

**KELLOGG SWITCHBOARD AND SUPPLY COMPANY  
CHICAGO, ILLINOIS**



**Kellogg Catalog 92  
March 10, 1936  
For Magneto Telephone Systems**

Produced in a pamphlet form and contained a listing of Kellogg's magneto products for the period. This scan version has omitted the outside plant, power plant and tool portions, as these were actually products produced by other companies and resold by Kellogg Supply. The date of this catalog has been assumed from the part number of "CAT. 92 10M 3-10-6 I.S.B." on the outside back cover. The year has been assumed because of the telephone types depicted fit the year 1936. Also Kellogg moved from West Adams Street location to a new facility on Cicero Ave. in 1937 and a hand written notation of the new address is on the covers of this copy.

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**SWITCHBOARDS  
TELEPHONES  
APPARATUS  
SUPPLIES**



*New York  
6650 South Branch  
Chicago 38, Ill.*

**CATALOG NUMBER 92**

**KELLOGG**

**CHICAGO**

# Customer Information

## Guarantee

We guarantee goods of our own manufacture against manufacturing defects for a period of one year from date of invoice when such goods prove defective while being used for the purpose for which they were manufactured. No goods should be returned and no credit will be allowed unless a return permit has been obtained before shipments.

All line supplies listed in this catalog carry the guarantees of their respective manufacturers. We guarantee these products to the extent that we will replace defective products or their component parts after inspection by us or our suppliers, within 90 days from date of purchase.

It is our desire and intent to furnish first class materials at all times, and we insist on rigid manufacturing inspections by our suppliers.

Under this guarantee we will make replacement of defective products and parts only and will not be liable for any charges or costs incurred in the removal or replacement of the defective products or parts.

## Terms

Our terms are 30 days net from date of invoice with the exception of a few items of construction material which carry a discount for cash within ten days from date of invoice. The Terms are clearly noted on acknowledgment of order. Purchasers unknown to us should have satisfactory bank or commercial references accompany their first order when it is desired to have same shipped on open account. A remittance with first order will avoid the delay incident to the necessary credit investigation. Goods may be forwarded by freight with sight draft attached to bill of lading or by express collect on delivery, if a remittance, sufficient to pay express charges both ways, accompanies the order.

## Orders

So that we may give you better service, we suggest that order blanks be used. We will be glad to furnish you a supply. In case blanks are not available, it is better to write the items on a sheet separate from your letter; being sure that your name is written on the sheet. The catalog numbers of items should always be given wherever possible.

In ordering line supplies, give catalog numbers of the items required together with a brief description. Shipments on orders incorrectly written or lacking numbers and description may be delayed until full information is received. While every effort is made to insure correct shipments, we cannot be responsible for errors in the transmission of orders by telephone and telegraph, or for duplicate shipments made on confirming orders which are not so marked. We suggest that confirming orders be mailed promptly, for this frequently permits us to correct errors in transmission before the shipment is made.

## Prices

The prices quoted herein do not include any Excise, Sales, Use, or similar taxes or duties. All such taxes and duties will be added on invoices, where applicable, as additional charges.

Prices are subject to change without notice.

All unpriced orders will be invoiced at lowest prevailing prices for the quantity ordered.

On priced orders which cannot be filled at prices specified, due to change, we will invoice at lowest prevailing prices.

On all apparatus of Kellogg manufacture, a service charge is added to the F. O. B. Chicago prices when delivered from Kellogg branch warehouses. This charge partly covers the cost of transportation to the warehouse, the cost of additional handling and the cost of carrying in stock for immediate delivery. There is no extra charge on shipments

from Chicago. A stated flat service charge is made on telephones but the service charge on other Kellogg manufactured items is as follows:  
Kansas City (Mo.) stock.....2% San Francisco stock.....5%

## Changes and Cancellations

Owing to the special stock conditions, etc., changes and cancellations of orders once entered cannot be made without our consent and on terms that will make good all loss and expenses incurred in preparing the order for shipment.

## Shipments

Shipments are made according to directions received with orders. In their absence we will use our best judgment in making selections of routes. State whether we shall ship by freight, express or parcel post. It is our endeavor to ship standard goods immediately upon receipt of orders, and customers will greatly assist us in making prompt shipments if they will order by catalog number to save delay. Also please mention number of the catalog.

## Claims for Breakage and Non-Delivery

Our goods are carefully packed by experienced packers, and each article is checked three times before reaching the packing case.

Receipts from the transportation company clearly specify that shipments were received in good condition and we, therefore, do not hold ourselves responsible for any loss or damage sustained in transit.

Claims for non-delivery, etc., should be made promptly against the transportation company.

If we are notified of such claims, we will gladly lend our assistance to secure a satisfactory adjustment for the customer.

On parcel post shipments claims are to be made to us as we insure the material and make adjustments.

## Claims

Claims for shortage should be made promptly upon receipt of goods and should be accompanied by the packer's ticket which is placed in each case, or freight receipt with agent's notation covering shortage. No claims will be entertained five days after receipt of shipment.

Claims for clerical errors should be accompanied by a reference to our invoice number.

## Returning Goods

No goods should be returned for credit or exchange without receiving a written authorization from us.

Long experience has shown that proper understanding of each case saves transportation expense, delays and misunderstandings and avoids returning satisfactory goods because of mistaken impression, etc.

Name and address of shipper should be marked plainly on all packages returned for credit, exchange or repairs, and a proper notice of shipment should be sent to the Kellogg Company. We stand ready at all times to rectify mistakes we make, and without cost to our customers, but under no circumstances should goods be returned without first consulting us for shipping instructions.

No credit for labor expense involved in the repair of defective or damaged goods will be allowed. If goods are defective, the measure of damage is the price of the defective goods only.

## Marine and Parcel Post Insurance

Unless otherwise directed, we reserve the right to insure against non-delivery all shipments made by steamer or parcel post, for which a nominal charge will be made to cover cost of this service.

# Kellogg

1926

# KELLOGG

**SWITCHBOARDS**

**TELEPHONES**

**APPARATUS**

**SUPPLIES**



**CATALOG NUMBER 92**

**KELLOGG** Switchboard and Supply **COMPANY**  
1066 West Adams Street Chicago, Illinois

WAREHOUSES: CHICAGO *6650 So. Cicero Ave. Chicago 38, Ill.* KANSAS CITY

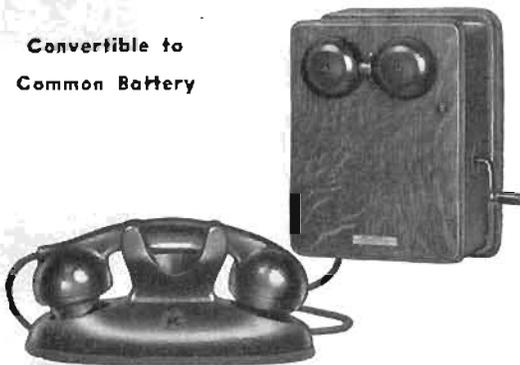
SAN FRANCISCO

# MAGNETO MASTERPHONES

No. 700-A

Desk **Masterphone**

Convertible to  
Common Battery



Possessing all of the latest achievements in modern telephone instruments, the Masterphone meets every requirement for good transmission and reception, low maintenance costs, durability and beauty.

The Kellogg No. 700-A Masterphone consists of a molded Kellite handset and cradle base. The case with which transmitter and receiver units can be changed, and hookswitch adjustments made, insure good instrument performance at all times.

All Masterphones utilize the same all-Bakelite handpiece and come equipped with the Kellogg NON-POSITIONAL transmitter. When used with any standard magneto bell box arranged for the conventional three-conductor circuit, it forms a complete desk set telephone. However, the Masterphone can at any time be changed to full common battery service with the TRIAD anti-sidetone circuit by simply changing a cord.

## Standard Desk Set Boxes

**Code No. F2328** 3 Bar Set 1000 OHM Ringer

The No. F2328 desk set box is recommended for business and residence service. It can be furnished with a biased ringer for 4-party negative and positive pulsating ringer when desired.

**Code No. F2326** Harmonic 3 Bar Set 1000 OHM Ringer  
30-42-54-66 Cycles

The No. F2326 desk set box is identical to the No. F2328 except equipped for 4-party harmonic ringing systems. In ordering, please specify number of cycles on which ringer is to operate.

**Code No. F2361** Heavy Duty 5 Bar Set 1600 OHM Ringer

The No. F2361 desk set box is recommended for use on long heavily loaded rural lines. It can be furnished with a 2500-ohm ringer instead of 1600-ohm when specified.

**Code No. F2370** Heavy Duty 5 Bar Set 1600 OHM Ringer  
With Condenser

The No. F2370 desk set box is similar to the No. F2361 except equipped with a 1/2-MP. condenser in the receiver circuit.

This condenser keeps ringing current from passing through the receiver when it happens to be off the hook. On long farm lines equipped with these phones, it is possible to "ring through" even though a number of receivers are down. If desired, a 2500-ohm ringer can be furnished instead of 1600-ohm.

**Code No. F2374** Heavy Duty 5 Bar Set 1600 OHM Ringer  
With Condenser and Secret Calling Button

The No. F2374 desk set box is similar to No. F2370 except provided with a secret calling feature, consisting of a push button and a special generator capable of delivering two kinds of ringing current, pulsating and alternating. When the button is normal the generator delivers alternating current to the line ringing all of the bells and throwing the "drop" at Central. By pressing the button while turning the crank, pulsating current is delivered which throws the "drop" at central, but does not ring the other bells on the line. This telephone can be used on either a grounded or metallic line regardless of the other telephones on the line and no change is required at the central office. If desired, a 2500-ohm ringer can be furnished instead of a 1600-ohm ringer.

**Code No. F2376** Heavy Duty 5 Bar Set 1600 OHM Ringer  
With Condenser and Grounding Key

The No. F2376 desk set box is arranged for calling central secretly by ringing over one side of the line and through the "drop" to ground. It can only be used on two-wire metallic lines which have all the telephones equipped with push buttons and with the "drop" at central disconnected from one side of the line and wired to ground. If desired, a 2500-ohm ringer can be furnished instead of 1600-ohm.

No. 3809M  
Wall

**Masterphone**



The Kellogg No. 3809M wall Masterphone consists of a standard Kellogg oak cabinet and a molded Kellite handset suspended on a special Masterphone hookswitch. The F27C handset is the same as used with the No. 700-A Masterphone. This wall Masterphone is carried in stock equipped as listed below. Battery-saver is not supplied with these sets unless specified. All Masterphones have the NON-POSITIONAL transmitter.

**Code No. 3809M** 3 Bar Set 1000 OHM Ringer

This set can be furnished with a biased ringer for 4-party negative and positive pulsating ringer when desired.

**Code No. 3812M** Heavy Duty 5 Bar Set 1600 OHM Ringer  
This set can be furnished with a 2500-ohm ringer instead of a 1600-ohm when specified.

**Code No. 3816M** Heavy Duty 5 Bar Set 1600 OHM Ringer  
With Condenser

The condenser is in the receiver circuit and functions similar to F2370 desk set box. Can be furnished with a 2500-ohm ringer instead of 1600-ohm when specified.

**Code No. 3820M** Heavy Duty 5 Bar Set 1600 OHM Ringer  
With Condenser and Secret Calling Button

The special generator furnished delivers both pulsating and alternating current. This set can be used on either grounded or metallic lines regardless of other telephones on the line and without necessitating changes at the central office.

**Code No. 3824M** Heavy Duty 5 Bar Set 1600 OHM Ringer  
With Condenser and Grounding Key

Grounding key is for calling central secretly. This telephone cannot be used on grounded lines and is only suitable for metallic lines on which all sets are of this type and with one side of the drop at central office wired to ground.

## **Masterphone** Conversion Kits

**Kit No. 7**

Wall magneto telephones in good condition are easily changed into modern wall Masterphone handset instruments at a small cost with these new conversion kits. Kit No. 7 consists of (1) a four-conductor Masterphone handset with a cord made to fit the present receiver and transmitter binding posts in wall telephones, (2) a new handset lever to replace present Kellogg short lever switchhook, (3) and a black enameled plate to cover the opening left by the removal of the transmitter arm. No rewiring or soldering necessary and a screw driver is the only tool required.

**Kit No. 8**

Kit No. 8 is intended for use with telephones not equipped with the Kellogg self-contained short lever switchhook, and contains a complete new switchhook replacement. Similar to Kit No. 7 except that the old switchhook and spring assembly is removed from the cabinet and the complete new assembly installed. The large mounting plate covers any opening left after removal of the old switchhook.

**40-C Four Conductor Handset**

No. 40-C is similar to the regular Masterphone handset but has separate conductors for the transmitter and receiver, and a 4 conductor cord with ends trimmed to fit the binding posts in Kellogg wall telephones. This set is also furnished in the kit shown above. Shipping weight 1 1/4 lbs.



Converted Telephone



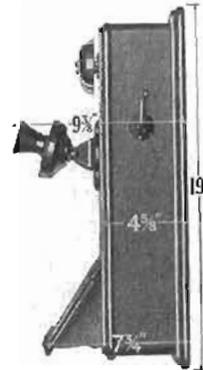
# Kellogg

# MAGNETO TELEPHONES



Closed View

Shipping Weight  
1 telephone to a box  
3-Bar Gen. Type,  
26 lbs.  
5-Bar Gen. Type,  
29 lbs.



Side View



Open View

## Compact Type-Wall Telephone

### Code F 2808 3-Bar Set—1000 OHM Biased Ringer

Same as the F 2809 except equipped with a biased ringer for four-party negative and positive selective ringing system.

### Code F 2809 3-Bar Set—1000 OHM Ringer

This telephone is designed especially for lines in town having one or more telephones and for lightly loaded farm lines. It is equipped with the same long distance transmitter and sensitive Kellite shell receiver used on all Kellogg telephones. The ringer is of the non-adjustable, non-sticking type. The powerful generator is of the 3-bar type with a current output large enough for all service requirements except long and heavily loaded farm lines. This style of telephone can also be furnished with higher resistance ringers and with condenser, if required. No battery saver is furnished unless specified.

### Code F 2812 Heavy Duty 5-Bar Set—1600 OHM Ringer

This instrument is equipped with a powerful five-bar generator capable of delivering the necessary voltage and current for the longest and most heavily loaded farm lines. The ringer is of the famous 1600 ohm sensitive non-sticking type. Transmitter, receiver and induction coil are the same high standard used in all Kellogg telephones and give equally efficient transmission on long distance as well as local connections. A battery saver is furnished without extra charge.

### Code F 2816 Heavy Duty 5-Bar Set 1600 OHM Ringer with Condenser

This telephone is the same as the No. F 2812 described before with the addition of a 1/2 M.F. condenser in the receiving circuit. The duty of this condenser is to keep ringing current from passing through the receiver when the receiver happens to be off the hook. On long farm lines equipped with a number of telephones, it is possible to ring through even though a number of receivers are down, providing they are equipped with these condensers. A battery saver is furnished without extra charge.

### Code F 2859 Heavy Duty 5-Bar Set—2500 OHM Ringer

Same as F 2812 except equipped with a 2500 ohm ringer for lines already equipped with this resistance.

### Code F 2880 Heavy Duty 5-Bar Set 2500 OHM Ringer with Condenser

Same as F 2816 except equipped with a 2500 ohm ringer. Same as F 2859 with condenser.

### Code F 2820 Heavy Duty 5-Bar Set 1600 OHM Ringer with Condenser and Secret Calling Button

This instrument has the same equipment as No. F 2816 but is furnished with a push button and a special generator capable of delivering two kinds of ringing current, pulsating and alternating. When the button is not pressed the generator delivers alternating current to the line which rings all of the bells and throws the drop at Central. By holding the button down while turning the crank, pulsating current is delivered which throws the drop at Central, but does not ring the other bells on the line. This telephone can be used on either a grounded or metallic line regardless of the other telephones on the line and no change is required at the Central office. A battery saver is furnished without extra charge.

### Code F 2824 Heavy Duty 5-Bar Set 1600 OHM Ringer with Condenser and Grounding Key

This telephone is arranged for calling Central secretly by ringing over one side of the line and through the drop to ground. It can only be used on two wire metallic lines which have all telephones equipped with push buttons and with the drop disconnected from one side of the line and wired to ground. This telephone is not recommended except for lines that are already equipped with instruments of this same type. A battery saver is furnished without extra charge.

### Code F 2860 Heavy Duty 5-Bar Set 2500 OHM Ringer with Condenser and Secret Calling Button

Same as F 2820 except equipped with a 2500 ohm ringer.

## Large Cabinet Telephones

Three Dry Cells

### Code 4886 Heavy Duty 5-Bar Set 2500 OHM Ringer with Condenser

This type of telephone is especially popular with the U. S. Forest Service, pipe line companies and railroads where the extreme transmission requirements make the use of three dry cells desirable. These telephones are otherwise the same as No. F2859 and No. F2880.

Height 23 inches; width 9 inches; depth 10 inches overall. Shipping weight 5-bar 29 lbs. 6-bar 31 lbs.

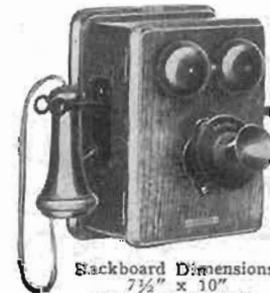
### Code 4885 Heavy Duty 5-Bar Set 2500 OHM Ringer

Same as 4886 except that condenser is omitted.

### Code 4884 Heavy Duty 6-Bar Set 2500 OHM Ringer

Same as 4885 except with 6-bar generator and condenser is omitted.

## Residence Type-Wall Telephone



Backboard Dimensions  
7 1/2" x 10"  
Shipping Weight,  
20 lbs.

### Code F 1809 3-Bar Set 1000 OHM Ringer

This instrument is exactly the same as code No. F 2809 except for the cabinet and is equipped with a 3-bar generator and 1000 ohm ringer. Battery savers are not furnished with this instrument, unless specified.

This is an excellent set where batteries can be located in the basement or other out of the way place and where wall space is at a premium.

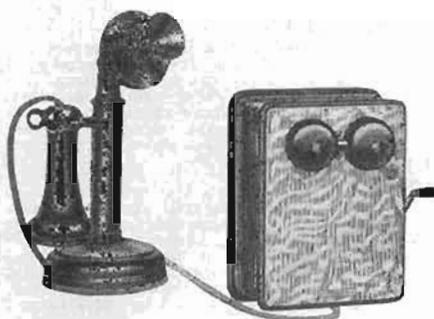
### Heavy Duty 5-Bar Set

This style can be furnished in other combinations of ringer resistance and generators on special order. For rural telephones, however, the compact sets containing a battery compartment are usually preferred.

# Kellogg

# MAGNETO TELEPHONES AND TEST SETS

## Desk Sets



Shipping Weights  
Stand only, 4 lbs.  
3-Bar Desk Set Box,  
only 14 lbs.  
5-Bar Desk Set Box,  
only 17 lbs.

Dimensions  
Length, 10¼ inches  
Width, 8 inches  
Height, 6 inches

### Code F 9 3-Bar Set—1000 OHM Ringer

This set consists of a No. F 118 desk stand in black enamel finish equipped with three conductor brown mercerized cord and a No. F 2328 quarter-sawn oak desk set box containing a 3-bar generator, 1000 ohm ringer and induction coil. This set has been standard for years and is recommended for business and residence service except for heavily loaded rural lines. This set can be furnished with biased ringer for four-party negative and positive pulsating ringing when desired.

### Code F 7 Harmonic 3-Bar Set—1000 OHM Ringer 30-42-54-66 Cycles

This set consists of a No. F 118 desk stand and No. F 2326 desk set box. It has the same equipment as code F 9 except for the ringer which is for four-party harmonic ringing systems. In ordering specify number of cycles on which ringers are to operate.

### Code F 12 Heavy Duty 5-Bar Set—1600 OHM Ringer

This set consists of an F 118 black enameled desk stand and F 2361 desk set box equipped with a powerful 5-bar generator, 1600 ohm non-adjustable ringer and induction coil. It is identical in equipment with the No. F 2812 wall set and will give splendid service on long and heavily loaded rural lines. It can be furnished with a 2500 ohm ringer instead of 1600 ohm, when it is so ordered.

### Code F 16 Heavy Duty 5-Bar Set 1600 OHM Ringer with Condenser

This set has the same equipment as code F 12 with the addition of a ½ M.F. condenser in the receiver circuit. The duty of this condenser is to keep ringing current from passing through the receiver when the receiver happens to be off the hook. On long farm lines equipped with a number of telephones, it is possible to ring through even though a number of receivers are down, providing they are equipped with these condensers. If desired, a 2500 ohm ringer can be furnished instead of 1600 ohm.

### Code F 20 Heavy Duty 5-Bar Set 1600 OHM Ringer with Condenser and Secret Calling Button

This set consists of an F 118 desk stand and F 2374 desk set box. It is the same as F 16 with the exception of the secret calling feature which consists of a push button and a special generator capable of delivering two kinds of ringing current, pulsating and alternating. When the button is not pressed the generator delivers alternating current to the line which rings all of the bells and throws the drop at Central. By holding the button down while turning the crank, pulsating current is delivered which throws the drop at Central but does not ring the other bells on the line. This telephone can be used on either a grounded or metallic line regardless of the other telephones on the line and no change is required at the Central office. If desired, a 2500 ohm ringer can be furnished instead of 1600 ohm.

### Code F 24 Heavy Duty 5-Bar Set 1600 OHM Ringer with Condenser and Grounding Key

This telephone is arranged for calling Central secretly by ringing over one side of the line and through the drop to ground. It can only be used on two wire metallic lines which have all telephones equipped with push buttons and with the drop disconnected from one side of the line and wired to ground. This telephone is not recommended except for lines already equipped with instruments of this same type. If desired, a 2500 ohm ringer can be furnished instead of 1600 ohm.

## Kellogg Outdoor Telephone

### Code No. 4883

The Kellogg Outdoor Telephone, type 4883, is one of the finest units of its kind. It contains all the desirable features necessary to meet every communication requirement. It is weatherproof, adaptable to any combination of common battery or magneto equipment, reasonable in weight, designed with simplicity, and all parts are accessible. As outdoor telephones are often used on long, heavily loaded lines where transmission and ringing efficiency are all important, provisions have been made to permit any circuit arrangement necessary to assure the highest quality transmission and reception, and efficient ringing.

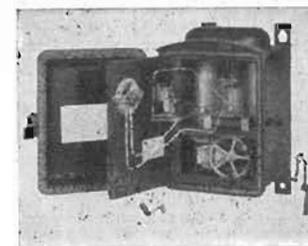
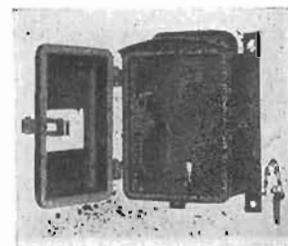
The black finish cast iron housing is weatherproof, but ventilated to prevent condensation of moisture or "sweating." Simplified wiring, with rubber insulated wire, is used throughout. No cabling required.

The door of the iron housing is securely fastened by a locking pin which is attached to the box by a chain. Slotted screw holes in the mounting lugs permit the setting of the upper lag screws before the housing is hung in place. The entire telephone may be handled and installed by one man.

The Kellogg 4883 type outdoor telephone is equipped with a 32-L low-resistance, local battery type transmitter for operation with either two or three standard No. 6 dry cells. The receiver is the Kellogg 81-A high efficiency watchcase type, with cobalt steel magnets. This receiver, though small and compact, is an ideal unit because its size does not sacrifice the quality of reception.

Over all height (not including mounting lugs) of 14½ inches, width over clasps and hinges 11½ inches, over all depth 10¼ inches. Horizontal mounting centers 7½ inches; vertical mounting centers 14¼ inches.

Weight complete less dry batteries, with 5-bar generator, 69 lbs., with 6-bar generator, 72 lbs.



## Portable Telephones

### Code No. 3001

The Kellogg No. 3001 Portable Magneto Telephone is one of the finest instruments made for portable use. The ruggedness and simplicity of this unit keeps maintenance at a minimum. It combines utmost efficiency with compactness and incorporates every desirable feature. It weighs only 19 pounds.

It will talk and ring over the most heavily loaded and longest line. Loud, clear reception and the finest transmission are assured. Equipped with a metal handset which contains both the transmitter and receiver units. Current is supplied by a standard 3-cell flashlight battery, and is required only for the transmitter. A button in the handset cuts in the battery when talking.

This set is equipped with a Kellogg standard 2500 ohm ringer, a powerful Kellogg 5-bar generator, one-half microfarad condenser, and an accurately balanced induction coil. The generator crank folds out of the way so that there are no projections of any kind. It comes with a heavy, 54-inch adjustable cowhide strap for easy carrying. Connections to the line are made direct to two, heavy contact clips.

The cabinet of Eastern Birch is impregnated with Inwood, and finished with two coats of durable Spar varnish. Height, 10¼ inches; width, 10 inches; depth, 5 inches; shipping weight without battery, 29 lbs.

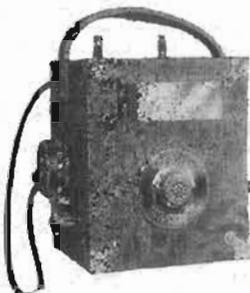


## Test Set

### Code 1016

This test set is a complete portable telephone. Is strongly built and will talk and ring over the longest and most heavily loaded line. It is equipped with a powerful 4-bar generator, 1600 ohm ringer, long distance transmitter, head receiver, induction coil, hookswitch and two No. 4 dry cells. The cabinet is oak heavily reinforced with metal corners. A good, sturdy, all around set for the Linemen.

Weight, not packed, 15 lbs. Height, 8". Width, 7". Depth, 8¼".



# Kellogg

# MAGNETO TELEPHONE PARTS

In ordering parts for telephones if there is any doubt as to the proper number it would be well to send in the code number of the telephone which will be found stamped in the woodwork. On Desk Telephones the box is numbered and the desk stand also bears a number stamped on the side of the switchhook. If no numbers are available send a sample of the parts wanted or give as complete a description as possible.

As new and better materials have become available and as the art of Telephony and Manufacture in general has progressed, Kellogg parts have been improved always with a view to furnishing better equipment to replace worn out parts as well as for the manufacture of new equipment. Therefore, it will sometimes be possible to order parts for old Kellogg Telephones which are stronger and better designed than the ones originally furnished with the instruments. Stampings of steel and brass have replaced many of the castings of the past; Kellite and Micarta replace hard rubber, composition and other of the older insulating materials. Better methods of insulating and treating coil windings have been developed.

It has been the aim of the Kellogg Company to so design the improved equipment that much of the new can be incorporated in the old at a substantial saving.

It sometimes happens that it is poor economy to try to prolong the life of telephone equipment past a certain point and good financial policy then indicates the purchase of modern up-to-date telephones. If there is any question the Kellogg Company will welcome the opportunity to be of service in helping to determine which course is best to follow.

## Arms, Transmitter

### Code No. 42

The No. 42 transmitter arm was formerly used on Kellogg compact wall telephones and can be used on a large variety of instruments. A handsomely finished, pressed steel arm with adjustable hinge. Net weight, 8 ounces.



No. 42 Transmitter Arm Over-all Length, 4 1/2"

### Code No. 50

Code No. 50 transmitter arm used on standard magneto telephones with sloping writing shelf. A desirable arm also for hotel and residence telephones. Net weight, 7 ounces.



Code No. 50 Length, 2 3/4"

## Bells, Extension

The No. 37 type extension bell consists of a neat quarter-sawed oak box with ringer and two binding posts. No condensers furnished. Net weight, 3 lbs.

CODE No.	Resistance	REMARKS
37 SA	1000 Ohms	Straight line
37 SD	1600 Ohms	Straight line
37 SG	2500 Ohms	Straight line
37 BA	1000 Ohms	Biased
37 HB	Harmonic	30, 42, 54, 66
37 HA	Harmonic	33 1/2, 50, 66 2/3, 16 2/3



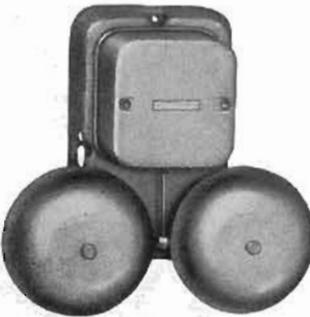
Oak Cabinet Extension Bell

## Loudringing Bell

The Kellogg Loudringing Weather-proof Extension Bell is especially designed for outdoor installations. It is also used extensively, however, for indoor purposes where a good loud ringing bell is required. The bells are furnished with either straight line or harmonic ringers. They operate perfectly under all climatic conditions. They are efficient and trouble-free.

The 6-inch steel gongs are cadmium plated. The housing consists of a heavy cast iron base with removable cast iron cover held by two screws. It has a weatherproof finish of heavy durable gray zinc paint.

Dimensions including gongs: depth 13 inches, length 12 3/4 inches, width 4 1/4 inches. Net weight 13 1/2 lbs.



Code No.	Ringer	Remarks
65-SA	1000 ohm	Straight Line
65-SD	1600 ohm	Straight Line
65-SG	2500 ohm	Straight Line
*65-HB	Harmonic	30, 42, 54, 66 cycles
*65-HA	Harmonic	33 1/2, 50, 66 2/3, 16 2/3 cycles.

\*Equipped with No. 12 condenser 1 M.F. capacity.

## Coils, Induction

See Page 22

### Code No. 108-A



No. 108A 4 1/2" Over All Heads, 1" Square

The No. 108A induction coil is an improved coil that replaces the 28 C coil. It is a universal local battery coil for use in any magneto telephone. Terminals are provided for either soldered or screw connections. Burned out coils should be replaced with new ones, as it is cheaper to order new ones than to have the old ones torn down and repaired. Net weight, 4 1/2 ounces.

### Code No. 100-A



No. 100-A

The 100-A induction coil when used with either a No. 700 Masterphone or a No. 118 desk stand, makes an ideal extension set where no ringer or generator is required.

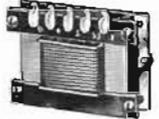
The coil and connecting rack are combined for compactness and simplicity. All wires terminate at the connecting rack. Terminals are clearly marked. Occupies a space of only 4 1/4 x 1 3/8 in., 1 3/8 in. deep. Net weight 7 ounces.

### Code No. 105-A

Induction coil similar to the 100-A in size and appearance for use with wall telephones and desk set boxes wired for the TRIAD (anti-sidetone) circuit. Local battery.

### Code No. 109-A

A silicon steel, closed core, local battery coil for TRIAD circuit. The TRIAD circuit (anti-sidetone) assures clear, natural conversation with ample volume. The 109-A coil is designed for use with the 900 type Desk Masterphone and side mounting extension Masterphones.



## Condensers

See Pages 22, 23

### Code No. 28



No. 28 Height, 2 2/4" Width, 1 1/4" Thickness, 1 1/8"

For telephones used on long party lines the No. 28 condenser in the receiver circuit is of great benefit as it enables other telephones to ring by when the receiver is off the hook. The No. 28 condenser is furnished with a mounting ear and can be fastened in place in any magneto telephone with a single screw. Nearly all Kellogg telephones have a small punching or loop so that this condenser can be installed even when not furnished with the telephones. On other makes it can be added by putting in a third receiver binding post, connecting the condenser between the new post and one of the old ones and then removing the receiver cord from the old post to the new one. Net weight, 3 ounces.

### Code No. 67



No. 67

It is sometimes desirable to place a condenser in series with the ringer of magneto telephones in order to have a line clear of all battery leaks for testing purposes. These are not regularly furnished in Kellogg magneto telephones on account of the small demand. Net weight, 6 ounces.

Height, 3 3/8". Width, 1 1/4". Thickness, 1 1/8".

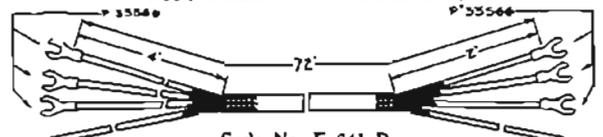
## Cords

See Pages 24, 26

Kellogg desk stand and receiver cords are of the new type wet-proof construction. A specially compounded insulation is used that prolongs their useful life. It absolutely seals the heavy, eighteen-strand tinsel against moisture and oxidation. Naturally, the tinsel retains its original flexibility and conductivity, thus enabling it to withstand the constant twisting, jerking and bending that cords are subjected to. Long field tests under the most trying conditions have proven this.

The heavy eighteen-strand tinsel conductor with its moisture-proof compound is protected by a tough cotton outer braid. The overall braid is of brown mercerized cotton.

## Desk Stand—Three Conductor

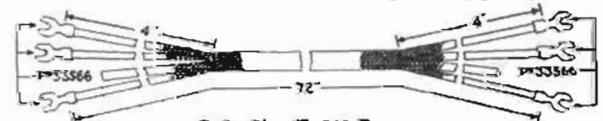


### Code No. F 641-D

The F 641-D cord, 72 inches in length, has splice tips on both ends. Tracer colors, brown, black and orange. Fits Nos. F 84, F 110, F 115 stands.

### Code No. 641-D

The 641-D cord is the same as F 641-D except having pin tips.



### Code No. F 640-D

The F 640-D cord, 72 inches in length, has splice tips on both ends. Tracer colors, green, orange and red. Fits Nos. F 115-A, F 118, F 118-B, F 135, F 138 and F 301 stands.

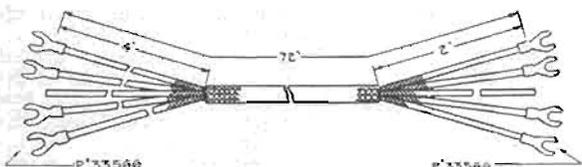
# Kellogg

# MAGNETO TELEPHONE PARTS

## Code No. 640-D

The 640-D cord is the same as F 640-D except having pin tips.

### Four Conductor



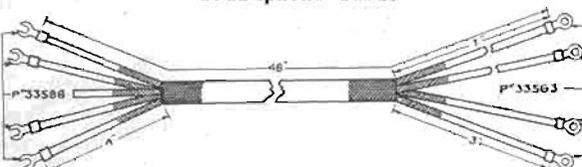
## Code No. F 666-D

The F 666-D, 72 inches in length has spade tips on both ends. Tracer colors brown, black, red and orange. Fits No. F 28 and other four conductor stands arranged for flat tips.

## Code No. 666-D

The 666-D cord is the same as F 666-D except having pin tips.

### Grabphone Cords



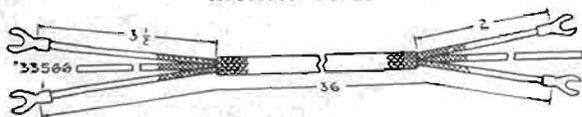
## Code No. F 454-G

The F 454-G cord, 48 inches in length, has spade tips on the box end and closed tips on the grabphone end. Tracer colors, brown, black, red and orange. Used on standard Kellogg No. F 11 and F 12 grabphones.

## Code No. 454-G

The 454-G cord, 48 inches in length, has pin tips on the box end and closed tips on the grabphone end. Tracer colors, brown, black, red and orange. Used on Kellogg No. 11 and 12 grabphones.

### Receiver Cords

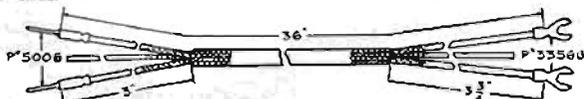


## Code No. F 644-TR

The F 644-TR cord, 36 inches in length, has spade tips on both ends. Tracer colors brown and black. Fits F 41-A and other standard receivers.

## Code No. 644-TR

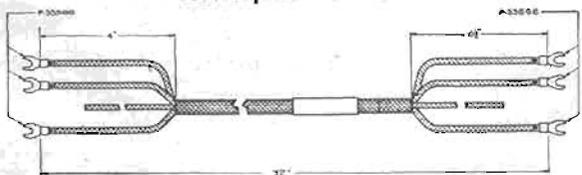
The 644-TR cord is the same as F 644-TR except having pin tips on both ends.



## Code No. F 642-TR

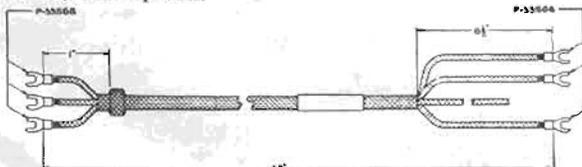
The F 642-TR cord, 36 inches in length has pin tips on receiver end and spade on the stand end. Tracer colors, brown and black.

### Masterphone Cords



## Code No. F 674-D

The F 674-D cord, 72 inches in length has spade tips on both ends. It is a three-conductor cord with red, yellow and green tracer colors. Fits Nos. 700 and 725 Masterphones.



## Code No. F 673-G

The F 673-G cord, 48 inches in length has spade tips on both ends. It is a three conductor cord with red, yellow and green tracer colors. Fits the No. F 27 handset.

## Key Boxes

### Code No. 8



No. 8

The No. 8 key box consists of a standard No. 1028 single throw key having 2 make and break springs, mounted in a black ebony finished wood box. Dimensions, 5 1/2" high, 3 3/8" wide and 1 3/4" deep. All springs are wired to binding posts, making it a very simple matter to make the necessary connections.

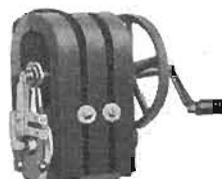
This box is used to connect the telephone to either of two lines or to connect either of two telephones to a single line. Net weight, 12 ounces.

### Code No. 9

The No. 9 key box is similar to the No. 8 except equipped with a standard No. 1030 double locking key having two sets of make and break contacts on each side. It is used to connect the telephone to either of three lines or to connect either of three telephones to a single line.

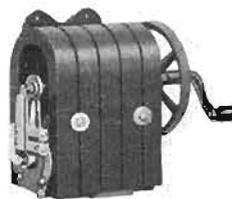
## Generators

See Page 24



No. 15

Kellogg generators are built with extreme care and accuracy and with a little care and occasional oiling, should last for years. The magnets are made of the finest tungsten magnet steel. Every shipment of this steel is carefully tested in the laboratory before being made into magnets. The magnets after being formed are given a special treatment to secure the proper degree of hardness. The armature is of the shaftless type, giving liberal winding space. All parts are carefully machined and held to the closest possible limits, insuring a smooth running powerful generator. End plates and gears are brass and springs are of heavy German silver.



No. 53

Code No.	No. of Bars	Weight	Remarks
15	3	6 1/2 lbs.	Lines in town
53	5	9 lbs.	Farm lines
59	5	9 lbs.	Farm line pulsating and alternating current.

Generators with pulsating and alternating current springs for telephone with secret calling button can also be furnished, if desired.



### Hinge

Piece No. 37778 is the standard telephone hinge, being 1 1/2" long, 1 1/4" overall width. Screws which are not furnished unless specified are Piece No. 7865.

### Cabinet Lock

Standard cabinet lock for all types of wood telephones, code No. 14.



## Number Plates

See Page 24



No. 87

### Code No. 87

Can be lettered by the user as desired. Fits over and is held in place by the threads of the transmitter mouthpiece.

### Code No. 88

Can be lettered by the user as desired. Held in place by two of the transmitter back screws.



No. 88

## Binding Posts



No. 11

### Code No. 11

The No. 11 binding post is of white nickel finish, the end being tinned for soldering. The mounting screw which is furnished is a 5x1/2" round head, wood screw, plated.

### Code No. 63

The No. 63 is white nickel in finish, the end being tinned for soldering. It is provided with a clip which takes a regular spade or spike tip. Mounting screw which is furnished is No. 6x1/2" flat head wood screw, plated.

These binding posts are the ones most commonly used. If interested in other styles write for complete list.



# MAGNETO TELEPHONE PARTS

## Receivers

See Page 26

The Kellogg Code F41A receiver has long bipolar type magnets, brass retaining cup, and moisture-proof receiver cord with heavy tinsel conductors.

The Kellite shell is highly polished and the cord hole in the end of the case is rounded out, which prevents excessive wear on the cord. The ear cap securely holds the diaphragm and receiver in the shell and is shaped to perfectly fit the orifice of the ear and has no objectionable lettering around the edge.

The shell and cap are of a standard size so that many other makes of receivers will fit the shell perfectly.

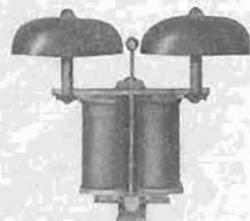
The magnets are made of a special grade steel and treated with a rust-proof finish.

The cord terminal posts are so designed that either spade or spike tip cord tips can be used. The cord is thirty-six inches long, consisting of heavy tinsel strand, braided and thoroughly insulated and protected from moisture by a special moisture-proof covering. The overall braid is heavy, which protects the conductors against breakage due to bending and stretching. The cord is regularly supplied with spade tips on both ends, but can be supplied with spike tips if desired.

Pc. 27944, Kellite receiver shell only. Pc. 32307, cap only.



No. F 41 A



No. 78

## Ringers—Straight Line

The Kellogg No. 78 ringer has black enameled brass gongs with adjustable gong posts but non-adjustable armature. This ringer is built for maximum efficiency and the armature adjustment cannot be changed. The greatest care is maintained in securing this adjustment so that the ringer will respond to the weakest currents but will not freeze or stick. The coils are wound with specially insulated wire on correctly

proportioned spools. This ringer may be mounted on wood of any thickness without affecting the gong adjustment. Net weight, 1¼ lbs.

