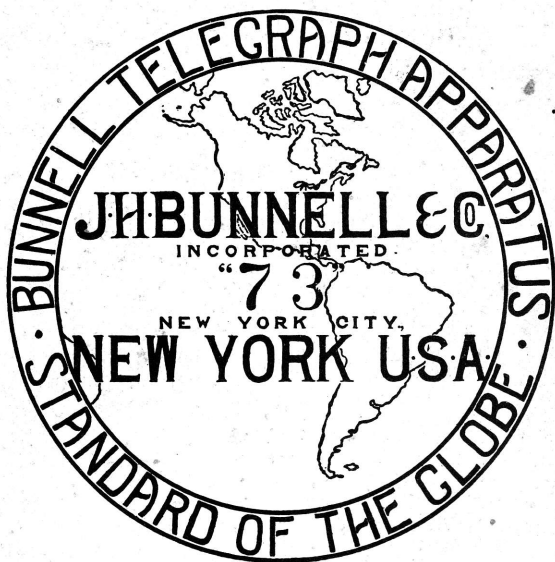


J. J. GHEGAN,
PRESIDENT

C. E. GRAHAM,
VICE-PRESIDENT



920 ESSEX STREET
BROOKLYN, N. Y. 11208

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

Copyright 1918.



... and Abe Lincoln asked
"Anything new, Jesse?"

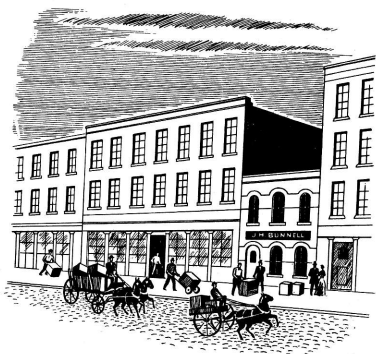
The period was the War Between the States . . . the place was the telegraph office of the War Department in Washington . . . and the man to whom these words were addressed was an official telegraph operator named Jesse Bunnell.

Recently discovered letters of an officer attached to Lincoln's staff tell how the President would walk quietly into the telegraph office, perch himself on one corner of Jesse Bunnell's desk and listen in thoughtful fascination to the urgent clack-click of the sounder as it tapped out messages from the Union forces. Then he would ask softly—with the gnawing ache of anxiety showing deep in his eyes—"Anything new, Jesse?"

It was thus—in the hot crucible of war where the future of our nation might well have hung on the accu-



rate transmission of a single word—that the important principles of precision and dependability in equipment were etched on the mind of the founder of J. H. Bunnell & Company.



And these were the principles that became the core of Jesse Bunnell's business philosophy when he established himself as a small manufacturer of bells, buzzers, telegraph keys, and sounders in a little shop in New York City in 1878. These were the principles—coupled with a firm determination never to compromise in applying them.

Recognition of Bunnell quality followed quickly . . . and in 1880 the

once small establishment had grown to the point where a complete reorganization was necessary to maintain the standards for which—even then—the name Bunnell had become nationally known. The new organization was called J. H. Bunnell & Company and engaged in the large scale manufacture of telegraph apparatus, fire alarm controls, bells, batteries, and miscellaneous electrical equipment.

The passing years brought increasing acknowledgment of Bunnell quality and progressive thinking in the communications equipment field. During the Spanish-American War, Bunnell equipment was used extensively by the U. S. government. During World War I, Bunnell units were standard for the Signal Corps. When—in the '20's—the art of telegraphy began to undergo radical changes, the Bunnell Company undertook a program of research to discover how the speed and operational economy demanded in modern equipment could be achieved without affecting the

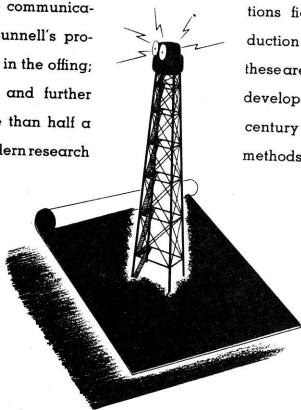
quality that had been Bunnell's watchword for more than sixty years. So successful was this program that up to the beginning of World War II Bunnell had been called upon to provide every type of standard communications unit but one used in the then modern telegraph office, both in this country and abroad.



