8 inches	\$ 8.20
9515	16 x 8 inches	9.10
9516	18 x 8 inches	10.00
9517	20 x 8 inches	10.80
9518	22 x 8 inches	11.60
9519	24 x 8 inches	12.30

LINEMAN'S CANVAS TOOL BAG, LEATHER BOTTOM.

This bag is made of heavy white duck, reinforced all around the bottom with black bag leather. Frame is of double 12 Gauge Steel riveted securely to the bottom. Sides and bottom are joined together with lock stitched and leather-welt seams. Heavy steel studs on bottom. Has harness leather handle and two straps with buckles.



List No.	Schedule BE.	Price Each
9520	12 x 10½ x 5½ inches	\$4.30
9521	14 x 13½ x 5½ inches	4.80
9522	16 x 13½ x 5½ inches	5.30
9523	18 x 15½ x 2½ inches	5.80
9524	20 x 15½ x 5½ inches	6.30
9525	22 x 15½ x 5½ inches	6.70
9526	24 x 15½ x 5½ inches	7.30

STANDARD CROSS ARMS.



Washington Fir or Yellow Pine. Size $3\frac{1}{4}$ x $4\frac{1}{4}$ inches. Bored for $1\frac{1}{2}$ inch Pins, $1\frac{1}{8}$ inch Machine Bolt, and $2\frac{3}{8}$ inch Brace Bolts.

List No.	Length Feet	Number of Pins	Standard Spacings			
			Center	Side	End	Brace
4795	3	2	28	....	4	25
4796	4	4	16	12	4	28
4797	5	4	18	17	4	28
4798	6	4	22	21	4	32
4799	6	6	16	12	4	32
4800	8	6	18	$17\frac{1}{2}$	4	32
4801	8	8	16	12	4	32

PONY TELEPHONE ARMS.

Size $2\frac{3}{4}$ x $3\frac{3}{4}$ inches. Bored for $1\frac{1}{4}$ inch Pins, $1\frac{1}{8}$ inch Machine Bolt and $2\frac{3}{8}$ inch Brace Bolts.

List No.	Length Feet	Number of Pins	Standard Spacings			
			Center	Side	End	Brace
4804	2	2	17	....	$3\frac{1}{2}$	..
4805	$2\frac{1}{2}$	2	23	....	$3\frac{1}{2}$	..
4806	3	2	29	....	$3\frac{1}{2}$	25
4807	$3\frac{1}{2}$	4	16	$9\frac{1}{2}$	$3\frac{1}{2}$	28
4809	5 ft., 2 in.	6	16	$9\frac{3}{4}$	$3\frac{1}{2}$	28
4811	6 ft., 10 in.	8	16	$9\frac{3}{4}$	$3\frac{3}{4}$	28
4813	$8\frac{1}{2}$	10	16	$9\frac{3}{4}$	4	28
4814	10	12	16	$9\frac{3}{8}$	$3\frac{7}{8}$	28

DOUBLE ARMING BOLT.



Hot Galvanized or Plain.

Used with four square washers, represents a much more economical means of tying two cross arms together than the old method.

Schedule BG.

Diameter	Length	Weight per 100	Price per 100
$\frac{1}{2}$ inch	12 inches	78 pounds	\$24.00
$\frac{1}{2}$ inch	14 inches	88 pounds	26.00
$\frac{1}{2}$ inch	16 inches	98 pounds	28.00
$\frac{1}{2}$ inch	18 inches	108 pounds	30.00
$\frac{1}{2}$ inch	20 inches	118 pounds	32.00
$\frac{1}{2}$ inch	22 inches	128 pounds	34.00
$\frac{1}{2}$ inch	24 inches	138 pounds	36.00
$\frac{5}{8}$ inch	12 inches	138 pounds	38.00
$\frac{5}{8}$ inch	14 inches	153 pounds	40.00
$\frac{5}{8}$ inch	16 inches	168 pounds	44.00
$\frac{5}{8}$ inch	18 inches	188 pounds	48.00
$\frac{5}{8}$ inch	20 inches	208 pounds	50.00
$\frac{5}{8}$ inch	22 inches	228 pounds	54.00
$\frac{5}{8}$ inch	24 inches	248 pounds	56.00
$\frac{3}{4}$ inch	12 inches	220 pounds	58.00
$\frac{3}{4}$ inch	14 inches	244 pounds	62.00
$\frac{3}{4}$ inch	16 inches	268 pounds	66.00
$\frac{3}{4}$ inch	18 inches	292 pounds	70.00
$\frac{3}{4}$ inch	20 inches	316 pounds	74.00
$\frac{3}{4}$ inch	22 inches	340 pounds	78.00
$\frac{3}{4}$ inch	24 inches	364 pounds	84.00

PINS AND BRACKETS.



No. 5530.



No. 5538.



No. 9713.



No. 9721.



No. 9722.



No. 9714.



No. 9716.



No. 9719.



No. 9718.



No. 9720.

Schedule BG.

List No. Mfgr's No.

Price per 100

7245		Painted Oak Bracket, 10 inch.....	\$3.00
5538		Painted Oak Bracket, 12 inch.....	3.50
5541		W. U. Painted Oak Bracket, 12x2½x1¾ in.	4.00
5535		Painted Oak Pins, 1¼ x 8 inches.....	2.20
5536		Painted Oak Pins, 1½ x 9 inches.....	3.15
5537		Locust Pins, 1¼ x 8 inches.....	3.60
5534		Locust Pins, 1½ x 9 inches.....	4.80
5530		W. U. Steel Pin with Wood Top, ½ inch Shank	3.00
7246		W. U. Steel Pin with Wood Top, ¾ inch Shank	4.50
9713	253	Extends 4 inches, spaced 9 inches.....	39.00
9714	253½	Extends 4 inches, spaced 6½ inches. . . .	37.50
9715	353	Same as No. 9714, but for 3 insulators. . .	57.00
9716	240	Extends 3½ inches, spaced 7 inches.....	34.50
9717	340	Same as No. 9716, but for 3 insulators. . .	52.50
9718	150	Extends 3½ inches	20.00
9719	145	Extends 3½ inches	16.50
9720	146	Extends 4½ inches	25.50
9721	4300	Clamp Pin for Cross Arms 4 x 5 and smaller	24.00
9722	4400	Clamp Pin for Cross Arms 4 x 5 and smaller	28.50
9723	4401	Clamp Pin for Cross Arms 3½ x 4½ and smaller	27.00
9724	1001	Cross Arm Strap for 3¼ x 4¼ Arms.....	16.00
9725	1002	Cross Arm Strap for 3½ x 4½ Arms.....	16.50
9726	1003	Cross Arm Strap for 3¾ x 4¾ Arms.....	18.00
9727	1004	Cross Arm Strap for 4 x 5 Arms.....	18.00

LAG SCREWS.—Hot Galvanized.