Code No.
78 A
78 D
78 G

Resistance
1000 Ohm
1600 Ohm
2500 Ohm

Remarks
Straight line
Straight line
Straight line

## Biased

The No. 79 type biased ringer of the adjustable type is used for four party selective system using positive and negative pulsating current. Net weight, 1¼ lbs.

Code No.
79 A
79 D
79 G

Resistance
1000 Ohm
1600 Ohm
2500 Ohm

Remarks
Biased
Biased
Biased

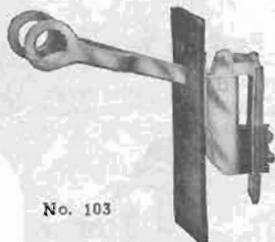
## Transmitter Cords

PC 11171, 22½". PC 11172, 26½".

Pair of cords for old style long transmitter arms. Spade tips on one end, other end bare. They can be used on shorter arms by cutting back to desired length.

## Hookswitches

### No. 103



No. 103

The Kellogg No. 103 hookswitch is mounted on a handsomely black enameled steel frame and escutcheon. The springs are of heavy German silver and assembled with a steel reinforcing spring, insuring positive contact. Kellite Dielecto insulations are used. The hook is easily removed by simply pushing the springs forward. When advisable to replace hooks in old style telephones the purchase of this hookswitch is recommended. For rural lines it may be installed complete by boring holes large enough to admit the springs and then fastening in place with four screws.

No. 156 Hookswitch. Same as No. 103 but with screw terminals for regular receiver.

No. 155 Hookswitch. Same as No. 156 for simplified wiring in connection with 100-A or 105-A induction coils.

## Masterphone Transmitters and Receivers



57340 Transmitter

57340 Transmitter. The Masterphone transmitter is a compact, self-contained, capsule type unit, with no cord connections. Two locating lugs of different size are cast on the aluminum alloy cup, and correspond to guide slots in the walls of the housing, to assure correct position when inserting. The two heavy bronze contact clips eliminate cord terminals and screws. They grip the ends of the bar conductors firmly on both

sides assuring positive electrical connections. The carbon chamber is formed between two spherically shaped electrodes, permitting free movement of the carbon granules and uniform contact with both electrodes at all times regardless of the position or angle in which the transmitter is held. This is the original, patented, NON-POSITIONAL transmitter.



55919 Receiver

55919 Receiver. The Masterphone receiver, like the transmitter, is a compact, self-contained unit which is easily removable. It has no cord connections, but as in the transmitter, two heavy bronze clips make the electrical connections. Locating lugs slide easily into the guide slots in the housing. The Bakelite cap grips the diaphragm firmly and evenly. Both receiver and transmitter caps screw directly into the housing. No metal retaining rings are necessary. This receiver is of the standard bi-polar type using a cobalt magneto which has more magnetic saturation and longer life. It is in the perfect electric balance with the transmitter and induction coil. The receiver shell is made of heavy pressed aluminum reinforced to insure the correct air gap between poles and diaphragm.

## Transmitters

See Page 26



Complete Transmitter No. 22 Type

The reverse type Kellogg transmitter requires little description—"it talks for itself." Designed more than twenty years ago it still leads in talking qualities, durability, and long life. For magneto telephones the LC type is best adapted, as the resistance is such that it will give maximum transmission with a minimum consumption of batteries. For extreme long distance work the L type can be used but requires the replacing of batteries at more frequent intervals.



Pc. No. 46279 Transmitter Back

No. 22 LC. Complete with standard black enameled back, pc. 46279, Bakelite mouthpiece, pc. 29779.

No. 22 L. Complete with standard black enameled back, pc. 46279, Bakelite mouthpiece, pc. 29779.

No. 64 LC. Transmitter without back, otherwise same as No. 22 LC.

No. 64 L. Transmitter without back, otherwise same as No. 22 L.



Transmitter Front Only No. 64 Type

## Transmitter Adapters

While many types of adapters are available for attaching Kellogg transmitters to other makes of telephone arms, they are not recommended for general use. Experience has proven that it is more satisfactory to use the Kellogg transmitter with the No. 42 arm attached than it is to use an adapter for attaching transmitter to an old arm. This provides a more modern and rigid apparatus and at the same time conforms with present standards.

## Writing Shelves

Quarter-sawed oak writing shelves are furnished in two standard styles as illustrated. Other shelves may be had to use on old style telephones, but the use of these standards are recommended if possible in order to avoid the extra expense of having the older styles made up to order.

PC 26743. Writing shelf, two brackets.

PC 43720. Writing shelf, single bracket as used on standard telephones. Extra sloping.



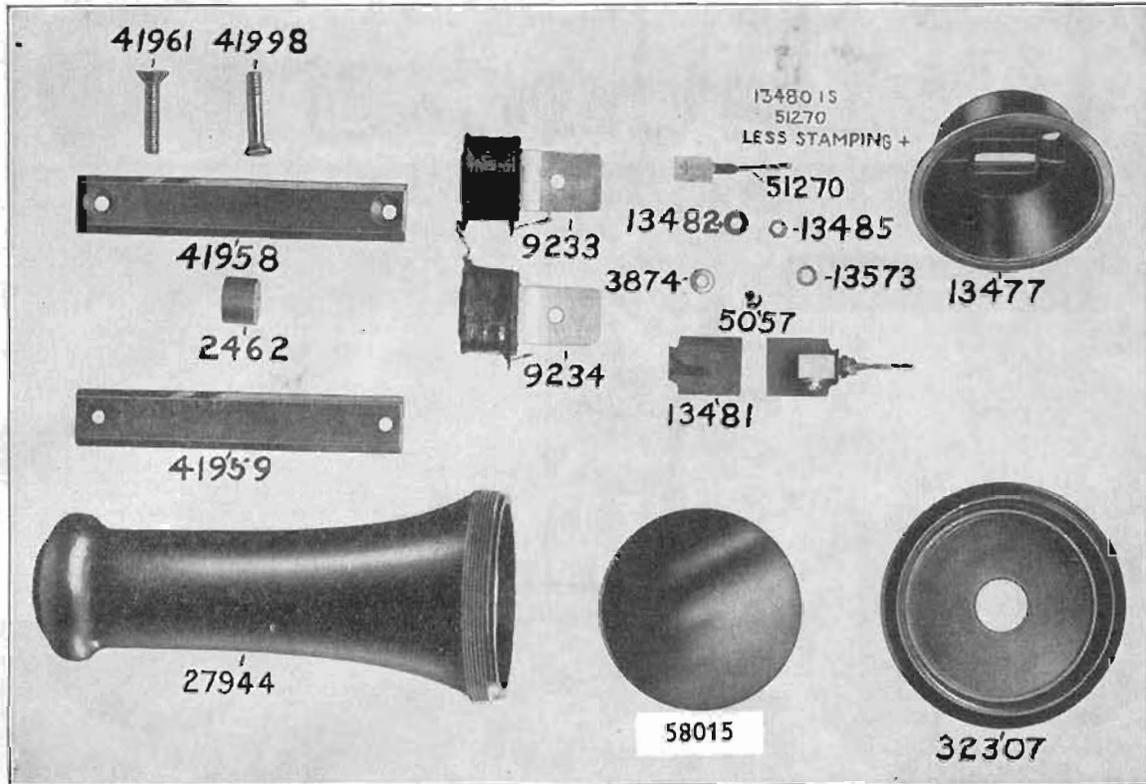
Pc. No. 43720



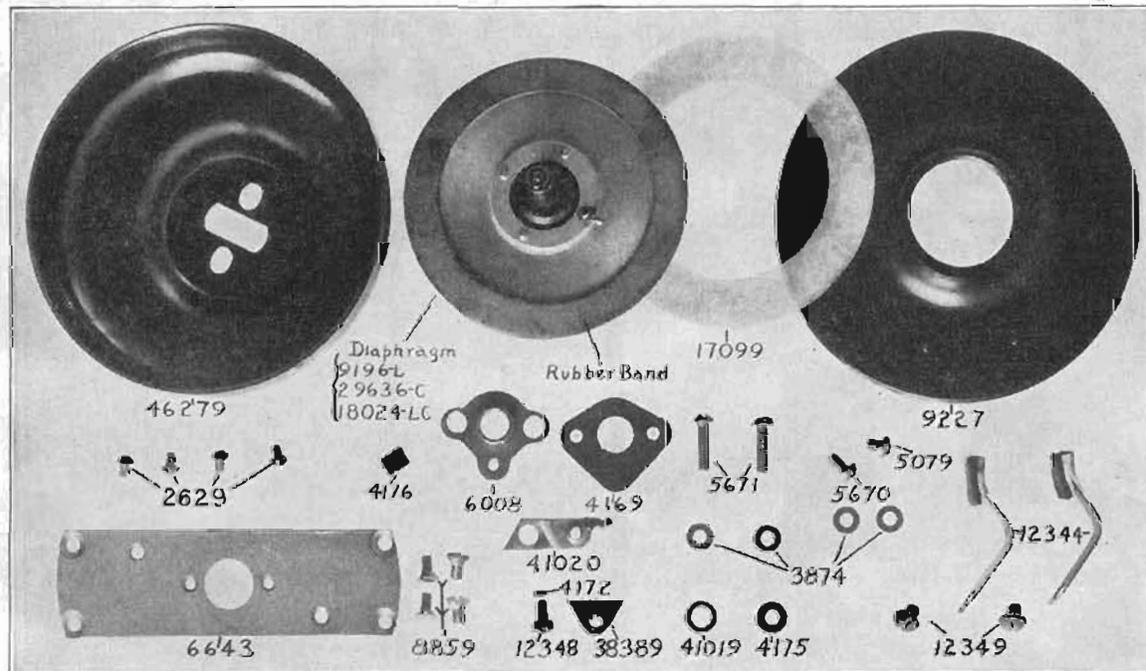
Pc. No. 26743

# Kellogg

## PIECE PARTS

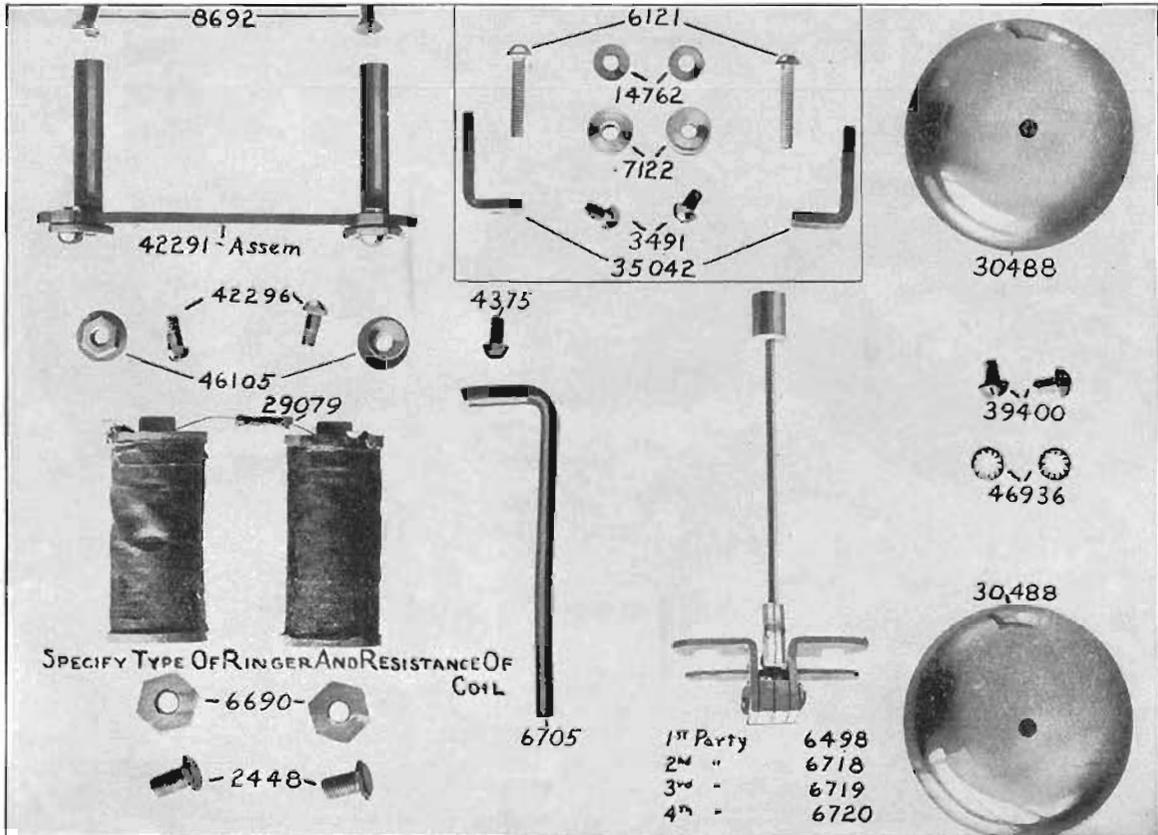
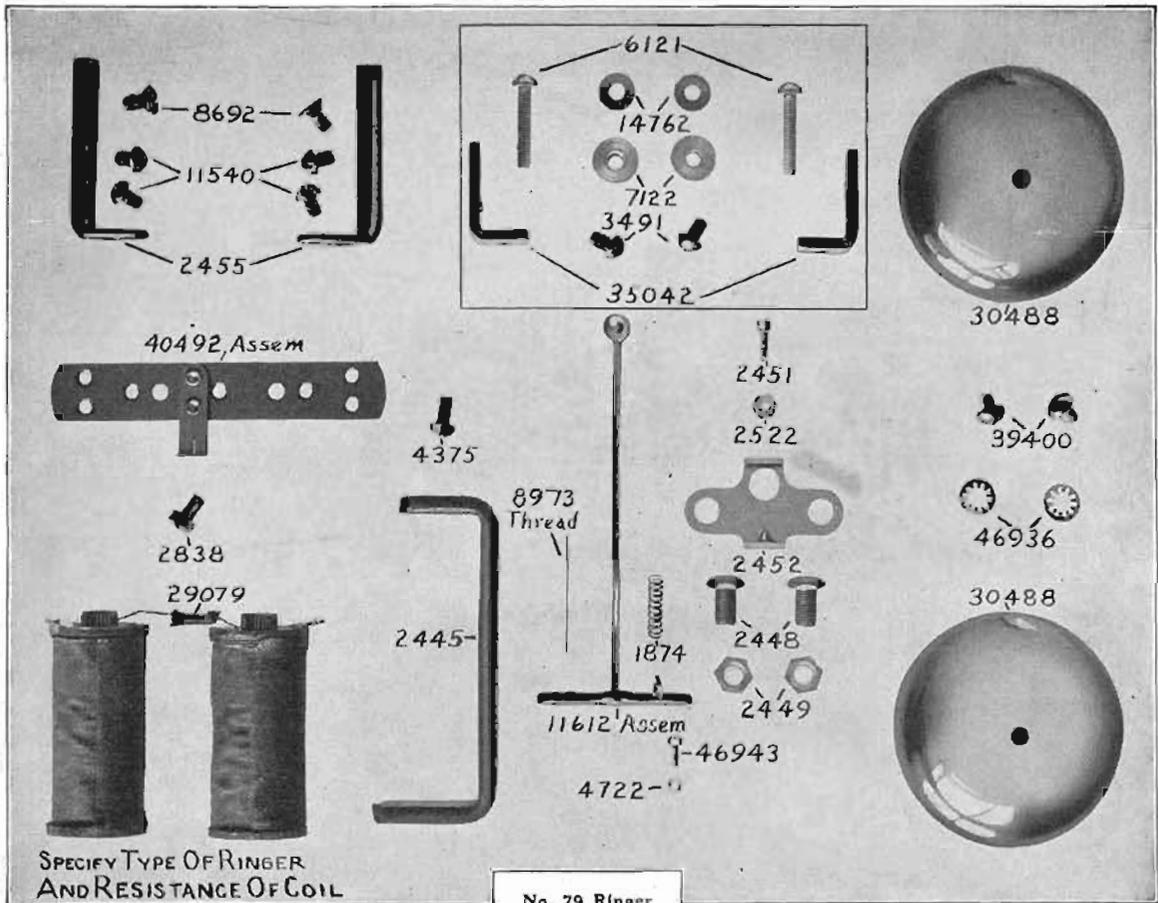


F-41-A Kellite Shell Receivers  
Parts are interchangeable with 26-A and 32-A receivers



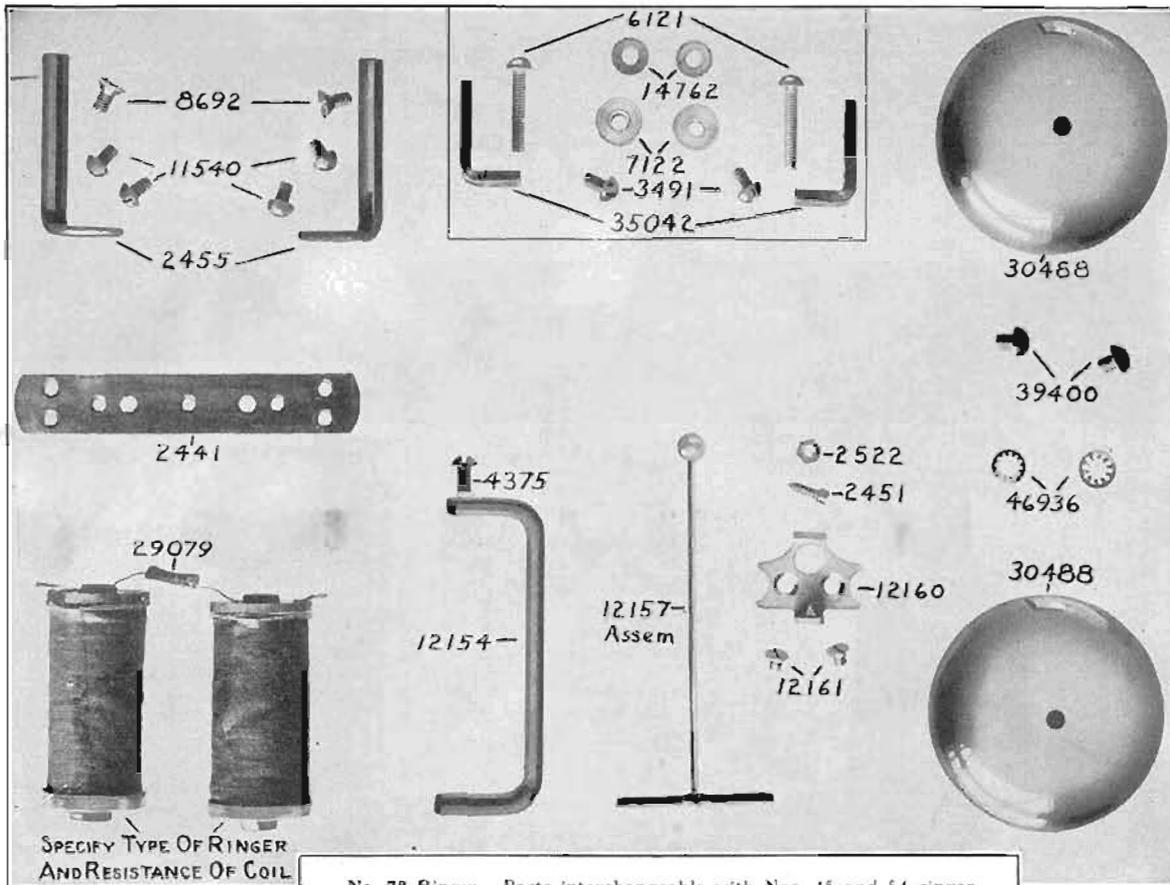
No. 22 Type Transmitter

Pc. 12341 Bridge assembly will mount on old and new type transmitter  
If nickel plated transmitter is desired order Pc. 10259 back and Pc. 9164 front, otherwise same as above.

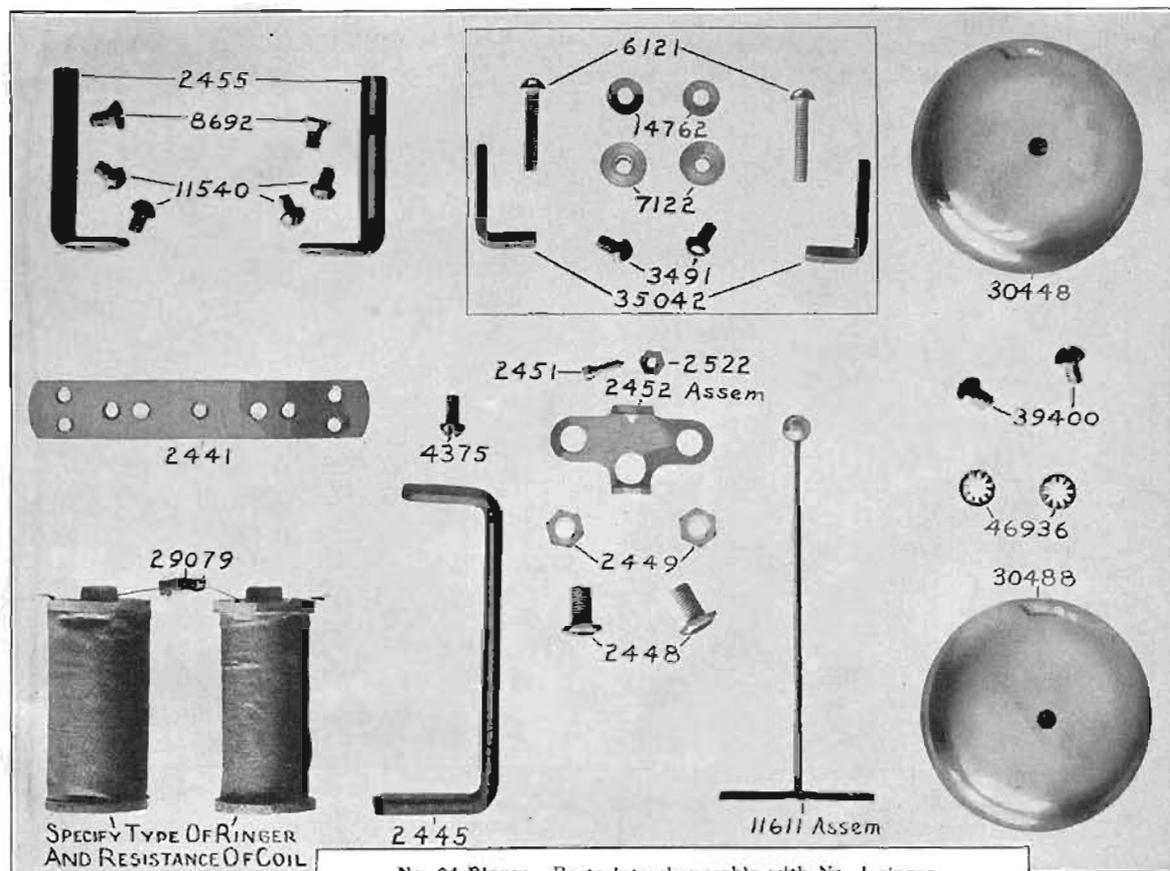


No. 73 Ringer for 30, 42, 54 and 66 cycles. Vibrator assemblies Pc. 15193, Pc. 15194, Pc. 15195, Pc. 15196, 1st to 4th party respectively.

# Kellogg

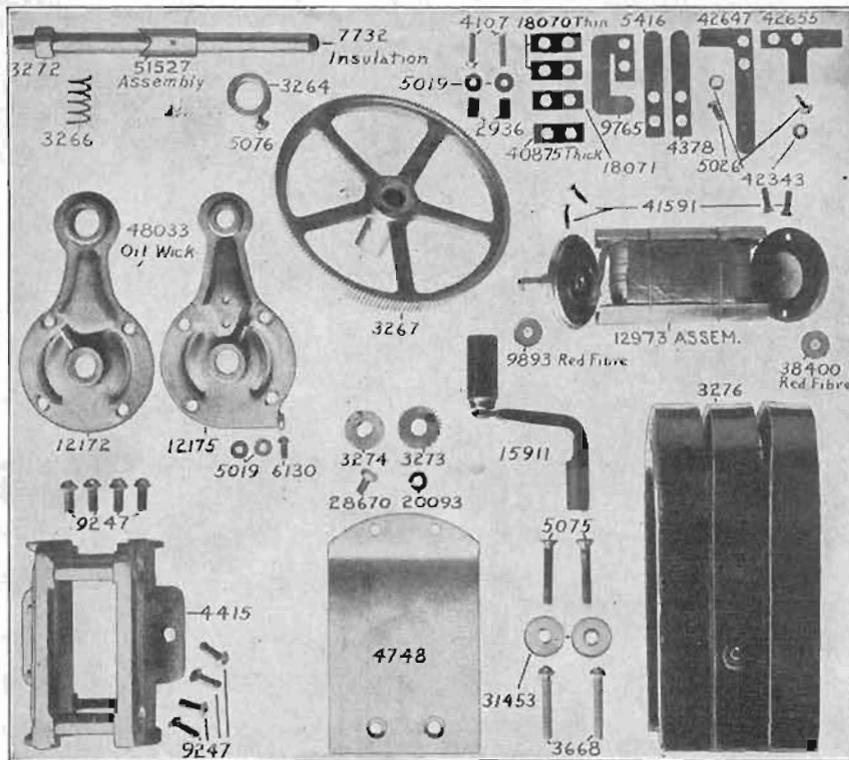


No. 78 Ringer. Parts interchangeable with Nos. 45 and 54 ringer.

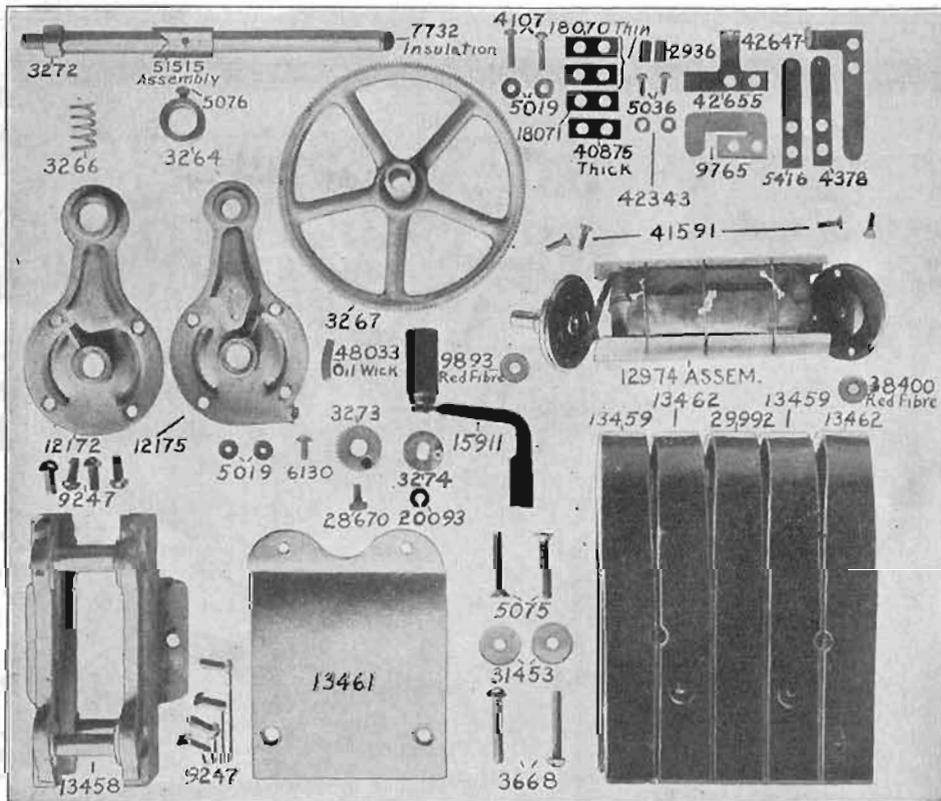


No. 84 Ringer. Parts interchangeable with No. 1 ringer.

**Kellogg**



No. 15 Generator 3-Bar



No. 53 Generator 5-Bar

No. 22 Generator 4-Bar uses same parts as No. 53 except Pc. 3281 pole piece instead Pc. 13458 and 4 Pz. 3276 magnets in place those shown

**Kellogg**

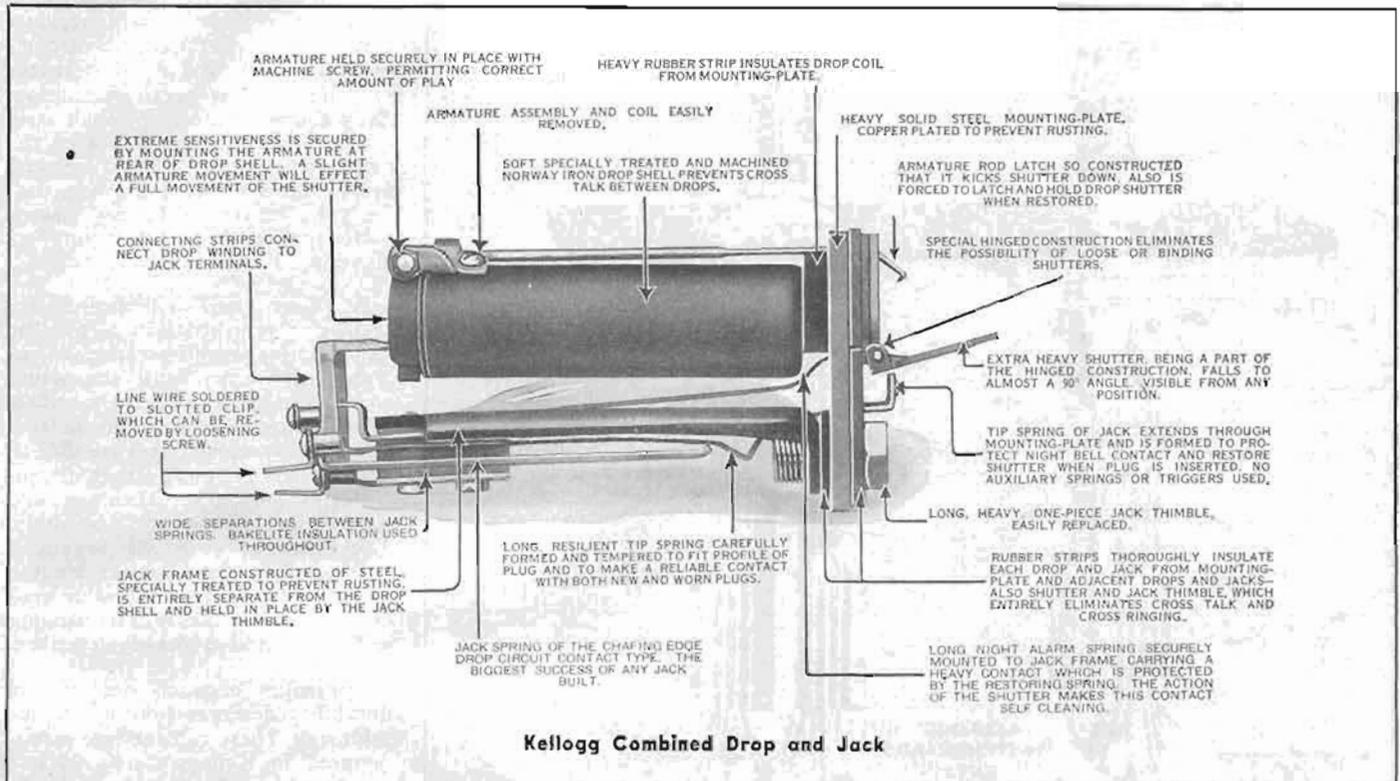
## MAGNETO SWITCHBOARDS

The universal popularity of Kellogg magneto switchboards is due to their extremely simple, sturdy construction and ease of operation.

The simplicity of circuits and of apparatus design, combined with good mechanical construction, insure a trouble-free switchboard, requiring little attention to keep in 100 per cent operating condition. No one feature has been over-emphasized at the expense of others. No efficiency has been sacrificed to gain trick design merely for sales purposes. Every feature and function

is scientifically proportioned to the part it has to play in efficient telephony. Each piece of apparatus is manufactured in the Kellogg plant and guaranteed against inherent defects for one year.

It is true that in switchboards, as well as every other mechanical assembly, there are one or more points that bear the brunt of service. In magneto switchboards, for example, the drops and jacks and keys receive the hardest use. The efficiency of the entire switchboard depends upon these essential parts. For that reason, their superior design is described in detail.



### Combined Drops and Jacks

Because magneto lines are not always in the best condition, Kellogg has concentrated on the design and manufacture of a sensitive drop and a positive jack that is simple and rugged in construction, and has high resistance against lightning and sneak currents. The Kellogg line drop and jack are combined into one unit, an original Kellogg development. When the line drop falls, the operator in answering the subscriber, by inserting her plug in the jack associated with that line drop, automatically restores the drop.

The armature assembly of the Kellogg drop is simple. The long lever principle provides maximum action at the shutter with a minimum air gap at the armature. With this small air gap between the armature and the coil, sensitive and positive operation is insured with a minimum current flow.

Drop shutters are firmly hinged, eliminating pins which work loose and fall out. Shutters fall by gravity; but the Kellogg armature latch is designed to push the shutter down and prevent "sticking."

Extra heavy insulators separate the drop and jack from the mounting plate, reducing the possibility of lightning and sneak current damage to a minimum.

Kellogg jacks are simple and efficient. A long, combined tip and restoring spring of evenly tempered nickel silver is the only spring making contact with the plug.

This spring is long and resilient, placing the heaviest wear on the inexpensive and easily replaced jack thimble. It serves the triple purpose of completing the tip side of the connection, removing the drop coil from across the line, and restoring the drop shutter to its normal position.

The night alarm circuit is completed by the action of the drop shutter against a long German silver spring. This spring is protected from accidental injury and so arranged as to give perfect operation throughout the entire life of the switchboard.

### Supervision

Modern magneto switchboards make use of either double drop or double lamp supervisory cord circuits. With either type of cord circuit, the operator sees at a glance which one of the connected lines is re-calling.

# Kellogg

# MAGNETO SWITCHBOARDS

Double lamp supervision is fast replacing double drop supervision because of its greater speed and accuracy. The lighting of a supervisory lamp immediately attracts the eye of the operator because it is located on the keyshelf where it can be more readily seen. This keyshelf location permits the supervision to be placed closer to the cord with which it is associated, thereby eliminating the possibility of the operator taking down or cutting in on the wrong pair of cords.

Machine ringing current can easily be supplied from the simple power equipment which lights the lamps and furnishes continuous battery to the operator's transmitter. This is another reason for the increasing popularity of Kellogg lamp supervision switchboards.



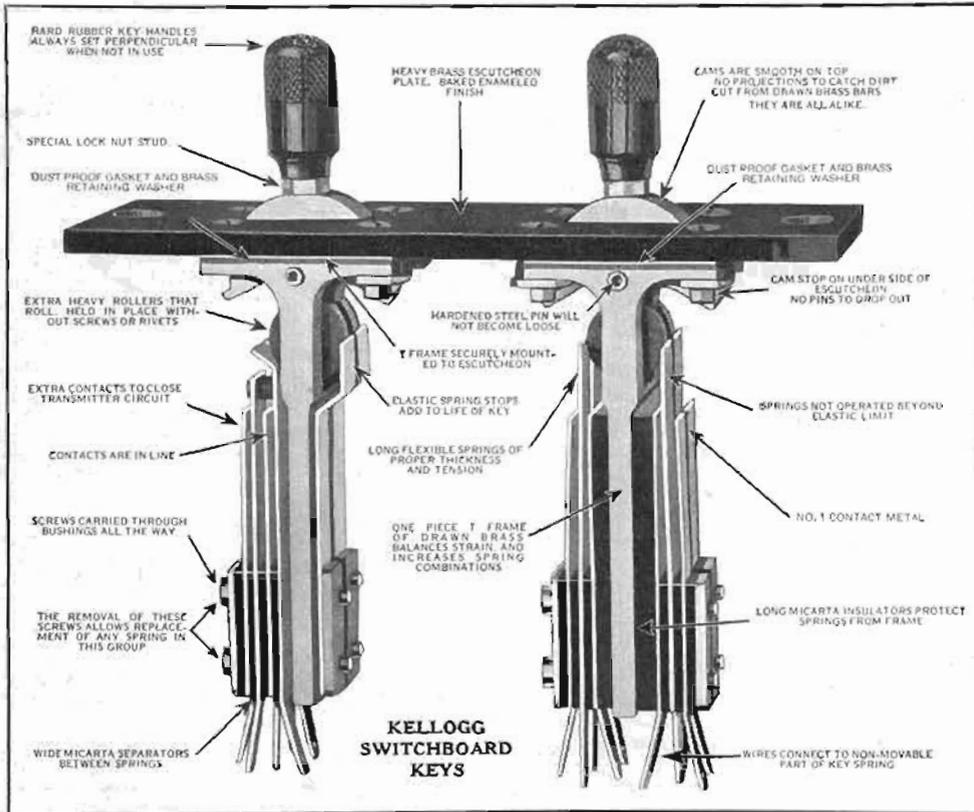
springs and contacts are protected from dust with a felt cushion placed between the frame and escutcheon.

The operator's equipment for each floor type switchboard comprises: transmitter, induction coil, head receiver, hand generator, generator switching key and, in switchboards arranged for more than one operator, a "position switching key" which when operated enables one operator to handle both positions. Kellogg switchboards are furnished complete—with either the suspended or breastplate type operator's transmitter, depending on the purchaser's preference.

With either type transmitter is furnished a light weight receiver combining real efficiency and comfort. It has loudness and clearness of tone with perfect articulation. Only the very finest of cobalt steel is used in the manufacture of the magnets, assuring a most unusual sensitiveness for incoming alternating voice currents. Its use insures better service, through better understanding.

All floor type switchboards are regularly furnished with a five-bar hand generator unless special generators delivering both alternating and pulsating currents are specified. The Kellogg generator is made from the finest magnetic steel possible to obtain. It is the most powerful generator on the market when new, and retains its full power indefinitely. The generator switching key, used for switching from power ringing to hand ringing, is of the same general design as the regular ringing and listening keys already described.

Apparatus of such quality and durability deserves housing in fine cabinets. These cabinets are manufactured in Kellogg's own 12-acre woodworking plant, where only the finest lumber is used. Artisans with years of experience on fine wood-



## Keys

Kellogg keys are designed with a full knowledge of the requirements of rural service. Kellogg engineers realize that magneto service is very heavy and competent repair service is not always obtainable. For this reason, Kellogg keys are built on a heavy cast brass frame that cannot rust, warp, nor twist. There are no intricate springs and levers to get out of order and cause trouble. Lightning discharges are always heaviest on long rural lines, and for this reason, Kellogg keys are insulated with heavy micarta strips and bushings.

The long resilient springs, of nickel silver, permit the greatest breadth of action without breakage. They are operated by a smooth acting cam equipped with pivoted rollers. The rollers contact with the springs so that there is practically no wear on these vital parts. The



Breastplate Type Transmitter

work give the same care and attention to the building of Kellogg switchboard cabinets as Kellogg engineers give to the equipment that goes into them. All cabinets, unless otherwise specified, are made of well-seasoned quarter sawed oak, with a medium dark finish.



Repeating Coil

The following pages are devoted to the several types of magneto switchboards. Because of the long life of Kellogg switchboards, the purchaser is cautioned to select a board with at least fifty per cent additional capacity to accommodate the future growth of his exchange for many years to come. Only the present requirement of lines and cords need to be equipped at the time of purchase, and the additional equipment may be added as required.

# Kellogg

# MAGNETO SWITCHBOARDS

## Type 9-B Switchboard

To meet the demands of exchanges too small to justify the expense of the floor type cabinet, the Kellogg Company has designed a complete line of wall type switchboards illustrated on this page. These wall switchboards are of the unit type. Should they ever become filled to capacity, another wall switchboard can be placed alongside, or the drops and jacks and plugs, being of standard construction, can be used in a Kellogg floor type switchboard.

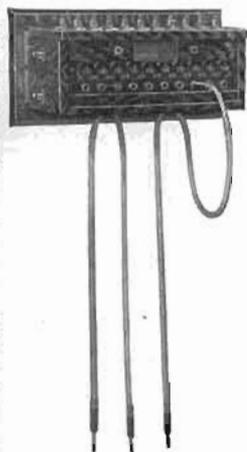
The 9-B is the smallest of the Kellogg wall type switchboards. Its operation is just as positive and just as dependable as the largest magneto board. Its capacity is limited, however, to ten drops and jacks with night alarm, two cord circuits and two supervisory or listening-in jacks. Code night alarm contacts, causing the night alarm bell to give a signal to correspond to the code rings on the bell, may be had if desired.

The use of this type switchboard is recommended where the requirements will not exceed ten lines. Gas, power, railway, and mining companies find this switchboard indispensable for inter-communicating purposes. Once installed, it operates for many years with but little attention.