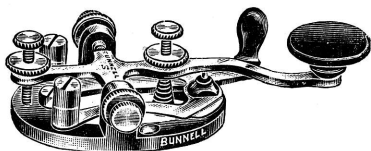
And this was not all. Major communications companies, and organizations in related fields, began to depend more and more on Bunnell for special equipment made to their own specifications—often prepared by Bunnell research and production engineers from little more than a general idea of the purpose to be served and the basic nature of the unit. This phase of Bunnell's operations soon reached a point where it greatly exceeded the manufacture of standard items.

Bunnell research and production techniques have never been allowed to lose their keen edge. As the years developments in the communication incorporated in Bunnell's protant advances are in the offing; for practicability, and further laboratories. More than half a combined with modern research

brought new and startling de-
tions field they were quickly
duction program. Other impor-
these are being examined, tested
developed in Bunnell's research
century of traditional quality
methods are ready to serve you.



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 Im-

proved Insulation, Lip for "Bug" Wedges and other valuable improvements—**The Acme of Perfection in Steel Lever Keys.**

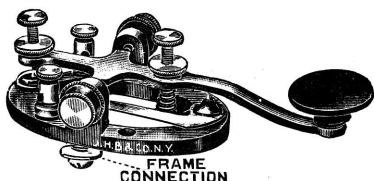
Schedule BB.

List No.

Price Each

9050 Triumph Key, Polished Brass Body.....

9051 Triumph Key, Full Nickel Plated.....



No. 9037.

**BUNNELL
OPEN CIRCUIT KEY.**

Front and Back
Contact.

ly recommended. Even though a closed circuit is maintained for communication in either direction no current is being used except when key is depressed. Each individual station supplies its own current.

Popular with commercial companies and becoming more so with the individual.

Schedule BB.

List No.

Price Each

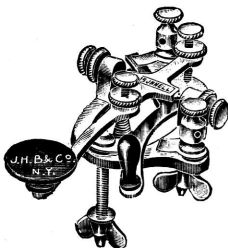
9035 O. C. Leg Key, Polished Brass Body.....

9036 O. C. Leg Key, Full Nickel Plated.....

9037 O. C. Legless Key, Polished Brass Body.....

9038 O. C. Legless Key, Full Nickel Plated.....

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.

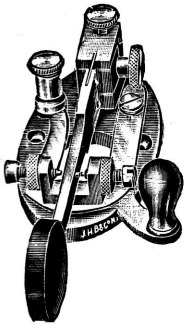
With circuit-closer in "closed" position, the battery cannot be put to line or short circuited by pressing down on key lever, hence leaving a book or other heavy object on key does not waste the battery, but the relay is always in circuit ready to receive signals.

Schedule BB.

List No.

Price Each

6215



(Patented)
No. 5876.

THE DOUBLE SPEED KEY.

Improved Contact Holders.

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.

List No.

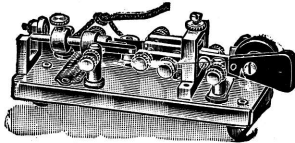
Schedule BD.

Price Each

5876	Style W Key	
5879	Portable Base only	
5880	Wedge and Cord only	

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.

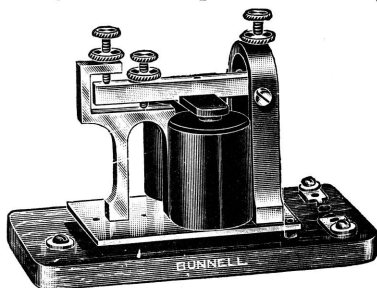
Schedule BD.

List No.

Price Each

9059	Model 4 Enamel Base.....	
9060	Model 4 Nickel Plated Base.....	
9061	Upright Model	

THE "1892" GIANT SOUNDER.
With Large Magnets and Important New Improvements.