Wood Screw Thread.



Fetter Drive Thread.



Twist Drive Thread.

Schedule BG.

Diam. in.	Length, inches—under Head		Price per 100.						
	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	7
1/4 or 5/16	\$2.85	\$3.05	\$3.25	\$3.45	\$3.65	\$3.85	\$4.05	\$4.25	\$4.45
3/8	3.48	3.74	4.00	4.26	4.52	4.78	5.04	5.30	5.56
7/16	4.11	4.43	4.75	5.07	5.39	5.71	6.03	6.35	6.67
1/2	4.83	5.19	5.55	5.91	6.27	6.63	6.99	7.35	7.71
5/8 and 3/4	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00

Fetter Drive Screws furnished unless otherwise specified.

ROUND WASHERS.—Hot Galvanized or Plain.

List No.	Outside Diameter	Diameter Hole	Size Bolt		Price Per 1000
			Machine	Carriage	
9737	1 1/4 inches	1/2 inch		3/8 inch	\$6.25
9739	1 3/8 inches	9/16 inch	1/2 inch	3/8 inch	8.34
9741	1 1/2 inches	11/16 inch	5/8 inch	1/2 inch	16.00
9742	2 inches	1 3/16 inch	3/4 inch	5/8 inch	18.80

SQUARE WASHERS.

9743	2 x 2 x 1/8 in.	9/16 inch	1/2 inch	\$21.00
9744	2 x 2 x 3/16 in.	3/4 inch	5/8 inch	27.20
9746	2 1/4 x 2 1/4 x 3/16 in.	7/8 inch	3/4 inch	32.50

POLE STEPS FOR WOOD POLES.



No. 9748.

Hot Galvanized or Plain—Hook Head.

List No.	Mfr's No.	Schedule BG.	Price per 1000
9748	7123	3/16 x 9 inches	\$ 81.50
9749	7124	5/8 x 9 inches	101.00

No. 1 MARLINE CABLE HANGER

List No.	Mfr's No.	Schedule BG.		Price per 1000
		Size Cable In Pairs	Length of Loop, inches	
9753	8950	25	9	\$15.00
9754	8951	50	11	16.00
9755	8952	75	12	18.00
9756	8953	100	14	20.00

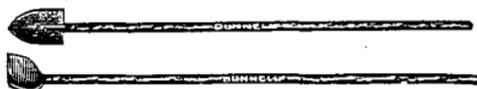
GALVANIZED BRIDLE RINGS.



No. 9765.

List No.	Mfr's No.	Schedule BG.		Price per 100
		Size	Eye	
9765	EEE	5/8 inch	Eye	\$2.00
9766	CCC	1 1/4 inch	Eye	3.50
9767	AAA	1 5/8 inch	Eye	5.00
9768	FFF	3 inch	Eye	15.00

POST HOLE SHOVELS.—Straight Handles.



Schedule BG.

List No.	Mfgr. No.		Price Each
9676	863	6 foot Handles, 10 inch Straps.....	\$5.70
9677	864	7 foot Handles, 10 inch Straps.....	4.80
9678	865	8 foot Handles, 10 inch Straps.....	6.75
9679	866	6 foot Handles, 20 inch Straps.....	6.30
9680	867	7 foot Handles, 20 inch Straps.....	6.75
9681	868	8 foot Handles, 20 inch Straps.....	7.80
9682	869	9 foot Handles, 20 inch Straps.....	8.40

POST HOLE SHOVELS.—Crooked Handles.

9683	870	6 foot Handles, 10 inch Straps.....	\$5.70
9684	871	7 foot Handles, 10 inch Straps.....	6.30
9685	872	8 foot Handles, 10 inch Straps.....	6.75
9686	873	6 foot Handles, 20 inch Straps.....	6.30
9687	874	7 foot Handles, 20 inch Straps.....	6.75
9688	875	8 foot Handles, 20 inch Straps.....	7.80

POST HOLE SPOONS.

9689	856	7 foot Handles, Short Straps.....	\$5.25
9690	857	8 foot Handles, Short Straps.....	5.70
9691	858	9 foot Handles, Short Straps.....	6.30
9692	859	7 foot Handles, Long Straps.....	5.70
9693	860	8 foot Handles, Long Straps.....	6.30
9694	861	9 foot Handles, Long Straps.....	6.75
9695	862	10 foot Handles, Long Straps.....	7.80

GUARDED PIKE POLE.—W. U. Pattern.



Schedule BG.

List No.	Mfgr. No.		Price Each
3863	832	10 foot 1 3/4 inch Douglas Fir Handle....	\$6.00
3864	833	12 foot 1 3/4 inch Douglas Fir Handle....	6.30
3865	834	14 foot 1 3/4 inch Douglas Fir Handle....	6.75
3866	835	16 foot 2 1/4 inch Douglas Fir Handle....	8.25
3867	836	18 foot 2 1/4 inch Douglas Fir Handle....	9.00

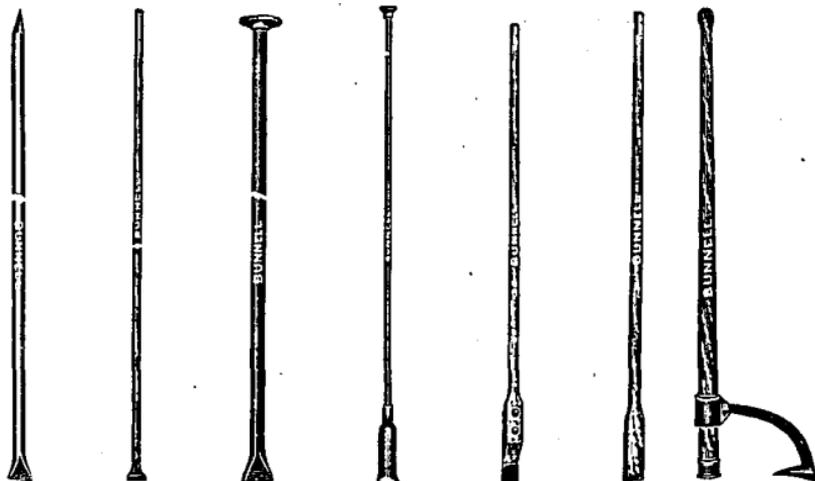
PLAIN PIKE POLES.