The line wiring terminates on binding posts on the top of the cabinet to which the outside lines are fastened. Through special design, the line binding posts include air gap lightning arresters.

The operator's set, which is furnished only when specified, and which may consist of any standard magneto telephone with hand generator and bell box, should be connected to the cord and plug furnished with the board.

Shipping weight approximately twenty-five pounds.



## Type 17-B Switchboard

This type switchboard has a greater capacity than the 9-B. It is wired for 34 lines, 6 single drops supervisory cord circuits equipped with combined ringing and listening keys, night or code alarm, and provided with an 8-foot cable extending from the top of the cabinet. The switchboard may be partially equipped to care for present traffic requirements, and as future growth demands it, equipment can be added up to its total capacity.

The drops and jacks are mounted ten per strip. They are of standard design, which permits them to be interchanged with those of any Kellogg floor type magneto switchboard.

This board has found much favor among managers of small exchanges because of its dependability and easy operation.

The cabinet is hinged on one side so that the face equipment may be swung away from the wall, permitting adjustments and connections to be made with ease. All parts are standard and may be replaced on order.

The 17-B, as illustrated, is not furnished with operator's equipment unless specified. Two binding posts are located inside the cabinet to which any standard magneto telephone can be connected.

Shipping weight approximately fifty-five pounds.



## Type 17-C Switchboard

The Kellogg 17-C wall switchboard is the same as the 17-B except that it is equipped with a suspended type operator's set with a hand generator mounted in a separate cabinet. This type makes a very desirable, complete, and compact switchboard unit.

Shipping weight approximately sixty-five pounds.

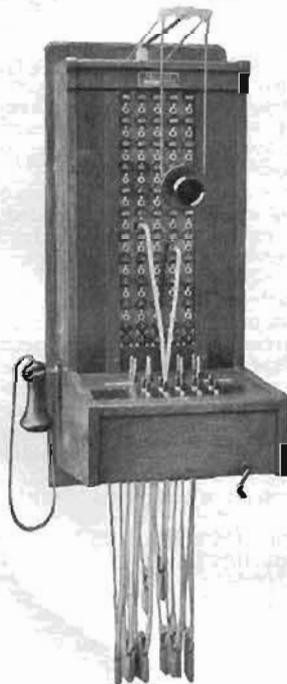
## Type 7-A Switchboard

When a 50 line magneto switchboard is required and lack of available space will not permit a floor type cabinet to be used, the Kellogg 7-A wall magneto switchboard is the popular choice because of its compactness and fine performance. The cabinet, mounted on the wall, swings outward from the back panel, permitting connections and inspection to be made with ease.

Standard drops and jacks are used and mounted five per strip. The 7-A switchboard is wired for fifty drops and jacks, regular or code night alarm, five single drop supervisory cord circuits, hand generator and twelve feet of cable. With this type of switchboard, as in all other Kellogg switchboards, equipment may be installed as required up to the ultimate capacity to take care of future growth.

The lines are brought out of the cabinet in a fifty pair, braid covered, wax core cable. The operator's equipment consists of a standard suspended type transmitter with either the hand or the headband type receiver. All circuits are arranged for connecting to either metallic or grounded lines.

Shipping weight approximately two hundred fifty pounds.



## Type 29-B Switchboard

Kellogg engineers designed this switchboard to meet the specific requirements of rural exchanges and switching centers where an audible line signal is desired. It differs from other Kellogg magneto wall switchboards and eliminates the operator of being in immediate attendance at all times.

A bell is wired across each line and operates similar to that of a telephone bell. This enables the operator to tell, without being at the switchboard, whether a party line subscriber is signaling her or another party on the same line.

The capacity of this board is limited to 15 lines, 5 connecting cord circuits, and night alarm. It may be equipped with as many cord circuits as desired up to its total capacity. The line equipment is in units of three each, permitting the switchboard to be equipped with 3, 6, 9, 12 or 15 lines.

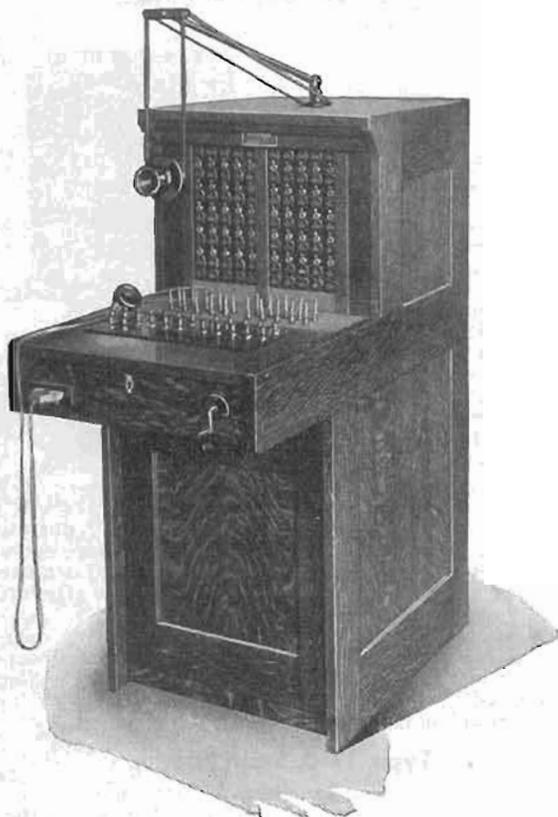
An 8-foot cable extends from the top of the board. The cabinet is hinged at the side, permitting it to swing outward from the back panel. The operator's instrument cord may be connected to any standard magneto telephone. Night alarm equipment is furnished which consists of a buzzer and switch, and may be located wherever desired, near or apart from the switchboard. The buzzer will operate when any of the switchboard drops fall, providing the night alarm switch is closed.

Shipping weight approximately fifty-five pounds, fully equipped.

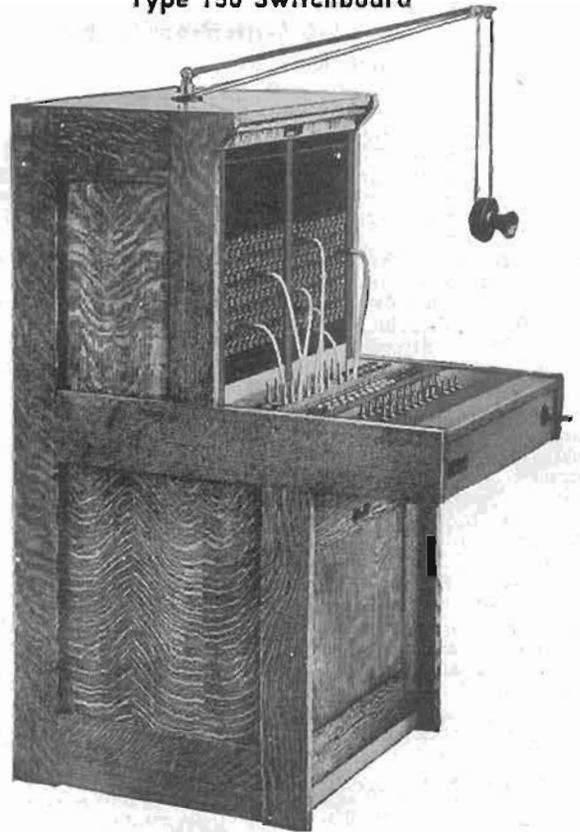


# MAGNETO SWITCHBOARDS

Type 50 Switchboard



Type 150 Switchboard



This is the smallest floor type switchboard manufactured by the Kellogg Company. All problems of design and engineering have been considered from the standpoint of the operating company, with the result that the Kellogg floor type switchboard is simple, inexpensive to maintain, is durable, and renders a grade of service which is not excelled by any other magneto equipment.

A new special Magneto Switchboard Bulletin more completely describes the details of Kellogg floor type magneto boards. A copy of this bulletin will be sent free upon request.

The Kellogg type 50 switchboard is wired for fifty lines, ten drop supervision cord circuits, suspended or breast-plate operator's equipment, hand generator, generator switching key, night or code night alarm, and equipped with twelve feet of cable. This switchboard is arranged for single or double drop supervision. It may be partially equipped if desired, leaving the additional equipment to be added as needed. This permits the switchboard to grow with the community.

Either the breast-plate or suspended type transmitter can be furnished. However, the breast-plate type is more sanitary, as it allows each operator to have a separate instrument. This type of switchboard has two panels for mounting the drops and jacks in strips of five, and if desired, the space occupied by one strip may be used for a pigeonhole or for a cash drawer which fits the pigeonhole. This type switchboard is recommended in preference to the wall switchboard of the same number of lines, when space is available. The over-all dimensions are: depth 24 $\frac{3}{4}$ ", width 18 $\frac{3}{4}$ ", and height 3' 9 $\frac{1}{4}$ ". The key shelf extends 10 $\frac{1}{4}$ " from the switchboard, giving sufficient room for the operator to write toll slips.

The Kellogg type 150 magneto switchboard has been designed for exchanges requiring the floor type board of a larger capacity than 50 lines.

All of the advantages and simplicity of the smaller switchboards have been retained in the Kellogg 150 type. It is wired for 100 or 150 lines, 15 cord circuits, suspended or breast-plate operator's equipment, hand generator, generator switching key, night or code alarm, and equipped with 12 feet of cable.

Kellogg floor type switchboards are built to customer's requirements. Standardized parts are used in equipping each board, which assures quick delivery, low price due to quantity production, and replacement parts available on order.

This cabinet may be partially equipped if desired, leaving space and wiring for additional drops and jacks when needed. If greater capacity than 150 lines is required, another cabinet of the same type may be used in connection with the original unit.

This switchboard appeals particularly to the exchange manager who wishes to employ the latest methods of operation in his magneto switchboard without discarding present magneto telephones and without incurring the expense of bringing the line construction up to the standard required for common battery service. Associated with each cord circuit, either drop or lamp signal type of supervision can be furnished. With Kellogg lamp supervision, an operator can handle her calls more rapidly than she can when the switchboard is equipped with drop supervision, due to the fact that lamps are more readily observed.

The over-all dimensions are: Depth 24 $\frac{3}{4}$ ", width 25 $\frac{1}{8}$ " and height 4' 3 $\frac{3}{4}$ ". The key shelf extends 10 $\frac{1}{4}$ " from the switchboard, giving ample writing room.

## CAPACITIES

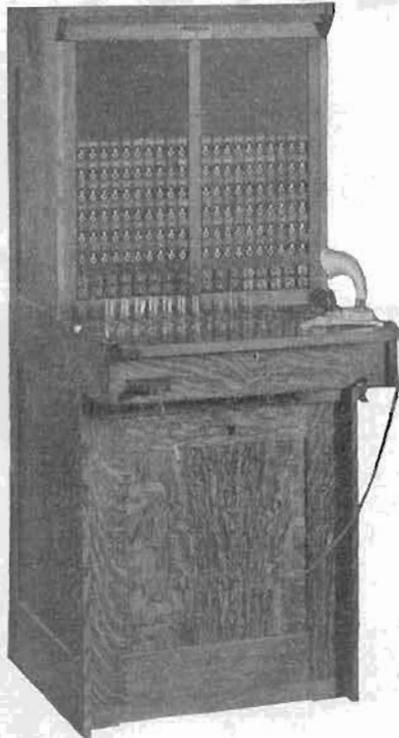
Code No.	Lines Wired	Cords Wired	Supervision	Approximate Shipping Weight
150-A	100	15	Drop	500 lbs.
150-B	150	15	Drop	500 lbs.
150-AL	100	15	Lamp	600 lbs.
150-BL	150	15	Lamp	600 lbs.

Code No.	Lines Wired	Cords Wired	Supervision	Approximate Shipping Weight
50	50	10	Drop	350 lbs.

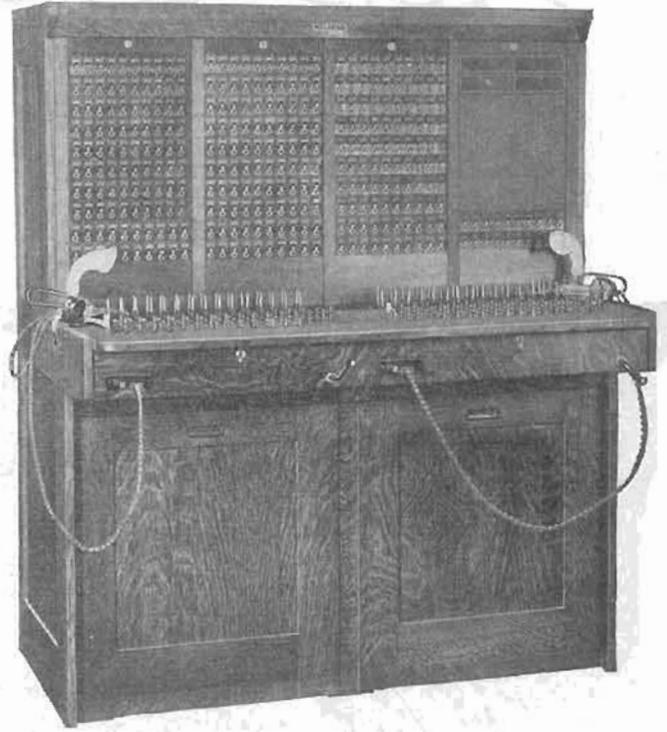
# Kellogg

# MAGNETO SWITCHBOARDS

Type 200 Switchboard



Type 400 Switchboard



The largest standard single position Kellogg magneto switchboard is the 200 type. This board has an ultimate capacity of 200 lines, though it may be purchased with 150 or even 100 lines wired. The price is figured according to the number of lines wired and the equipment placed in it.

The 200 type, when purchased with wiring for 200, 150 or 100 lines, is completely wired for 15 cord circuits, suspended or breast-plate operator's equipment, hand generator, generator switching key, night or code alarm, and equipped with twelve feet of cable. The cord circuits can be equipped with lamp or drop supervision of either the single or double type.

Double lamp supervision is recommended for this type switchboard, as greater facility is provided for handling the large number of lines.

With its low key shelf and large capacity, this switchboard presents a most attractive unit for any exchange desirous of giving the very best magneto service. This switchboard is designed to accommodate the addition of another position when traffic conditions require the use of a second operator.

The over-all dimensions are: depth 24 $\frac{3}{4}$ " , width 24 $\frac{1}{8}$ " , height 4' 11". The key shelf extends 10 $\frac{1}{2}$ " from the cabinet.

The 400 type Kellogg switchboard is a two position section developed for larger magneto exchanges.

In recent years, much progress has been made in building magneto switchboards that enable the operators to handle more calls quickly and easily, giving better service.

Kellogg engineers have incorporated various new ideas and improvements in this switchboard. It is arranged for four panels with drops of ten per strip, allowing an ultimate capacity of 400 lines, and wired for either 300 or 400 lines. Each position is also wired for 30 double drop or double lamp supervisory cord circuits, hand generator, generator switching key, night alarm and control keys, and equipped with 12 feet of cable extending from the cabinet.

In addition to the supervisory lamps associated with each cord pair, a large red pilot lamp is used which remains lighted until the operator has given proper attention to all disconnect and recall signals. Improvement of line and supervisory pilots, lamp signal key shelf supervision, and the distribution of rural lines in front of the local positions, naturally speeds operator's handling time. This allows more calls to be handled with greater care and ease.

The over-all height is 4' 11", width 3' 11 $\frac{1}{8}$ " , depth 34 $\frac{3}{8}$ ".

## CAPACITIES

Code No.	Lines Wired	Cords Wired	Supervision	Approximate Shipping Weight
200-A	100	15	Drop	500 lbs.
200-B	150	15	Drop	500 lbs.
200-C	200	15	Drop	500 lbs.
200-AL	100	15	Lamp	600 lbs.
200-BL	150	15	Lamp	600 lbs.
200-CL	200	15	Lamp	600 lbs.

## CAPACITIES

Code No.	Lines Wired	Cords Wired	Supervision	Approximate Shipping Weight
400-A	300	30	Drop	650 lbs.
400-B	400	30	Drop	650 lbs.
400-AL	300	30	Lamp	750 lbs.
400-BL	400	30	Lamp	750 lbs.

# Kellogg

## WIRE CHIEF'S TEST SETS

### The Junior Test Cabinet



It is expensive for the smallest magneto or common battery exchange to be without the service of a test cabinet. It will earn its cost many times each year. Simplicity in design and construction is an outstanding feature of all Kellogg test sets.

The Kellogg Junior Test Set is for use in magneto and small common battery exchanges where a simple, compact, and inexpensive testing arrangement is all that is needed. It is assembled in a turret type cabinet of medium dark finished quarter-sawn oak, measuring 13½ inches high, 10 inches wide and 6 inches deep.

Standard practice includes a No. 267 Weston panel mounted voltmeter reading from 0 to 30 volts. If preferred, this same meter can be furnished with an additional scale of 0 to 3 volts graduated in ohms for direct reading resistance measurements.

Two trunks, one to the switchboard and one to a test shoe at the main frame, are wired on all sets. A third trunk for test clips can be had if desired.

Tests can be made through the switchboard or from the main frame "out" on the line side, or "in" on the switchboard side.

Tests can be made for shorts and ground on either side of the line, and also for condenser "kicks" on open or common battery line.

A ringing and listening key is furnished, but no operator's telephone. This test set will connect and operate with any standard telephone, which can be used as a wire chief's or operator's instrument.

An order wire key for connecting the wire chief direct with the operator, for handling the test trunk cords at the switchboard, is equipped on request.

All wiring for outside connections is terminated on binding posts and fuse bars, conveniently located in the rear of the cabinet. All apparatus and wiring is accessible from the rear through a full size removable panel.

When placing an order or asking for prices be sure to state whether the single or double scale voltmeter is desired, and if it is to be used with a magneto or common battery switchboard; also if the order wire key is wanted. When a separate trunk for test clips is desired, this should be stated, as well as stating whether four or five frequency ringing is used and a ringing key desired.

### The Senior Test Cabinet



The senior test outfit is assembled in a turret type cabinet suitable for mounting on a desk or table and measures 12 inches high by 12 inches wide and 23 inches deep.

The voltmeter used is the Weston No. 24 type. This voltmeter sets flush with the face of the cabinet and has a scale of 0 to 30 and 0 to 150 volts. It has no ohm scale calibration, but the low scale has a resistance of 10,000 ohms and 50,000 ohms on the high reading.

When specified this cabinet can be equipped with the same circuit and apparatus used in the Junior type; however, standard practice includes a larger, more complete and flexible circuit arrangement. This circuit includes all the necessary apparatus and additional refinements for testing in the small and medium sized universal and common battery exchanges.

A resistance coil and shunt key is included for decreasing the resistance of the voltmeter to permit easy reading on low resistance line, or other circuits, under test. A key for connecting the voltmeter to the test circuit is standard equipment.

A key is furnished for cutting the voltmeter battery off and a voltmeter reversing key for testing for foreign currents. A voltmeter ground key is used for testing for grounds and foreign currents; a test trunk reversing key will locate grounds on either the tip or ring side of the line. Another key will set up the testing apparatus for both "in" and "out" test from the M.D.F. Keys for connecting common battery and magneto test trunks, a flash key for flashing the line lamp on common battery trunks, keys for ringing and listening and connecting talking battery to common battery are furnished.

Other refinements include a key for reading the test battery, a key for connecting a bridge or howler (the bridge or howler not furnished), and a continuous ringing key. A two-way trunk to the local board is furnished with a lamp signal and an answering key.

Standard equipment includes a complete operator's telephone of the desk stand type. It has an anti-side tone induction coil and head receiver with head band and suitable hook. A night alarm buzzer and cut off key is also standard equipment. All apparatus, including binding posts, is housed inside the cabinet, accessible through a full panel, hinged rear door.

No test shoe and cord for the main frame or trunk equipment for the switchboard are furnished with the cabinet. They are to be ordered separately.

General practice calls for single party ringing only; therefore, all orders or requests should state what type of ringing is used on the main switchboard, as a small additional charge is made for party line master keys.

# Kellogg

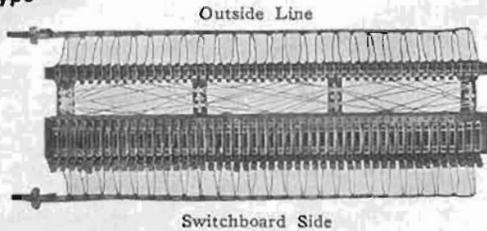
# MAGNETO SWITCHBOARD APPARATUS

## Arresters and Cross-Connecting Equipment

Every switchboard should be protected from lightning by some form of carbon lightning arrester for each incoming line. Where there is danger from electric light and power circuits, best practice calls for the use of a fuse or heat coil sneak current protector in addition to the carbon arrester which is intended as a protection against lightning. ALL PROTECTIVE APPARATUS SHOULD BE WELL GROUNDED. This ground should be made by means of a heavy insulated copper wire not smaller than 14 B & S gauge well secured to a water pipe or soldered to a ground cone such as shown on page 51.

Every exchange requires some means of cross connecting in order that subscribers moving from one part of town to another can do so without changing their old number. For example, this can be done by attaching the cable pair of drop No. 1 on the switchboard to the corresponding number on the arrester. The line wires or cables can likewise be permanently connected to the line wire side of the line terminals or distributing block, which is also numbered from 1 up. Then by attaching one end of a jumper wire to the line side of the arrester the other end can be connected to the terminal of any line selected; thus No. 40 drop can be made to work on No. 1, or No. 49 or any other line desired.

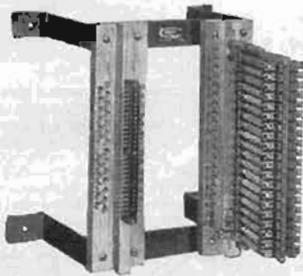
### No. 6 Type



No. 6 type combination lightning arrester and cross connecting rack. This type ranges from 5 to 25 metallic lines or 10 to 50 grounded lines. It is so arranged that any line can be cross connected to any switchboard drop. Uses No. 11 fuses and carbon arresters. Over-all length 32 3/4 inches.

Code No.	Capacity	Overall Length	Shipping Weight
6	25 pair	32 3/4 inches	10 lbs.
9	10 pair	13 3/4 inches	5 lbs.

### Code No. L 9

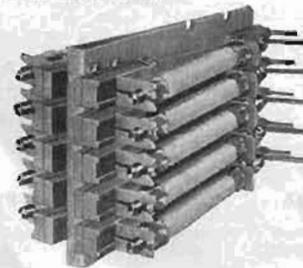


No. L 9

The L 9 is a small distributing frame designed to carry the H 36 or the No. 100 protector. Distributing strips of hard maple are mounted on two heavy steel brackets with sufficient room to make it accessible. Made in 20, 40, and 60 pair capacities. Width 9 1/2 inches, depth 15 inches. Furnished less protectors but including line terminals.

Code No.	No. of Pairs	Length, Inches	Weight
1050	20	12	1 lb.
1052	40	27	4 lbs.
1054	60	42	32 lbs.

### Code No. H 36



No. H 36 Protector

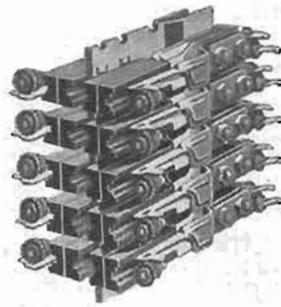
Designed to protect circuits where heat coils are not required. The fuses and lightning arrester carbons are mounted on metal plates of the same length as those used for heat coil protectors and may be mounted on the same frame.

Standard carbons, one plain and one grooved, and "U" shape celluloids .005 thick are provided.

Furnished with wood or composition fuses, the latter being approved by the Underwriters. Sections 1 1/2 inches wide and 5 1/2 inches deep.

Code No.	Section	Fuses	Length	Weight
1202	10 pair	A 45 composition	5 1/2 inches	20 lbs.
1203	20 pair	A 45 composition	10 1/2 inches	21 lbs.

Unless otherwise ordered 1 ampere composition fuses will be sent.



No. 100 Protector

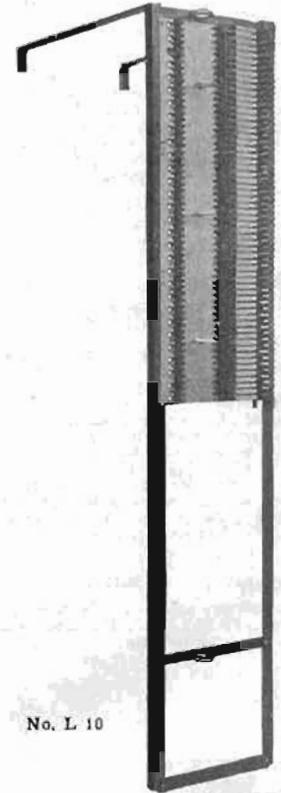
Code No.	Section	Length	Weight
1230	10 pair	5 1/2 inches	2 1/2 lbs.
1231	20 pair	10 1/2 inches	5 lbs.
1232	No. 100 heat coils		
1234	No. 100 test plugs		

### Code No. 100 Protector

This newest design protector is equipped with wire wound, self soldering heat coils and carbon block arresters.

When the heat coil melts or blows from an overcharge of lightning or electric current, it opens the circuit and grounds the line. To reset the protector simply push the switchboard spring back over the heat coil. No coil to change, turn or re-solder.

Sections are 2 inches wide and 3 1/4 inches deep.



No. L 10

### Code No. L 10

#### Main Distributing Frame

This is a floor type of frame to be used in mounting H 51 Central Office Protector.

It is designed to replace the old wooden fire hazard wall frames, and consists of two vertical upright angle iron supports with cross pieces, wall braces, jumper rings for top and bottom and necessary bolts. Additions may be made to right or left side. The top cross piece is drilled to attach a cable bracket to the switchboard. The vertical uprights are 6 feet 9 inches in height. The frame is 16 inches wide and braces are 18 inches long. All steel parts are finished in aluminum.

### Code No. H 51 Protector

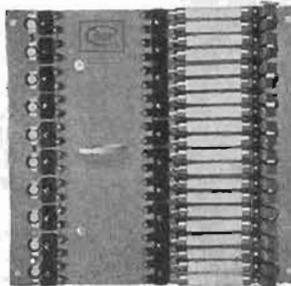
The H 51 Protector, in sections of 10 pairs each are installed as required.

H 51 Protector is a combination of line terminals and central office protector.

The base is of metal, aluminum treated.

Carbons ground on a copper ground strip that runs the length of the mounting plate, with provisions to make the ground continuous.

Fuses are composition type A 12 of 1 ampere capacity. Standard grooved carbons and "U" shape dielectrics are used.



No. H 51 Protector

Cat. No.	Description	Length, Inches	Width, Inches	Depth, Inches	Net Weight
1260	L 10 Frame 50 pair	61	12	18	16 lbs.
1040	H 51 Protector 10 pair sections	12	11 1/4	2	45 lbs.

# MAGNETO SWITCHBOARD APPARATUS

## Coils—Induction

See Page 6

### Code No. 108 A



No. 108 A

An improved coil that replaces the 28 C. The No. 108 A induction coil is a universal local battery coil for use in magneto switchboards using dry cells or primary batteries. Terminals are provided for either soldered or screw connections. Replaces Nos. 14 A and 14 C. Net weight, 4½ ounces.

### Code No. 7 D



No. 7 D

The No. 7 D induction coil is used on magneto switchboards when a third or tertiary winding is desired for monitoring. The primary has a resistance of 4 ohms, the secondary 90 ohms and the tertiary 435 ohms. Net weight, 12 ounces.

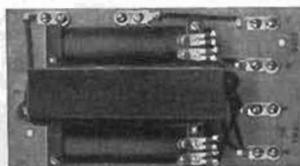
### Code No. 81 A



No. 81 A

Similar in construction to No. 28 is the No. 81 A induction coil but used with battery feed coils where operator's sets on magneto switchboards are supplied from storage battery. The primary has a resistance of 4 ohms, the secondary 37.5 ohms. Net weight, 4½ ounces.

## Operators Feed Coils



Nos. 3 A-4 A

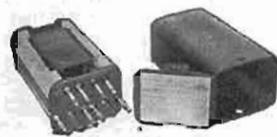
These feed coils each consist of a 2 M.F. condenser in combination with two retardation coils one in each side of the circuit. They are wound to secure the proper impedance, to feed the right amount of current to the transmitter, and prevent cross talk between positions. Net weight, 1½ lbs. No. 3 A battery feed coil—for use with 24-volt battery. No. 4 A battery feed coil—for use with 32-volt battery.

## Coils—Repeating

The repeating coils listed below replace all former types and represent our latest development in coils and are superior to any now on the market for both ringing and transmission efficiency.

The cores are made of Silicon steel laminated, and the windings are completely enclosed in heavy cross-talk proof cases.

### Ring and Talk Through



Nos. 19 A-20 A

The No. 19 A was designed for magneto cord circuits where a ring and talk through coil is required. Consists of four concentric windings 15.3, 17.1, 18.8, 20.9 ohms respectively. Mounts on relay strips or can be mounted on wood by the use of individual angle mountings Nos. 1012, 1013 and 1014. Net weight, less mounting, 2¼ lbs.

### Talk Through Only

The No. 20 A was designed for magneto circuits where a talk through coil is required. Consists of 4 concentric windings 12.1, 13.7, 15.2 and 16.6 ohms respectively. Mounts on relay strips or can be mounted on wood by the use of individual angle mountings Nos. 1012, 1013, 1014. Net weight, less mountings, 2¼ lbs.

## Mountings



No. 1014

No. 1012

No. 1013

Code No.

1012

1013

1014

Mounts On

Right

Left

Roof

Weight

6 ounces

6 ounces

6 ounces

### Non Ring-Through



No. 16 A

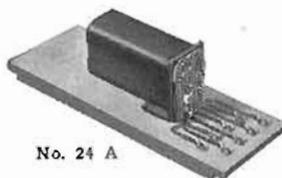
A non ring-through repeating coil formerly used in magneto cord circuits. Has 2 concentric windings 16 and 20 ohms. Used anywhere a non ring-through coil is desired for wood mountings. Net weight, 3 lbs. Height, 3¾ inches. Width, 3¾ inches. Depth, 2¾ inches.

## Phantom and Drainage Coils

(For Complete Information On Repeating Coils, Write for Bul. No. 206)

Proper Protection for These Coils Listed Under Arresters in Supply Section

### Code No. 24 A Repeating Coil

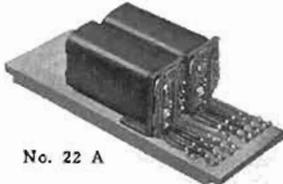


No. 24 A

A new coil with extremely low transmission loss for use with phantom circuit or for the termination of metallic lines which are continued as grounded or one wire circuits. The core is laminated nickel iron alloy which permits high efficiency on both talking and ringing circuits. Windings are perfectly balanced. This coil is provided with a maple base 10¾ inches by 4 inches for convenient mounting. Terminals are brought out to numbered solder-base. Replaces Kellogg 17 F and 18 A and B repeating coils. Height overall 3¾ inches. Weight packed for shipping, 6 lbs.

ing connections on the wood base. Replaces Kellogg 17 F and 18 A and B repeating coils. Height overall 3¾ inches. Weight packed for shipping, 6 lbs.

### Code No. 22 A Repeating Coil



No. 22 A

A double coil consisting of two coils of the No. 24 A on one base. This arrangement is particularly convenient for phantom circuits and is economical of space.

All connections are brought out to numbered soldering connections on the base. Base, 10¾ inches by 4 inches. Height overall 3¾ inches, weight packed for shipping, 8 lbs.

### Code No. 21 A Repeating Coil

This coil has the same windings as the No. 24 A but is furnished without the maple base. Requires a standard Kellogg relay mounting as shown in the preceding column. This coil is recommended only when there are standard Kellogg relay mounting strips or when space is at a premium. Length, 4¾ inches; width, 2¾ inches; height, 1¾ inches. Weight packed for shipping, 3 lbs.

## Insulating Transformer



No. 19 B

The 19 B transformer is well balanced and has a break down test of 7,500 volts. Can be used either as an insulating transformer or drainage coil on telephone lines paralleling high tension lines. It is furnished without cover or base and can be mounted as desired. Net weight, 16¾ lbs.

## Condensers

See Page 6

Kellogg condensers are manufactured by the most modern process and are of the best materials obtainable. Special tin foil and paraffin paper are used in the construction of all condensers, rather than the metallized paper process, which is not satisfactory for telephone use because of its high resistance.

The tin foil type of construction is more expensive, but is thoroughly reliable and free from trouble and is the only condenser that will withstand high frequency currents, such as auto, ignition and radio work. It is well known that where an ordinary condenser fails the installation of a Kellogg will prevent further trouble.

Kellogg is prepared to furnish condensers for special work providing the quantity is large.

## Condensers for Cord Circuits

Code No. 68 ½ M. F.

No. 68 is a ½ M.F. condenser being 3¼" high, 1½" wide and 1½" thick. Arranged for wood mounting. Net weight, 6 ounces.

Code No. 67 1 M. F.

No. 67 is a 1 M.F. Condenser using the same can as the No. 68 and arranged for wood mounting. Net weight, 6 ounces.

For best cord circuit transmission 2 M.F. condensers are recommended.

Code No. 66 2 M. F.

No. 66 Condenser is a 2 M.F. of the same dimensions as the No. 67 and 68. Arranged for wood mounting. Net weight, 7 ounces.

Code No. 64 2 M. F.

No. 64 Condenser has a capacity of 2 M.F. and arranged to mount on regular relay strip mountings. It is 2¾" high, 1½" wide and 1½" high. Standard for Kellogg magneto boards. Net weight, 6 ounces.



No. 64



Nos. 66, 67, 68

# MAGNETO SWITCHBOARD APPARATUS

## Condensers—Power

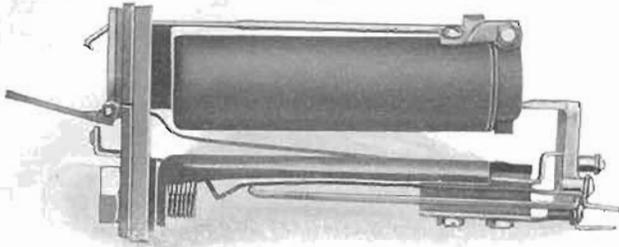


Nos. 24, 25

**Code No. 24** 1/2 M.F.  
For a 1/2 M.F. high break down condenser the No. 24 is recommended. It is used in the Kellogg No. 36 type pole changer. Net weight, 11 ounces.

**Code No. 25** 1 M.F.  
For a 1 M.F. high break down condenser the No. 25 is recommended. It is used in the No. 9, 23 and 30 dry battery pole changers. Net weight, 12 ounces.

## Combined Drops and Jacks



### Jack

The jack is of the single line spring construction with a chafing knife edge drop circuit contact. This simple construction makes possible the use of an extra strong combined tip and restoring spring.

The sleeve line conductor uses the frame of the jack and the sleeve thimble provides a long surface contact. This sleeve thimble is of the removable type, permitting easy replacement when the thimble has become too badly worn for proper operation.

### Night Alarm

The regular night alarm spring is mounted on the jack, which simplifies construction and maintenance. The alarm does not close.

### Drop

The drop shutter has punched hinge construction, using a stationary hinge pin which is a part of the shutter. There is no loose pin to work out. When the new shutter is released, it falls to a 65° angle. The new hinge construction provides a durable adjustment of the drop.

### Mounting

The new drops with mountings can be placed in any board.

The Kellogg Combined Drop and Jack is extremely sensitive and will fall reliably with a minimum of current, will give a good clean rattle and its mechanism is designed so drop will restore reliably, no matter how badly the plug may be worn.

The Jack springs catch the plug firmly and are so tempered as to give fine service on the busiest toll and rural lines. All iron work is permanently protected against rust and scaling.

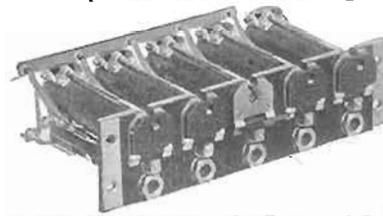
A drop and jack that will cause you no trouble. Practically no burnouts—the record is one in each five hundred and forty years of drop service.

Net weight, 5 per strip complete, 2 1/2 lbs., 10 per strip 4 lbs.

In ordering give board number if Kellogg, otherwise name of manufacturer and dimensions of present mountings.

Code No.	Drop Resistance	Remarks
300 A	100 ohms	with armature contact
300 C	1000 ohms	with armature contact
300 E	500 ohms	with armature contact
301 A	100 ohms	without armature contact
301 C	1000 ohms	without armature contact
301 E	500 ohms	without armature contact

## Drop and Jack Mountings



No. 257, Mtg. Complete with Drops and Jacks

### Code No. 257

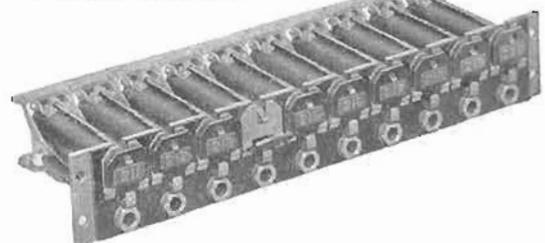
No. 257 mounting strip is the standard 5 per strip. It will mount the No. 29, 101 and 301 type D. & J. the mounting center is 6 3/4". Length of face 8 1/2", over-all length 6 1/2". Width of strip 1 3/4". Net weight, 10 ounces.

### Code No. 333

No. 333 mounting strip is of the same construction as the No. 257 except being drilled for adjustable code alarm contacts. Mounts Nos. 59, 100 and 300 type. Net weight, 10 ounces.

### Code No. 395

No. 395. Similar to No. 257 except has 2-piece No. 28421 adapters to cover end spacing, thereby permitting flush mounting. Net weight, 10 ounces.



No. 329, Mtg. Complete with Drops and Jacks

### Code No. 329

No. 329 standard 10 per strip mounting that mounts the Nos. 29, 101 and 301 D. & J. Mounting center is 10 3/4", length of face 10 1/4", length over-all 11 3/8". Width of strip 1 3/4". Net weight, 1 lb.

### Code No. 426

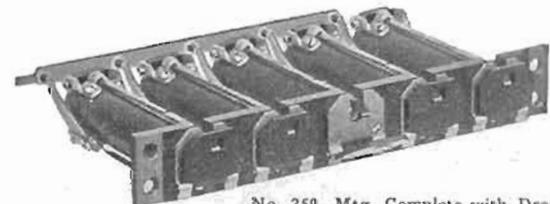
No. 426 standard 10 per strip for the Nos. 59, 100 and 300 type D. & J. Similar to No. 329 except drilled for adjustable code alarm contacts. Net weight, 1 lb.

## Clear Out Drops

The Kellogg ring-off drop or clearing-out drops as they are sometimes called, are similar in design and embody all points of excellence found in the Kellogg line drops. They are sensitive. Shutters are forced to fall. Drops are of rustproof construction and are fitted with contacts for night alarm or pilot lamp signals, the same as are the drops used in the line circuits. Net weight, 5 per strip complete 2 1/4 lbs., 8 per strip 2 3/4 lbs.

In ordering give board number if Kellogg, otherwise name of manufacturer and dimensions of present mountings.

No. 51 E drop is standard for all types Kellogg magneto board. The drop coil has a resistance of 500 ohms.



No. 259, Mtg. Complete with Drops

### Code No. 259

The No. 259 is the standard 5 per strip mounting. It also mounts the 22 type. Mounting center is 6 3/4". Length of face 5 3/4", length over-all 6 1/2", width of strip 1". Net weight, 2 ounces.

# Kellogg

# MAGNETO SWITCHBOARD APPARATUS

## Drop Mountings—Continued



No. 433, Mtg. Complete with Drops

### Code No. 433

The No. 433 is the standard 8 per strip mounting. It also mounts the 22 type. Mounting center  $10\frac{1}{8}$ " length of face  $10\frac{1}{4}$ " length over all  $10\frac{1}{8}$ ". Net weight, 10 ounces.

## Combined Ringers—Drops and Jacks

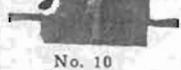
Combined ringers and drops for use in switchboard work where a drop shutter is not sufficient to signal the operator can be furnished.

The No. 3 A has a resistance of 1000 ohm, the No. 3 D 1600 ohm, and the No. 3 E 2500 ohm.

No. 141 mounts in same space as standard 5 per strip combined drop and jack mounting. Mounting center  $6\frac{1}{4}$ " length of face  $5\frac{7}{8}$ " width  $3\frac{1}{2}$ ". Mounts 2 combined ringer and drop with 2 jacks.

No. 455 mounts in same space as standard 10 per strip drop and jack mounting. Mounting center  $10\frac{1}{8}$ " length of face  $11\frac{1}{8}$ " width of strip  $1\frac{3}{4}$ ". Mounts 3 combined ringers and drops also 3 jacks.