No. 515.

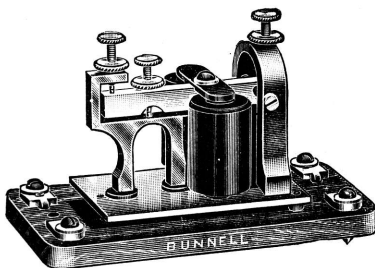
These sounders have aluminum or brass levers, and with one cell of local crowfoot battery will give a loud clear and quick stroke, equal to the best of any other form using two cells.

They are popular with the Postal Telegraph Company and have been standard instruments for many years.

Schedule BB.

List No.	Price Each
515 Wound to 4 Ohms.....	
516 Wound to 20 Ohms.....	

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



No. 9109.

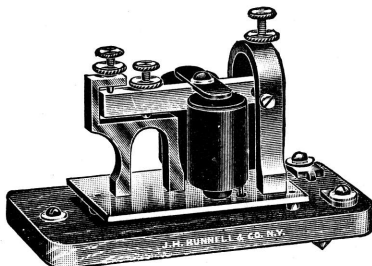
Has hardened silver contacts, W. U. Clamping Binding Posts and Aluminum Lever.

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

Schedule BB.

List No.	Price Each
9109 Quad Repeating Sounder, 4 Ohms.....	
9110 Quad Repeating Sounder, 20 Ohms.....	

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.

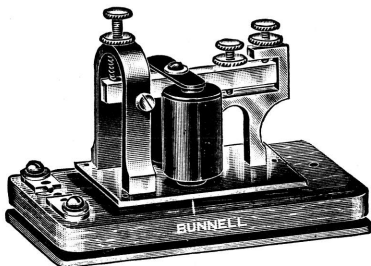
Sounders wound to 4 ohms can be used on lines up to $\frac{1}{4}$ mile in length; while 20 ohm Sounders will operate on Main Lines up to 15 miles in length, without using a relay.

Schedule BA.

List No.	Price Each
500 Giant Sounder, Polished Brass Finish, 5 Ohms.....	
9076 Giant Sounder, Nickel Plated, 5 Ohms.....	
501 Giant Sounder, Polished Brass Finish, 20 Ohms.....	
9077 Giant Sounder, Nickel Plated, 20 Ohms.....	

ALUMINUM LEVER SOUNDER.

With Patent Aluminum Resonator Base.



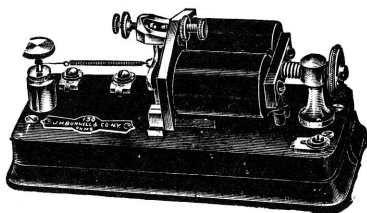
No. 502.

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.....	
503 Wound to 20 Ohms Resistance.....	

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.

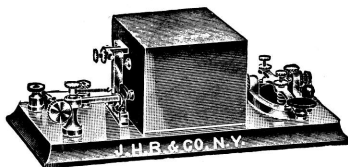
We have designated it the C. Q. A. or Champion Quick Adjustment Relay because with our new magnet adjustment the magnets may be instantly moved to any desired distance from the armature. The armature tension spring adjustment is also simplified and improved. The C. Q. A. Relay is very compact, the dimensions 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	
9071 Resistance, 150 Ohms, Nickel Plated	
9072 Resistance, 250 Ohms, Polished Brass Finish	
9073 Resistance, 250 Ohms, Nickel Plated	
9074 Resistance, 300 Ohms, Polished Brass Finish	
9075 Resistance, 300 Ohms, Nickel Plated	

BOX SOUNDING RELAY AND STEEL LEVER KEY COMBINATION SET.



No. 542.

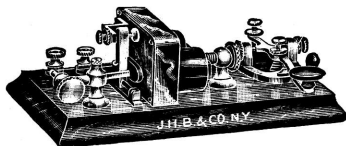
Of best construction for Loud, Clear Sound, without Local Sounder.