Schedule BG.

List No.	Mfgr. No.		Price Each
9662	805	10 foot 1 3/4 inch Standard	\$3.60
3858	806	12 foot 1 3/4 inch Standard.....	3.90
3859	807	14 foot 1 3/4 inch Standard	4.50
3860	808	16 foot 1 3/4 inch Standard	5.10
3861	813	18 inch 2 1/4 inch Heavy	7.50
3862	814	20 foot 2 1/4 inch Heavy	8.25

DIGGING TOOLS.



No. 3050. No. 3046. No. 3052. No. 9661. No. 3056. No. 3055. No. 9663.

Schedule BG.

List No.	Mfgr. No.		Price Each
3050	1016	1 in. by 7 ft. Crow and Digging Bar....	\$ 6.00
3051	1064	1½ in. by 7 ft. Crow and Digging Bar....	9.00
9696	1065	1½ in. by 8 ft. Crow and Digging Bar....	10.00
3052	1071	1 in. by 7 ft. Tamping and Digging Bar	8.00
3053	1075	1½ in. by 8 ft. Tamping and Digging Bar	9.00
3046	1081	1 in. by 7 ft. Plain Digging Bar.....	5.00
3047	1085	1½ in. by 8 ft. Plain Digging Bar.....	7.50
3056	853	Loy or Slick with 8 ft. Wood Handle....	7.50
3055	854	Tamping Bar with Iron Shoe and 7 ft. Handle	3.20
8726	855	Tamping Bar with Iron Shoe and 8 ft. Handle	3.50
9661	852	Digging Spud and Tamper, with 9 ft. Steel Tube Handle	8.40

CANT HOOKS.

Schedule BG.

List No.	Mfgr. No.		Price Each
9603	188	With 2½ x 4 ft. Select Maple Handle....	\$3.40
3735	189	With 2½ x 4½ ft. Select Maple Handle....	3.60
9664	199	With 2½ x 4 ft. Select Hickory Handle..	4.10
9665	200	With 2½ x 4½ ft. Select Hickory Handle..	4.10

THE STANDARD EARTH AUGER.



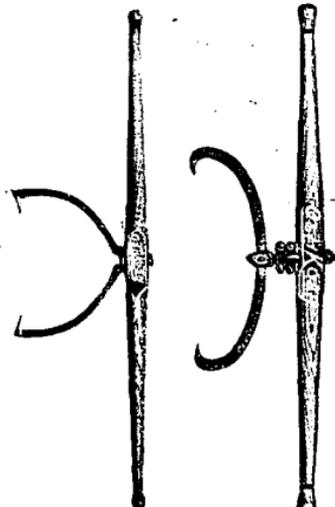
No. 9672.



No. 3061.



No. 9674.



List No.	Mfgr.	Schedule BG.	Price Each
9672	883	Bores seven different size holes: 8, 9, 10, 11, 12, 13 and 14 inches; has telescope stem for boring six feet deep.....	\$13.00
9673	884	Bores nine different size holes: 8, 9, 10, 11, 12, 13, 14, 15 and 16 inches; with telescope stem for holes six feet deep	14.50

POST HOLE DIGGER.

List No.	Mfgr.	Schedule BG.	Price Each
3061	890	5 foot Handles; 9 inch Blade.....	\$3.10
3062	891	7 foot Handles; 9 inch Blade.....	3.50

POST HOLE AUGER.

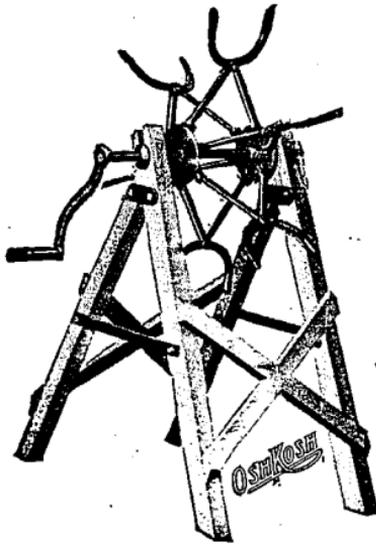
List No.	Mfgr.	Schedule BG.	Price Each
9674	885	6 inch, with 3½ foot Stem.....	\$ 3.80
9675	886	8 inch, with 3½ foot Stem.....	4.20
3057	887	10 inch, with 3½ foot Stem.....	4.60
3059	888	12 inch, with 5 foot Stem.....	17.00
3060	889	14 inch, with 5 foot Stem.....	20.00

CARRYING HOOKS.—Regular Pattern.

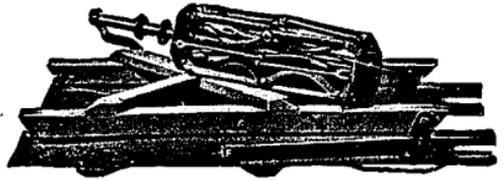
List No.	Mfgr.	Schedule BG.	Price Each
3736	295	With 2½ in. by 4 ft. Maple Handles..	\$4.00
9666	296	With 2½ in. by 4½ ft. Maple Handles..	4.20
9667	297	With 2½ in. by 5 ft. Maple Handles..	4.40

CARRYING HOOKS.—Western Union Pattern.

List No.	Mfgr.	Schedule BG.	Price Each
9668	801	With 5 foot Maple Handles.....	\$5.60
9669	802	With 6 foot Maple Handles.....	6.40
9670	803	With 7 foot Maple Handles.....	7.50
9671	804	With 8 foot Haple Handles.....	8.00



FOLDING TAKE-UP REEL.