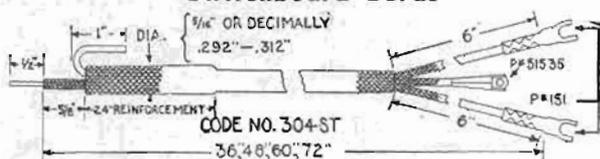
## Number Plates



No. 10

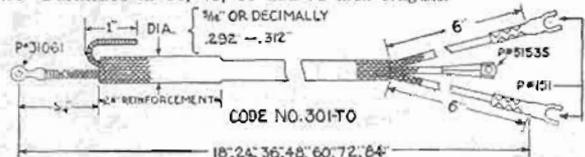
No. 10 is the standard number plate for combined drop and jacks and clear out drops. Carried in stock numbered 1 to 999 inclusive.

## Switchboard Cords



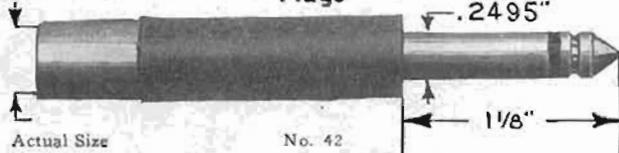
The No. 304 ST steel and tinsel cord solves the problem of reducing the high cost of switchboard cordage. It consists of two spiral steel conductors wrapped over braided tinsel. The round steel conductors are practically unbreakable giving the cord a wonderfully long life, while the tinsel lowers the resistance of the steel conductors, making a most satisfactory cord from a transmission standpoint. Diameter at plug end  $\frac{5}{16}$  inch, the decimal equivalent of which is .292 to .312 inch. Tracer colors tip white, sleeve blue. Fits Nos. 3, 17, 42, 70, 130 and 187 plugs.

The No. 353 ST steel and tinsel cord fits Kellogg plug 168; also W. E. No. 47. Furnished in 36, 48, 60 and 72 inch lengths.



Code No. 301-TO is our standard two conductor tinsel cord having a diameter at the plug end of  $\frac{5}{16}$  inch, the decimal equivalent of which is .292 to .312 inch. Fits Kellogg plugs Nos. 3, 15, 17, 42, 35, 70, 109, 112, 130, 168 and 187. Tracer colors tip conductor white, sleeve blue. Used on 9-B switchboard.

## Plugs



Actual Size

No. 42

### Code No. 42

No. 42 is the standard two conductor switchboard having a sleeve diameter of .2495 inch. Net weight, 2 ounces.



### Code No. 247

No. 247

The No. 247 replaces Western Electric No. 47-A plug. Sleeve diameter .250. Length of body from shoulder to tip 1.206. Net weight  $1\frac{3}{4}$  oz. Over all diameter .563. Net weight, 2 ounces.

## Cord Fasteners



No. 4

No. 4 cord fastener, brass dull nickel.

No. 5 cord fastener, steel hot tin plated.



No. 5

## Cord Hooks



No. 2

No. 2 brass cord hook made from No. 11 B & S gauge brass. Bent to form loop to prevent cord from slipping off.

## Cord Weight

No. 9 cord weight is made of steel and lead, having a weight of approximately 10 ounces.



No. 9

## Generators

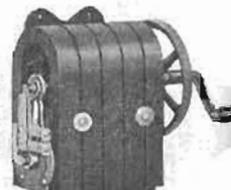
(See Page 7)

The secret of the Kellogg generator's extraordinary strength lies not only in its permanent magnet, but in the superior design of its revolving electro-magneto or armature, upon which the wire is wound. It is just as important that this revolving magnet be massive in size as it is to have a large and powerful magnet, for it is absolutely useless to have the permanent magnet furnish more magnetism than the electro-magnet has capacity to use. Most important of all, however, is the necessity for a liberal amount of winding space to accommodate a large coil of magnet wire in which the ringing current is generated.

The Kellogg armature is of the shaftless type, which permits the use of the correct amount of iron and wire to secure the most powerful results.

Repeated laboratory and exchange tests of the most severe character prove time and again the uniformly superior service of Kellogg generators.

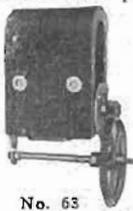
All danger from rust and from short circuits caused by small pieces of loose nickel scale are eliminated by giving the generator magnets a heavy coating of special blue paint. The gear, pinion, field and screws are all nickle plated, dull finish.



No. 72

### Code No. 72

The No. 72 is the standard 5 bar generator used in magneto switchboards. Net weight, 9 lbs.



No. 63

### Code No. 63

The No. 63 is the inverted 5 bar generator used with extension shaft. Net weight, 9 lbs.

## Generator Extension Shafts



Code No.

Length

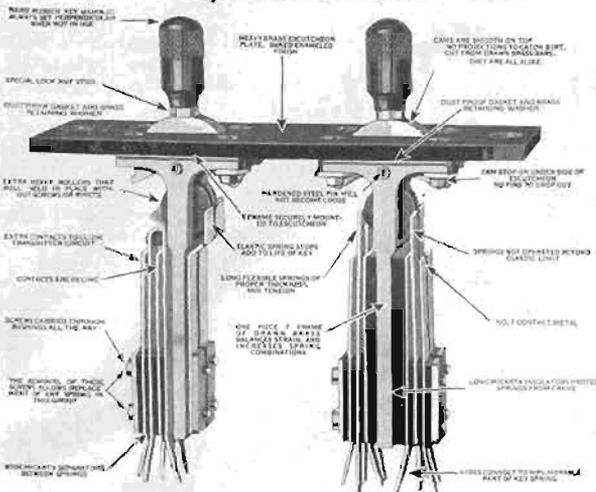
9  
14  
17  
15911

24 inches  
 $12\frac{1}{4}$  inches  
 $20\frac{3}{8}$  inches  
Generator Crank

# Kellogg

# MAGNETO SWITCHBOARD APPARATUS

## Keys—Switchboard



Kellogg cam keys are built on a perfect center line or T frame, making it possible to assemble any number of spring combinations of either the locking, restoring or both locking and restoring types, which are always interchangeable with each other.

All bushings, insulations and rollers are made from Kellite Dilecto, which will not carbonize or break down under high voltage and which will stand up under the most rigid and persistent usage.

The T frame, typical of Kellogg cam keys, and the assembling screws are made of brass. The springs are made of German silver with special contacts, eliminating the possibility of corrosion and giving perfect talking and ringing connections in every operation.

The scientific basis on which Kellogg keys are constructed, with proper distribution of wear, insures long life and positive contacts.

Keys mounted on escutcheons should be ordered so that the first key mentioned on the order will be the key nearest the operator when installed, and so that all locking keys are farthest from the operator. Net weight, 3½ ounces.



### Single Locking

Code No. 1028

Two sets of make and break contact. For switching purposes.



### Double Locking

Code No. 1002

Two sets of make contacts on each side.



Code No. 1030

Two sets of make and break contacts on each side.



### Locking and Restoring

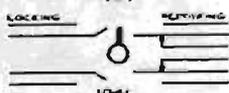
Code No. 1029

Two sets make and break contacts on restoring as well as locking side.



Code No. 1041

Two sets make contacts locking side, two sets make and break contacts restoring side. Ringing and listening.



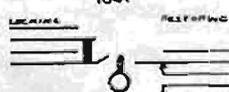
Code No. 1043

Three sets make contacts locking side two sets make and break contacts restoring side. Ringing and listening with battery contacts.

### Single Restoring

Code No. 1033

Two sets make and break contacts. Ringback key.



### Double Restoring

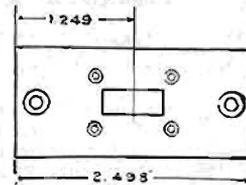
Code No. 1031

Two sets make and break contacts each side. Ring and ringback.



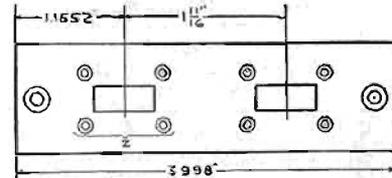
## Key Escutcheons

Escutcheons are made of brass black enameled. Mounting screws not furnished unless specified then charged for extra.



Code No. 1021

An individual escutcheon mounting any of the No. 1000 Type Keys.



Code No. 1012

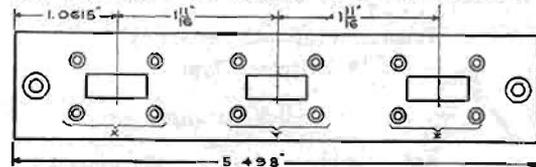
No. 1012 escutcheon is 1 1/8 inches in width. Arranged for 2 keys.

Code No. 1013

No. 1013 escutcheon is 1 inch in width arranged for 2 keys.

Code No. 1026

No. 1026 escutcheon is 1 3/8 inches in width. Arranged for 2 keys.



Code No. 1030

No. 1030 escutcheon is 1 1/8 inches in width. Arranged for 3 keys.

Code No. 1065

No. 1065 escutcheon is 1 3/8 inches in width. Arranged for 2 keys less hole Z.

## Keys—Old Style

On old switchboards where only one or two new keys are required the following old style keys are listed. However, it is recommended that if more keys are to be replaced, a complete set of new style "T" frame keys listed above be ordered and that the keyshelf be cut to fit the new style escutcheon which mount side to side.

### Single Locking

Code No. 28

Same spring combination as No. 1028.

### Single Restoring

Code No. 33

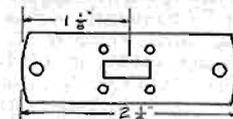
Same spring combination as No. 1033 key.

### Locking and Restoring

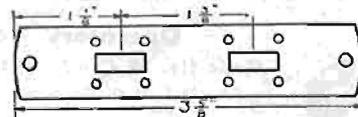
Code No. 41

Same spring combination at No. 1041 key.

## Escutcheons—Old Style



These escutcheons are made of brass nickelplated.



Code No. 301

No. 301 single mounts old style keys only. 3/4 inches in width.

Code No. 303

No. 303 double mounts old style keys only. 3/4 inches in width.

# MAGNETO SWITCHBOARD APPARATUS

## Receivers—Operators'

### Code No. 65 A



No. 65 A Receiver  
With No. 12 New  
Type Wire Headband

The No. 65 type operator's receiver, combining real efficiency and permanent, satisfying service, with feather-like weight, is an equipment that will be appreciated by the operator and manager alike.

The total weight of receiver and band is but 3.9 ounces. The total width is 2 $\frac{3}{4}$  inches and the depth or thickness  $\frac{7}{8}$  inches. Terminals are entirely enclosed within the shell; solid horseshoe permanent magnet, and electro-magnets of high grade wire wound on cores of special magnet iron. The head band is arranged to permit the receiver to be adjusted in any position that is most comfortable to the wearer. Resistance 100 ohms. Standard for all magneto switchboards. Shipping weight,  $\frac{1}{2}$  lb.

### Code No. 46 A

No. 46 A is the standard formerly used on all magneto switchboards. Resistance 140 ohms. Replaced by 65 A receiver. Shipping weight, 12 ounces.



No. 46 A Receiver  
With No. 2 Leather  
Covered Flat Spring  
Steel Headband

## Transmitter—Operators'

### Breastplate Type

The world renowned talking qualities of Kellogg transmitters are not lacking in Kellogg operators' transmitters, which is very important, as patrons and neighboring exchanges judge the character of service of any plant very largely by how well they hear the operator.

The No. 1076-C transmitter is standard for all types of switchboard using the breastplate type of transmitter. The breastplate is constructed of aluminum, white celluloid veneered; the mouth-piece is of hard rubber, heavily white enameled. Transmitter shell is aluminum. Net weight, 10 ounces.



No. 1076, Breastplate  
Transmitter

### Suspended Type

The No. 55-C suspended type transmitter is standard for all types of switchboard using this style of transmitter. Furnished in black enamel finish and with two 72-inch transmitter cords. Net weight, 18 ounces.



No. 55 C

## Cords—Operators'

Kellogg operator cords speak for themselves in giving long, uninterrupted service. The operator cords on Kellogg switchboards are well proving their worth to thousands of users.

The operator cords are made up of 18 strands of tinsel, twisted together in three ropes of 6 strands each, which are covered with two wraps of silk, impregnated with moisture-proof compound. Over this, is placed one braid of plant cotton and then a brown mercerized overall braid.

## Operators' Handset

### Code No. 39 C

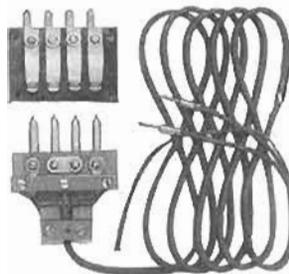
No. 39 C is equipped with a cord to fit the No. 145 operator's plug and is used for an auxiliary operator's set on boards equipped with breast plate transmitter sets. No. 39 C may be furnished on order to fit No. 582. No. 139 and No. 25 operator's plugs. It is the same as the regular NON-POSITIONAL Masterphone handset except that it has separate conductors for the transmitter and receiver. Shipping weight, 1 $\frac{3}{4}$  lbs.



No. 39 C

No. 139 and No. 25 operator's plugs. It is the same as the regular NON-POSITIONAL Masterphone handset except that it has separate conductors for the transmitter and receiver. Shipping weight, 1 $\frac{3}{4}$  lbs.

## Operators'—Cords—Jacks—Plugs



No. 110-OR Cord  
No. 146 Plug No. 43 Jack

No. 110-OR cord is a two-conductor, 72 inches in length.

No. 146 plug four-conductor plug with two center prongs strapped to permit using two-conductor cord for suspended type transmitter. Net weight, 3 ounces.

No. 43 jack — four individual conductors. Face dimensions, 2 $\frac{1}{4}$  inches by  $\frac{1}{2}$  inch. Net weight, 3 ounces.

No. 111-O cord has four conductors for breastplate type operator's set. Overall length, 68 inches.

No. 145 plug four-conductor plug for breastplate type operator's set. Net weight, 3 ounces.

No. 43 jack — four individual conductors. Face dimensions 2 $\frac{1}{4}$  inches by  $\frac{1}{2}$  inch. Net weight, 3 ounces.



No. 111-O Cord  
No. 145 Plug No. 43 Jack

No. 26-OR cord has two conductors, 72 inches in length. Diameter .285.

No. 107 plug — two-conductor. Net weight, 2 $\frac{1}{2}$  ounces.

No. 237-OR cord — same as No. 26-OR except smaller in diameter. Fits No. 75 plug.

No. 75 plug same as No. 107 plug except equipped with bushing to take smaller diameter cord.

No. 24 jack — two-conductor, face diameter 1 $\frac{7}{8}$  inches. Takes No. 75 or 107 plug. Net weight, 4 ounces.

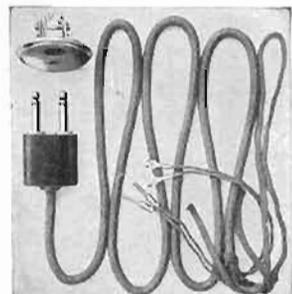


No. 26-OR and No. 237-OR Cords  
No. 107, 75 Plugs No. 24 Jack

No. 67-O cord has four conductors. Overall length, 68 inches. For breastplate operator's set.

No. 25 plug — four-conductor. Fits No. 57 jack. Net weight, 3 ounces.

No. 57 jack — four-conductor. Face diameter 2 inches. Net weight, 4 ounces.

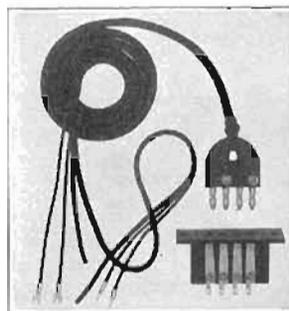


No. 433-O Cord  
No. 25 Plug No. 57 Jack

No. 439-O cord has four conductors. Overall length 68 inches for breastplate type operator's set.

No. 182 plug—four-conductor. Fits No. 325-A jack. Net weight, 3 ounces.

No. 325-A jack — four-conductor, face dimensions 1 $\frac{7}{8}$  inches by 3 $\frac{1}{2}$  inches. Net weight, 1 ounce.



No. 439-O Cord  
No. 182 Plug No. 325-A Jack

# Kellogg

# MAGNETO SWITCHBOARD APPARATUS

## Tools



No. 8—Flat wrench for adjusting drop armature.



No. 9—Flat wrench for adjusting ringers.



No. 10—Flat wrench for adjusting ringers.



No. 12—Socket wrench for sleeve of comb. D. & J. and removing No. 72 type relay shell with hexagonal nut.



No. 22—Screwdriver for hollow screws on plugs.



No. 42—Switchboard cable skinner.



No. 16—Socket wrench for stop nuts on No. 1000 type cam keys.



No. 50—Plug gauge for gauging worn No. 42 plugs.



No. 51—Jack gauge for gauging worn jacks taking the No. 42 plug or plugs of similar size.



No. 67—Key spring adjuster.



No. 68—Burnisher for cleaning and polishing contacts.



No. 71—For removing transmitter and receiver caps from F 27-C Masterphone handset.

## Switchboard Cable



Cable with Lead Colored Paint Braid



Cable with Lead Sheath

Kellogg switchboard cables are manufactured from the best grades of selected raw materials by Kellogg's specially designed machinery, and are furnished in several styles and sizes.

The wires are tinned, thoroughly annealed, and are of not less than 98 per cent pure copper, evenly coated with tin. Only the best grade of silk and cotton wrappings are used for insulation. After the insulation is applied the twisted pairs are formed into a cable and covered with several wraps of heavy manila paper and then thoroughly saturated with beeswax. This cable is regularly furnished with double silk and cotton insulation over tinned wire, with cotton over all braid covering, saturated with lead colored fireproof paint.

A standard color code is used so that each pair of wires can be identified. Small sizes, such as 11, 21 and 26 pairs can be shipped in boxes up to 500 foot lengths. Above 500 feet, reels are required. Large sizes, such as 41, 51 and 102 pairs can be shipped in boxes up to 250-foot lengths. Above 250 feet, reels are required. When cable reels are furnished they will be charged for. Full credit will be allowed for their return in good condition, prepaid to Kellogg's factory.

### ROUND TYPE—22 B & S GAUGE

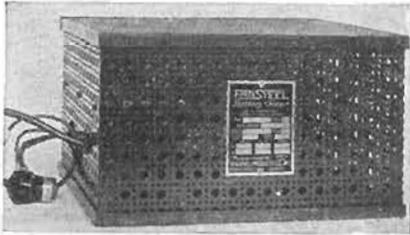
Code No. Lead Colored Fireproof Paint Over Braid	No. of Pairs	Diameter
65 A	11	25/64
149 A	13	13/32
127 A	16	15/32
42 A	21	16/32
112 A	26	16 1/32
63 A	51	68
62 A	102	16 1/16

### LEAD COVERED—22 B & S GAUGE

Code No.	No. of Pairs	Diameter Inches	Thickness of Sheath
148 L	13		1/16"
144 L	16		1/16"
121 L	21		1/16"
147 L	26		1/16"
146 L	51		1/16"
145 L	102	1 1/8"	3/16"

# MAGNETO POWER APPARATUS

## Fansteel G-30 Rectifier



The Fansteel G-30 Rectifier has been developed for float charging small P.B.X., toll and Central office batteries. Many small Rectifiers will not charge at low rates due to the absence of suitable adjustments. The G-30 is arranged to overcome this difficulty, being provided with transformer taps and a 27 point adjustable resistance for regulating the charge in close steps from a few milliamperes to 0.5 ampere.

The use of a small closely adjustable Rectifier of this type will assist considerably in prolonging the life of the small battery required for the switchboards mentioned above. The G-30 is a full wave Rectifier arranged to operate from 115 volts, 60 cycles single phase alternating current and furnishes a filtered direct current of 0.05 to 0.5 amperes. It is a very compact unit, being only 6¼" high, 12" wide, 8½" deep, and weighs 68 pounds packed for shipment.



## Holtzer-Cabot MG-125 Magneto Motor Generator

A new, greatly simplified type of magneto motor generator. It operates without slip rings, brush holders or the centrifugal cut-out used on older types. A condenser in the circuit eliminates all these parts and the care they require. Since there is no brush rigging a very high insulation resistance has been maintained. Both generator and motor are combined as a single unit. All the windings are stationary. The rotating member has the usual induction type rotor; the generator is a rotating magnet, a new magnetic iron.

This simplification is largely due to the use of an "ALNICO",

neto. The wool packed lubricating device makes it possible to run the motor generator 3000 hours without renewal of oil. Connections are made in the base through bushed Bakelite holes. Conduit or BX may be used. Installation is very simple since the unit is self-contained.

The motor generator operates from a 60 cycle circuit and the motor may be wound for either 110 or 220 volts. It delivers 20 watts at 80 volts and when running under full load requires no more current than an ordinary tungsten lamp.

Causes absolutely no radio interference. Length 12", height 8½", width 7½". Shipping weight 62 lbs.

## PIECE PARTS

Pc. 57340 Transmitter

Pc. 55919 Receiver

Pc. No. 55367 Handle  
Pc. No. 58015 Diaphragm →  
Pc. No. 55370 Ear Cap →

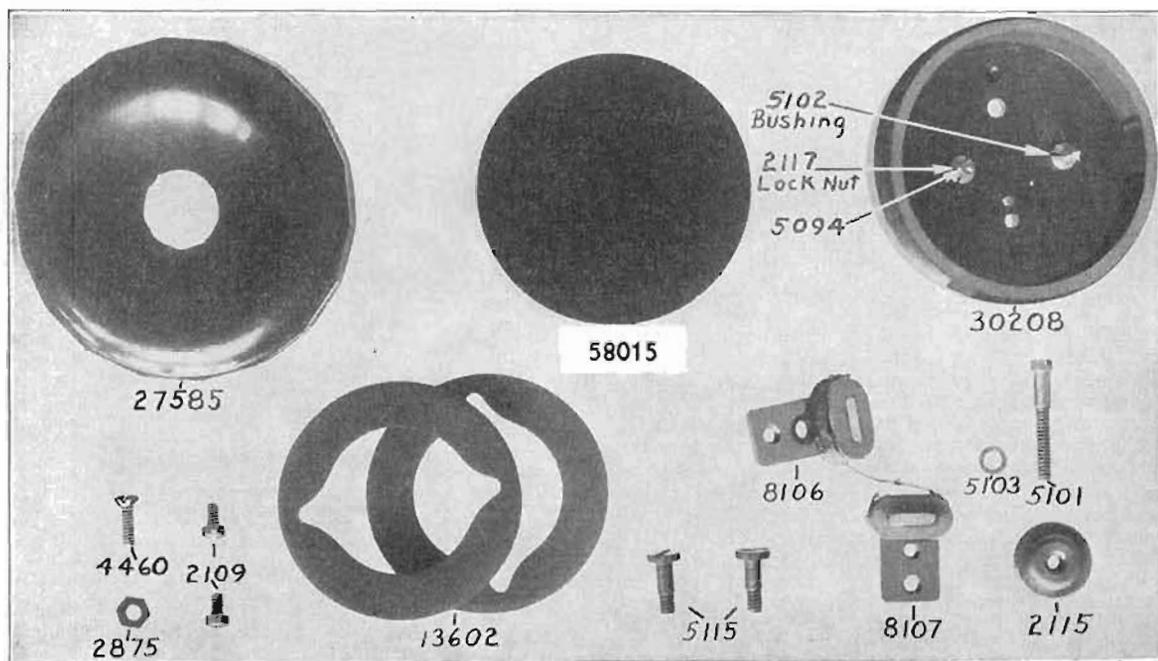
Pc. 55369 Transmitter Mouthpiece Ring

Pc. No. 55398 Moulded Kellite Shell Base only

Pc. 57623 Transmitter Mouthpiece

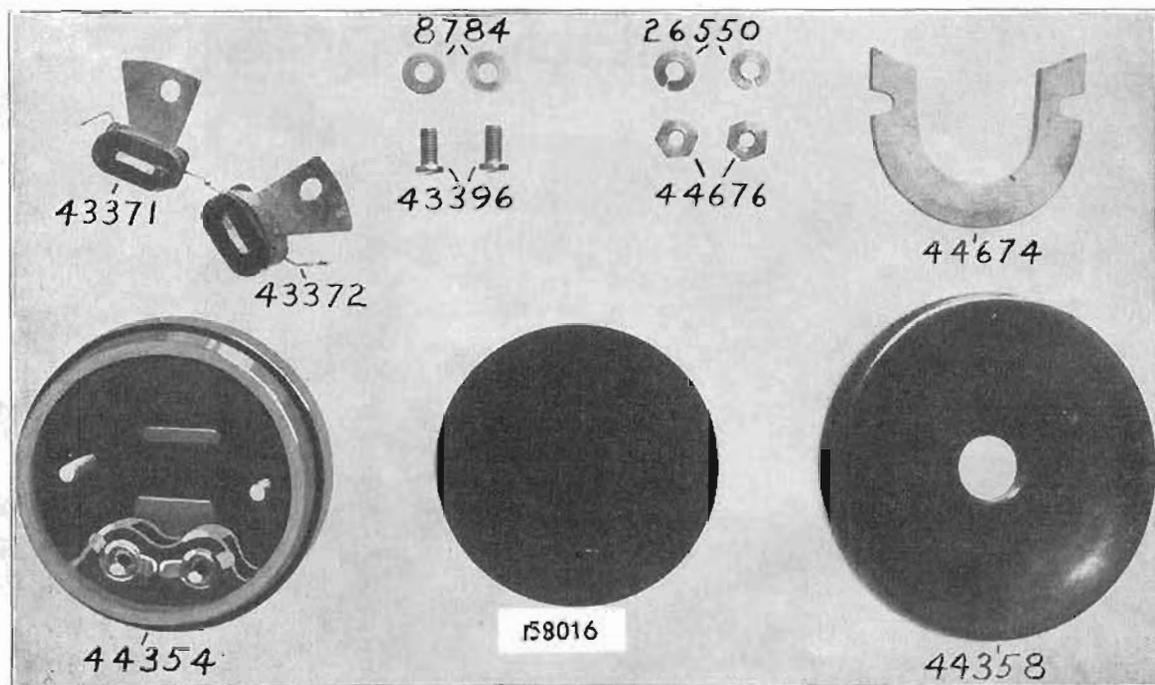
F673-G Cord

## PIECE PARTS



**No. 46 A Receiver**

Parts are interchangeable with No. 14 A receivers except when used on No. 1016 test set, in which case use Pc. No. 5086 cap and Pc. No. 5085 shell to fit special hook switch on test set.



**No. 65 A Receiver**

On Pcs. Nos. 43371 and 43372 the resistance of 50 ohms per coil must be specified. Magnets, coils, diaphragm, screws, washers and nuts interchangeable with No. 54 A receivers. Cap for 54 A receiver is Pc. 43360. If new body is desired order Pc. 44354 and Pc. 49358 together with yoke No. 45171, which will make the 54 A receiver into a No. 65 A.

## A Few Reasons for the Long, Active Life and Dependability of Kellogg Instruments

**Kellogg Hookswitches** are of the short compact type with removable hook. The simple, sturdy design makes this a highly efficient hookswitch. The contact metal springs are of the correct length for proper tension and are equipped with special contacts. The escutcheon plate is heavily black enameled. Kellite is used exclusively for insulation purposes.

**Kellogg Receivers** are of the bipolar non-adjustable type. Permanent magnets are of the correct form and of lasting strength. Pole pieces are made of the best carefully annealed iron and held securely by bolts that fasten the supporting bridge in place. The diaphragm made of perfectly flat ferrotype metal of the proper thickness is held in accurate position to respond freely and accurately to the voice currents. In design the Kellogg Receiver secures loudness and clearness of tone and excellent articulation.

**Kellogg Transmitters** are of the solid back reverse type. Specially designed to give the best results in long distance as well as local service. The diaphragm is made from hard drawn aluminum with carbon retaining cup formed in the center of its face. Highest grade carbon of correct size, insuring minimum battery consumption, is used and will not pack. The small number of parts, accurately made from the best material obtainable insures long life and minimum chances for trouble.

**Kellogg Condensers** for magneto telephones have a one-half M. F. capacity. This allows the receiver to be off the hook without crippling the ringing service of the heavily loaded lines.

**Kellogg Induction Coils** are wound to the proper resistance, so they will step up the out-going currents the necessary amount to carry them over long distance lines without distortion, but will not reduce the strength of the incoming voice currents.

**Kellogg Ringers** do not need adjusting. They are the most sensitive ringers made. Cores and armatures are made from the highest grade carefully annealed iron. Spools are carefully insulated and wound with Kellogg enameled copper wire. The thin strip of metal between pole pieces and armature prevents any possible tendency towards sticking. Length of stroke and armature air gap are correct, and remain so during the entire life of ringer. Gongs are made of the best material obtainable, rich in tone, will not crack or become dead through service; they are of the concentric type, and heavily black enameled.

**Kellogg Generators** are "built like a watch." They have a larger armature and greater winding space than other types known of. The field magnets are built with great care. Kellogg's method of forming magnets, shapes them accurately without injury. The magnet bars are thoroughly protected against rust. The end plates are made of pressed brass and all springs properly insulated. Wheels and gears are accurately cut and machined. The generator handle is strongly constructed of one piece. The minimum number of parts used insures great reliability and long life in all types of service.

## MAGNETO MASTERPHONES

No. 900-A

Desk **Masterphone**

Convertible to  
Common Battery



The 900-A Masterphone is an unusually attractive handset for use with any standard magneto bell box arranged for a 3-conductor circuit. Low, compact, and beautifully designed, it has a particularly strong subscriber appeal. It consists of a molded Bakelite handset with the famous Kellogg NON-POSITIONAL transmitter and a molded Bakelite base. There are no cradle lugs and it can be easily picked up with one hand. Removing four screws in the base plate exposes the interior and all cord connections. The Masterphone handset has a solid handle with two heavy brass bar conductors through its center, thus eliminating cord ends and adding a reinforcing feature which practically eliminates breakage.

Both the transmitter and receiver are of the capsule type with heavy bronze contact clips which positively grip the bar conductors when the units are inserted. The NON-POSITIONAL transmitter assures a constant carbon contact and flow of current between the two spherically shaped electrodes regardless of the position in which the phone is held. This patented construction guards against "dead" positions. The receiver assures the same high quality reception that has made Kellogg receivers the standard for years.

This set can also be used as a complete TRIAD circuit extension Masterphone by simply adding a 109-A local battery induction coil to the base. It can also be converted to a complete Combination Masterphone for common battery service by adding a condenser, induction coil and ringer to the space provided in the base. Shipping weight 5½ pounds.

### 950-LR Extension Desk Masterphone

The 950-LR Masterphone is the same as the 900 except that it is equipped with a 109-A closed core, local battery induction coil providing the TRIAD circuit with anti-sidetone feature. It is particularly recommended as an extension set for use with any standard desk set box containing ringer and condenser only. The TRIAD circuit and NON-POSITIONAL transmitter assure the finest transmission and reception. Shipping weight 6½ lbs.

### 9830 Side Mounting Extension **Masterphone**

The 9830 side mounting extension Masterphone is an attractive, compact unit that supplies the answer to many installation problems. It consists of a black enameled steel housing, an all-purpose bracket, a switchhook, the 109-A induction coil, and the all-Bakelite Masterphone handset with the Kellogg NON-POSITIONAL transmitter. The special bracket permits a wide variety of mounting positions. It can be positioned on the unit in a number of ways to accommodate installations where other types of sets cannot be used such as under or on the side of desks, counters, tables, cabinets, etc. The 109-A local battery, closed core, induction coil in this set gives the added advantage of the TRIAD circuit which assures "quiet" conversations regardless of outside noises. Shipping weight 5 lbs.



### 9735 Side Mounting Masterphone

This is the same as the 9830 except that it has no induction coil. The 9735 side mounting Masterphone is an ideal telephone to use with your present desk set boxes in locations where the telephone must be out of the way. Like the 9830, this set can be installed in a variety of locations by changing the position of the bracket. Shipping weight 4 lbs.



No. F9827

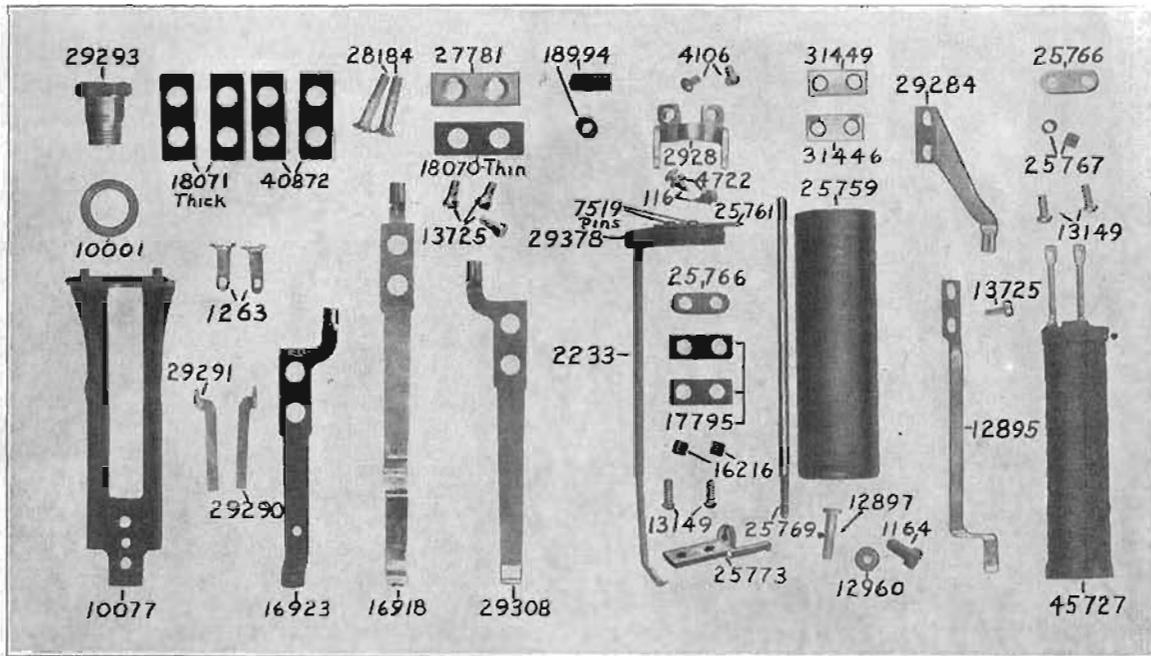
Extension **Masterphone**

The Kellogg F9827 Extension Masterphone is an ideal two-wire magneto unit, consisting of a small steel box and a molded Kellite handset. The F27-C handset is the same as that used with the No. 700-A Masterphone and is suspended from a specially designed hookswitch which assures positive action.

This unit is small, neat, durable and convenient, and gives perfect transmission and reception. Because of its small size, the F9827 set can be installed almost anywhere. A mounting space of only 4x5½ inches is required for this compact unit. The box is made of drawn steel, finished in durable black enamel. It contains the hookswitch, induction coil, condenser, and connecting rack.

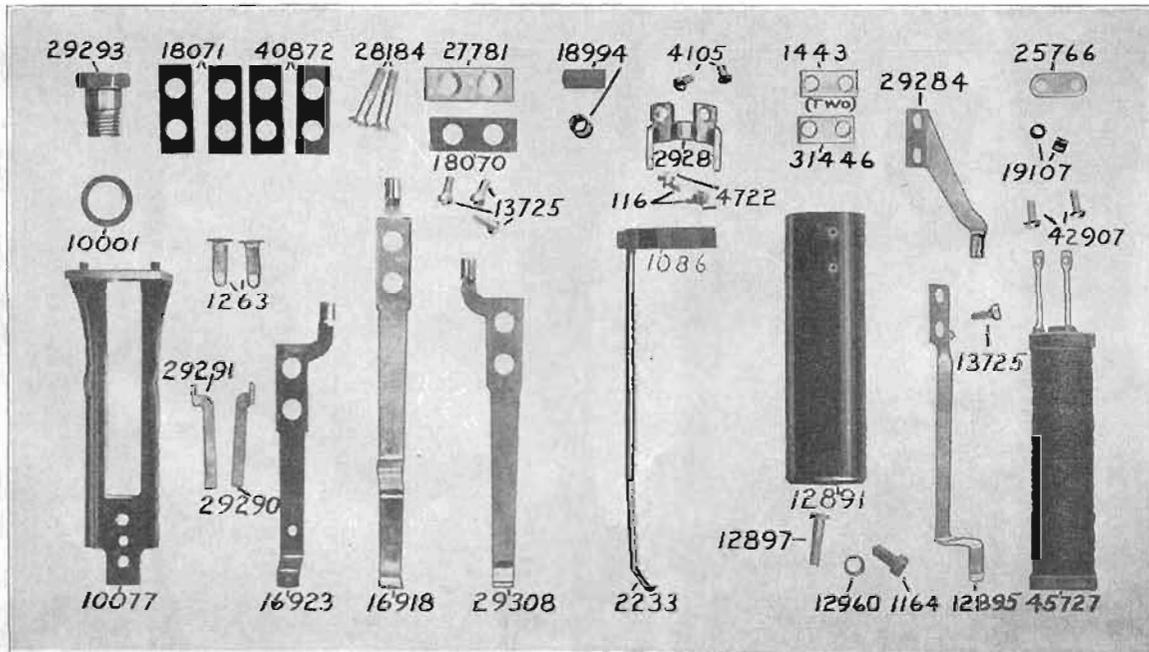
# Kellogg

## PIECE PARTS



No. 100 combined drop and jack. For mounting parts, see pages 35 and 36.

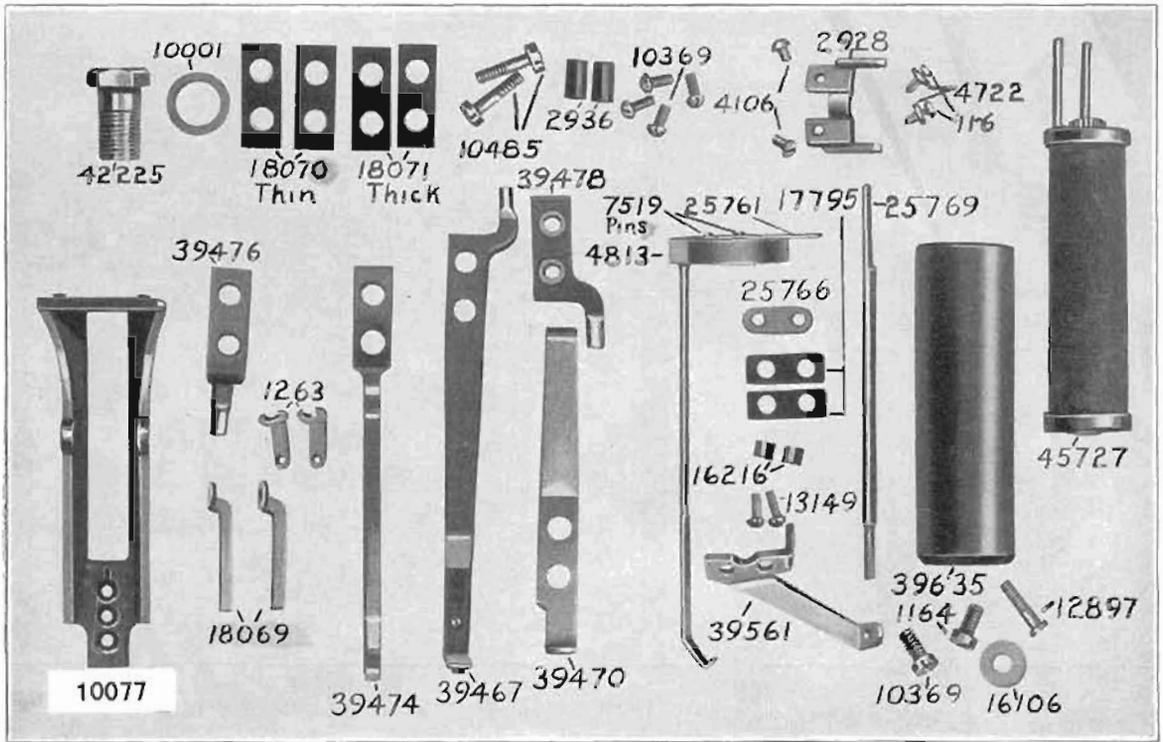
	Coil Codes
DJE	500 Ohms
DJC	1000 Ohms



No. 101 combined drop and jack. Parts for drop shown above are same as used on No. 51 clearing out drop. For mounting parts, see pages 35 and 36.