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.....	
543 With Key on Base, Wound to 250 Ohms.....	
545 Without Key on Base, Wound to 150 Ohms.....	
546 Without Key on Base, Wound to 250 Ohms.....	

BARCLAY BOX RELAYS.



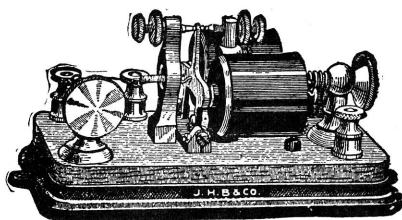
No. 404.

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	
9083 250 Ohms with Key and Local Contacts	
405 150 Ohms with Key, without Local Contacts.....	
9084 250 Ohms with Key, without Local Contacts.....	
426 150 Ohms without Key, with Local Contacts	
9085 250 Ohms without Key, with Local Contacts	
427 150 Ohms without Key or Local Contacts	
9086 250 Ohms without Key or Local Contacts	



No. 575.

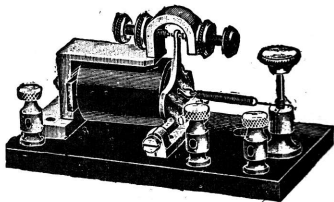
THE "1900" MODEL PONY RELAY.

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	
576	Wound to 50 Ohms	
577	Wound to 75 Ohms	
578	Wound to 100 Ohms	

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	
541	20 Ohms Resistance	
6222	50 Ohms Resistance	

HUDSON WORD COUNTER.

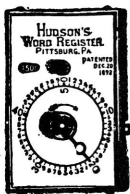
For counting number of words written on a typewriter.

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.)

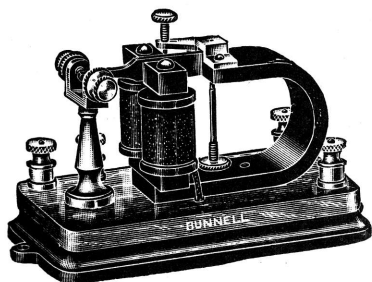
Any number of words may be counted without re-setting by simply taking note of each 1,500 words and adding thereto the number registered when the work is completed.

Directions for attaching accompany each machine.



List No.	Schedule BA.	Price Each
6211	

POLAR RELAYS:



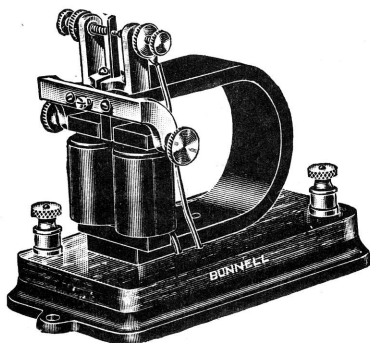
No. 555.

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.

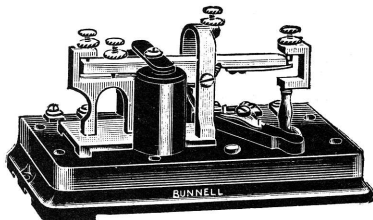
Schedule BA.

List No.

Price Each

555	No. 1 Polarized Relay, 20 Ohms.....
556	No. 1 Polarized Relay, 50 Ohms.....
557	No. 2 Polarized Relay, 50 Ohms.....
558	No. 2 Polarized Relay, 100 Ohms.....

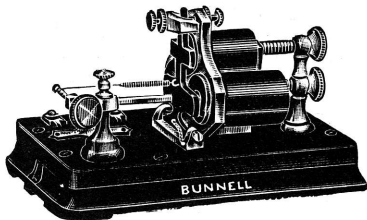
AUTOMATIC TELEGRAPH REPEATERS.



No. 9091.

Weiny-Phillips Transmitter.

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.



No. 9082.

Weiny-Phillips Relay.

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 slate base with enameled iron surbase.