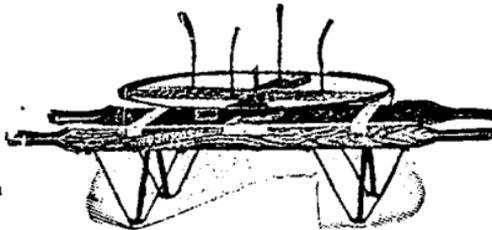
Weighs only 45 lbs., but will make a neater coil and throw it off in less than half the time it takes with the other type.

A compact handy device which will save its cost in a few days and outlast the obsolete wooden style.

Schedule BG.

List No.	Mfgr's No.		Price Each
9568	895	For 12 in. Coil...	\$23.00
9569	896	For 18 in. Coil...	23.50
9570	897	For 21 in. Coil...	24.00
9571	898	For 24 in. Coil...	25.00

BARROW REELS.



Made of fine Maple with heavy steel legs and reel strongly reinforced with strap steel. The Western Union Pattern is reinforced and braced with strong angle iron braces and is intended for heavy work.

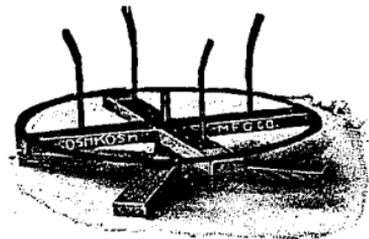
List No.	Mfgr's No.	Schedule BG.	Price Each
9572	899	Light	\$21.00
9573	900	W. U. Type	27.00
9574	901	Guard Pins, per Set	2.30

PAY OUT REEL.

Made of hard maple, well constructed and reinforced throughout.

Schedule BG.

List.No.	Mfgr's.No.	Price Each
3774	902	\$14.00



TACKLE BLOCKS.

Schedule B.J.



W. B. Co. 490-491-492.

W. G. Co. 571-572-573.

REGULAR INSIDE IRON STRAPPED BLOCKS.

List No.	Dimensions			For Dia. Rope, in.	Length Shell, in.	Iron Bushed			Improved Roller Bushed		
	Size Sheave inches					Single, Each	Double Each	Triple, Each	Single, Each	Double Each	Triple, Each
9949	1 3/4	x	1 1/2	3/8	3	\$0.70	\$1.30	\$1.75	\$1.10	\$2.00	\$2.90
9950	2 1/4	x	1 1/2	3/8	3 1/2	.75	1.45	2.00	1.15	2.20	3.15
9951	2 1/4	x	1 1/2	3/8	4	.85	1.60	2.15	1.20	2.25	3.25
9952	3	x	1 3/4	3/8	5	.90	1.75	2.25	1.25	2.35	3.50
9953	3 1/2	x	1 3/4	3/8	6	1.10	2.00	2.90	1.50	2.85	4.40
9954	4 1/4	x	1 3/4	3/8	7	1.30	2.40	3.50	1.70	3.35	5.00
9955	4 3/4	x	1 3/4	3/8	8	1.65	2.85	4.25	2.25	4.15	6.00
9956	5 1/2	x	1 3/4	3/8	9	1.85	3.40	4.75	2.50	4.70	7.25
9957	6 1/4	x	1 3/4	3/8	10	2.75	4.50	6.25	3.50	6.00	8.50
9958	7 1/4	x	1 3/4	3/8	11	4.45	7.50	10.65	5.30	9.20	13.20
9959	8	x	1 3/4	3/8	12	4.45	7.50	10.65	5.30	9.20	13.20
9960	9	x	1 1/2	3/4	13	7.00	10.50	15.00	8.15	12.80	18.45
9961	9 1/2	x	1 1/2	3/4	14	7.00	10.50	15.00	8.15	12.80	18.45
9962	10	x	1 1/2	3/4	15	8.00	13.00	18.00	9.25	15.50	21.75
9963	11	x	1 1/2	3/4	16	10.00	15.00	22.00	11.50	18.00	26.50

STEEL TACKLE BLOCKS. With Loose Side Hooks.

They are lighter than wood blocks and equally strong. As there is no danger of shells splitting, they are more durable.

List No.	Diameter Sheave inches	Dimensions		Length Shell, in.	Iron Bushed			Improved Roller Bushed			Phosphor Bronze of Metalline Bushed, Self lub'ring		
		For Dia. Rope, in.			Single, Each	Double Each	Triple, Each	Single, Each	Double Each	Triple, Each	Single, Each	Double Each	Triple, Each
9964	1 3/4	1 1/2	3/8	3	\$0.70	1.30	1.75	1.10	2.00	2.90	1.50	2.90	4.15
9965	2 1/4	1 1/2	3/8	3 1/2	.85	1.60	2.15	1.20	2.25	3.25	1.75	3.35	4.75
9966	2 1/4	1 1/2	3/8	4	.90	1.75	2.25	1.25	2.35	3.50	1.75	3.35	4.75
9967	3 1/4	1 3/4	3/8	5	1.10	2.00	2.90	1.50	2.85	4.40	2.20	4.00	5.80
9968	4 1/4	1 3/4	3/8	6	1.30	2.40	3.50	1.70	3.35	5.00	2.50	4.50	6.70
9969	4 3/4	1 3/4	3/8	7	1.65	2.85	4.25	2.25	4.15	6.00	3.25	5.70	8.50
9970	5 1/2	1 1/2	3/4	8	1.85	3.40	4.75	2.50	4.70	7.25	3.70	6.75	10.00
9971	6 1/4	1 1/2	3/4	10	2.75	4.50	6.25	3.50	6.00	8.50	4.75	8.50	12.50

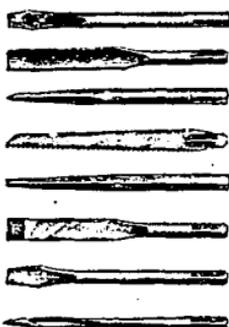
HOLLOW HANDLES AND TOOL HAFTS.

PATENT GIANT HOLLOW HANDLE.

With 10 Useful Tools for Office and General Use.

Illustration of the Giant Hollow Handle and Tapering Shank Tools.

The handle is Rosewood, six inches long, with patent screw top.