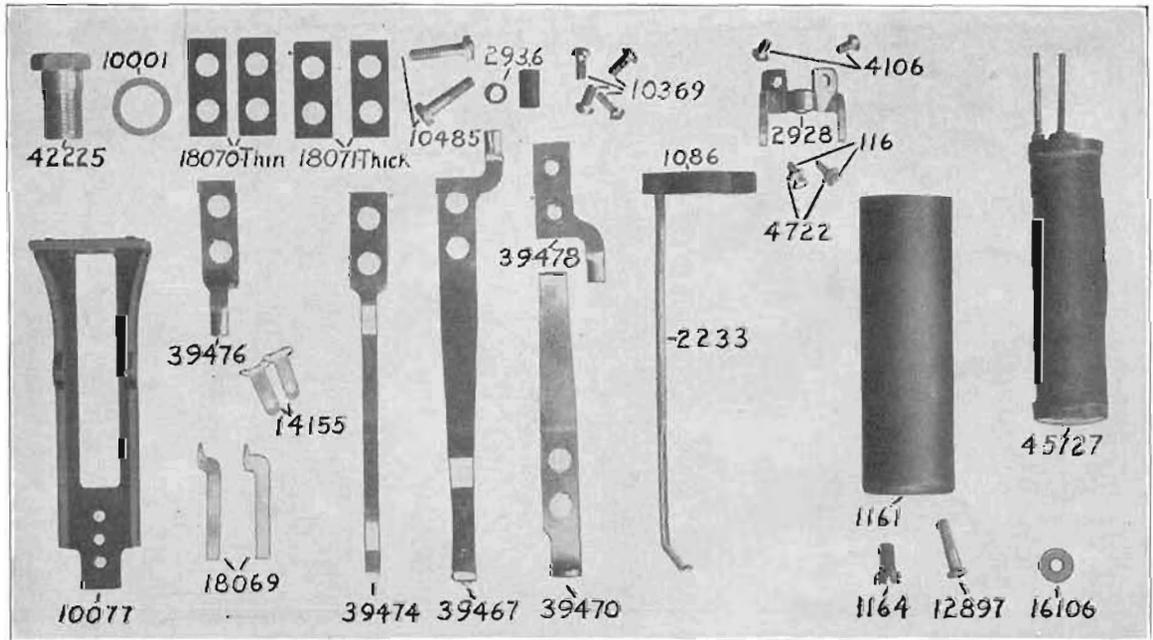
	Coil Codes
DJE	500 Ohms
DJC	1000 Ohms

## PIECE PARTS



No. 300 combined drop and jack.  
For mounting parts, see pages 35 and 36.

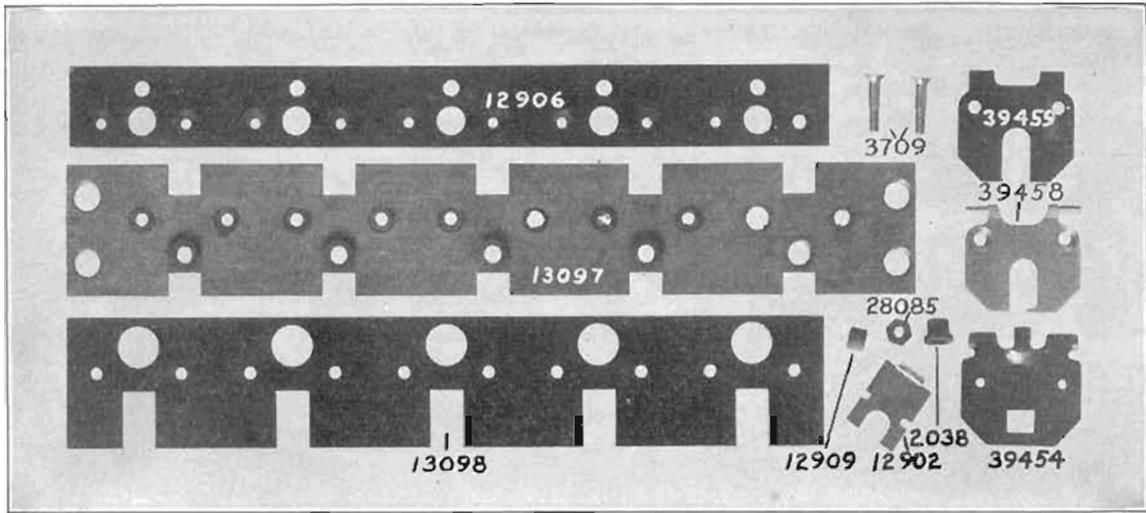
Coil Codes  
DJE 500 Ohms  
DJC 1000 Ohms



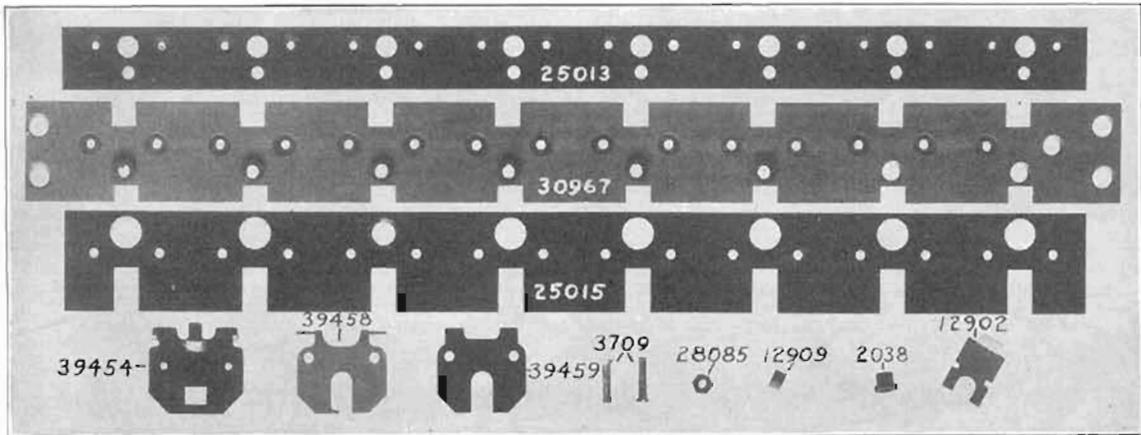
No. 301 combined drop and jack.  
For mounting parts, see pages 35 and 36.

Coil Codes  
DJE 500 Ohms  
DJC 1000 Ohms

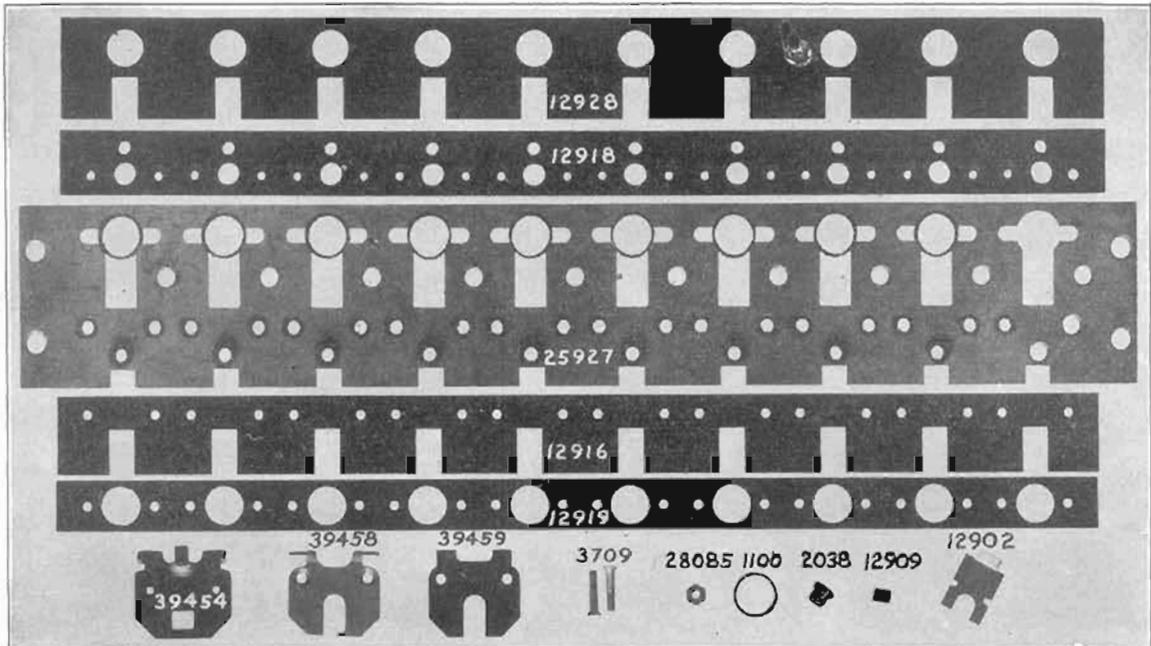
# Kellogg



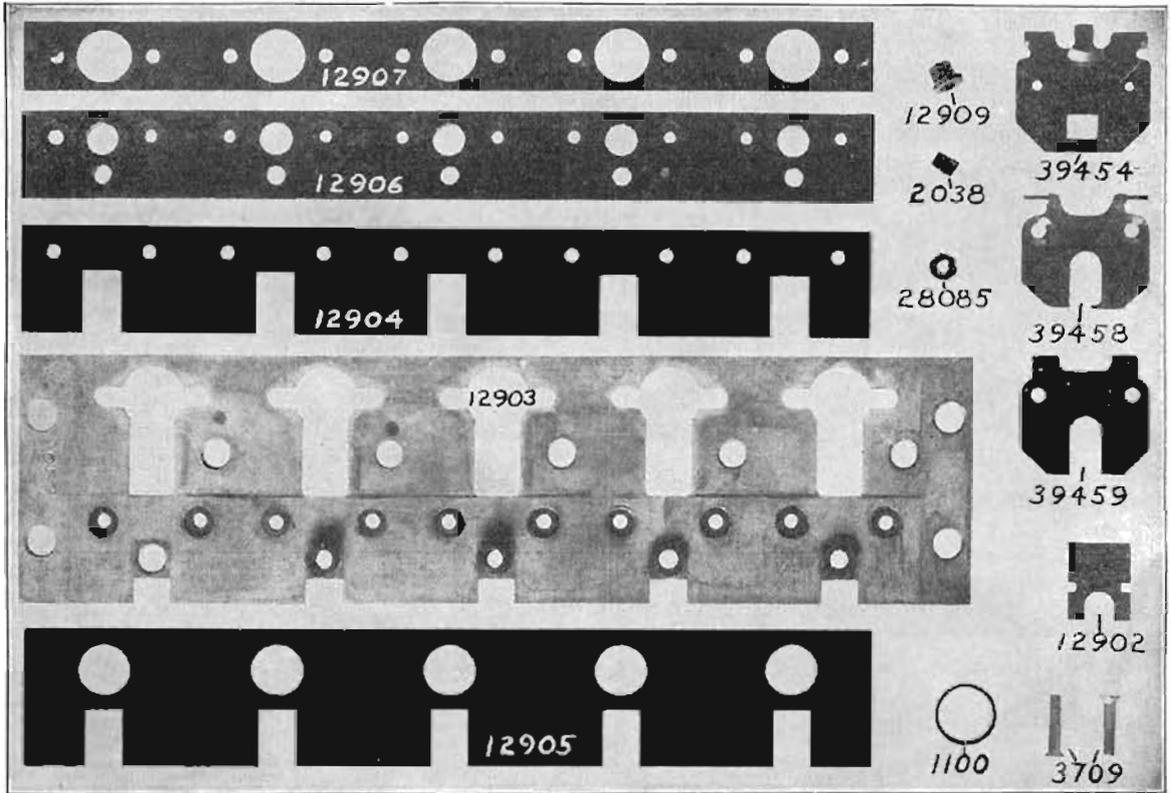
No. 259 drop mounting mounts Nos. 22 and 51 type drops



No. 433 drop mounting mounts Nos. 22 and 51 type drops



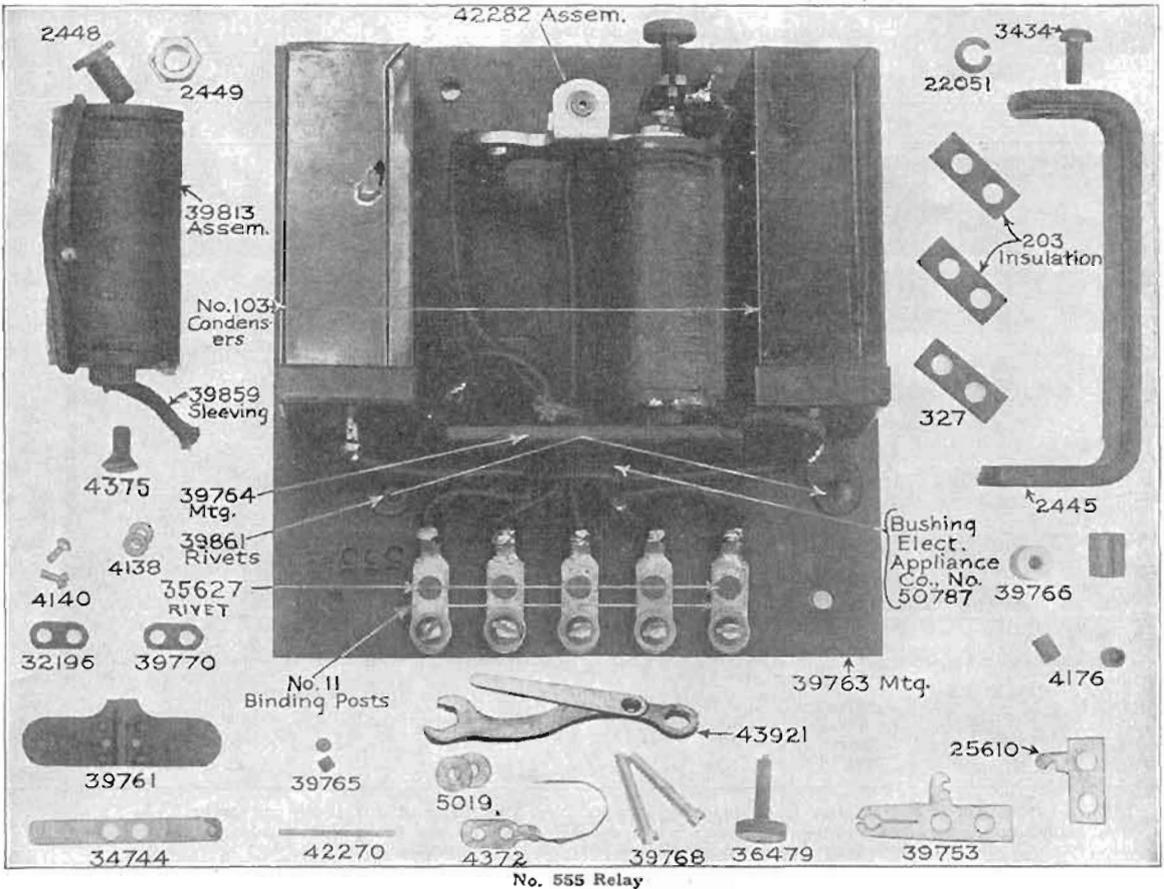
No. 329 drop and jack mounting mounts Nos. 29, 101, and 301 drop and jacks.  
 No. 426 drop and jack mounting uses same parts as the above except Pc. 29350 insulation instead Pc. 12928.  
 Mounts Nos. 59, 100 and 300 drop and jacks with code ringing night alarm.  
 Mounting screws to mount above mountings to Switchboard can be secured by specifying Pc. 12995 screw.



No. 257 drop and jack mounting mounts Nos. 29, 101 and 301 drops and jacks.

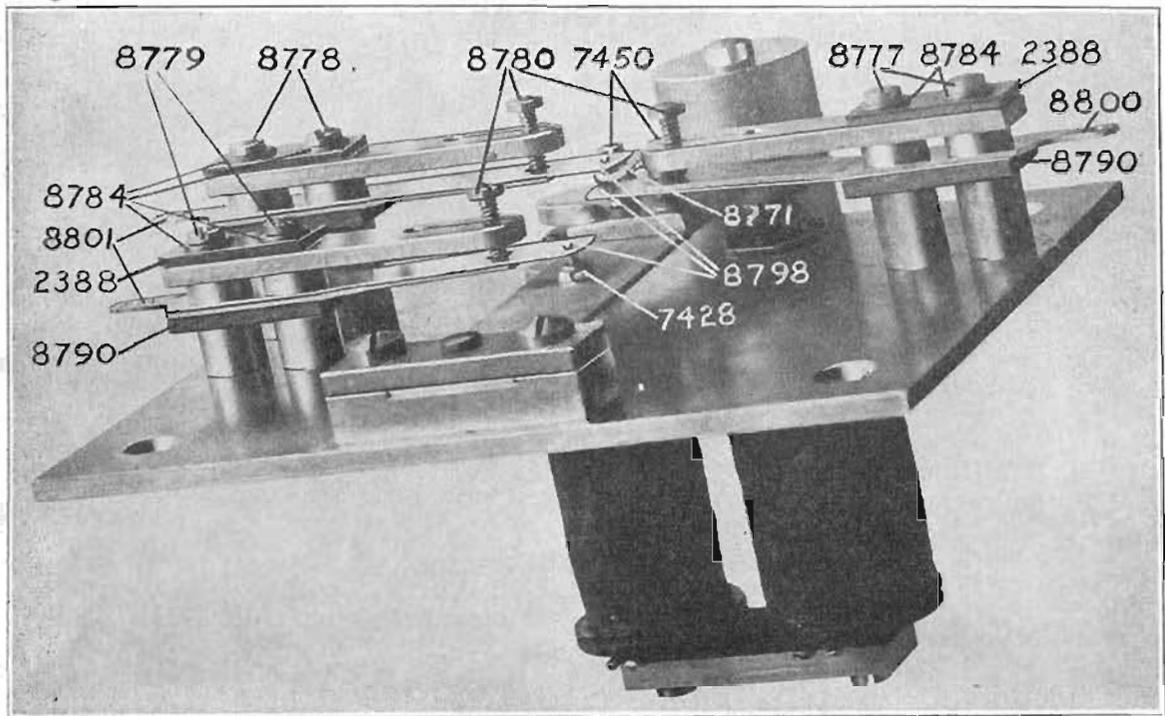
No. 333 drop and jack mounting uses same parts as the above except Pc. 25358 insulation instead 1295. Mounts Nos. 59, 100 and 300 drops and jacks with code ringing night alarm.

Mounting screws to mount above mountings to Switchboard can be secured by specifying Pc. 12995 screw.

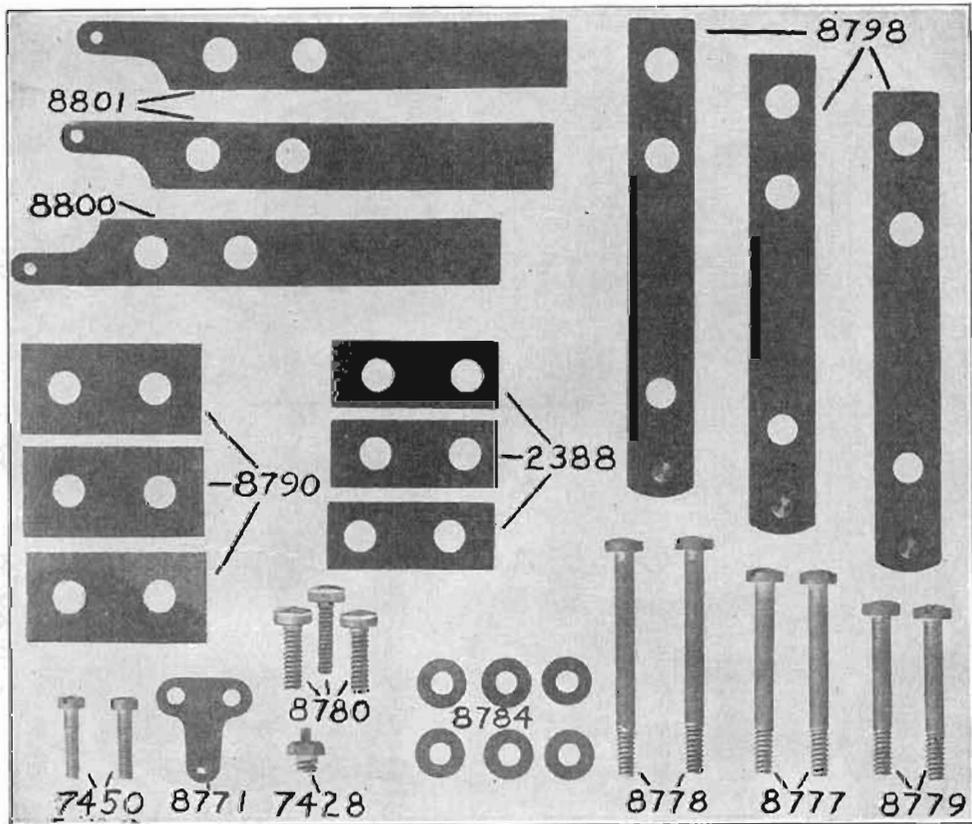


No. 555 Relay

# Kellogg



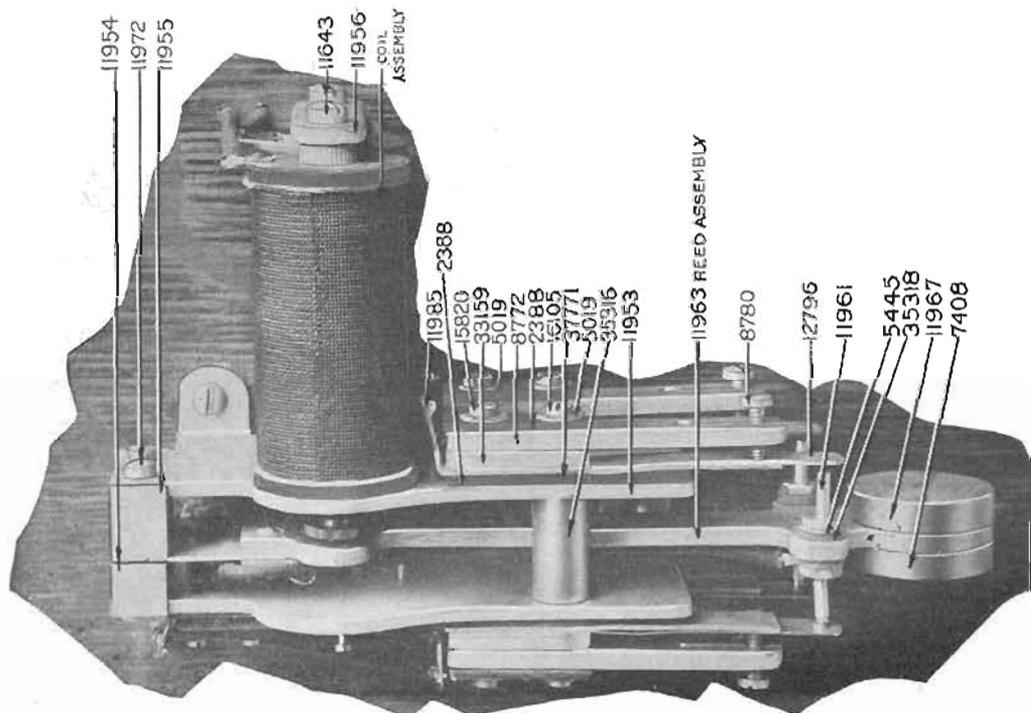
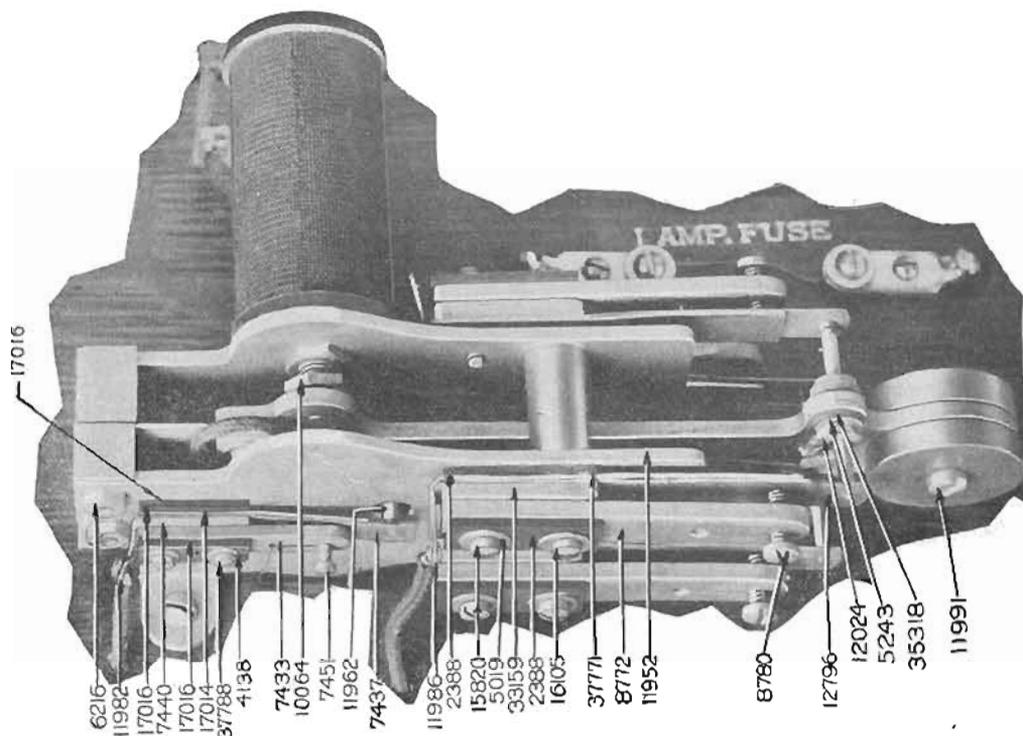
Vibrator Assembly. Used on Nos. 13, 29, 36 A, 36 B and all harmonic pole changers.



Vibrator Spring Assembly

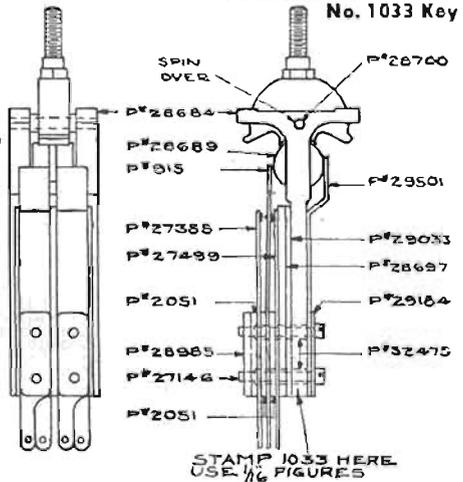
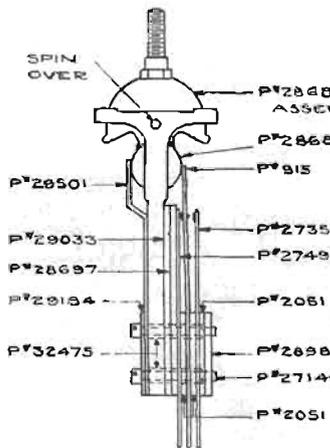
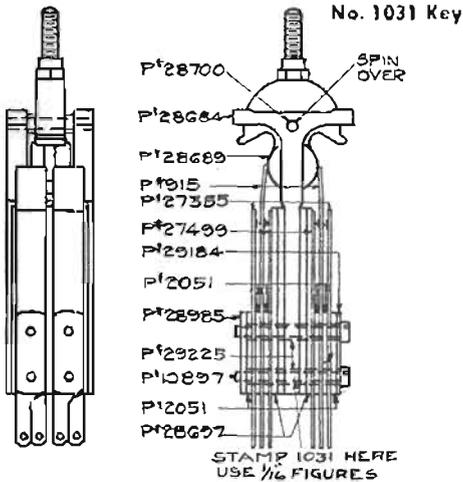
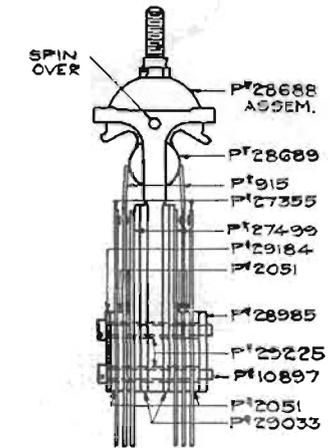
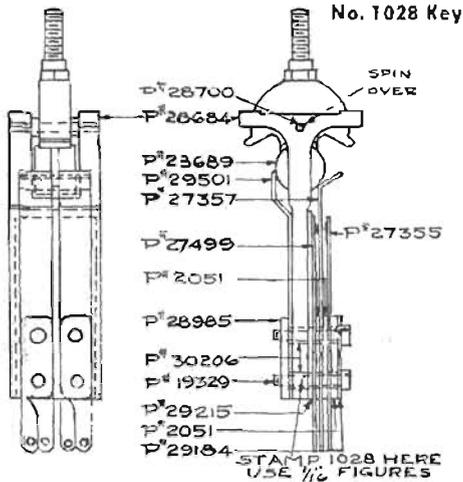
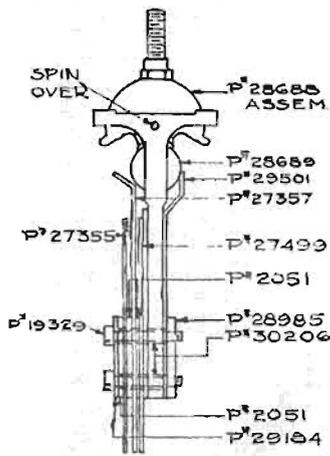
# VIBRATOR PARTS

For Dry Battery Pole Changers and Electric Light Converters



Piece numbers of parts for Nos. 9, 23 and 30 Pole Changers. Nos. 6 and 7 converters are the same. Nos. 6 and 7 converters use Pc. No. 35323 coil assembly. Nos. 9, 23 and 30 Pole Changers use Pc. No. 51060 coil assembly.

# Kellogg



No. Pcs.	Pc. No.	Description
1	28684	Frame
1	28688	Cam assem.
2	28689	Roller
6	2051	Ins.
1	29215	Ins.
2	27357	Spg. with cont.
2	27355	Spg. with cont.
2	27499	Spg. with cont.
2	29184	Washer
1	28700	Pin
2	28985	Nut
2	29501	Springs
4	30206	Bushing
4	19329	Spec. screw

No. Pcs.	Pc. No.	Description
1	28684	Frame
1	28688	Cam assem.
2	28689	Roller
1	28700	Pin
12	2051	Ins.
2	28697	Ins.
2	29033	Ins.
4	915	Spg. with cont.
4	27499	Spg. with cont.
4	27355	Spg. with cont.
2	28985	Nut
4	29225	Bushing
2	29184	Washer
4	10897	Spec. screw

No. Pcs.	Pc. No.	Description
1	28684	Frame
1	28688	Cam assem.
2	28689	Roller
1	28700	Pin
1	28697	Ins.
1	29033	Ins.
6	2051	Ins.
2	915	Spg. with cont.
2	27355	Spg. with cont.
2	27499	Spg. with cont.
2	29184	Washer
2	32475	Bushing
2	28985	Nut
2	29501	Springs
4	27146	Spec. screw



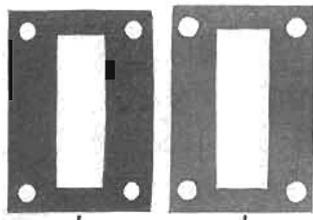
15171



28872



29023



32690

47557



28870

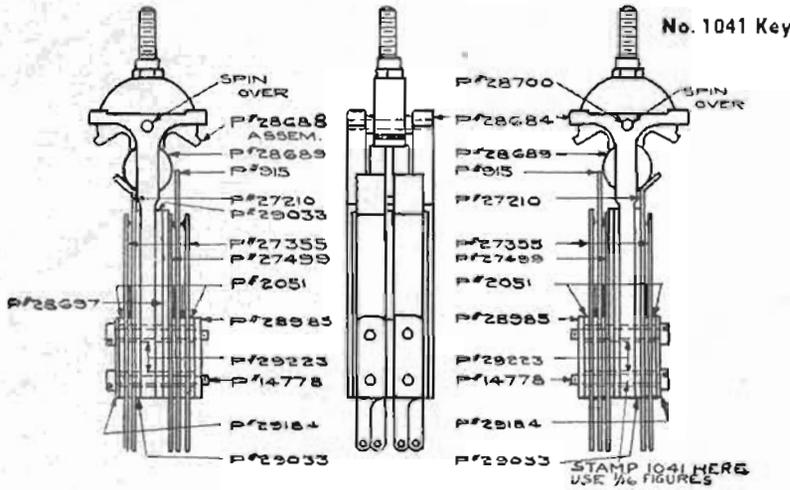


28872

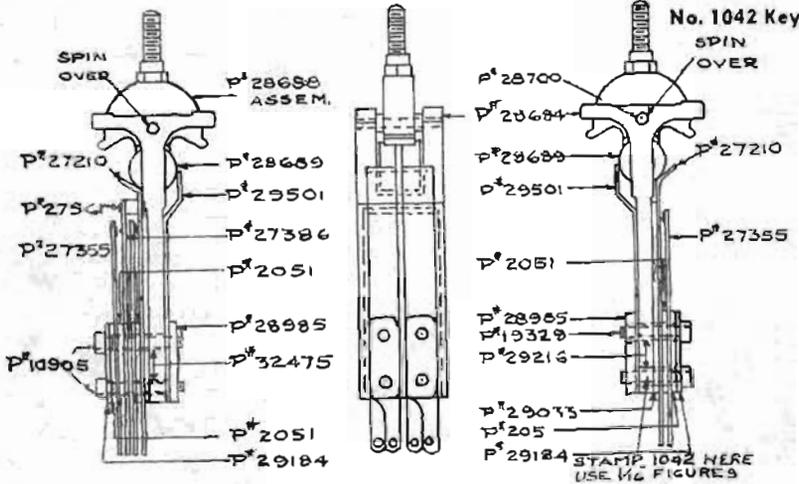


28868

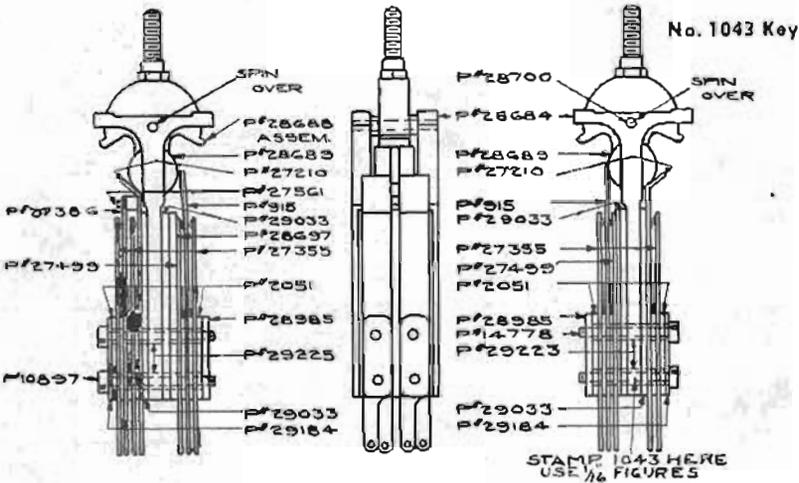
**Kellogg**



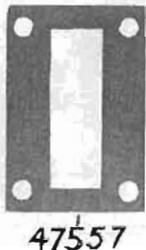
No. Pcs.	Pc. No.	Description
1	28684	Frame
1	28688	Cam assem.
2	28689	Roller
1	28700	Pin
2	29033	Ins.
1	28697	Ins.
10	2051	Ins.
2	915	Spg. with cont.
2	27210	Spg. with cont.
4	27355	Spg. with cont.
2	27499	Spg. with cont.
2	29184	Washer
4	29223	Bushing
2	28985	Nut
4	14778	Spec. screw



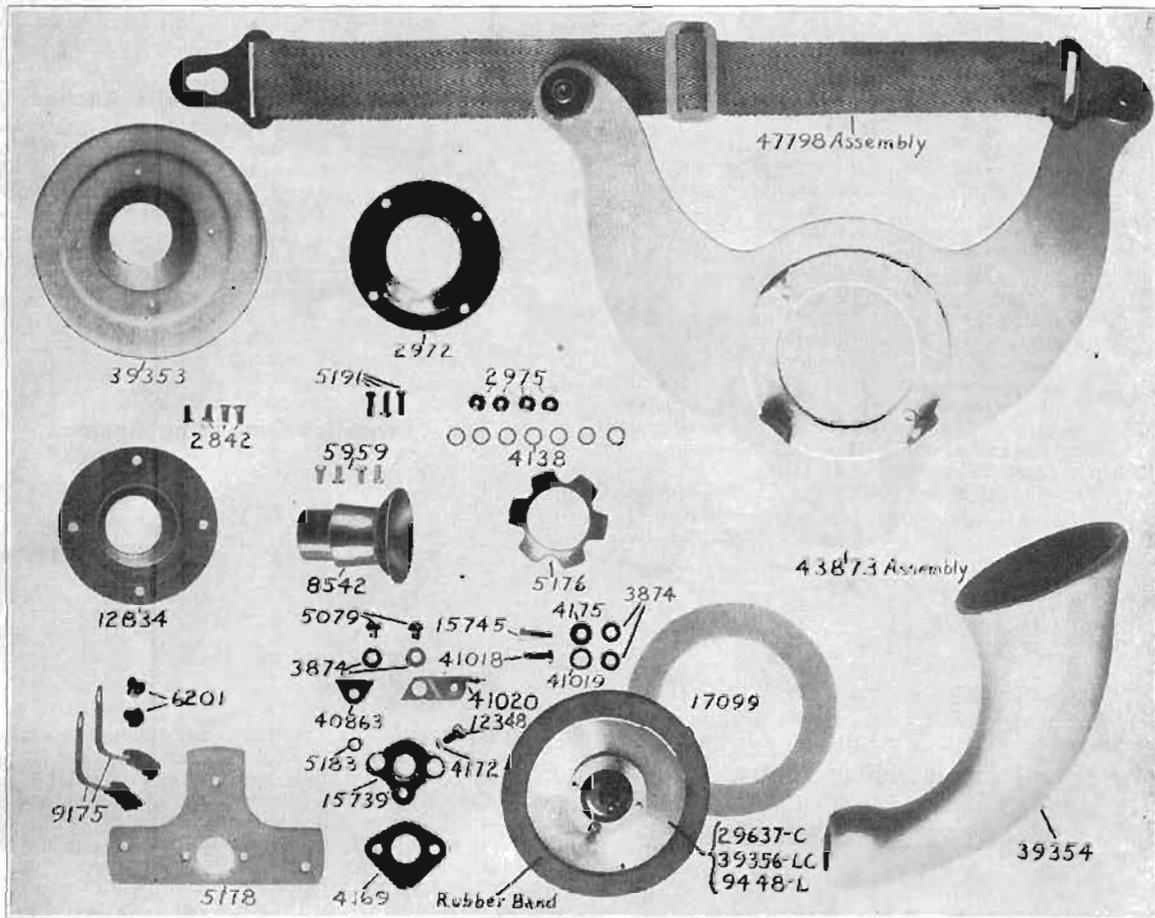
No. Pcs.	Pc. No.	Description
1	28684	Frame
1	28688	Cam assem.
2	28689	Roller
6	2051	Ins.
1	29033	Ins.
2	27210	Spg. with cont.
1	27386	Spg. with cont.
3	27355	Spg. with cont.
2	29184	Washer
2	32475	Bushing
1	28700	Pin
1	27561	Separator
2	28985	Nut
2	29501	Spring
2	29216	Bushing
2	10905	Spec. screw
2	19329	Spec. screw



No. Pcs.	Pc. No.	Description
1	28684	Frame
1	28688	Cam assem.
2	28689	Roller
1	28700	Pin
2	29033	Ins.
1	28697	Ins.
12	2051	Ins.
2	27210	Spg. with cont.
2	915	Spg. with cont.
5	27355	Spg. with cont.
1	27386	Spg. with cont.
2	27499	Spg. with cont.
1	27561	Separator
2	29184	Washer
2	29223	Bushing
2	29223	Bushing
2	28985	Nut
2	14478	Spec. screw
2	10897	Spec. screw

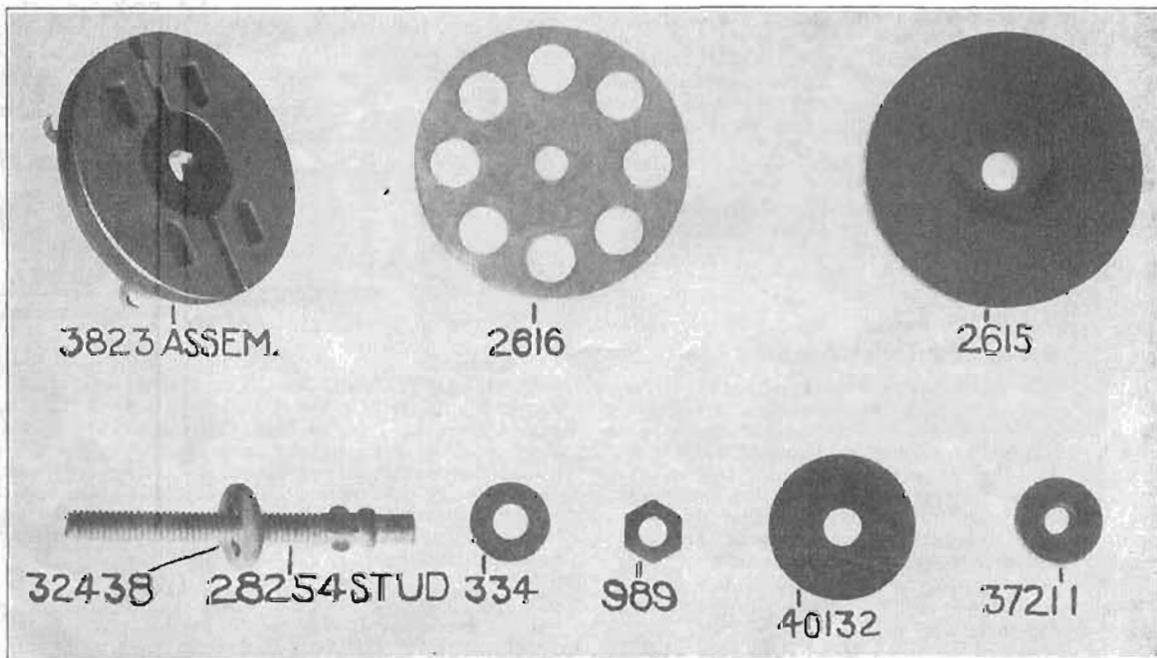


**Kellogg**



No. 1076 Transmitter

Pc. 43674 breastplate assembly includes Pc. 43873 and 47798. No. 76 transmitter parts are interchangeable, except use Pc. 29776 mouthpiece, Pc. 32549 transmitter front, Pc. 5175 assembly including Pc. 2979 band, 2980 clasp and 2982 buckle.