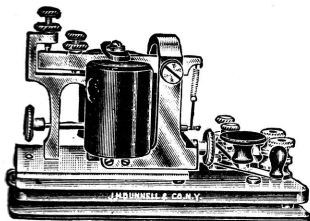
Schedule BB.

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

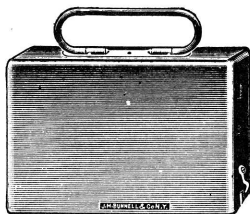
ARMY FIELD TELEGRAPH SET.

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 $3\frac{1}{2}$ inches deep, by 4 inches wide.



No. 598.



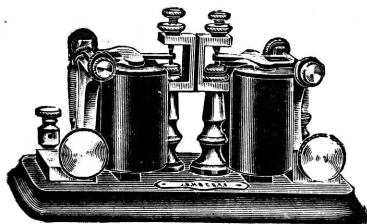
Case.

Schedule BA.

List No.

Price Each

- | | | |
|-----|-----------------------------------|--|
| 597 | 150 Ohm Field Set, with Case..... | |
| 598 | 150 Ohm Instrument only..... | |

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.

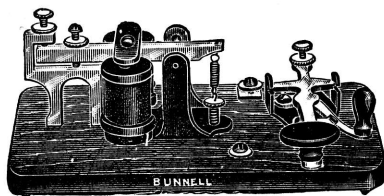
List No.

Price Each

- | | | |
|-----|--------------------------------------|--|
| 540 | Balanced Double Relay, 150 Ohms..... | |
|-----|--------------------------------------|--|

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.

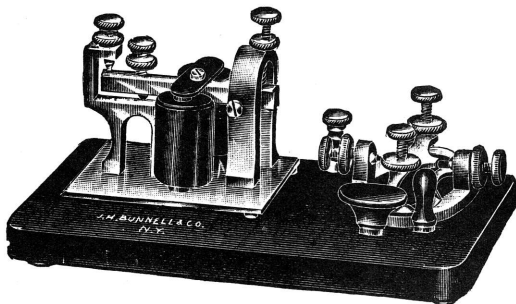
When it is desired to operate two or more instruments on one line with Bluestone Battery, the "Circuit-closers" should be left on the keys.

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
436	Beeko Instrument only, wound to 5 Ohms.....
437	Beeko Instrument only, wound to 20 Ohms.....

BUNNELL MINIATURE COMBINATION SET.



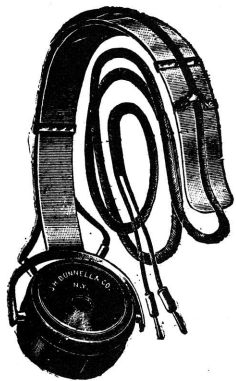
No. 444 (Actual Size).

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.....	
9420	Miniature Combination Set, 20 Ohms.....	
9421	Miniature Combination Set, 150 Ohms.....	



No. 6230.
Cut $\frac{1}{4}$ 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.

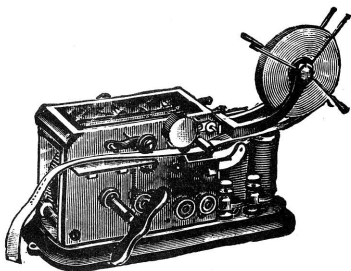
The headpiece contains a Miniature Bunnell Sounder, the strokes of which can be adjusted to suit.

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.....	
6231	Wound to 20 Ohms.....	
6232	Wound to 150 Ohms.....	



No. 645

INK WRITING REGISTERS.

**Latest Model.
All Brass Enclosed**

**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.

Nos. 645-646 Registers wound to any resistance above 50 Ohms at slight additional cost; however, for any resistance below 50 Ohms the list price will remain the same.

Where registers with more than two pens are required special prices will be quoted on request.

Schedule BB.

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

AUTOMATIC PAPER WINDER.

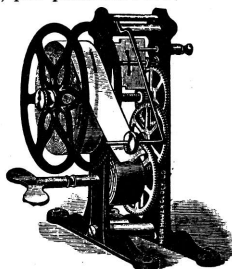
Made in Three Different Finishes.