The tools are $2\frac{1}{2}$ inches long, with $\frac{3}{16}$ inch tapering shank. Being made of the best cast steel, tempered in oil, they are superior to anything of the kind heretofore offered. They include:

- | | |
|-----------------|----------------|
| 1 Screw Driver, | 1 Gimlet, |
| 1 Scratch Awl, | 1 Chisel, |
| 4 Brad Awls, | 1 Gouge, |
| | 1 Tack Puller. |

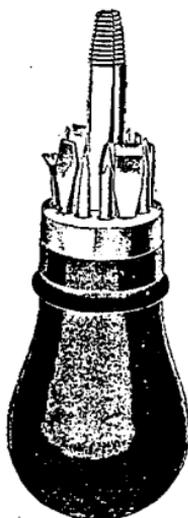
Schedule BG.

No. 2101.

List No.	Price Each
2101	\$1.50
2102 Large Size	2.00

TOOL HAFTS.

Made of Cocobola, Finely Finished with Nickel Plated Metal Cap.



No. 2103.



Each Haft contains twelve tools made of the best Tool Steel, tempered and finished in the most workmanlike manner.

- | | |
|------------------------|----------------|
| 1 Chisel, | 1 Tack Puller, |
| 1 Screw Driver, | 1 Pegging Awl, |
| 1 Reamer, | 1 Marking Awl |
| 6 Brad Awls, Assorted. | |

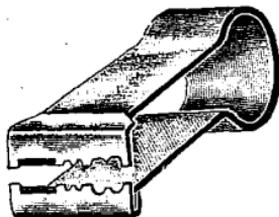
The complete tool is 4 inches in length and can be easily carried in the pocket. Being made of solid wood, it is not liable to split.

The tools stand upright in holes under the metal cap, facilitating selections.

Besides being very useful as a household article, it is also, by reason of its compactness and quality, most valuable for mechanic's use.

List No.	Schedule BG.	Price Each
2103		\$1.20

P. & G. WIRE SKINNER.



Does away with the dangerous pocket knife.

Skins wire clean at one stroke. Does not nick, mar or injure the wire. Skins or splits any kind of insulated wire, including weatherproof, rubber covered, braided, lead-covered, single and duplex wire, lamp cord, etc.

Supplied in nickel or oxidized copper.

List No. **Schedule BC.** Price Each
9503 P. & G. Wire Skinner.....\$2.00

BUNNELL ELECTRICIAN'S KNIFE.



No. 2055.



No. 2056.

A handy combination for electricians, combining an emergency screw driver and a knife blade for stripping wire. It is exceptionally well made, having a well tempered blade, strong joint, finely finished and a safety lock to keep the blade open, yet easily and quickly released when it is desired to close the blades.

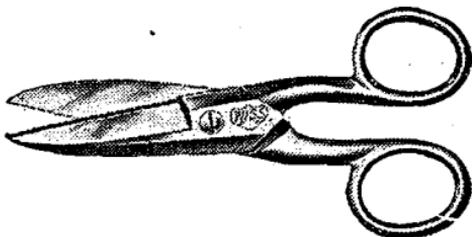
With Double Blade Knife, screw driver blade is locked when open, and to unlock and close the blade it is necessary to press down on the large knife blade. The single blade knife is also locked when open and to close it is necessary to press the spring on the back of the handle.

List No.	Schedule BC.	Price Each
2055	Single Blade	\$1.20
2056	Double Blade	1.50

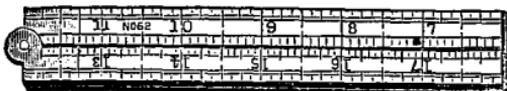
ELECTRICIAN'S SCISSORS.

Schedule BC.

List No.	Price Each
2052	5 inch Full Nickel Plate .....\$1.40
9602	5 inch Japanned Finish 1.10



No. 2052.



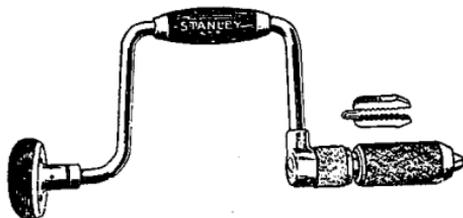
No. 7683.

NARROW BOX WOOD RULE.

Two Feet—Four Fold.

Schedule BC.

List No. **7683.** Square Joint, Brass Bound, 8ths, 10ths, 12ths, and 16ths— $\frac{3}{4}$ inch wide. Price Each.....\$0.80



No. 9619.

RATCHET BIT BRACE.

Highest material and workmanship place these tools in a class by themselves as to strength, durability and appearance.

Cocobolo heads and handles. Ball bearing, metal clad heads. Universal jaws. All metal parts heavily nicked.

List No.	Mfgr.	Schedule BG.	Price Each
9619	Type 901 with 8 inch Sweep.....		\$4.60
9620	Type 901 with 10 inch Sweep.....		4.80
9621	Type 901 with 12 inch sweep.....		5.00
9622	Type 901 with 14 inch Sweep.....		5.20
9623	Type 901 with 16 inch Sweep.....		5.50

AUGER BITS—Jennings Pattern No. 80.

Sizes, in 16ths	3	4	5	6	7	8	9	10
Prices, per doz.	\$6.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$6.00	\$6.00
Sizes, in 16ths.....	12	14	14	16	18	20	22	24
Prices, per doz.....	\$7.00	\$8.25	\$9.50	\$12.00	\$14.00	\$16.00	\$18.00	

EXPANSIVE BITS.

List No.	Mfgr's No.	Schedule BG.	Price per Doz.
9658	6	Small, cutting from $\frac{1}{2}$ to $1\frac{1}{2}$ inches....	\$18.00
9659	7	Large, cutting from $\frac{7}{8}$ to 3 inches....	26.00

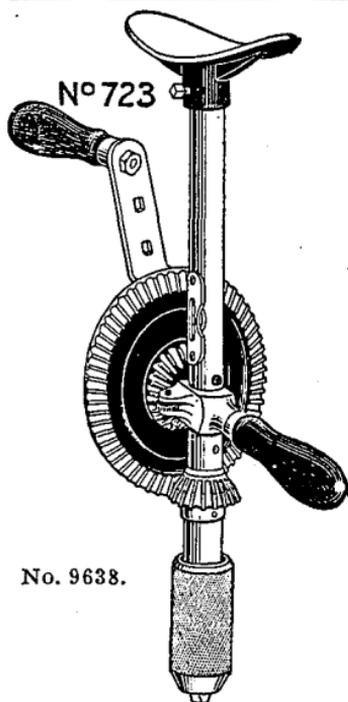
HAND DRILL.