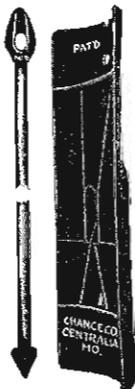


No. 2 Arrester

**Kellogg**

# ANCHORS

## Never-Creep Anchors



Never-Creep is an appropriate name for these anchors, as they will not creep or move if properly installed. They are very powerful because they actually bolt through solid earth, and it is not necessary to fill the hole to secure the holding power. The plate is manufactured from malleable iron and the rods are furnished with a drop forged thimble-eye.

To install, simply bore a hole for the plate at right angle to the line of pull, then drive the rod and hang on plate. In ordering specify the catalogue number and length of rods desired. If plates or rods are wanted separately always state plates only or rods only as the case may be.

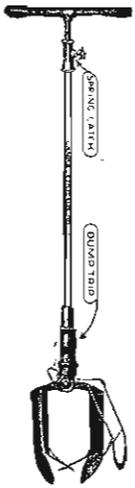
For various sizes of strand the following sizes are recommended:

For 4 to 6,000 lbs. strand use No. 615— $\frac{5}{8}$  x 6.  
For 6,000 lb. strand use No. 620— $\frac{5}{8}$  x 6.

Rod Plate	Size Plate	Size Rod	Wt., Lbs., Each
510— $\frac{1}{2}$	5 x 10 inch	$\frac{1}{2}$ x 5 ft.	7
510— $\frac{1}{2}$	5 x 10 inch	$\frac{1}{2}$ x 6 ft.	8
615— $\frac{1}{2}$	6 x 15 inch	$\frac{1}{2}$ x 5 ft.	10
615— $\frac{1}{2}$	6 x 15 inch	$\frac{1}{2}$ x 6 ft.	11
615— $\frac{3}{8}$	6 x 15 inch	$\frac{3}{8}$ x 6 ft.	14
620— $\frac{5}{8}$	6 x 20 inch	$\frac{5}{8}$ x 6 ft.	16
620— $\frac{5}{8}$	6 x 20 inch	$\frac{5}{8}$ x 7 ft.	17

Never-Creep Anchors can be furnished with Twineye Rods and any of the above sizes may be used for double guying.

## Never-Creep Installing Tools



Auger



The Heavy Auger is equipped with a quick action dumping mechanism and telescoping handle. The Installing Bar is used for placing the plate in position and the opposite end is made for tamping.

The Maul is made especially for driving Never-Creep Rods. It has two lead and two iron faces, or two wood and two iron faces. Wood faces are furnished unless otherwise specified.

Cat. No.	Description	Wt., Lbs. Each
C-15	10 ft. Installing and Tamping Bar..	9
1575	Wood or Lead Faced Maul.....	14
C-17	Extra Wood Inserts for Maul.....	1
C-812	Heavy Telegraph Auger.....	28
C-177	Quick Catch Telescoping Auger Handle .....	9

## Drive and Twist Anchors

Drive and Twist Anchors are made of steel throughout. The shaft eye and point are all one solid piece dipped in asphaltum. The Bearing for the strong heavy blade is made of Black Diamond Tool Steel and has a breaking strength of over 10,000 lbs. The point acts as a pilot when driving through roots, gravel and rocky soil. For installing just drive anchor down with a sledge and then insert a bar in the eye and twist four revolutions to the right.

Cat. No.	Span Blades	Diameter Rod	Wt., Lbs. Each
1	8 in.	$\frac{3}{4}$ x 4 ft.	8
2	12 in.	$\frac{7}{8}$ x 5 ft.	12
3	12 in.	$\frac{7}{8}$ x 6 ft.	15

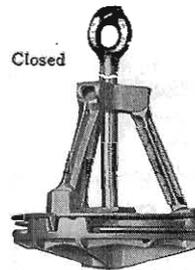
## Matthews Scrulix Anchors



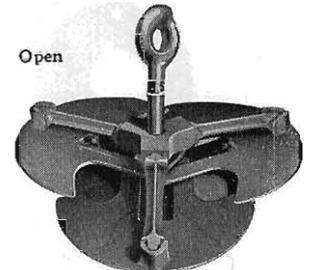
Matthews Scrulix Anchors are manufactured of high carbon steel and are screwed into solid earth. No moving parts to adjust, nothing to assemble, shipped ready to be installed. For ordinary installation No. 567 Wrench is used. When screwing down close to walls, fences and other projections use the No. 865 Ratchet Handle.

Cat. No.	Diameter	Size Rod	Wt., Lbs. Each
612-R	6 inch	$\frac{1}{2}$ x 6 ft.	7 $\frac{1}{2}$
658-R	6 inch	$\frac{5}{8}$ x 6 ft.	9 $\frac{1}{2}$
758-R	7 inch	$\frac{5}{8}$ x 6 ft.	11
858-R	8 inch	$\frac{5}{8}$ x 6 ft.	13
567	Anchor Wrench		30
865	Anchor Ratchet Handle		16

## Everstick Expanding Anchors



Closed



Open

Everstick Anchors are made of high grade malleable iron. The expanded plates provide a large anchoring surface against undisturbed earth. These anchors can be used with standard guy rods. Installation is very simple, an earth auger and the Everstick Tamping Bar is all that is needed. After boring hole place the anchor, allowing tamping bar to slide down over rod; then tamp anchor until plates are fully spread. For best results place a quantity of broken stone on anchor and fill in balance of hole with well tamped earth.

Cat. No.	Area Expanded	Wt., Lbs., Each
52	Two-Way 5-inch	40 sq. in. 5
62	Two-Way 6-inch	55 sq. in. 7
82	Two-Way 8-inch	100 sq. in. 10 $\frac{1}{2}$
633	Three-Way 6-inch	65 sq. in. 7 $\frac{1}{2}$
833	Three-Way 8-inch	90 sq. in. 10 $\frac{1}{2}$
834	Three-Way 8-inch	84 sq. in. 10 $\frac{1}{2}$
836	Three-Way 8-inch	110 sq. in. 13

Furnished less rods. If rods are desired give length and size (see Rods Catalog, page 56). Nos. 52 and 62 take  $\frac{5}{8}$ -inch rods or smaller. No. 82 takes  $\frac{3}{4}$ -inch rods or smaller.



Auger Blades



Telescopic Auger Handle



Tamping Bar

Blackburn Telescoping Auger Handle equipped with Iwan Auger blades greatly assist in boring holes. This handle telescopes to four feet, and as the depth increases the handle lengthens by a slight pressure on the finger lever. Auger blades and handles are furnished separately; when desired complete, specify catalogue number of blade and length of handle.

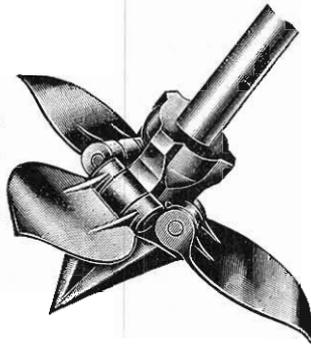
The Everstick Tamping Bar is equipped with an iron shoe having a slot to fit over rod. With this arrangement it cannot bounce from the rod.

Cat. No.	Description	Wt., Lbs., Each
No. 5	Iwan Auger Blades bore 5-inch holes.....	4
No. 6	Iwan Auger Blades bore 6-inch holes.....	6
No. 8	Iwan Auger Blades bore 8-inch holes.....	7
No. 8	Telescopic Handle, 8-ft.....	17
No. 10	Telescopic Handle, 10-ft.....	20
	9-Foot Everstick Tamping Bar.....	20

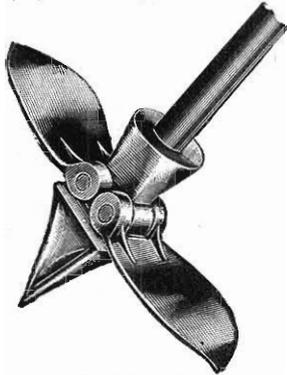
# ANCHORS, EXTENSION ARMS

## Aiken Mastergrip Anchors

Aiken Mastergrip Anchors are more economical to buy—easier to install—and have greater holding power in all types of soil. They are extremely simple in design and construction of malleable iron. There is no riveting in the Mastergrip construction, no welding, pressing, joining or triggerwork. The anchor consists simply of the body and two, three or four blades. Each blade is broad and tough, held by a pin frozen in the body of the anchor itself, and has complete freedom of action. Made in 2, 3, and 4 way in a size to meet any



Three-Way Mastergrip



Two-Way Mastergrip

requirement. The surface of each blade is larger than the anchor head itself, thus providing extreme holding power as each blade opens independently and completely into undisturbed soil. Only a 3" hole is required for installing the medium sizes compared to 6", 8" and 10" holes for other makes. The smaller sizes are easily hand-driven into the ground same as the Rodless types. Aiken Mastergrip Anchors weigh only 1/2 to 3/4 that of other anchors having corresponding holding power. Select the proper anchor size by the holding power required for each job.

## Aiken Mastergrip Three-Way Anchors

	Hole Size	Rod Size	Strain			Weight
			Sandy Soil	Ordinary Soil	Firm Soil	
H5	3"	3/8-3/8	7,000	9,000	11,000	3 1/2 lbs.
G4	3"	3/8-3/4	8,000	11,000	13,000	6 1/4 lbs.
F1	4"	3/4-1	10,000	14,000	18,000	9 3/4 lbs.
F2	4"	3/4-1	12,000	19,000	24,000	10 lbs.
F3	4"	3/4-1	20,000	30,000	.....	12 1/2 lbs.

## Aiken Mastergrip Two-Way Anchors

	Hole Size	Rod Size	Strain			Weight
			Sandy Soil	Ordinary Soil	Firm Soil	
O5	Drive	1/2-3/4	2,000	4,000	6,000	2 1/4 lbs.
M4	Drive	1/2-3/4	4,000	6,000	8,000	3 1/4 lbs.
L1	3"	3/8-1	8,000	13,000	18,000	5 1/2 lbs.
L2	3"	3/8-1	9,000	14,000	20,000	5 3/4 lbs.
L3	3"	3/8-1	10,000	16,000	22,000	7 lbs.

## Aiken Mastergrip "Kable King" Rodless Drive Anchors

Mastergrip Rodless Anchor is designed for use without a rod. A 1/2" hole is provided in anchor for cable. Simply attach cable and drive into place.



## Dryvin Anchors

Dryvin expansion Anchors are used for mounting to brick or masonry, fixtures such as corner brackets, house brackets, cable clamps, etc. Installed very quickly. The above masonry twist type drill point and holder—used like a star drill, are recommended. Insert shield in mounting hole of fixture. Expand by driving nail into the shield.

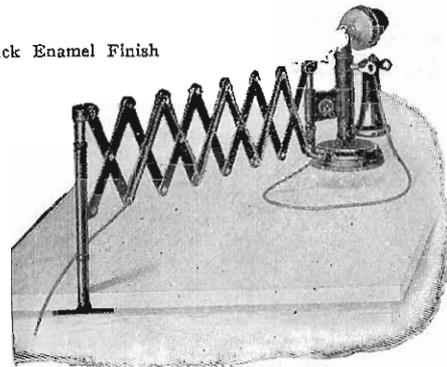


Cat. No.	Diameter Inches	Length Inches	Size Drill Inches	Wt., Lbs. per 100
3678	3/8	1	3/8	1.2
1410	1/2	1 1/4	1/2	2 1/4
1414	1/2	1 1/4	1/2	2 3/4
5614	3/4	1 1/2	3/4	5 1/2
5624	3/4	2 1/4	3/4	6 3/4
3820	1	2	1	10 1/2
1224	1 1/2	2 1/4	1 1/2	18

Sold and packed in standard packages of 100, including nails.

## Sperry Telephone Extension Arm

Black Enamel Finish



**STANDARD TYPE**—The Standard Type Sperry Arm operates out and in horizontally. When ordering be sure to specify catalogue number of mounting desired. On orders not specifying otherwise, the No. 2 mounting will be furnished.

Cat. No.	Length Extended	Wt., Lbs. Each
8—Standard	26 inches	5 1/2
10—Standard	30 inches	6
12—Standard	34 inches	6 1/4
14—Standard	38 inches	6 1/2
16—Standard	42 inches	7

### Minute Clamp

The Minute Clamp fits around the barrel of the telephone and is furnished with all Standard and Universal Telephone Arms, unless otherwise specified. It requires no tools or screws to attach and is quick and simple in operation.



### No. 20 Clamp

The No. 20 Clamp fits all telephones with cylindrical barrels and is only furnished on orders when specified.



### Universal Attachment

The Universal Attachment fits any Sperry Standard Arm. It is inserted between the arm and the mounting and serves to give the arm the up and down motion as well as the horizontal movement. This attachment is furnished separately and permits any Standard Type Arm to be made into a Universal Type.



### No. 21 Clamp

The No. 21 Clamp is used for the old automatic telephone with the convex barrel, and is only furnished on orders when specified.



**UNIVERSAL TYPE, Black Enamel Finish**—The Universal type is the same as the popular Standard, with the addition of the Universal Attachment, which gives it an up and down or vertical motion in addition to the in and out and horizontal side motion. This arm is especially adapted to circumstances where one telephone is used by several persons, it may be also used in a standing as well as sitting position. It may be adjusted to any position and automatically stays put.

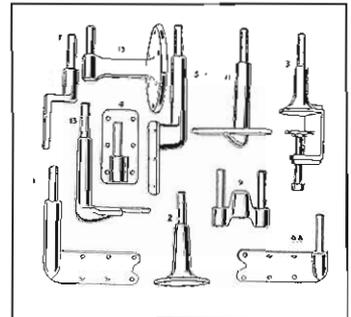
Cat. No.	Length Extended	Wt., Lbs. Each
8—Universal	26 inches	8
10—Universal	30 inches	8 1/2
12—Universal	34 inches	8 3/4
14—Universal	38 inches	9
16—Universal	42 inches	9 1/2

## Sperry Arm Mountings

Black Enamel Finish

The mountings illustrated here have been especially designed so that Sperry Arms can be installed in the most convenient place or position. Any of these mountings may be used with either the Standard or Universal type so when ordering pick out the mounting most suited for your needs and order by catalogue number.

Cat. No.	Description
1	Used on side of roll-top desk.
2	Used on the top of the desk.
3	Clamps to edge of a flat-top desk.
4	Used on a wall or partition.
5	Used on side of a flat-top desk.
6A	Used on side of roll-top desk.
7	Used on side of a flat-top desk.
9	Fits any mounting and holds two brackets.
11	Fastens to under side of desk or table top with screws.
13	Fastens under table or desk at corner.
15	Fastens to the wall or partition.



NOTE: Mountings No. 6A and No. 15 designed especially for the Universal Arms.

# CROSS ARMS, ARRESTERS

## Cross Arms



McCormick Fir or Long Leaf Yellow Pine Cross Arms

### Electric Light Arms 3/4"x4 1/4"

STOCK NUMBER		Length Arm	Use Length Brace	WEIGHT PER 100	
Fir	Pine			Fir	Pine
5800	5860	3 ft., 2 pin	20	1020	1320
5801	5861	4 ft., 4 pin	22	1360	1760
5802	5862	5 ft., 4 pin	22	1700	2200
5803	5863	6 ft., 4 pin	24, 26	2040	2640
5804	5864	6 ft., 6 pin	24, 26	2040	2640
5805	5865	8 ft., 6 pin	24, 26	2720	3520
5806	5866	8 ft., 8 pin	24, 26	2720	3520
5807	5867	8 1/2 ft., 10 pin	24, 26	2890	3740
5808	5868	10 ft., 8 pin	30, 32	3400	4400
5809	5869	10 ft., 10 pin	30, 32	3400	4400
5810	5870	10 ft., 12 pin	30, 32	3400	4400

### Pony Telephone Arms 2 3/4"x3 3/4"

5819	5879	24 in., 2 pin	20	500	650
5820	5880	30 in., 2 pin	20	625	812
5821	5881	36 in., 2 pin	20	750	975
5822	5882	42 in., 4 pin	22	875	1137
5823	5883	62 in., 6 pin	22	1300	1680
5824	5884	82 in., 8 pin	22	1700	2220
5825	5885	102 in., 10 pin	22	2125	2762
5826	5886	120 in., 12 pin	22	2500	3250

**Special Note:** All arms bored for one 3/8 in. center bolt. Two 3/8 in. brace bolts and pin holes will be bored for 1/4 pins unless otherwise specified.

## Wood Side or Pole Brackets



No. 1

These brackets are manufactured from oak thoroughly seasoned and dried, which eliminate shrinkage after the brackets are installed. These brackets are fastened to pole or wall by spikes—two 5/8 inch holes are provided to accommodate spikes. The No. 2 and Western Union Types are wired in bundles of 20 each, all other sizes 25 to the bundle.

Cat. No. 2550-4 and 2551-1 furnished painted or unpainted.

Cat. No. 2555, 2558, 2560 and 2561 furnished unpainted only.

The Kellogg special and giant brackets are much stronger due to their short shank feature; they are obtainable only from the Kellogg Co. and are recommended wherever Nos. 9, 10 or 12 insulators are used.

Cat. No.		Size	Wt. per 1000
2550-4		1 1/2 x 2 x 10	500 lbs.
2551-1		1 1/2 x 2 x 12	700 lbs.
2555	Western Union	2 x 2 3/8 x 12	1,100 lbs.
2560	Kellogg Special	1 1/2 x 2 x 10	700 lbs.
2561	Kellogg Giant	2 x 2 3/8 x 12	1,100 lbs.



## Wood Pole Steps

Wood pole steps furnished in plain, painted and creosoted oak for butt steps on cable terminal, or any stepped pole.

Cat. No.	Size	Wt. per 1000
2556	1 1/2 x 2 x 7	500 lbs.
2662	1 3/4 x 2 3/8 x 7	700 lbs.

## Wood Insulator Pins



Kellogg Special

### No. 1 Grade Locust

Cat. No.	Size	Wt. per 1000
1760	1 1/4 x 8 in.	325 lbs.
1761	1 1/2 x 9 in.	450 lbs.

Put up in bags containing 250 pieces.

## W. U. Galv. Steel Pins With Wood Tops



No. 1190

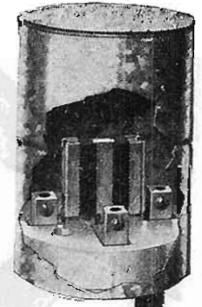
Cat. No.	Description	Wt. per 100
1190	1/2 x 9 1/4 in.	74 lbs.
1191	3/8 x 9 1/4 in.	106 lbs.
1193	1/2 x 5 1/4 in.	53 lbs.
1194	1/2 x 6 in.	59 lbs.
1196	3/8 x 6 1/4 in.	76 lbs.

## Exterior Type Arresters

### Cat. No. 402 S

A weatherproof self-cleaning, sawtooth, air gap lightning arrester for outdoor mounting to be used for protection against lightning at telephone stations and for draining from open wire toll and rural lines. For protection of two wires.

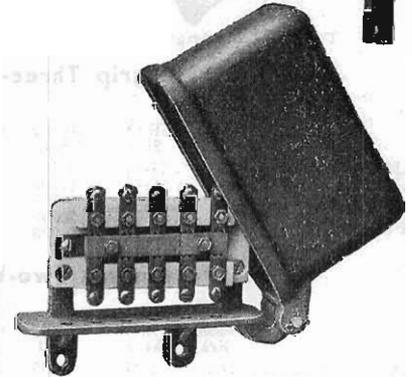
Consists of two P 495 sawtooth discharge blocks and two P 197 carbons mounted on porcelain base with galvanized bracket and cover. Length, 8 1/2 inches over bracket. Net weight, 1 pound.



Cat. No. 402 S

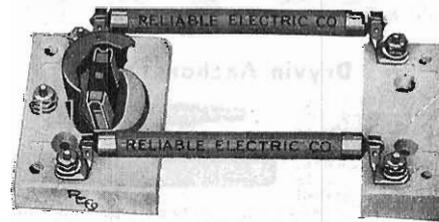
### Cat. No. 202

A self-cleaning sawtooth air gap lightning arrester, with capacity for ten wires, to be used out-of-doors and for draining lines of lightning at the cross arms, without grounding the lines. All five pairs of lightning arresters can be connected to one pair of wires, if desired. The lightning arresters are mounted in a cast-iron housing to protect them from the weather and from sharpshooters and rock throwers. The arresters should be mounted on the cross-arm out of the lineman's way. Consists of ten sawtooth metal discharge plates normally placed .010 inch from the carbon ground. Spring washers are provided on all bolts and screws to keep arrester parts and screw connections from working loose. Size 7 x 2 5/8 x 5 1/4 inches. Std. pkg. 25. Weight 6 1/2 lbs.



### Cat. No. 977 DD

This is a metal saw-tooth air gap discharge protector to be used for protection against lightning and crosses with electric current. The lightning arresters are enclosed by a brass cap.



Cat. No. 977 DD

Consists of two No. 27 blow-rite tubular wood fuses, 7 amperes, 4 3/4 inches between shoulders, two P 197 carbon blocks, and two P 495 metal saw-tooth discharge blocks. The fuses are interchangeable with those used in cable terminals. This is a very convenient feature which makes it necessary to carry on hand only one type fuse.

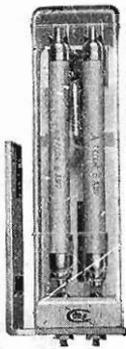
### Cat. No. 977 D

The 977 D is the same protector equipped with four P 197 carbon blocks and two P 312 "U" shaped mica dielectrics. Weight, 1 1/4 lbs. Size, 7 1/2 x 3 1/2 x 2 1/4 inches.

# Kellogg

# ARRESTERS AND PARTS

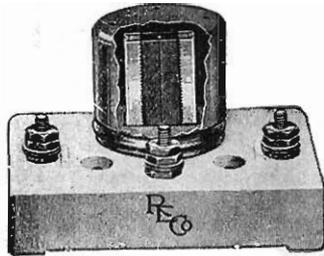
## "O" Type Sub-Station Arrester



A completely enclosed sub-station protector, that offers perfect protection for outdoor use. Fuse clips are of phosphor bronze. The Type O Protector is made for various lengths of fuses, as listed below. Fuses are 5 ampere capacity unless otherwise ordered.

Lightning Arresters ground on a copper ground strip. Two 2080 carbons, two 2081 carbons and two 2094 dielectrics, or two 4500 True Gap Dischargers and two 2080 carbons that will not permanently ground the line are furnished. Line and instrument wires are connected on opposite sides of the porcelain which provides wide separation and increased protection.

Cat. No.	Equipped With	Dimensions in Inches			Wt. Lbs. Each
		Length	Width	Depth	
O-7	A7 Wood Fuse	6¼	2¼	1¾	2½
O-9	A9 Composition Fuse	6¼	2¼	1¾	2½
O-12	A12 Composition Fuse	4½	2¼	1¾	2
O-44	A44 Wood Fuse	4½	2¼	1¾	2
O-52	A52 Fibre Fuse	6¼	2¼	1¾	2



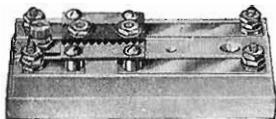
Cat. No. 977 AA

### Cat. No. 977 AA

The No. 977 AA lightning arrester is a metal sawtooth air gap discharge protector to be used for protection against lightning where crosses with electric circuits are not likely to occur. It is enclosed by a brass screw cover. Consists of two P 197 and two P 495 sawtooth discharge blocks. Weight, ¾ lb. Size 3½x2½x2¼ inches.

### Cat. No. 977 A

The No. 977 A lightning arrester is the same as above except that it is equipped with four P 197 carbon blocks and two P 312 "U" shaped mica dielectrics.



Cat. No. 975 B

### Cat. No. 975 B

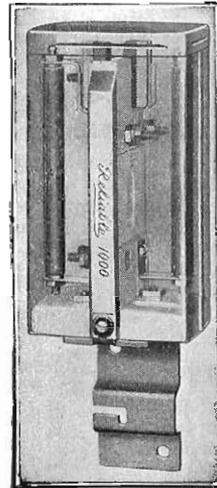
A self-cleaning saw-tooth air gap protector to be used for protection against lightning, and where crosses with electric circuits are not likely to occur. Consists of two adjustable sawtooth metal discharge plates normally placed .005 inch from the carbon ground. Can be supplied with or without "all over" metal cover. Cover shipped only when specified. Weight, 15 oz. size, 5x2x1½ inches.

## True Gap Discharger

The True Gap discharger is designed to relieve telephone circuits from high potential without permanently grounding the line. It is of rugged construction, accurately made, and free from maintenance expense. The discharger is used with a carbon block. A heavy brass discharger is moulded into a bakelite block the size of an ordinary carbon. On the top of this bakelite block is a metal cap anchored to the discharger blade. The discharge surfaces are completely inclosed so no dust can accumulate. The True Gap is recommended for use in pole cable terminals, sub-station protectors, and farm line arresters.



Cat. No. 4500



### Cat. No. 1000

A new weatherproof self-cleaning sawtooth air gap protector for outside mounting. Rigid zinc slide cover which cannot tilt and contact with fuse clips. Bracket will accommodate porcelain tie knob and the cover can be secured to the bracket when lowered. Furnished with two No. 55 Fuses, two P 495 Sawtooth Discharge Blocks, two P 197 Carbons. Std. Pkg. 50. Shipping weight, 2 pounds.

### Cat. No. 1000 A

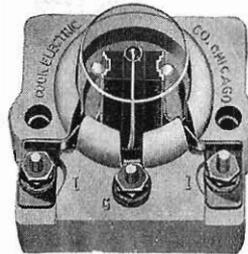
The No. 1000 A is the same as the above equipped with No. 95—7 ampere fuses.

### Cat. No. 1000 E

The No. 1000 E is similar to the above equipped with No. 77—7 ampere fuses. It is also supplied with No. 27 fuses when specified.

### Cat. No. 2

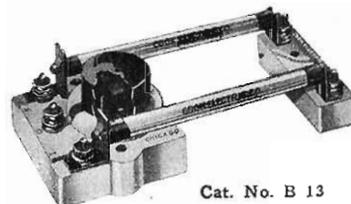
No. 2 arrester is to be used for protection against lightning when crosses with electric circuits are not likely to occur. It is a very durable, compact, and efficient arrester. It may be converted into a fuse type by the addition of contact springs to the brass binding posts, and adding the line end fuse mount and the fuses (See B 13 substation arrester described below).



Cat. No. 2

	Length	Depth	Weight	Net Wt.
Cat. No. 2	2¾ in.	2 in.	3 in.	½ lb.

### Cat. No. B 13

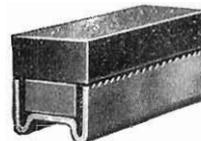


Cat. No. B 13

Designed to carry either a long or a short fuse, the porcelain being in two pieces, one carrying clips for the line end of the fuses only, and the other carrying clips for the instrument end of the fuses, and also carbons. Carbons are standard

type, chemically treated, and are practically self-cleaning. Regularly furnished with 3-ampere A 9 composition tubular fuse, 4¾ inches long between shoulders. Weight, 1½ lbs.

## Self-Cleaning Sawtooth Discharge Blocks



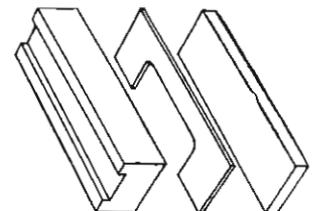
Cat. No. 495

A self-cleaning sawtooth discharge block designed to replace the line carbon and mica separator of existing and new lightning arresters and cable terminals. The cut shows the self-cleaning discharge block, with carbon ground block ready for insertion in a lightning arrester. Carbon ground blocks of various shapes and thicknesses adapt the discharge block to fit any lightning arrester or cable terminal which uses ¼"x1¼" carbon or copper blocks.

## Carbon Block and Celluloid Dielectrics

The Nos. 2080 and 2081 carbon arrester blocks are specially treated under their patented process, which eliminates carbon dust and makes them self-cleaning under ordinary conditions. A greatly reduced percentage of carbon troubles, will follow the use of these self-cleaning carbons.

The No. 2094 celluloid dielectrics are widely known and favored because of their uniform thickness and high insulating qualities. Long experience has proved them to be the best form of dielectrics for use between carbon blocks. Mica dielectrics can be furnished when required, but they are not recommended.



No. 2081 No. 2094 No. 2080

# BATTERIES, BELLS

## Dry Batteries

Columbia, Victor and French Dry batteries are furnished with Fahnestock or Screw connections. Specify type when ordering. Write for special battery agreement.



### No. 6 Columbia Gray Label Batteries

This is a medium low current, long life battery made for telephone service, door bells, and any other low current drain service. Initial amperage, 18 to 22 amperes, 1½ volts. Size 2½ x 6 inches. Standard package 50. Weight 230 lbs. per 100.

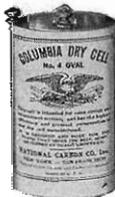
### No. 6 French Telephone Battery

Made with internal protective coating which reduces shelf deterioration. This feature makes this battery especially serviceable in telephone work. Initial amperage 18 to 22 amperes, 1½ volts. Practically no action when battery is idle. Its life is exceedingly long. Size 2½ x 6 inches. Standard package 50. Weight 230 lbs. per 100.



### Columbia 04 Battery

This small oval battery is designed for use with Kellogg No. 1016 test set. Initial amperage 10 to 12 amperes, 1½ volts. Size 1¼ x 4 inches. Weight 11¼ ounces.



## Battery Boxes

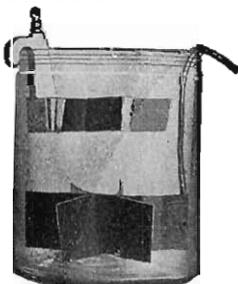


These battery boxes are for use with inter-communicating and desk or hotel types of local telephones. Also electric bell installations or wherever dry cell batteries are used. They are made of sheet steel finished in black Japan and are lined throughout with heavy insulating fibre, which protects the sides of the box and the edges of the holes.

No. 2 takes two No. 6 dry cells, No. 3 takes three No. 6 dry cells.

Cat. No. 2

## Gravity



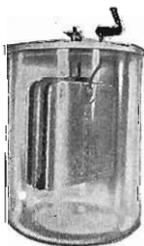
Gravity

Gravity batteries should be purchased for no other purpose in telephone exchanges than to supply operators transmitter battery where storage battery is unattainable. They are designed for closed circuit work of small consumption. Furnished in two sizes, Cat. No. 57, 5x7", and Cat. No. 68, 6x8". Battery consists of jar, zinc, copper and sufficient blue vitriol.

## Edison Primary

The 403 type batteries are adaptable to Railway signal work, train dispatchers talking and ringing circuits, supervisory lamps, private branch exchanges, telephone switchboard, inter-communicating telephones and fire alarms. It is provided with a glass container and has 400 ampere hours' capacity.

The type "RR" cell is now obsolete, but renewals will still be furnished. By using the 400 type renewal and No. 403 cover and nuts they may be converted into type No. 403 cell with 400 ampere hour capacity.



"BSCO" Type 403

## Eveready Operators' Transmitter Batteries



No. T-600

ounces of water occasionally. They are shipped dry and are activated merely by filling them with ordinary drinking water; no mixing or stirring of dangerous chemicals, no assembling of battery parts. The T-600 is 10 in. long, 11 in. high, 6½ in. wide and weighs 24 lbs. The T-300 is 5½ in. long, 11 in. high, 6½ in. wide and weighs 13 lbs.

Guarantee: When installed in switchboards of modern design, drawing approximately 100 milliamperes, Eveready Air Cell batteries are guaranteed to supply 6,000 talking hours of "peak" transmission.

Cat. No.	Unit Pkg.	Voltage	Ampere-Hour Capacity
T-600	1	2.50	600
T-300	1	1.25	600

These batteries are equipped with Fahnestock terminals.



No. T-300

## Telephone Dry Battery

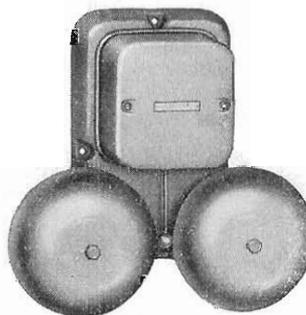


Cat. No.	Volt.	Size	Weight
9451	4½	11½x6½x4½"	16 lbs.

This new Ray-O-Vac battery is designed particularly for use at operators' positions on telephone switchboards. It is composed of a number of small high efficiency cells connected in series parallel to furnish 4½ volts. A special mix formula is employed in these cells, providing a relatively long service capacity and a notably uniform voltage characteristic throughout that period. Its small size makes it ideal for switchboard use, permitting installation within the board if desired.

Its low service-hour cost is true economy for the magneto operated central office. Packed 1 to a package.

## Loudringing, Weatherproof Extension Bell



Code No.	Ringer	Remarks
65-SA	1000 ohm	Straight Line
65-SD	1600 ohm	Straight Line
65-SG	2500 ohm	Straight Line
*65-HB	Harmonic	30, 42, 54, 66 cycles
*65-HA	Harmonic	33½, 50, 66½, 16½ cycles

\*Equipped with No. 12 condenser 1 M.F. capacity.

The Kellogg Loudringing Weatherproof Extension Bell is especially designed for outdoor installations. It is also used extensively, however, for indoor purposes where a good loudringing bell is required. The bells are furnished with either straight line or harmonic ringers. They operate perfectly under all climatic conditions. They are efficient and trouble-free.

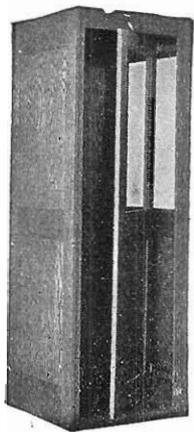
The 6-inch steel gongs are cadmium plated. The housing consists of a heavy cast iron base with removable cast iron cover held by two screws. It has a weatherproof finish of heavy durable gray zinc paint.

Dimensions including gongs: width 13 inches, length 12½ inches, depth 4¼ inches. Net weight 13½ lbs.

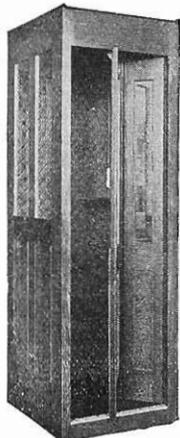
# Kellogg

# BOOTHS, BELLS, BUZZERS, CHAIRS

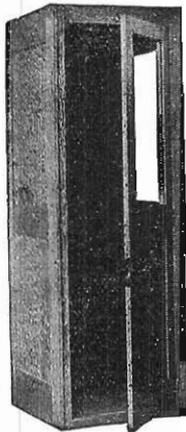
## Booths



Code No. 3  
Receding Door



Code No. 2  
Folding Door



Code No. 4  
Swinging Door

These telephone booths are durably constructed, spacious and of neat appearance. They are made throughout of genuine kiln dried selected plain white oak or birch, equipped with a reinforced back panel for mounting a wall telephone or coin collector. Also a writing shelf for desk telephones if desired. They can be furnished with either a sliding hinged or folding door. Also with glass in both sides, one side or door only. The door fastens securely making the booth as near sound proof as possible. Several of these booths may be placed adjoining each other. Such booths should be ordered without glass panels in sides. Lighting equipment can be furnished when desired.

Outside dimensions 83½ in. high, 28½ in. wide, 29½ in. deep. Inside dimensions, 80½ in. high, 27 in. wide, 27½ in. deep. Door opening 77½ in. high, 23 in. wide. Finish, golden oak, light or dark mahogany. Shipped knocked down in a substantial crate ready for assembling. Shipping weight, 300 lbs.

Note—Specify finish, glass arrangement and type of door. Unless specified, oak finish with glass in door and right side furnished.

## Kellogg Bells and Buzzers

Kellogg Bells and Buzzers have been designed to meet the need for night alarm signalling equipment built to Kellogg specifications. They have platinum contacts and adjustment screw. May be used on A.C. or D.C. current. Housed in standard black enamel case. Bell is 4 1/8" high, 2 1/8" wide over all.

Buzzer is 2 1/8" x 1 1/4" over all. Buzzer mounted in same case as bell and uses same parts omitting gong, tapper and gong support.



1-A Bell

### Code No.

- Bell**  
1-A 4 ohm for use with 2 dry cells.  
1-B 300 ohm for 24 volt storage battery.  
1-C 500 ohm for 48 volt storage battery.

### Code No.

### Buzzer

- 10-A 4 ohm for use with 2 dry cells.  
10-B 300 ohm for 24 volt storage battery.  
10-C 500 ohm for 48 volt storage battery.



10-A Buzzer

## Push Buttons

These push buttons are for use on buzzer circuits. They are furnished in either copper finished metal or in wood.

Cat. No.	Description
100	Wood
200	Copper



## Chairs

Chairs shown below are for use with both the high and low keyshelf type of switchboard as well as for wire chief and chief operator's desk. Standard finish No. 9 Golden Oak. Shipping weight, crated, approx. 55 lbs. each.

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

The No. 1110-C, 1104 chairs with cane seats are carried in stock in No. 9 Golden Oak finish.



Furnished  
Only With  
Cane Seats



Cat. No. 1104-C, 1114-C

Range 1104-C, 24—31.

Range 1114-C, 28—36.

Outside diameter of ring 17 inches. Height from floor to top of ring, 1104, 10¾ inches, 1114, 14¾ inches.

Cat. No. 1110-C

Range, 18—22 inches.

Outside diameter of ring 16 inches. Height from floor to top of ring, 2¼ inches.

## Do/More Metal Chairs

New in design—new in construction—the Do/More Telephone Operator Chair incorporates the many Do/More features that banish fatigue and promote health. There is but one way to sit in this chair—the correct way. The easily adjustable back—the form fitting seat and the swivel height adjustment are special Do/More features. Furnished in three ranges—18" to 22", 24" to 28", 28" to 32". Choice of three types of seats as follows: Type RC—a round cane seat. Type RGL—a rectangular leather seat. Type RWC—a saddle wood frame cane seat.

Standard finish: Black or Olive Green enameled, Seat No. 9 Golden Oak.

Standard finish furnished unless otherwise specified.



No. 2832-RGL



No. 2428-RWC

Cat. No.	Range	Seat	Diam. of Foot Ring	Height from Floor	Shipping Weight Each
1822-RGL	18-22"	Rectangular Leather	17¼"	6½"	29 lbs.
2428-RGL	24-28"	Rectangular Leather	17¼"	8¼"	31 lbs.
2832-RGL	28-32"	Rectangular Leather	17¼"	12¼"	32 lbs.
1822-RWC	18-22"	Comb. Saddle Cane Seat	17¼"	6½"	29 lbs.
2428-RWC	24-28"	Comb. Saddle Cane Seat	17¼"	8¼"	31 lbs.
2832-RWC	28-32"	Comb. Saddle Cane Seat	17¼"	12¼"	32 lbs.

# Kellogg

# BOLTS, WASHERS, BRACES, BRACKETS

## Carriage or Brace Bolts (Hot Galvanized)



Standard carriage bolts are used for attaching the braces to cross arms on most overhead lines. It is customary to order bolts  $\frac{3}{4}$  inch longer than the thickness of the cross arm or a bolt  $\frac{3}{8}$  x 4 inches should be used in connection with a  $\frac{3}{4}$  x  $\frac{3}{4}$  inch cross arm. The  $\frac{3}{8}$  inch carriage bolts used for this purpose are supplied with  $\frac{1}{4}$  inch thread. Length measured from inside of head to tip.

Size	Weight lbs. per 100	Size	Weight lbs. per 100
$\frac{3}{8}$ x 3	13	$\frac{3}{8}$ x $4\frac{1}{2}$	18
$\frac{3}{8}$ x $3\frac{1}{2}$	15	$\frac{1}{2}$ x $4\frac{1}{2}$	33
$\frac{3}{8}$ x 4	17		

All bolts 6 inches and shorter have  $1\frac{1}{2}$  inch threads.