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

Schedule BB.

List No.	Price Each
648 Japanned, Striped in Gilt...	
649 Bronze, Hand Finished.....	
650 Bronze, Nickel Plated.....	

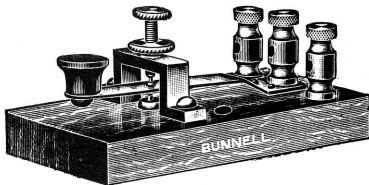
In ordering state width of paper to be used.



No. 648

STRAP KEYS.

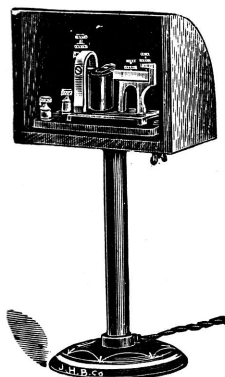
Made with heavy cast brass Bridge and Strap, mounted on a finely finished Mahogany Base.



No. 1571.

Schedule BB.

List No.	Price Each
1579 Open Circuit (Bot- tom Contact).....	
1570 Closed Circuit (Top Contact)	
1571 Double Circuit (Top and Bottom Con- tacts)	



No. 619.

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 BB.

List No.	Price Each
619 Without Sounder.....	

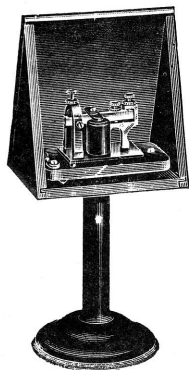
ACME PORTABLE RESONATOR.

(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.)



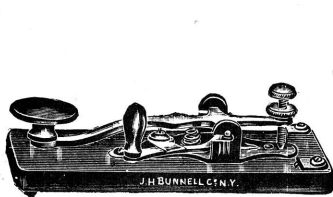
No. 7972.

Schedule BB.

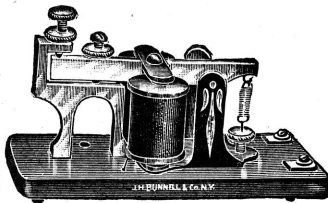
List No.	Price Each
7972 Without Message Rack.....	
7973 With Message Rack.....	

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	

Postage weight, 1 pound.

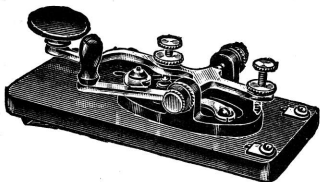
BEEKO SOUNDER.

List No.		Price Each
5874	5 Ohms	
6220	20 Ohms	

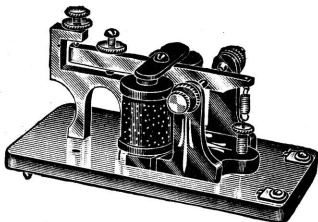
Postage weight, 2 pounds.

"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	

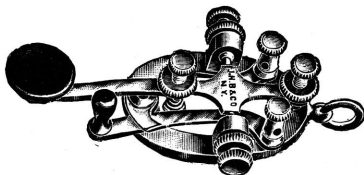
Postage weight, 1 pound.

"DANDY" SOUNDER.

List No.		Price Each
776	5 Ohms	
777	20 Ohms	

MINIATURE BUNNELL INSTRUMENTS.

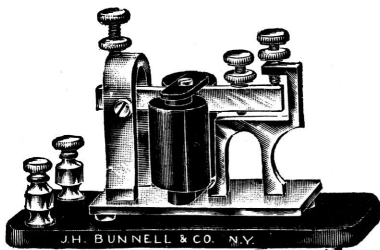
Gold
Lacquered
Body.
Nicked
Lever.



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.....
441	Miniature Key with Pin.....
442	Miniature 5 Ohm Sounder.....
9103	Miniature 20 Ohm Sounder.....
9104	Miniature 150 Ohm Sounder.....

Sent by sealed Registered Mail on receipt of price.