Cocobolo wood handles, malleable iron frame. Hollow handle with screw cap containing eight wood drills ranging from $\frac{1}{16}$ to $1\frac{1}{64}$ inches in diameter. Removable side grip. Cut gears and ball thrust bearings. Three jawed chuck holding round shank drills up to $\frac{3}{16}$ inches in diameter.



No. 2335.

List No.	Schedule BG.	Price Each
2335	Model 1, Hand Drill	\$3.50
9632	Model 01, same as Model 1 but has plain hardwood handles instead of screw cap cocobolo handles.....	3.40



No. 9638.

STEEL FRAME BREAST DRILL

Highest grade workmanship material and general finish. Made with single or double speed. Single speed has a ratio of $4\frac{1}{2}$ to 1 and is adapted for small drills.

The double speed drill has a ratio of 3 to 1 for using small drills at fast speed and a second or "even" speed having a ratio of 1 to 1; to be used with carpenters bits and large size drills.

All bright parts are polished and nicked. Handles are of cocobolo. Has level set in frame; ball thrust bearings, as well as adjustable crank and breast plate.

Three jaw chuck takes round drills up to $\frac{3}{8}$ inches; interlocking jaws are adapted for taper shank bits while the Universal Jaws take drills up to $\frac{1}{2}$ inch as well as taper shank bits.

List No.	Mfr. No.	Schedule BG.	Price Each
9633	711	3 Jaw Chuck, 1 speed	\$7.50
9634	712	Interlocking Jaw, 1 speed.....	7.00
9635	713	Universal Jaw, 1 speed.....	7.00
9636	721	3 Jaw Chuck, 2 speed.....	6.00
9637	722	Interlocking Jaw, 2 speed.....	6.00
9638	723	Universal Jaw, 2 speed.....	5.50



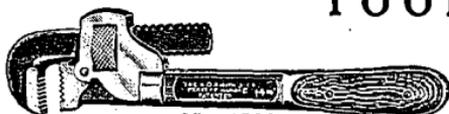
No. 9645.

S A W S.

Crucible Steel, Patent Ground and Tempered, Beech Handle, Full Polished.

List No.		Schedule BG.	Price Each
9639	28 inch Rip Saw		\$2.50
9640	30 inch Rip Saw		2.80
9641	32 inch Rip Saw		3.00
9642	34 inch Rip Saw		3.50
9643	36 inch Rip Saw		4.00
9644	26 inch Hand Saw		2.40
9645	14 inch Panel Saw		1.50
9646	16 inch Panel Saw		1.60
9647	18 inch Panel Saw		1.70
9648	20 inch Panel Saw		1.80
9649	22 inch Panel Saw		2.00
9650	24 inch Panel Saw		2.10

TOOLS.



**PERFECT HANDLE PIPE
WRENCH.**

No. 9583.

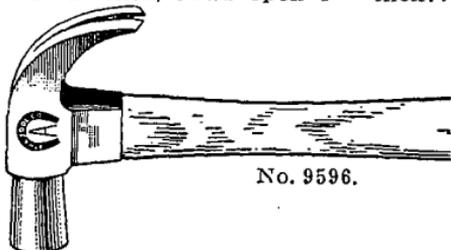
List No.	Schedule BG.	Price Each
9582	8 inch, takes up to $\frac{3}{4}$ inch Pipe	\$2.00
9583	10 inch, takes up to 1 inch Pipe	2.25
9584	14 inch, takes up to $1\frac{1}{2}$ inch Pipe	3.00
9585	18 inch, takes up to 2 inch Pipe	4.00
9586	24 inch, takes up to $2\frac{1}{2}$ inch Pipe	6.00

**PERFECT HANDLE
NUT WRENCH.**



No. 9587.

List No.	Schedule BG.	Price Each
9587	6 inch, Jaws open $1\frac{1}{16}$ inch	\$1.00
9588	8 inch, Jaws open $1\frac{1}{4}$ inch	1.20
9589	10 inch, Jaws open $1\frac{3}{8}$ inch	1.40
9590	12 inch, Jaws open $2\frac{3}{16}$ inch	1.80
9591	15 inch, Jaws open $2\frac{3}{4}$ inch	2.40
9592	18 inch, Jaws open $3\frac{1}{8}$ inch	3.20
9593	21 inch, Jaws open 4 inch	3.90



No. 9596.

**ADZE EYE NAIL
HAMMER.**

Polished Finish—Hickory
Handle.

List No.	Mfr's No.	Schedule BG.	Price Each
9594	40	Weight 1 pound 2 ounces	\$2.00
9595	41	Weight 1 pound 4 ounces	1.50
9596	41 $\frac{1}{2}$	Weight 1 pound	1.44
9597	42	Weight 13 ounces	1.36
9598	43	Weight 7 ounces	1.28
9599	43	Weight 5 ounces	1.28

HACK SAW FRAME.

Adjustable for blades from 8 to 12 inches long. Finely finished in polished nickel. Blades may be faced in four directions.



No. 9600.

List No.	Schedule BG.	Price Each
9600	Depth under back $2\frac{3}{4}$ inches	\$2.20
9601	Depth under back $3\frac{3}{8}$ inches	2.30

HACK SAW BLADES. Highest Grade Steel.

List No.	Schedule BG.	Price per doz.
2107	8 inches long	\$1.00
2108	9 inches long	1.20
2109	10 inches long	1.30
2111	12 inches long	1.40

SCREW DRIVERS.

Schedule BG.

ELECTRICIANS' SCREW DRIVER.

Gun Metal finished rod and ferrule. Hammered tool steel blade. Black rubberoid handle.

List No.	Blade Length	Price Each	List No.	Blade Length	Price Each
5744	2 in.	\$0.20	5748	6 in.	\$0.40
7545	3 in.	.25	5750	8 in.	.50
5746	4 in.	.30	5752	10 in.	.65
5747	5 in.	.35	5753	12 in.	.80

"HYVOLTAGE" SCREW DRIVER.