## Machine or Cross-Arm Thru-Bolts (Hot Galvanized)



In order to determine the correct length in inches for a machine or cross arm through bolt it will be necessary to add the sum of the thickness of the cross arm and pole top and then allow about  $\frac{3}{4}$  of an inch for washer and nut room. Length measured from inside of head to tip.

Size	Weight lbs. per 100	Size	Weight lbs. per 100
$\frac{3}{8}$ x 3	14	$\frac{3}{8}$ x $5\frac{1}{2}$	22
$\frac{3}{8}$ x $3\frac{1}{2}$	15	$\frac{3}{8}$ x 10	102
$\frac{3}{8}$ x 5	19	$\frac{3}{8}$ x 12	118

## Lag Screws or Heel Bolts (Hot Galvanized)



Gimlet Point



Fetter Drive

Used to fasten the cross arm braces to the pole. The fetter drive type is the more popular as they may be driven in the pole without tearing the fibres of the wood and by adding a few turns with a wrench it is securely seated.

All sizes are made in either the fetter drive or gimlet point.

Size, in.	Wt. Lbs. per 100	Std. Pkg.	Size, in.	Wt. Lbs. per 100	Std. Pkg.
$\frac{3}{8}$ x $2\frac{1}{2}$	9	1500	$\frac{3}{8}$ x 4	12	1000
$\frac{3}{8}$ x 3	10	1000	$\frac{3}{8}$ x $4\frac{1}{2}$	13	1000
$\frac{3}{8}$ x $3\frac{1}{2}$	11	1000			

## Thimble Eye Bolts (Hot Galvanized)

Thimble eye bolts and angle bolts are used for guying to a pole. They eliminate the use of strain plates and the extra strand necessary for wrapping around the pole. When heavy loads are to be carried on the Thimble eye bolt, use a No. 7891 guy plate.

### Thimble Eye Bolts

Cat. No.	Size Inches	Wt. Lbs. per 100	Cat. No.	Size Inches	Wt. Lbs. per 100
8050	$\frac{3}{8}$ x 8	120	8060	$\frac{3}{4}$ x 8	160
8051	$\frac{3}{8}$ x 10	140	8061	$\frac{3}{4}$ x 10	200
8052	$\frac{3}{8}$ x 12	160	8062	$\frac{3}{4}$ x 12	240

### Thimble Eye Angle Bolts

Cat. No.	Size Inches	Wt. Lbs. per 100	Cat. No.	Size Inches	Wt. Lbs. per 100
8150	$\frac{3}{8}$ x 8	120	8160	$\frac{3}{4}$ x 8	160
8151	$\frac{3}{8}$ x 10	140	8161	$\frac{3}{4}$ x 10	200
8152	$\frac{3}{8}$ x 12	160	8162	$\frac{3}{4}$ x 12	240

## Guy Plates (Hot Galvanized)

Guy Plates are used with all sizes of Thimble Eye and Angle Bolts.

Cat. No.	Size Inches	Wt. Lbs. per 100
7889	$7 \times 2\frac{1}{2} \times \frac{1}{8}$	86
7890	$7 \times 2\frac{1}{2} \times \frac{1}{4}$	113
7891	$7 \times 2\frac{1}{2} \times \frac{3}{8}$	142

## Double Arming or Spacing Bolts (Hot Galvanized)



Furnished with four nuts. Rolled threads used exclusively. Bolts up to 12-inch are threaded 4 inches, longer bolts 6 inches on each end. For correct length allow  $1\frac{1}{4}$  to  $1\frac{1}{2}$  inches for washers and nuts, add twice the thickness of the cross arm plus the diameter of pole less depth of gain.

Cat. No.	Size Inches	Std. Pkg. Quan.	Wt., Lbs. per 100
8862	$\frac{3}{8}$ x 12	50	128
8864	$\frac{3}{8}$ x 14	50	143
8866	$\frac{3}{8}$ x 16	50	158

## Flat Cross Arm Braces (Hot Galvanized)



The standard arrangement for bolt holes in flat cross arm braces is  $\frac{1}{8}$  and  $\frac{1}{8}$  in. hole drilled one inch from each end. These braces are put up in bundles of twenty.

Cat. No.	Length Inches	Wt., Lbs. per 100
7020	$\frac{1}{2} \times \frac{1}{2} \times 20$	142
7022	$\frac{3}{8} \times \frac{3}{8} \times 22$	156
7024	$\frac{3}{8} \times \frac{3}{8} \times 24$	170
7026	$\frac{3}{8} \times \frac{3}{8} \times 26$	184
7028	$\frac{3}{8} \times \frac{3}{8} \times 28$	198
7122	$1\frac{1}{4} \times \frac{1}{4} \times 22$	184
7124	$1\frac{1}{4} \times \frac{1}{4} \times 24$	200
7126	$1\frac{1}{4} \times \frac{1}{4} \times 26$	217
7128	$1\frac{1}{4} \times \frac{1}{4} \times 28$	234
7130	$1\frac{1}{4} \times \frac{1}{4} \times 30$	250

## Cross Arm Back Braces (Hot Galvanized)



Back braces are used for bracing cross arm braces and terminal poles or any place subjected to heavy strain. They are made of flat and angle open hearth steel, fastened to the cross arm by  $\frac{1}{2}$  inch carriage bolts and to the pole by  $\frac{5}{8}$  inch through bolts.

Cat. No.	Size	Wt. per 100
6966	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{8} \times 6$ ft.	1090
6967	$1\frac{3}{4} \times 1\frac{3}{4} \times \frac{1}{8} \times 7$ ft., 10 in.	1300
6969	$1\frac{3}{4} \times 1\frac{3}{4} \times \frac{1}{8} \times 9$ ft., 1 in.	2040

## Round Washers (Hot Galvanized)

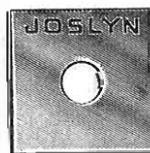
The round washers are used for carriage bolts and lag screws.



Cat. No.	Outside Diameter	Diameter Hole	Weight per 100
1085	$1\frac{1}{4}$ in.	$\frac{1}{4}$ in.	30 lbs.
1086	$1\frac{3}{8}$ in.	$\frac{3}{8}$ in.	42 lbs.
1088	$1\frac{3}{4}$ in.	$\frac{1}{2}$ in.	75 lbs.
1089	2 in.	$\frac{3}{8}$ in.	112 lbs.

## Square Washers (Hot Galvanized)

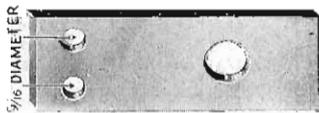
The square washers are used on machine bolts, double arming bolts and guy rods.



Cat. No.	Size	Size Bolt	Weight per 100
1074	2 x 2 x $\frac{1}{8}$ in.	$\frac{5}{8}$ in.	13 lbs.
1075	$2\frac{1}{4} \times 2\frac{1}{4} \times \frac{1}{8}$ in.	$\frac{3}{4}$ in.	25 lbs.
1076	$2\frac{1}{4} \times 2\frac{1}{4} \times \frac{1}{4}$ in.	$\frac{3}{4}$ in.	25 lbs.
1078	3 x 3 x $\frac{1}{8}$ in.	$\frac{3}{4}$ in.	45 lbs.
1079	3 x 3 x $\frac{1}{4}$ in.	$\frac{3}{4}$ in.	58 lbs.
1080	4 x 4 x $\frac{1}{8}$ in.	$\frac{3}{4}$ in.	84 lbs.
1081	4 x 4 x $\frac{1}{4}$ in.	1 in.	215 lbs.



Thimble Eye Angle Thimble Eye



$\frac{5}{16}$  DIAMETER

# BRACKETS, CABLE, COMPOUND, CLAMPS

## House and Pole Brackets

(Hot Galvanized)



No. 1200

The No. 1200 house bracket is made of  $\frac{3}{8}$  x  $1\frac{3}{4}$  inch stock, hot galvanized, having three  $\frac{3}{8}$  inch mounting holes; when mounting to wood buildings use three  $1\frac{1}{2}$ x $1\frac{1}{2}$  galvanized RH wood screws, brick or masonry, three  $\frac{3}{4}$ x $1\frac{1}{2}$  inch Dryvin lead anchors. Weight, per 100, 57 lbs. Code number does not include knobs or bolts.

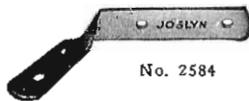
The No. 1202 pole bracket is heavier, being made of  $\frac{1}{4}$ x $2$  inch stock, also hot galvanized, having three  $\frac{3}{8}$  inch mounting holes; when mounting to pole use three  $\frac{3}{8}$ x $4$  lag screws. Weight, per 100, 100 lbs.

The following table gives size of bolts required for mounting knobs on brackets:

One 2-groove knobs—Use one $\frac{1}{8}$ x $2$ galv. stove bolt.
Two 2-groove knobs—Use one $\frac{1}{8}$ x $3\frac{1}{2}$ galv. stove bolt.
One 4-groove knobs—Use one $\frac{3}{8}$ x $3$ galv. stove bolt.
Two 4-groove knobs—Use one $\frac{3}{8}$ x $5\frac{1}{2}$ galv. stove bolt.

## Corner Brackets

(Hot Galvanized)



No. 2584

The 2584 corner bracket is made of  $\frac{1}{4}$ x $1\frac{1}{4}$  inch stock, hot galvanized, and is eight inches in length, having two  $\frac{3}{8}$  inch mounting holes. For mounting to wood buildings use two  $\frac{1}{8}$ " x  $2\frac{1}{2}$ " galvanized lag screws. For brick or masonry use two  $\frac{1}{8}$ " x  $2\frac{1}{2}$ " Dryvin lead anchors.

galvanized lag screws. For brick or masonry use two  $\frac{1}{8}$ " x  $2\frac{1}{2}$ " Dryvin lead anchors.

## Pearl Drop Wire Brackets

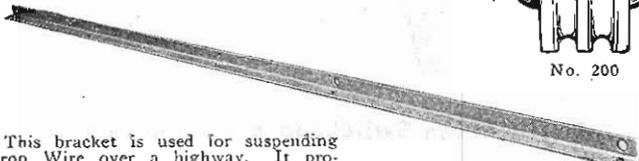
These brackets are furnished complete with knob ready to install. The unbreakable wire screw hook and malleable castings are hot galvanized, insuring long life. To install screw in hook, hang on two-piece hook assembled into insulator.

No. 100 Single Groove for Electric and Radio Wires.

No. 200 Double Groove for Duplex Telephone Wires.

## Highway Cross-Over Bracket

(Hot Galvanized)



No. 200

This bracket is used for suspending Drop Wire over a highway. It provides ample clearance when a short pole is used. Manufactured from  $1\frac{1}{2}$ x $1\frac{1}{2}$ x $\frac{1}{4}$ x $\frac{1}{4}$  inch Angle Iron. Furnished with six  $\frac{3}{8}$  inch holes for mounting two or four groove knobs with machine or stove bolts, also four  $\frac{1}{8}$  inch holes for mounting to pole. Shipping weight 1750 lbs. per 100.

## Telephone Cable

For Aerial and Underground Use



Standard Telephone Cable is regularly furnished in various electrostatic capacities with conductors of 19, 22, and 24 B. & S. Gauge.

This dry core, lead encased cable can be supplied with either double reverse or single wrapped paper conductor insulation. Prompt shipments can be made from the factory warehouse at Phillipsdale, Rhode Island.

To take care of short lengths and emergency orders, Kellogg's Chicago warehouse carries in stock 10, 15, 25, 50, 75 and 100 pair, 22 B. & S. Gauge, double paper wrapped, also 50 and 100 pair, 22 B. & S. Gauge wool cable.

## Cable Compound

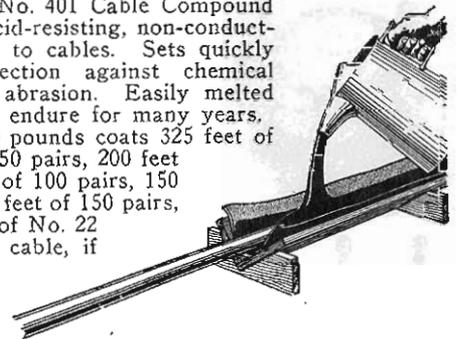
Kellogg Formula No. 401

Kellogg Formula No. 401 Cable Compound is a non-corrosive, acid-resisting, non-conducting material applied to cables. Sets quickly and forms a protection against chemical fumes, rodents and abrasion. Easily melted and applied and will endure for many years.

For new cable 100 pounds coats 325 feet of 25 pairs, 300 feet of 50 pairs, 200 feet of 75 pairs, 165 feet of 100 pairs, 150 feet of 125 pairs, 125 feet of 150 pairs, 100 feet of 200 pairs of No. 22 B. & S. gauge new cable, if properly applied.

This is sufficient under normal conditions, but where toilets, stables, gas plants, cinders, train smoke or other conditions threaten the cable, a thicker coating should be given.

Kellogg Cable Compound is sold in open-top drums of approximately 400 pounds each, also pails of 25 pounds each.



## Cable Suspension Clamps

(Hot Galvanized)

For temporary construction or for use on light lines, the cable suspension clamps may be used advantageously. It is suggested that a  $\frac{3}{8}$  inch bolt with two nuts and two washers be used in mounting, putting on the clamp after the bolt is mounted in the regular manner, then fastening the clamp on the end of the bolt with the second nut and washer. This gives a small clearance between the clamp and the pole which is some advantage when working on the line.

Cat. No.	Description	Std. Pkg.	Length	Wt. per 100
1095	1-Bolt	100	2 $\frac{1}{2}$ in.	80 lbs.
1096	3-Bolt	150	6 in.	205 lbs.

## No Slip Guy Clamp

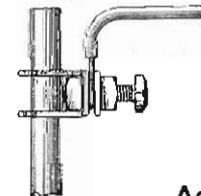
(Hot Galvanized)

Nos. 1030, 1031 and 1033 clamps are easily installed and have a holding power that will break the strand. They are made from half rolled open hearth steel plates  $1\frac{1}{2}$  in. wide by  $\frac{3}{8}$  in. thick. Equipped with  $\frac{1}{2}$  in. bolts and will stand 10,000 lb. pull without breaking or stripping their threads.

No. 1032 is a heavier and more expensive clamp made of plates 2 in. wide by  $\frac{3}{8}$  in. thick equipped with  $\frac{3}{8}$  in. bolts. Adopted by NELA and A. T. & T. Co. as their standard clamp.

All clamps fit seven-wire strand from  $\frac{1}{4}$  in. to  $\frac{1}{2}$  in., inclusive, and are furnished in the following sizes with plain or ridged groove:

Cat. No.	Size	Std. Pkg.	Wt. per 100
1030	2 bolt 3 in.	200	110 lbs.
1031	3 bolt 4 in.	150	150 lbs.
1032	3 bolt 6 in.	75	285 lbs.
1033	3 bolt 6 in.	100	210 lbs.
1061	1 bolt 1 $\frac{3}{8}$ in.	100	63 lbs.



## Kling Ground Clamps

A galvanized steel clamp for connecting ground wires to  $\frac{1}{2}$  in. and  $\frac{3}{8}$  in. iron or copper ground rods. Equipped with cup pointed set screw which insures a good contact, even on a rusty rod. Made in two sizes,  $\frac{1}{2}$  in. for  $\frac{1}{2}$  in. rod, and  $\frac{3}{8}$  in. for  $\frac{3}{8}$  in. rod. Clamps should be attached before rod is driven. Shipping weight,  $\frac{1}{2}$  in. 15 lbs. per 100,  $\frac{3}{8}$  in. 17 lbs. per 100.

## Adjustable Ground Clamps

The most approved method of permanently making ground connections at subscriber's stations where water pipes are available and where it is inconvenient to solder ground wires onto ground rods.

Cat. No.	What they fit
No. 0	$\frac{3}{8}$ and $\frac{1}{2}$ in. ground rods
No. A1S	$\frac{3}{8}$ , $\frac{1}{2}$ , $\frac{3}{4}$ , 1 and 1 $\frac{1}{4}$ in. pipe

Shipping weights per 100

No. 0	30 lbs.
No. A1S	55 lbs.



No. A1

# Kellogg

# CALCULAGRAPHS, COUNTERS, CLEATS, CLEANERS

## Calculagraphs



An elapsed time recorder that definitely and permanently establishes the time a toll circuit is in use. The measure of time elapsed secures an absolute record by which the toll fee can be accurately arrived at, avoiding disputes and preventing losses in the collection of revenues. Equipped with two levers; by operating one when a connection is established and the other when the conversation is finished, a true record is obtained similar to the one shown below.

Two models are made: the No. 6 calculates and prints the elapsed time in minutes and quarter minutes and records the time of day. The No. 6X, in addition, prints the day, month and year. (See facsimile record below.)

Both models are furnished in two styles: Style C for sinking in the existing key-shelf to fit flush with the top, or Style A mounted on a pedestal that may be adjusted to any height from 26 to 40 inches and placed wherever desired.



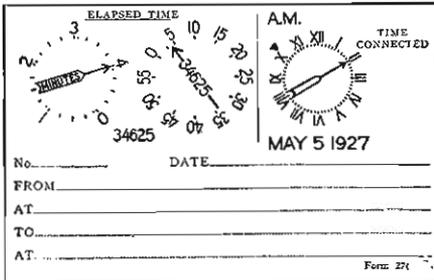
### Spring Drive

Model 6 Style A—Pedestal type  
 Model 6X, with dater Style A—Pedestal type  
 Model 6 Style C—Flush type  
 Model 6X, with dater Style C—Flush type

### Motor Drive

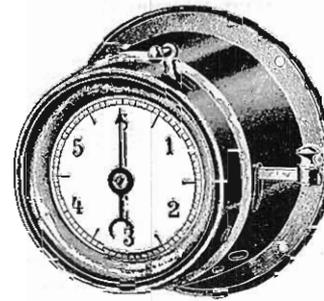
Equipped with self-starting Synchronous Motor for 60 cycle, 110 volt regulated alternating current.

- Model 25-Case A or C, Less Date Stamp  
 (Prints elapsed time in minutes and quarter minutes).....
- Model 25x-Case A or C, With Date Stamp  
 (Prints elapsed time in minutes and quarter minutes).....
- Model 30-Case A or C, Less Date Stamp  
 (Prints elapsed time in minutes and seconds).....
- Model 30x-Case A or C, With Date Stamp  
 (Prints elapsed time in minutes and seconds).....



Left is a record of Calculagraph Model 6X showing the time of day, that the connection was made 10:10 A. M., and the exact elapsed time the circuit was in use, four minutes. The number indicates the serial number of the Calculagraph to identify it. The record may be made on the standard toll ticket or tickets of any size.

## Chronoscope



An instrument for timing telephone calls. This instrument is the newest and most reliable device made for checking the time of toll messages.

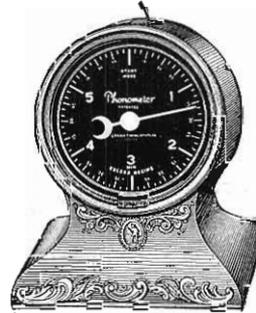
The method of using same is very simple. The Chronoscope is provided with two levers. A single downward pressure on the side lever will wind the clock, set it going and start the hand.

To stop the hand when through using the telephone, if interrupted, or line gets out of order, turn the top lever upward and the clock will stop. When telephone or line is in order again, press the upward lever downward and the instrument will record again the exact time the telephone has been used.

To set the hand back to the starting point, press the large lever on the side of instrument and the hand will fly back to the starting point, so that the instrument is always ready for use.

Metal Oxidized case 2½ inches. Diameter of dial, 2 inches. Six minute time. Bell on three and six minutes and stopper at any period.

## Phonometers



The Phonometer is a practical device for timing calls in a small exchange where an expensive timing device is not necessary. Measures time up to six minutes, being started by means of a lever at beginning of a conversation and stopped in the same manner at end of conversation. It is simple, accurate and inexpensive.

Phonometer

## Bristle Brush Switchboard Jack Cleaners



Used on a revolving flexible shaft or wheel drill, for cleaning switchboard jacks. Brushes are furnished in 2 sizes. No. 32 diam., .249, it fits all jacks approximately ¼ in. diam. No. 22 diam., .221, fits all jacks using No. 201 Kellogg plugs. Carbon Tetrachloride liquid is an excellent cleaner to be used with the above brush, and also can be used for polishing switchboard plugs. Furnished in either 4 oz. or 8 oz. bottles.

## Universal Dusters



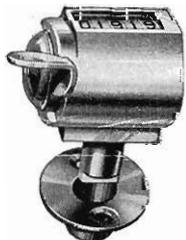
Made entirely of wood. No chance for short circuits. Ideal for dusting out switchboard relay

racks and places where cloths or brushes are liable to cause injury to contacts or disturb adjustment of relays.

No. 1 Length, 20 inches. Weight, each 10½ ounces.

## Counter

### No. 8 Straight Counter



This counter is used in practically every telephone exchange throughout the country for making accurate traffic records.

The socket plate is intended to go flush into the keyboard slightly to the right of the operator and to remain there permanently. The counter can then be inserted and removed at will. This counter registers up to 100,000.

Straight Counters

## Fibre Cleats



Style No. 1



Style No. 2



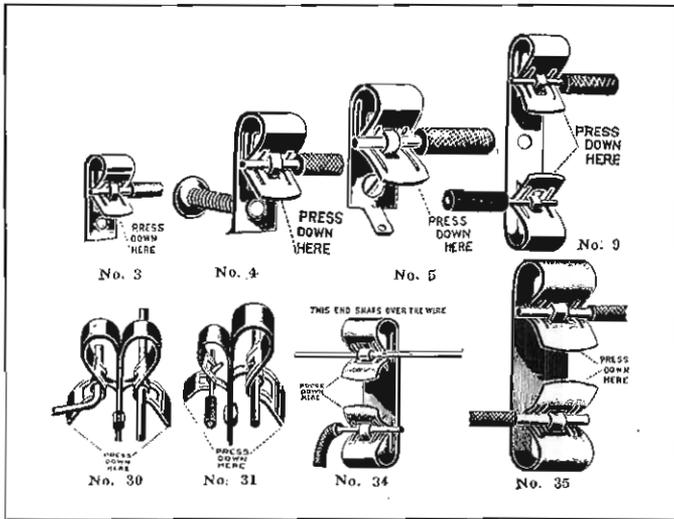
Style No. 2-A

Fibre cleats are furnished in three styles—as per cut. These cleats furnish a neat and substantial method of permanently retaining interior wire in place, especially on lath and plaster walls where it is not desirable to fasten with nails or staples.

# Kellogg

# CONNECTORS, CLIPS, CONES

## Fahnestock Connectors

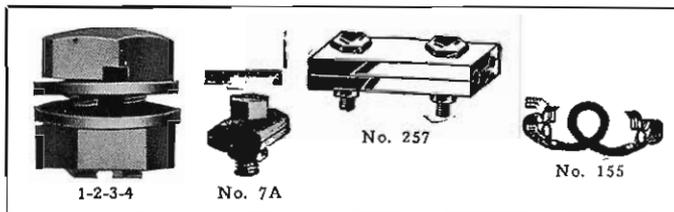


Fahnestock connectors are made of special copper bronze spring metal for different size of wire and for connecting an iron to iron wire, a copper to a copper wire, or an iron to a copper wire.

When ordering be sure and state whether they are to be used on iron wire, copper wire, or on iron to a copper wire; also state the size of wire and gauge. For outside construction work a copper wire should never be fastened directly to an iron wire. In such a combination the copper wire will destroy the zinc coating on the iron wire and in a short time rust the wire, making a poor connection. The use of the iron to copper connector eliminates this difficulty. See table below for size.

Type	Takes B & S Gauge Wire Number	Size Length Width	Screw Holes
3	10	1 1/8 x 3/8	No. 8
4	10	1 x 3/8	No. 8/32 threaded
5	10	1 1/8 x 3/8	No. 8
9	10	2 1/8 x 3/8	No. 8
30		1 1/8 x 5/8	
31		1 1/8 x 5/8	
34	10	2 3/4 x 5/8	

## Test Connectors



These connectors are made from copper bar, very easily installed and insure good permanent contact.

Cat. No.	Style	Size Wire	Wt., Lbs. Per 100
7-A	1 Bolt	10x17 B.&S. ga.	6 1/4
257	2 Bolt	10x17 B.&S. ga.	11
155	No. 6 Telephone Battery		2 1/2
1	Brass Bolt	17 or 18 B.&S. ga.	2
2	Brass Bolt	12 B.&S. or 14 N.B.S. ga.	2 1/2
3	Brass Bolt	10 B.&S. or 12 N.B.S. ga.	5
6	Steel Brass Bolt	Copper Drop to No. 12 B.W.G. Iron	11

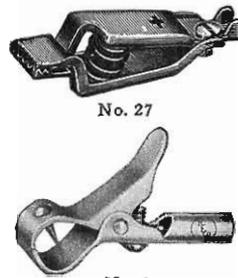
## Connecting Blocks



No. 25-A Two point rack (no cover). Pc. No. 58887 Cover only.

No. 25-B Three point rack (no cover). Pc. No. 58889 Cover only.

## Test Clips



These clips take a good firm hold and are constructed with a thin nose for tight quarters. The Nos. 27 and 28 are furnished with side jaws for bare wire testing. By using these clips in connection with a pocket-knife a contact can be made without skinning the insulation from wire.

The insulated connector can be attached to the wire without the lineman coming in metallic contact with it. Connections are all of the screw type; the jaw 3/16 inch spread and carrying capacity 10 amperes.

Cat. No.	Stock	Insulated or Bare Wire	Spread of Jaws	Amperage	Per C Wgt.
27	Copper	Bare	3/8"	10	4 lbs.
28	Copper	Insulated	3/8"	10	5 1/2 lbs.
2	Nickel Silver	Bare	5/8"	10	4 lbs.

## Paragon Ground Cones



These grounds are made of a perforated sheet of pure copper. The cone is filled with pea-sized charcoal or coke as desired. Furnished with five feet of No. 4 soft copper leading-in wire welded to the grounds.

These cones are especially recommended for establishing suitable central office grounds for the protective apparatus and switchboards. They should be buried at least five feet below the surface and preferably in a heavy clay sub-soil. Before refilling the hole after the cone has been set, the coke or charcoal filling should be well saturated by pouring water over and around the cone. The ground wire should not be smaller than No. 10 heavily insulated copper, well soldered to the lead-in wire, and run as straight as possible to the protector or other apparatus.

Cat. No.	Length Feet	Gauge Copper
3	1	21
4	2	21

# Kellogg

# EXTINGUISHERS, FUSES, GUY PROTECTORS, HANGERS

## Pyrene Fire Extinguishers



Pyrene with Bracket

Pyrene Fire Extinguishers are the safest and most efficient type for electrical and all fires starting in oil, gasoline, shellac, paints, or other highly inflammable substances. Water only spreads oil fires and it is dangerous to use water on electrical fires.

Insurance companies recognize the value of Pyrene and grant a 15% reduction in automobile fire insurance when cars are equipped with Pyrene. Reduction in premium is also given for Pyrene equipment on other risks.

Pyrene Liquid will not injure switchboards, or any other electrical apparatus. It is a non-conductor of electricity. Always use Pyrene liquid in refilling Pyrene extinguishers.

Tested, approved and labelled by the Underwriters' Laboratories, Inc.



Pyrene Liquid

## Fuse Wire

### Blow-Rite Fuse Wire



Blow-Rite Fuse Wire

Blow-Rite Fuse Wire is a copper alloy made especially for lining telephone fuses. It has great tensile strength and can be soldered without fear of burning the wire. It is rated at its exact blowing point and does not corrode or crystallize as ordinary fuse wire does.

Blow-Rite Fuse Wire is put up on 300-foot spools for use in relining telephone fuses.

Made in 1, 2, 3, 4, 5, 7 and 10 amperes blowing point.

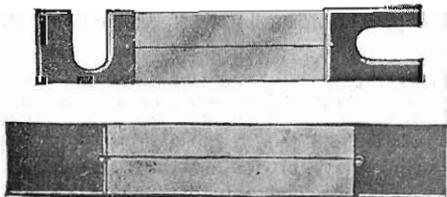
## Blow-Rite Terminal and Protector Fuses



Sizes and types for every kind of telephone protector. When ordering fuses specify the code number of the protector to insure selection of correct fuse.

Cat. No.	Material	Length over all	Wt., per 1000
6	Wood	4 3/8 in.	40 lbs.
27	Wood	5 1/4 in.	43 lbs.
29	Wood	3 1/2 in.	38 lbs.
A-7	Wood	5 1/4 in.	70 lbs.
A-46	Wood	3 1/2 in.	30 lbs.
A-9	Composition	5 1/4 in.	90 lbs.

## Copper Terminal Fuses



Postal Type  
 No. 137—1 1/8 x 1/4 or 3 x 1/4 in.  
 No. 21—2 x 3/8 in.  
 No. 11—2 1/8 x 3/4 in.  
 No. 25—2 1/2 x 1/2 in.

Western Union Type  
 No. 19—2 x 3/8 in.  
 No. 8—2 1/8 x 3/4 in.  
 No. 22—2 1/2 x 1/2 in.

The workmanship is excellent, insuring 100 per cent good fuses.

When ordering specify code number and amperage. Fuses packed 50 per box.

**Note:** The enclosed type of fuse is recommended and all orders not specifying will be filled with that type. All of the above styles are carried in stock in the enclosed type in both 1/4 and 1/2 amperes.

## U-Cable Guards and Straps (Hot Galvanized)

"U" cable guards are made from 14 gauge sheet steel formed into U-shape for protecting telephone cables. The U-shape affords additional strength necessary against collision, and the rounded surface protects the pedestrian.

Cat. No.	Size In. Ft.	Std. Pkg. Quan.	Wt., Lbs. per 100
985	1 1/2 x 6	5	450
986	2 1/8 x 5	5	750
987	2 3/8 x 8	5	1225
988	3 1/8 x 5	5	1100
989	3 1/8 x 8	5	1750

## Mounting Straps

	Size Steel Inches	Used with Cable Guard	Std. Pkg.	Wt., Lbs. per 100
995	3/4 x 1/2	985	150	13
996	3/4 x 1/2	986-7	150	21
997	1 x 1/2	988-9	150	55

## Guy Wire Protectors (Hot Galvanized)

This guy wire protector is made of heavy gauge steel in semicircular form. While comparatively light and easy to handle for its length, the convex shape makes it unusually strong. Each protector is provided with a simple clamping device 18 inches from each end by which the protector is fastened securely to the guy wire, in any required position.

Just screw the nuts from protector in the desired position.

Furnished as follows:

Cat. No.	Description	Length	Wt., Lbs. Each
1604	Straight Type	7 ft.	14 1/2
1605	Straight Type	8 ft.	16 1/2
1617	Tapered Type	7 ft.	14 1/2
1618	Tapered Type	8 ft.	16 1/2

## Universal Messenger Hangers (Hot Galvanized)

The curved groove in which the strand is secured makes this hanger particularly adaptable for curves and at the same time affords a secure hold for straight line work.

The upright section is furnished with two mounting holes, the upper one 1/8 inch in diameter and the lower one 1/4 inch in diameter. Either lag screws or machine bolts, or one of each, may be used in mounting the hanger on the pole. Manufactured in two sizes. No. 2 for 3/8 inch strand and smaller. No. 1 for 1/2 inch strand and larger; No. 1 weighs 800 lbs. per C. No. 2 weighs 240 lbs.

## Guy or Jay Hooks (Hot Galvanized)

The 1 3/4 x 3/8 x 4 in. one bolt Guy Hooks should always be recommended for use in connection with guys to keep them from slipping down. It is better to use a 1/2 in. or 5/8 in. thru bolt in preference to a lag screw, as they hold better and are not apt to tear the wood.

Cat. No.	Description	Weight per C
1016	1 1/4 x 1/4 x 3 in. 1 bolt	30 lbs.
1017	1 1/2 x 3/8 x 3 1/2 in. 1 bolt	75 lbs.
1018	1 1/2 x 3/8 x 6 in. 2 bolt	90 lbs.
1019	1 3/4 x 3/8 x 4 in. 1 bolt	90 lbs.

# Kellogg

# HOLDERS, KNOBS, INSULATORS, JACKS

## Holder

### Kellogg Guy Thimble Holder

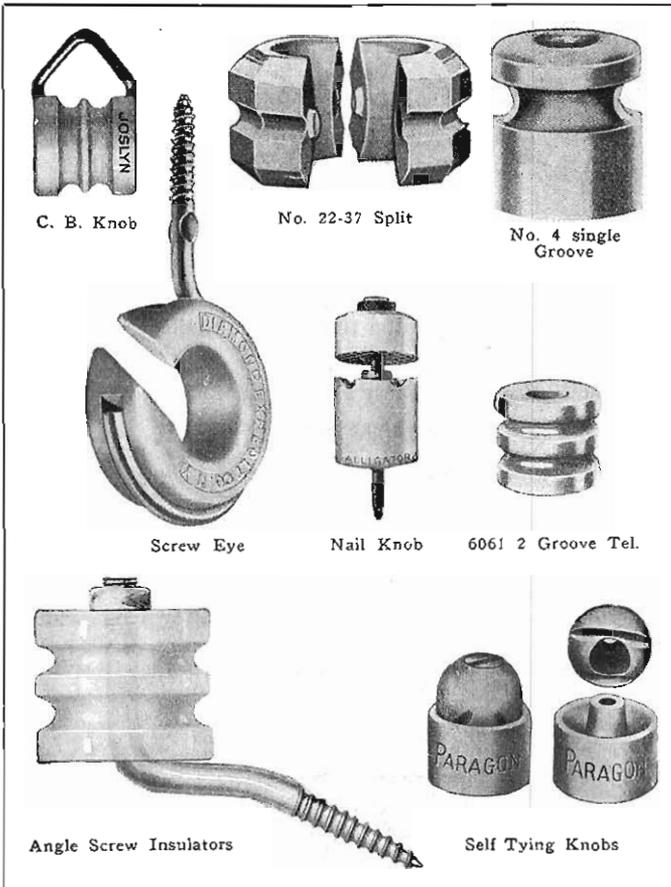


Showing Thimble Holder in place

The use of a guy thimble in the eye of a standard anchor rod makes a larger and more uniform bend in the messenger or guy wire than can be obtained with the so-called Patented eye rods. The Kellogg holder eliminates the difficulty and danger incident to holding the thimble in place; with this device the guy can be pulled by fastening the fall rope of the blocks to a truck. After the guy is pulled the tool is easily removed by hand and the guy clamp bolted in place. Enables a crew of linemen to place anchor guys in one-half the time. Manufactured from heavy cast iron and covered with a heavy coating of black enamel and will last a lifetime. Shipping weight, 3 lbs.

## Knobs

### Porcelain Knobs



C. B. Knob

No. 22-37 Split

No. 4 single Groove

Screw Eye

Nail Knob

6061 2 Groove Tel.

Angle Screw Insulators

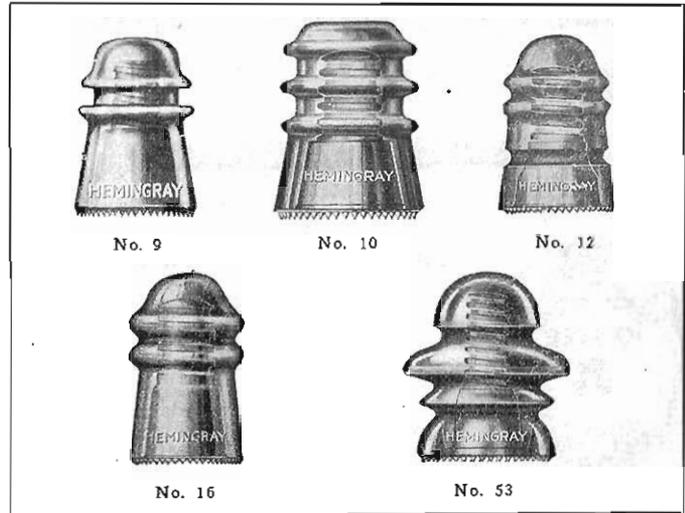
Self Tying Knobs

Cat. No.	Height	Diameter	Number Per Bbl.	Weight per 1000
6061	2 Groove Tel.	1½ in.	1900	221 lbs.
6062	4 Groove Tel.	2¼ in.	1000	395 lbs.
4	Single Groove	1½ in.	2200	230 lbs.
4	Double Groove	1½ in.	2000	225 lbs.
	Nail Knob	1¾ in.	2500	185 lbs.
	No. 22 Split Knob	1½ in.	1200	382 lbs.
	No. 37 Split Knob	1½ in.	1800	250 lbs.
	CB Knob			250 lbs.
	Insulated Screw Eye	1 in.		80 lbs.
	Self Tying Knobs			490 lbs.

Angle Screw insulators furnished less knobs.

## Insulators

### Screw Thread Glass Insulators



No. 9

No. 10

No. 12

No. 16

No. 53

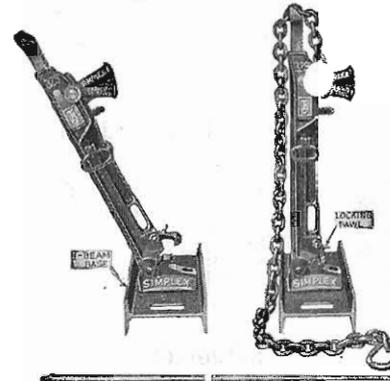
Cat. No.	Description	Std. pkg. Quantity per box	Wt., lbs. per 1000 pkd. in boxes
9	Single Groove Pony	250	648 lbs.
10	Exchange Line	250	704 lbs.
12	Double Groove Pony	250	752 lbs.
16	Long Distance New Style	175	1057 lbs.
53	One-Piece Transposition	50	2200 lbs.

### Porcelain Tubes Unglazed



Length Under Head	Inside Diam.	Outside Diam.	No. Per Bbl.	Wt., Lbs. per 1000
3 in.	⅞ in.	⅞ in.	4500	65
4 in.	⅞ in.	⅞ in.	3600	80
6 in.	⅞ in.	⅞ in.	2000	120
6 in.	⅞ in.	⅞ in.	1400	200
8 in.	⅞ in.	⅞ in.	1200	210
10 in.	⅞ in.	⅞ in.	1000	265

### Pole Pulling and Straightening Jacks



No. 329 Simplex, 15 tons

This is the only jack designed and made especially for pulling, straightening and lowering telephone, telegraph, electric light, power and railway poles—also for municipalities and public utilities having pole equipment.

Present day efficiency standards of public utilities demand better, quicker and more economical methods of handling this pole construction and maintenance work than insured by ordinary labor with ordinary tools. The No. 329 Simplex handles every phase of pole work with unequalled efficiency, dispatch and economy.

# Kellogg

# MISCELLANEOUS

## Bar Solder



Kellogg Special wiping solder is made to rigid specification and is recommended for all cable splicing.



Ordinary bar solder "Half and Half"; also for cable splicing.



## Kester Plastic Rosin-Filled Solder

Just the thing for soldering delicate electrical connections such as switchboards, instrument repairs and installations. It has two items in one—solder and flux. Solder is a hollow wire filled with rosin flux; as solder melts flux flows out on the job, insuring a perfect bond. Put up in 1, 5 and 20 pound spools.

## Plain Wire Solder

Used for general line work in connection with some kind of flux.

## Allen Soldering Stick



A convenient form of soldering flux of the same quality as Allen paste, catalog Number 039534.



## Allen Soldering Salts

A combination of several of the most efficient soldering agents in a convenient soluble form. Gives off no obnoxious gases. Very superior to the old-time acid.

Cat. No. 039547..... $\frac{1}{2}$  lb. bottles

Cat. No. 039548..... 1 lb. bottles



## Allen Soldering Paste

Will not corrode or injure surface to which it is applied. Ideal for soldering with torch or soldering copper.

No. 039538.....2 oz. can

No. 039565.....4 oz. can

No. 039539.....8 oz. can

No. 039540.....1 lb. can

## Solderall



This material will join all metals except aluminum. Strength and durability equal to regular solder. Contains pure pulverized solder combined with non-corrosive flux, ready for instant use.

## Marline



Made from the best grade of long line Three-Ply American hemp selected material and thoroughly tarred. Furnished in 1 pound balls.

## Kellogg Black Friction Tape



Kellogg Friction Tape

An excellent tape with good adhesive qualities and made to our specifications. Put up in  $\frac{1}{2}$  lb. rolls. Standard width,  $\frac{3}{4}$  in.

## Manson Friction Tape

Put up in  $\frac{1}{2}$  lb. tins, width  $\frac{3}{4}$  in.



Manson Friction Tape

## Okonite Tape

A rubber tape put up in  $\frac{1}{2}$  lb. packages,  $\frac{3}{4}$  in. wide and suitable for all telephone or electrical purposes.

## Lead Sleeves

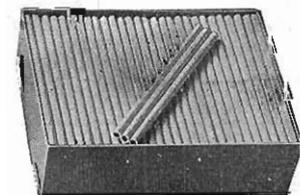
Lead sleeves for making splices at cable junctions are furnished with a  $\frac{1}{8}$  in. wall, and the following table is furnished based on straight splices using No. 22 gauge conductors for convenience in determining the proper number of pounds to specify for each sleeve. These estimates are approximate only.