Have been tested in actual service on 5000 volt lines without breaking down. Will not warp, expand or shrink and are stronger than wood.

List No.	Blade Length	Price Each	List No.	Blade Length	Price Each
9532	2 in.	\$1.00	9535	5 in.	\$1.00
9533	3 in.	1.20	9536	6 in.	2.00
9534	4 in.	1.40			

RUBBER COVERED SCREW DRIVER.

An insulated screw driver for all kinds of electrical and automobile work.

List No.	Blade Length	Price Each
9537	3 inch	\$0.70
9538	6 inch	1.00

PERFECT HANDLE SCREW DRIVER.

A one-piece drop forging. Can be used as a hammer to start screws into wood or used with a hammer to loosen screws.

List No.	Blade Length	Price Each	List No.	Blade Length	Price Each
9539	2 in.	\$0.60	9544	6 in.	\$1.00
9540	2½ in.	.65	9545	7 in.	1.20
9541	3 in.	.70	9546	8 in.	1.40
9542	4 in.	.75	9547	10 in.	1.70
9543	5 in.	.80	9548	12 in.	2.00

"BENJAMIN" FRICTION DRIVE SCREW DRIVER.

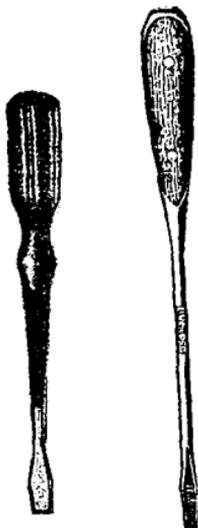
The spring in the handle releases the clutch when pressure is removed, and on reverse motion the hand, with the cap, is returned to original position without shifting. This free cap movement does away with chafing and blistering of the skin.

Standard Blade.

List No.	Blade Length	Price Each	List No.	Blade Length	Price Each
9549	3 in.	\$0.25	9552	6 in.	\$0.40
9550	4 in.	.30	9553	8 in.	.45
9551	5 in.	.35			

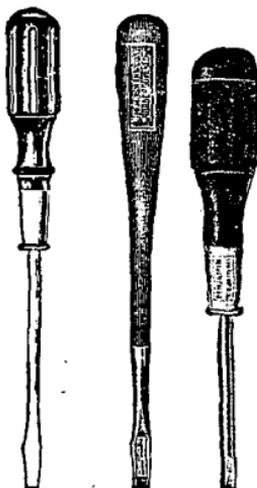
Cabinet Blade.

List No.	Blade Length	Price Each	List No.	Blade Length	Price Each
9554	3 in.	\$0.25	9557	6 in.	\$0.40
9555	4 in.	.30	9558	8 in.	.45
9556	5 in.	.35			



No. 9534.

No. 9544.



No. 5748.

No. 9538.

No. 9550.

YANKEE RATCHET SCREW DRIVER.



No. 2381.

Can be used as a fixed blade screw driver as well as a right and left hand screw driver.

Schedule BG.

List No.	2377	2378	2379	2380	2381	2382
Blade length, inches...	2	3	4	5	6	8
Prices, each	\$0.60	\$0.70	\$0.80	\$0.90	\$1.00	\$1.20

YANKEE SPIRAL RATCHET SCREW DRIVER.

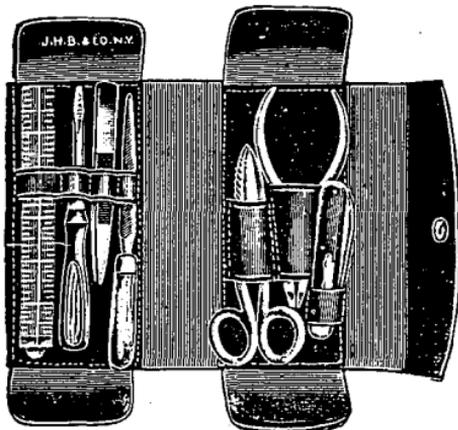


NO. 2383.

Right or left hand ratchet or rigid at variable lengths. Furnished with 3 forged steel blades.

List No.	Schedule BG.	Price Each
2383	Yankee Spiral Screw Driver	\$3.00

ELECTRICIANS' POCKET TOOL KIT.



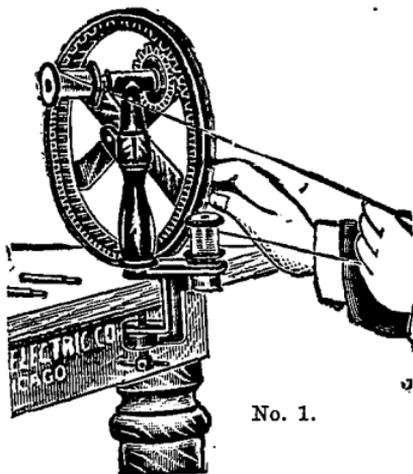
This outfit is indispensable to the practical electrician. The case is made of the best quality of russet leather, hand stitched. It is of convenient pocket book style with firm metallic clasp, and measures 3x6 inches. It contains the following tools, viz: 1 Electricians' knife, 1 2-foot Brass Bound Box Wood Rule, 1 pair Nickel Plated 5-inch Pliers, 1 File, 1 pair Tweezers, 1 pair Electrician's Shears and 1 Screw Driver.

List No.	Schedule BC.	Price Each
2045	Complete Kit	\$10.00

SEPARATE PARTS FURNISHED AS FOLLOWS:

2046	Case only	\$4.00
2047	Electricians' Knife	1.50
2010	Pliers	1.50
2050	File	.60
2051	Tweezers	.60
2052	Shears	1.40
2053	Screw Driver	.40
7683	2 foot Brass Bound Box Wood Rule	.80

MAGNET WINDER No. 1.



No. 1.

The cut shows a Magnet being wound from a spool of wire which is supported on a stud in a clamp. A hub like that shown lying on the table is used to support the magnet, one end of the hub screwing on the spindle of the machine, the other end screwing in the thread in the magnet core. The spool and the magnet hub are interchangeable. To unwind a magnet it is placed in the stud shown occupied by the spool, and the latter is screwed on the spindle. The operation of winding is already shown by the illustration. It is finished in enamel and striped.

With each winder we furnish a wooden spool, also one $\frac{9}{32}$ and one $\frac{5}{32}$ hub.

Schedule BG.

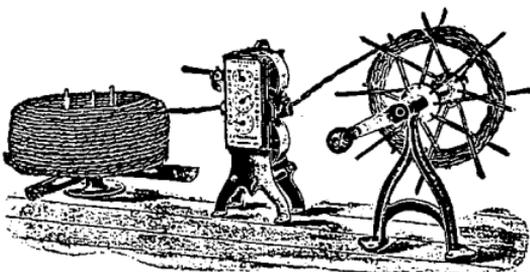
List No.	Price Each
9816 No. 1—Complete	\$5.00
9817 Extra Wooden Spools..	.20
9818 Extra Hubs to order...	.75

WIRE MEASURING OUTFIT.

The wire measurer quickly and accurately measures all wires from No. 6 to No. 40 inclusive.

It can also be used for measuring lamp cord, rope, tape, etc.

It is made so that it may be fastened to either the counter or side wall, and occupies but little space.



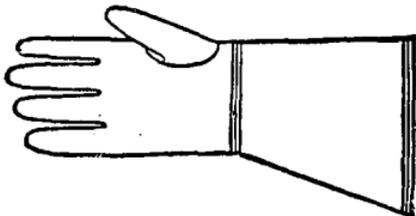
No. 7737.

No. 7738.

Schedule BG.

List No.	Price Each
7737 Folding Reel only	\$ 6.00
7738 Measuring Machine only	21.00
7739 Wire Winder only	18.00

RUBBER GLOVES.—For Protection From Shock.



These gloves are designed to prevent the frequent and often fatal accidents occurring to linemen from shock while handling electric light wires or other wires in contact with the same, and also the dangers of line work from lightning in stormy weather.

The gloves are also useful in handling the strong acids of batteries, being impervious to the same.

Schedule BG.

List No.	Price per pair
1581 Extra Heavy Long Acid Glove, with Gauntlet.....	\$5.00
1583 Medium Weight Half Long Glove, with Gauntlet.....	4.50

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TELEGRAPH CODE.

Telegraph inquiries received by us in code will be replied in the same manner, not otherwise.

QUOTATIONS.

Abaft	At what price can you furnish.....?
Abash	At what price and how soon can you furnish.....?
Abess	Wire quotations on
Abduce	Quote by return mail on.....
Abet	Quote us F. O. B.....

ANSWERS ON QUOTATIONS.

Babel	We quote for immediate acceptance.....
Baize	Quotation is F. O. B. New York on.....
Banns	Quotation is F. O. B.
Balm	Not understood, send fuller particulars.

ORDERS.

Candor	Ship immediately by express.....
Canica	Ship immediately by express C. O. D.....
Canine	Ship immediately by freight.....
Canker	Ship immediately by freight with sight draft attached to bill of lading.....
Canon	Send immediately by mail.....
Canter	Duplicate our order
Canter	Enter our order per your quotation of.....
Canto	Enter our order for.....
Caper	Enter order, shipping directions to follow, for.....
Capon	Enter order if you can ship within.....
Capsule	Cancel order for

ANSWERS ON ORDERS.

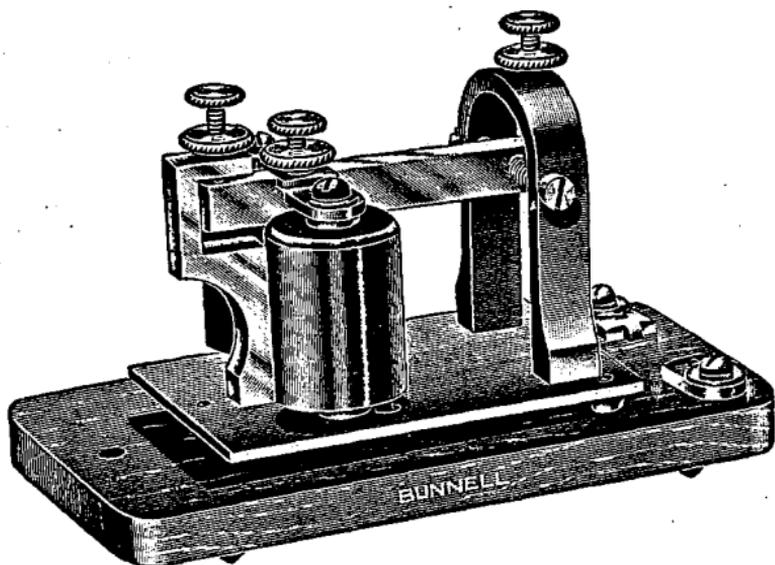
Dean	Cannot accept order at price named for.....
Debate	Too late to cancel order for.....
Decade	We accept your order for shipment in.....
Decant	We have in stock for immediate shipment.....
Declaim	If ordered at once we can ship.....
Decoy	We cannot change order now.
Deduce	Referring to your order for.....

REGARDING SHIPMENTS.

Eagle	How soon can you ship.....?
Eaglet	Wire us if you cannot ship immediately our order..
Earl	Have you in stock for immediate shipment.....?
Earth	If ordered immediately, how soon can you ship....?
Eaves	Have you shipped our order.....?
Ebony	What have you shipped on our order.....?
Eclipse	When will you ship our order.....?
Eddy	By what route was our order shipped.....?
Eden	Hold shipment of our order.....
Edict	Ship what you can and balance soon as possible on our order
Edify	Ship the whole order in one lot.
Educe	Trace immediately our order.....
Egotist	We have shipped all of your order except.....
Egress	We have shipped part of your order and will send balance in
Eject	Your order was shipped by.....
Elate	We have started tracer on your order.....

THE GHEGAN Alternating Current Sounder

Solves the Local Battery Question



Patented.

Telegraph Engineers pronounce it the most important telegraph invention in many years.

Simple and perfect. Nothing to get out of order.

Saves Money, Saves Trouble.

Extensively used on Railway and Commercial Telegraphs.

Adapted to any 110 volt, 60 cycle circuit.

Looks and sounds like the regular Bunnell instrument.

J. H. BUNNELL & Co.

The Telegraph Instrument Makers

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