### Straight Splice

Size of Cable	Inside Diameter	Length	Weight of Sleeve
10-15	$1\frac{1}{4}$ in.	16 in.	3.5 lbs.
25-30	$1\frac{1}{2}$ in.	16 in.	4.25 lbs.
50-100	2 in.	18 in.	6.25 lbs.
100-150	$2\frac{1}{2}$ in.	18 in.	7.75 lbs.
200	3 in.	20 in.	10.25 lbs.
300	$3\frac{1}{2}$ in.	22 in.	12.75 lbs.
400	4 in.	22 in.	14.5 lbs.
600	4 in.	22 in.	16.6 lbs.

Length of sleeve is of course optional, according to splices. Sleeves cut to any length.

## Paper Sleeves



Paper sleeves are used to insulate bare joints of cable construction where splices have been made, one sleeve used on each wire of each pair at junction making a compact and reliable insulation.

Diameter Inches	Used for Straight Splices	Standard Package	Weight lbs. per 1,000
$\frac{1}{8} \times 3$	22 ga.	175	1
$\frac{1}{8} \times 2\frac{3}{4}$	22 ga.	175	1
$\frac{1}{8} \times 3$	19 ga.	110	1

# Kellogg

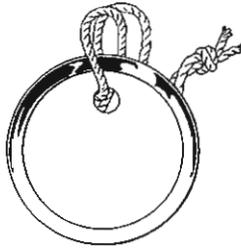
# MISCELLANEOUS

## Cotton Sleeving

Cat. No.	Size, Inches	Yard per Lb.	Remarks
1	$\frac{1}{8}$	280	Furnished in 1 and
3	$\frac{3}{8}$	230	5 lb. spools

## Waxed Cotton Sleeves

Cat. No.	Size Inches	Approx. Length Inches	Carton Contains
4	$\frac{5}{8}$	4	Appr. 400 pcs.
5	$\frac{1}{2}$	$3\frac{1}{4}$	Appr. 700 pcs.



## Metal Rim Tags—No. 32

Used for any purpose where it is found necessary to tag cable or wires as a means of designation after they have been tested out and assembled in groups, made of thin tough cardboard and bound with metal. Can be used over and over for the same purpose. One inch in diameter.

## Insulating Compound

For insulating and sealing pot-heads and cable terminals or for any purpose where insulation and protection from moisture of wires or current-carrying parts is desired. It is normally hard, forming into the mold or container, but when heated can readily be poured. Furnished in one-gallon cans. Will not run in temperature less than 190 degrees. Not shipped in less than one-gallon cans. Approx. weight, 10 lbs.

## Paraffine

Commercially refined, white paraffine is used for "boiling out" paper insulated cables before splicing. Furnished in any quantity desired.

## Yellow Wax



Faultless A-1 wax is ideal for impregnating or boiling out cable forms, cores of wool or silk and cotton cables to render them moisture resisting and prevent the insulation from fraying. Furnished in one-pound cakes.

## Plumber's Candles

Used to apply to lead sheet before pouring on hot lead in making splices; also used by installers for illumination while working in dark places.

Cat. No.	Length	Diameter	Weight, Each
3	$7\frac{1}{2}$ in.	$1\frac{1}{4}$ in.	4 oz.
5	$5\frac{1}{2}$ in.	$1\frac{1}{4}$ in.	3 oz.

## Lashing Wire

For use in lashing lead sleeves and for attaching aerial cable to supporting strand. Consists of No. 16 B. & S. Ga. tinned copper wire. Supplied in 1 lb. spools.

## Insulated Staples

For retaining interior telephone or bell wire on wood surface.



Cat. No.	Description	Length
1	For hardwood	$\frac{1}{2}$ in.
3	For general use	$\frac{3}{4}$ in.
5	For hardwood	$\frac{5}{8}$ in.
6	For general use	$\frac{3}{4}$ in.

## Metal Nails

For use in installing interior telephone wire where a neat job is desired on woodwork around baseboard, casing and mouldings. Furnished in boxes of 100 each. Weight  $2\frac{1}{2}$  lbs. per 1000.



Cat. No.	Small Head	
	Color	Length Inches
333	Brown	$\frac{1}{2}$
333	Brown	$\frac{5}{8}$
333	Brown	$\frac{7}{8}$
333	Olive Green	$\frac{1}{2}$
333	Olive Green	$\frac{5}{8}$
<b>Large Head</b>		
555	Brown	$\frac{5}{8}$
555	Brown	$\frac{7}{8}$
555	Olive Green	$\frac{1}{2}$
555	Olive Green	$\frac{5}{8}$
555	Dark Green	$\frac{1}{2}$
555	Dark Green	$\frac{5}{8}$
555	Dark Green	$\frac{7}{8}$

## Milonite or Perfection Nails

For use in installing interior telephone wire where a neat and workmanlike job is desired on woodwork around baseboards, casings and mouldings. Furnished only in boxes of 1000 each. Weight, 2 lbs. per 1000.



Cat. No.	Color	Diam. Head Inches	Length Inches
1877 $\frac{1}{2}$	Dark Green	$\frac{7}{8}$	$\frac{1}{2}$
1882 $\frac{1}{2}$	Oak Tan	$\frac{7}{8}$	$\frac{1}{2}$
1877 $\frac{5}{8}$	Dark Green	$\frac{7}{8}$	$\frac{5}{8}$
1882 $\frac{5}{8}$	Oak Tan	$\frac{7}{8}$	$\frac{5}{8}$
1877 $\frac{7}{8}$	Dark Green	$\frac{7}{8}$	$\frac{7}{8}$
1882 $\frac{7}{8}$	Oak Tan	$\frac{7}{8}$	$\frac{7}{8}$

## Galvanized Nails

High quality and uniform nails made from open hearth steel heavily galvanized. Heads are well centered and well formed. Standard package—100 lb. keg.

Code No.	Length	Gauge Wire
6 D	2 inches	No. 10
30 D	$4\frac{1}{2}$ inches	No. 5
40 D	5 inches	No. 4
60 D	6 inches	No. 2

## Wood Screws



Common wood screws are regularly made in both iron and brass with three styles of head—flat, round and oval.

The sizes are designated by length in inches and by diameter in numbers of the American screw gauge. The length measurement includes the head of the flat heads, about half the head of the round heads and the countersink portion of oval heads.

All standard sizes from  $\frac{1}{4}$  in. to 6 in. are carried in stock. Furnished in blued, bright or nickel. The following are carried in galvanized:  $1\frac{1}{2}$ x16 round head,  $2\frac{1}{2}$ x16 flat head, 3x16 flat head,  $2\frac{1}{2}$ x18 flat head,  $3\frac{1}{2}$ x18 flat head and 3x18 flat head

# PAY STATIONS, RINGS

## No. 11 Pay Station

The No. 11 will fit any regular wall telephone in present use. Connected to the telephone by means of a mounting plate furnished with the pay station.

Weight, each, 17 lbs.

No. 11-A — Same as shown with extra large money drawer.



No. 11

## No. 14 Pay Station

The No. 14 is designed for general portable business. Made to fit any make desk telephone. In ordering state type and make of desk to be used and fittings will be furnished accordingly. Has nickel, dime and quarter slots. Weight, each, 16 lbs.



No. 14

## No. 23-D Pay Station

The No. 23-D station is very compact and includes all connections and switchhook. Upper compartment is hinged, allowing inspections without entering the money drawer or disconnecting any wiring, the repair man and inspector being confined to this section while the collector has the lower. Used with desk stand box; transmitter and receiver of regular set. Furnished without receiver and transmitter. Has nickel, dime and quarter slots. Weight each, 20 lbs.



No. 23-D

## Pay Station Signs

These signs are attractively made of porcelain enamel on 18 gauge steel plate and are guaranteed never to fade or tarnish from the effects of the weather. They will last a business lifetime.



No. 4—2 Colors

Cat. No.	Colors	Size	Weight, Each
4	Blue and White	8x18 inches	2½ lbs.

## Bridle Rings

Galvanized and enameled bridle rings are both used for retaining wire in place without forming into hand-made cables or fastening with nails or staples. Each ring has a ¼-inch opening which eliminates threading wire through the eye, thereby preventing kinks and breakage of wire.



Style	Size, Eye Inches	Length of Shank	Opening	Weight per 1000
A	1½	1¼	¼	160 lbs.
C	1¼	1¼	¼	140 lbs.
E	¾	¾	¼	48 lbs.
F	¾	1½	¼	540 lbs.

## Drive Rings

(Galvanized)

These Drive Rings are designed to accomplish the same purpose as the Screw Bridle Ring. They are easy to attach, being driven in with an ordinary hammer, and will hold securely.

Diameter of Eye	Wire Gauge	Over-all Length
½ in.	No. 11	2 in.
¼ in.	No. 9	3 in.

## National Cable Rings



These rings grip the messenger with two prongs. With both prongs in place on the messenger, the ring forms a tension that holds the grip of the prongs on the messenger so tight they positively cannot slip. The harder the pull the tighter the grip. Wide opening between the two prongs makes National rings especially desirable for re-clipping. They are made of high carbon wire galvanized to stand the Standard Four Immersion Test. These rings can be furnished in the following sizes.

In ordering specify size of strand on which rings are to be used.

Size Inches	Size Strand Inches	Size Cable Pairs	Std. Pkg. Quan.	Wt., Lbs. per 1000
1½	⅝, ¾	5-50	1000	55
2 light	⅝, ¾	50-150	500	62
2 heavy	⅝, ¾, ⅞	50-150	500	80
2½	¾, ⅞, 1	150-300	500	98
3	⅞, 1	300-500	400	120
3½	1	500 and over	300	135

## Never-Slip Type Cable Rings



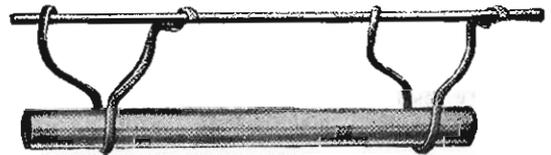
Four Bearing

Never-Slip Cable Rings are applied by hand, no tools being required. Rings fit ¼ to ½ inch strand. Never-Slip rings can be installed over or removed from an existing cable without injury to ring or strand. They can be salvaged if desired to use in another place, and require fewer rings per mile. It costs less to use Never-Slip rings.

1½, 2 and 2½ inch rings are usually spaced 24 inches on centers, while 3 inch and larger are spaced 20 inches apart. When ordering, specify size strand rings are to be used on. Packed 500 to a sack. No-Tangle packing.

Cat. No.	Size Inches	Stan. Pkg. Quan.	Size Cable Pairs	Wt., Lbs. per 1000
1½	1½	500	5-50	112
2-L	2	250	50-150	138
2½	2½	200	150-300	168
3	3	200	300-500	181
3½	3½	200	500 and over	193

## Duplex Cable Ring



Two Bearing

The V bottom of the Duplex cable rings prevents lateral movement of the cable independent of ring, and the additional surface aids in supporting the cable more securely. Both suspension hooks grip the messenger wire. They are very easily clipped around an existing cable. The cable can be pulled from any direction. Smooth, galvanized finish. Specify size strand rings are to be used on.

Size Inches	Std. Pkg. Quan.	Wt., Lbs. per 1000
1½	500	60
2	250	93
2½	250	136
3	200	158
3½	200	168

# Kellogg

**Thimble Eye Anchor Rods**  
(Hot Galvanized)



The Seyler No-Thimble Eye Guy Rods have been designed with the drop forged eye to eliminate the use of thimbles. The eye has a wide bearing surface that will not cut the strand, and is large enough to hold two or three strands if necessary.

Cat. No.	Size	Inside Diameter Eye	Std. Pkg. Quantity	Wt., Lbs. per 100
7406	1/2 in. x 6 ft.	7/8 in.	10	400
7416	5/8 in. x 6 ft.	1 in.	10	680
7418	3/4 in. x 8 ft.	1 in.	10	830
7426	3/4 in. x 6 ft.	1 1/8 in.	5	960
7428	3/4 in. x 8 ft.	1 1/8 in.	5	1245
7438	1 in. x 8 ft.	1 1/8 in.	3	2300
7440	1 in. x 10 ft.	1 1/8 in.	3	2600

**Oval-Eye Anchor Rods**  
(Hot Galvanized)



Guy or Anchor Rods with welded eyes are furnished unless otherwise specified. Forged eyes can be furnished when requested.

Cat. No.	Size	Weight per 100	Diameter of Eye
1000	1/2 x 5	295	3/4 in.
1002	1/2 x 6	340	3/4 in.
1005	5/8 x 5	500	7/8 in.
1006	5/8 x 6	590	7/8 in.
1007	5/8 x 7	680	7/8 in.
1011	3/4 x 7	950	1 1/8 in.
1012	3/4 x 8	1080	1 1/8 in.
1015	1 x 10	2900	1 3/8 in.

**Ground Rods**  
(Hot Galvanized)



Ground rods are furnished in two styles—those with No. 10 copper wire attached with five turns around the rod and soldered with 6-inch free end—and those without wire but drilled for wire hole, one inch from end. The 3/8-inch rod has a 1/8-inch hole, the 1/2-inch a 3/8-inch hole, and the 5/8-inch a 1/2-inch hole. The wired ground rods are to be preferred, as a good connection is assured at all times.

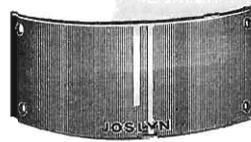
Plain Ground Rods		
Cat. No.	Size	Weight per 100
1102	3/8 x 5	152
1103	3/8 x 6	196
1104	1/2 x 5	300
1105	1/2 x 6	360
Wired Ground Rods		
Cat. No.	Size	Weight per 100
1098	1/2 x 5	340
1099	1/2 x 6	370
1100	5/8 x 6	665

**Butt Plates, or Hub Guards**  
(Hot Galvanized)

Butt plates are used to protect the base of poles from injury by wheel hubs, etc. Holes are punched 3/8 in. diameter for 1/2 in. boat spikes or nails.

Cat. No.	Size	Weight per 100
1037	18x16x1/2 inch	1200 lbs.

**Strain Plates**  
(Hot Galvanized)



Strain plates are used for the same purpose as pole shims; that is, to protect the pole where guy wires pass around it. The strain plates have been adopted by some companies in preference to shims, as they cost no more and are very easy to install.

Cat. No.	Size	Gauge Stock No.	Weight per 100
1034	4x8 inch	No. 14	90 lbs.

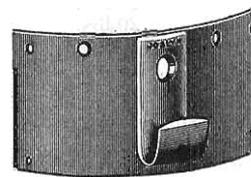
**Pole Shims**  
(Hot Galvanized)



Pole shims (or strain plates) should always be used underneath guy wires to protect the wood. They are punched with 1/4-inch nail hole 3/4 inch from each end.

Cat. No.	Size	Weight per 100
1036	1 1/4 x 1 1/8 x 8 in.	60

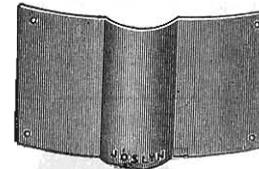
**Guy Hook Strain Plate**  
(Hot Galvanized)



Serves the double function of preventing the Guy strand from slipping down the pole and from biting into the pole. The guy hook is firmly welded to the plate. Size, 4 x 8 x No. 14 Gauge.

Cat. No.	Std. Pkg. Quan.	Wt., Lbs. per 100
6577	100	124

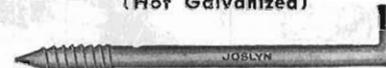
**Moulding Strain Plate**  
(Hot Galvanized)



Used to prevent the guy strand from cutting or crushing the ground wire moulding. This plate is formed to fit over standard one inch ground wire moulding. Size, 4 x 8 x No. 14 Ga.

Cat. No.	Std. Pkg. Quan.	Wt., Lbs. per 100
6576	100	75

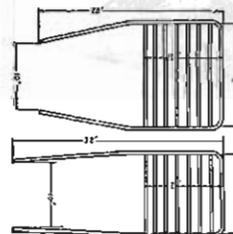
**Iron Pole Steps**  
(Hot Galvanized)



Used for stepping large expensive poles where companies prefer to furnish them in place of using climbers, as climbers cut into and spoil the surface. Especially used where poles are to be painted and where terminal is located.

Cat. No.	Size	Weight per 100	Per Keg
1116	1 1/8 x 9 in.	69	325
1117	5/8 x 9 in.	83	250
1118	5/8 x 10 in.	92	250

**Pole Seats**  
(Hot Galvanized)

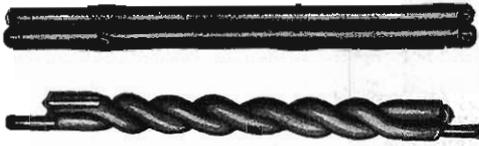


In spite of its light weight, this type of seat is very rigid and strong. The frame and braces are made of 1 1/2 inch channel iron and the cross bars on the seat are of 3/4 inch square bars with the edge up, which provides a rough surface and prevents slipping. There is sufficient space between the cross bars to prevent ice and snow from collecting. Each brace is secured to the pole by means of two 3/4 inch lag screws and the frame by means of two 3/4 inch lag screws. They are designed to fit a 10 inch diameter pole, but may be fitted to 8 or 12 inch diameter poles. The seat frame is made of steel.

Cat. No.	Seat Size	Wt. per 100
755-285	16 1/2 inch Wide Steel Frame Seat	1400
757-287	13 inch Wide Steel Frame Seat	1260

# SLEEVES, SWITCHES, JUNCTION BOXES, TERMINALS

## Double Tube Splicing Sleeves



The use of double tube sleeves is recommended for making all connections in straight line splices. Use copper sleeves for copper wire. Use tinned copper or tinned steel for iron wire. They are made accurately and very close to the size of wire for which they are intended. When twisted they draw snugly around the wire, forming an absolutely solid joint which air and moisture cannot penetrate. When ordering copper sleeves use B. & S. gauge in specifying. When ordering tinned copper use B. W. G. gauge.

### Copper and Tinned Copper

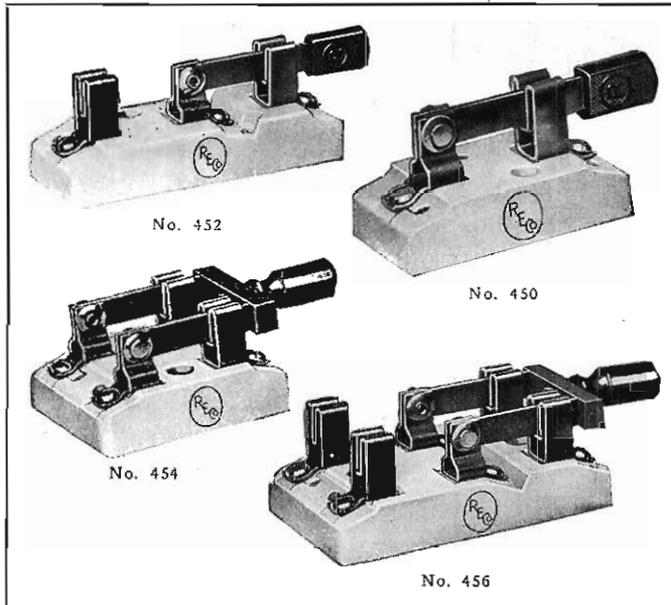
B. & S.	B. W. G.	Full Length	Half Length	Full Length Ship. Wgt. Per 1000
10	12	4 3/4"	2 3/8"	45 lbs.
12	14	4 1/2"	2 1/4"	29 lbs.
14	16	4"	2"	20 lbs.
16	18	4"	2"	20 lbs.
17	19	4"	2"	17 lbs.

### Tinned Steel Sleeves

10	5 1/2"	2 3/4"	53 lbs.
12	4 3/4"	2 3/8"	38 lbs.
14	4 1/2"	2 1/4"	30 lbs.
16	4"	2"	17 lbs.

Combination sleeves can also be furnished in standard sizes. To avoid errors when ordering specify kind and size of wire sleeves are intended for. When ordering steel sleeves use B. W. G. gauge.

## Baby Knife Switches Porcelain Base



Cat. No.	Style	Dimensions Inches	Std. Pkg. Quan.	Wt., Lbs. per 100
450	S.P.S.T.	2 7/8 x 1 1/4	100	37
452	S.P.D.T.	3 3/8 x 1 1/4	100	61
454	D.P.S.T.	2 7/8 x 2	100	63
456	D.P.D.T.	3 5/8 x 2	100	105

## Junction Boxes



This device permits a first-class splicing of lead-covered telephone cable in a simple and inexpensive way. The box is 10 inches in diameter by 18 inches high. It is made of steel galvanized with removable front, to allow ample room for making cable connections.



Self-soldering nozzles are provided, as specified. Cable should be permanently soldered to nozzles, as described under the S-6 terminal. The bottom of the junction box should be filled with compound to a depth of one inch. The removable front is fastened over a rubber gasket with machine screws, to make the box air-tight. Mounted on the pole with a malleable iron bracket, and covered with a galvanized iron hood.

Where it is desired to distribute part of a cable only, the junction box can be used with any of Cook type S protected terminals. The terminal should be ordered with the junction box and will be furnished assembled in one unit with galvanized hood to cover both. Customers should state size terminal wanted and size of cable to be brought into junction box and the size or sizes to be brought out.

### Junction Boxes

Cat. No.	Description	Wt., Lbs. Each
1885	Juncti only, for use without terminal	27
1886	Junc for use with terminal	27

### Soldering Nozzles

Cat. No.	Outside Diameter Nozzle, Inches	Opening Inches
1890	1	5/8
1891	1 1/4	3/4
1892	1 1/2	1
1893	50	1 1/4
1894	60 to 75	1 3/8
1895	75 to 100	1 1/2
1896	150	1 5/8

## Unprotected Type GR (Reliable)



A hot-galvanized cast iron cable terminal to be used without pot-head for multiple tap distribution from lead covered cable. Arranged for mounting on pole and provided with gravity cover.

The cable is brought into the terminal through a tinned brass nipple to which the sheath of the cable is soldered. The cable is protected from sharp bends by a bell-mouthed lead sleeve. The cable wires are soldered to terminals which are grooved into the maple panels to prevent turning and soldered to studs which are threaded for the heavy split lock nuts, with which drop wires are attached.

The wire openings at the bottom are just large enough to admit No. 17 B. & S. drop wires. The sides of the terminal are made a part of the cover to give plenty of room for dressing the bridge wires.

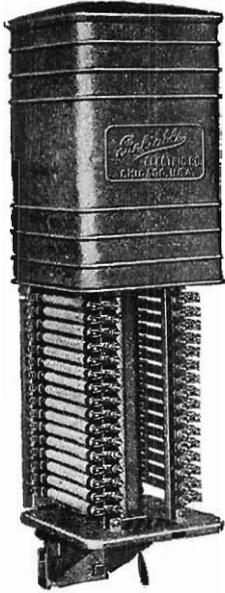
When specified these terminals are equipped with a No. 22 B. & S. gauge six-foot cable stub at top or bottom.

Capacity	Height Over All	Net Weight Less Stub	Net Weight With Stub
11 pair	8 in.	10 1/2 lbs.	22 1/2 lbs.
16 pair	10 in.	20 lbs.	25 lbs.
26 pair	12 in.	26 lbs.	34 lbs.

# Kellogg

# TERMINALS

## Protected Type B27



The Reliable B27 protected cable terminal uses the well known Reliable self-cleaning sawtooth discharge blocks which are accessible for inspection at a glance. The square weatherproof cover will not bend under the weight of the lineman. It will stay in any raised position and cannot be tilted into contact with live parts.

Skeleton Supports for molded Bakelite insulation lessen condensation areas. Beveled washers make installation of wires easier, and edges of fuse clips are rounded. There is an individual knock-out for the entrance of each pair of wires. Discharge blocks are held by individual springs and cannot be accidentally loosened or crossed. Binding posts are at front, accessible to the lineman without removing fuses or reaching around the cable terminal.

### Specifications

The B27 cable terminal is equipped with No. 27 five ampere wood fuses.

The B56 cable terminal is equipped

with No. 56 five ampere asbestos lined fiber fuses.

The B55 cable terminal is equipped with No. 55 seven ampere asbestos lined fiber fuses.

All three are supplied with P495 discharge blocks and P197 carbons. Each terminal is packed in an individual carton with four 3 1/2" lag screws.

Capacity	Height Over All	Net Weight Less Stub	Net Weight With 6' Stub
11 pr.	14 1/4 in.	15 1/2 lbs.	19 1/4 lbs.
16 pr.	19 in.	19 lbs.	22 1/4 lbs.
26 pr.	23 3/8 in.	26 1/4 lbs.	31 1/2 lbs.

## Unprotected Type R. U. (Reliable)



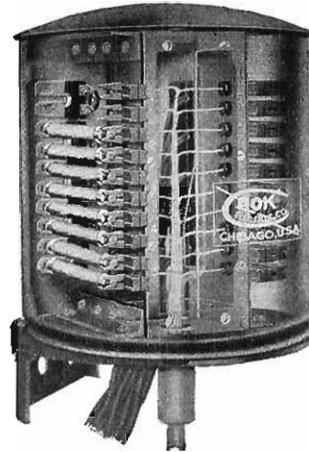
The R. U. Terminal is used for mounting on poles or buildings. It has a reversible sliding type weatherproof cover, which surrounds the jumper wires back of the fanning plate. The cover is made of heavy zinc-ribbed and rigid—no sharp edges or corners. Gravity catches hold cover in raised position and out of the way. Bronze chain is used so cover cannot be dropped.

Cover grips the edges of the fanning plate eliminating any danger of contact with binding posts. Highest grade bakelite face plates with bosses for greater surface distance between lugs. Long, heavy binding posts are spun over, so nuts cannot come off and are proof against season cracking. Wire slides into position on binding posts when pressed against beveled edges of washers. Guide rings for jumpers,—easily re-located when terminals are reversed. All steel parts are hot galvanized.

One size detachable bracket used for all R. U. terminals. Simplified mounting—no danger of striking terminal or cable when driving lags. The cast iron cable chamber will outlast the cable, it is sand-blasted to assure adherence of a heavy galvanized coating to casting. The new Reliable moisture-proof, non-cracking compound is used in pot-heads. 6 ft. 22 gauge double paper wrapped cable in all stubs. Shipped less stub unless otherwise specified:

Capacity Pair	Height Inches	Wt., Lbs., Each	
		Less Stub	With Stub
11	11	11	15
16	12	13	17 1/2
26	16	17	22

## Protected Type S-6 (Cook)



The Cook S-6 Protected Pole Cable Terminal combines strength, light weight, rigidity, and perfect insulation. It is very compact and yet it has ample room for connecting both cable and jumper wires. No pot-head is required because of the self-soldering nozzle.

Fuses and carbons can be easily removed or replaced. Jumper connections can be readily made. Any circuit can be tested by removing a fuse and testing through the fuse holders.

Cable connections are made through hollow brass studs, set in hard rubber, which pass through the sides of the box.

The outside ends of these studs are concave, and have sufficient solder to permit the copper wire to be permanently fastened by the touch of a hot soldering iron. The cable connections being made on the outside of the box can easily be inspected. On the jumper side, both screw and washer, and soldering connections, are provided for.

The S-6 terminal is equipped with Cook's standard tubular A-7, 5-amp. wood fuse, 4 3/4 inches between shoulders. The lightning arresters are grooved, treated carbons separated by celluloid dielectrics, U-shaped, .007 of an inch thick. True Gap Dischargers that will not ground the line can be furnished when desired.

Cat. No.	Capacity	Height	Wt. Each	Wt. Each
			Less Stub	With Stub
1700	10 pair	14	15	20
1701	16 pair	17 1/2	18	26
1702	26 pair	26 1/2	26	32
1703	51 pair	39 3/4	45	57
1880	102 pair (Twin 51 pair)	39 3/4	100	115

## Unprotected Type XB (Cook)



The Cook XB Unprotected Pole Cable Terminal is light in weight, durable, easy to mount and practically unbreakable. The terminal cable box and bracket are formed of separate pieces of heavy Toncan Iron, riveted together and thoroughly hot galvanized.

The reversible hood is formed of heavy sheet zinc with a strong galvanized steel chain attached, allowing the terminal to be mounted with cable stub carried out of either the top or bottom.

The cable enters through a well in the cable box and in which solder is puddled so that a strong and tight connection is made.

The one-piece face plate and fanning strip is made of moulded bakelite, suitably numbered for easy identification of pairs. The square-headed studs are moulded in the bakelite face plate and cannot turn.

The XB Terminal is made in three sizes, 11, 16, and 26 pairs. The 11 and 16 pair terminals are exactly the same size. The face plate on the 11 pair is the same as the 16, except for the smaller number and wider spacing of studs. Standard stock contains 6 1/2-foot 22-gauge cable stub. Special length studs, and terminals without stubs, are also furnished.

These terminals are also manufactured of Red Brass for localities where severe alkaline or sulphur conditions exist.

Cat. No.	Description	Height Inches	Width Inches	Depth Inches	Net Wt.	Net Wt.
					Without Stub	With Stub
3503	XB11—11 pair	12 1/2	7	3 1/2	5 lbs.	12 lbs.
3504	XB16—16 pair	12 1/2	7	3 1/2	5 lbs.	12 lbs.
3505	XB26—26 pair	15 1/2	7 3/4	3 1/2	8 lbs.	22 lbs.

Specify whether stub is to be from top or bottom.

# Kellogg

# TESTING EQUIPMENT

## The Teleohm



A practical and inexpensive portable testing instrument for telephone troublemen, switchboard repairmen, linemen and shopmen. Indispensable for testing and locating all kinds of line circuit, telephone and switchboard trouble, shorts, grounds, high resistance, and open circuits in coils of all kinds, also partially shorted coils, high resistance transmitters, cut-outs in receiver, desk stand and switchboard cords, hook switch contacts, etc. Uses two standard flashlight cells for battery. Equipped with a Weston 0-3 Volt Direct Reading Ohmmeter 0-10,000 Ohm Scale, with Glass Protector, mounted in a solid black walnut case size 1 7/8 in. x 3 1/2 in. x 6 in. Complete with battery, "On and Off" Battery Switch, cords and Test Clips. Weight complete 1 1/4 pounds.

## Stewart Test Set



This test set tells which way and how far trouble is from the tester without opening the line or cutting the wire. It is equipped with a Director Coil for use on insulated wire.

This Stewart Test Set is a complete portable telephone and talks up just as efficiently. It can be used as a complete local battery

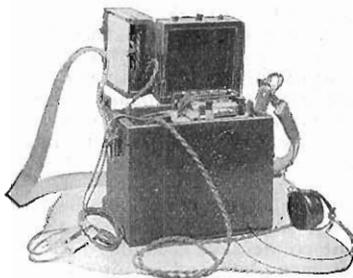
test set for telling trouble directions or as a common battery test set with transmitter in the external circuit. When desired, it can be used to furnish battery for testing on cable or other "dead" wire.

Both types of test sets come complete with all necessary cords and clips, receiver and head band, detector coil, full length shoulder strap and leather top cover.

"Midget Test Set" for light service, size 3 1/2 by 5 3/4 by 1 3/4 inches, weight 8 pounds.

"Heavy Duty Midget Test Set," size 4 1/2 by 6 3/4 by 8 inches, weight 12 pounds.

## West Test Set



This Test Set is used in the location of the various forms of trouble, such as: "shorts," "grounds," "crosses," "opens," "swinging trouble," "leaky arrester carbons," "faulty ground rods," "defective windings," etc.

The carrying case consists of vulcanized fiber over a laminated wood body finished with three coats of Duco olive-drab color, and equipped with a long adjustable

shoulder strap. The size over all is 8 x 8 x 3/4 inches and weighs 10 lbs. each.

## Telefault-Matthews



The type L Telefault will find wet trouble of high or low resistance, grounds, crosses, split pairs and dead shorts. It will not "noise up" other working pairs. It only sends four volts out on a line. It has a tone test circuit which is more efficient than any other. The exploring coil and receiver will tell whether power circuits are alive before touching them. Operates on one dry cell. Weight, 8 pounds.

## The Portis Test Meter



This instrument has been steadily gaining in popularity since its first introduction in 1927. The meter has a direct reading ohm scale and is made by one of the leading and best known instrument manufacturers. The dial is calibrated to indicate resistances from 0 to 10,000 ohms. Assembled in a neat wood case complete with two cells of flashlight battery, test cords, and neck tape. It is of convenient pocket size and indispensable to the trouble man.

## Stewart Cable Tester

Locates shorts, crosses, grounds, and wet spots to an inch. Operates on dry batteries.

As the Exploring Coil is neutral to the tone on the armor the Cable Tester is a success for locating water trouble. This patented feature is found in no other.

This instrument will pay for itself many times each year. Shipping weight, 18 pounds.



## Stewart Detecto-Meter

Stewart Detecto-Meters are the most successful instruments made for locating bad joints, locating low resistance ringers, checking transmitters, receivers, induction coils, etc.

Reads resistance direct in ohms, the same as a volt-meter reads volts. Operates on one dry battery.

The instrument is also a 150-volt volt-meter and a battery tester.

It is portable, only weighing 4 lbs. A very reliable, inexpensive instrument.



## Stewart Direct Reading Test Cabinet

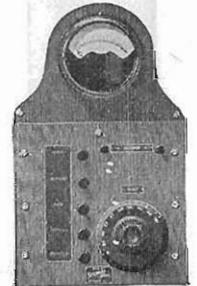
Reads resistance to trouble direct in ohms. Operates on 30-volts of battery. Can be furnished to operate on 24 volts battery for common battery exchange, if so ordered.

Any telephone man can install it in one hour's time, and anyone can use it. Push button marked Short, and it reads resistance to short. Button marked Ground L-1, reads resistance to ground on one side, and button marked Ground L-2 reads resistance to ground on other side.

Card furnished with each instrument gives distance for each reading on the different sizes of wire.

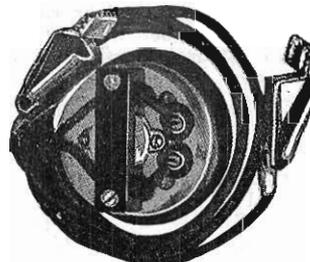
Furnished with 15-volt or 150-volt voltmeter scale as desired.

Shipping weight, 12 pounds.



## Stewart Pocket Phone

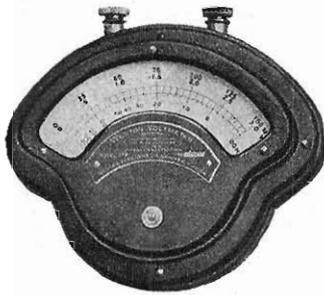
This Pocket Phone is a combination transmitter and receiver in the same case, to be used as a common battery test set. It talks up as efficiently as a telephone, and when used as a receiver, it is a perfect receiver. Comes complete with cords and clips ready for use. Weight, 4 oz.



# Kellogg

## TESTING EQUIPMENT, TAPES

### Kellogg Volt-Ohm-Meter



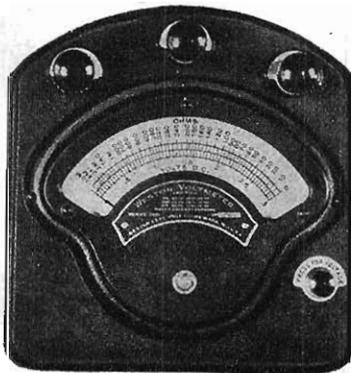
Kellogg No. 279

A practical and accurate meter for testing armatures, dry cells, drop coils, fuses, heat coils, switchboard coils, transmitters and for countless other tests in and around the central office.

These volt-ohm-meters enable one to make tests that would ordinarily require the use of a voltmeter, an ammeter, a Wheatstone bridge, and a technical man familiar with their proper usage.

The low cost of these meters is quickly absorbed in the Magneto Exchange by the saving in dry batteries effected by elimination of high resistance transmitters. In addition there is the time saved in easily locating trouble.

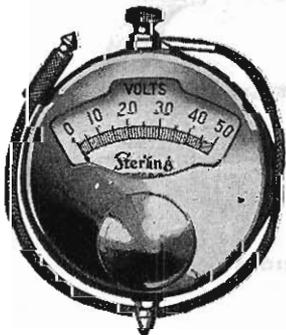
The No. 279 volt-ohm-meter has a scale of 0 to 150 milliamperes, 0 to 3 volts and 0 to 1000 ohms.



Kellogg No. 280

The No. 280 volt-ohm-meter has a range of 0 to 3 volts and 0 to 30 volts, 0 to 10,000 ohms and 0 to 100,000 ohms.

### Pocket Ammeters and Voltmeters



Cat. No. 34C Voltmeter

These instruments are especially valuable for indicating the strength and condition of batteries, locating ignition and starting troubles and particularly useful because they show polarity, this indicating the direction of the current.

Cat. No.	Reading
24	Ammeter—0.35 amperes, 1 ampere division
34C	Voltmeter—0.50 volts, 1 volt division
44	Voltammeter—0.35 amperes, 0.10 volts, 1 ampere and ½ volt divisions

### Sterling Linen Tapes

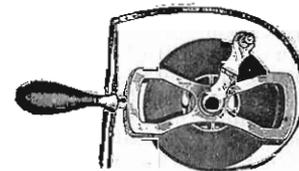


A strictly high grade tape especially popular with telephone and telegraph companies for ordinary work.

The tape is 5/8 inches wide with clear markings and prominent figures showing feet and inches. Reinforced leather ends. Case of genuine russet leather, metal lined, with folding flush handle and nickel plated trimmings.

Cat. No.	Length, Feet	Wt., Oz. Each
403	50	12
406	100	24

### Surveyors' Chain Tape



A chain tape that will stand up to telephone, railroad, and other rough work. This line is of heavy and extra tough steel, coated with white metal to resist rust. The foot markings are on one side only and a pair of rawhide thongs is furnished with each tape.

Has sturdy metal reel of improved pattern, heavily nickel plated, with polished hardwood handle and long folding winding handle. Line is detachable from reel.

Cat. No.	Length, Feet	Wt., Lbs. Each
3100	100	3 1/4
3150	150	5

### Challenge Steel Tapes



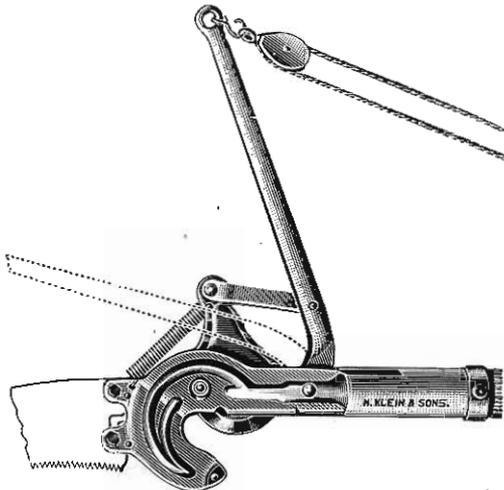
Particularly recommended for all kinds of general measuring. Line of highest grade tape steel with distinct feet, inches and eighth inches markings on one side only. Case of genuine russet leather, hand stitched and with substantial plated steel liner. Folding flush steel handle is opened by pressing pin on opposite side. Measurements guaranteed accurate.

Cat. No.	Length, Feet	Wt., Oz. Each
263	50	11
266	100	21

# Kellogg

# TOOLS

## No. 3628 Klein Tree Trimmer



This tool is entirely different from any other on the market. The entire head comprising hook and socket into which handle fits is sturdily constructed of pressed steel. The knife made of tempered tool steel is round in shape and arranged to rotate slightly with each cut thus providing the entire circumference of the blade for cutting and giving an edge more than three times the length of that on the ordinary blade.

The leverage makes this trimmer cut easily limbs up to 1 1/4 inch, both green and dry. So arranged that knife may readily be removed for sharpening or renewal.

Two threaded holes are provided for attaching saw.  
Supersedes No. 3600 Klein Tree Trimmer.

Cat. No.	Size Overall	Weight
3628	12 1/2 inch	3 1/2 lbs.

### Tree Trimmer Handles

Cat. No.	Size	Weight Each
3601-6	18 ft., 3 sections, brass ferrules.....	10 1/2 lbs.
3601-9	18 ft., 2 sections, brass ferrules.....	9 3/4 lbs.

### Klein Tree Trimmer Saws



No. 913-12



No. 913-15

Teeth set to cut on up and down stroke. Readily attached to tree trimmer. The curved blade saw is particularly efficient and easy cutting even for large limbs.

Cat. No.	Size	Weight Doz.
913-12	12 in.	4 1/2 lbs.
913-15	15 in.	6 lbs.

### Cableman's Saw

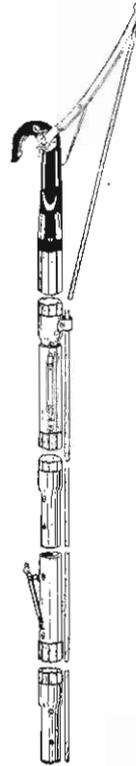


Cat. No. 24-14

This saw is arranged particularly for use on Cable work. One of these saws should be in every tool kit. Will also cut wood.

Length of blade is 14 inches and weight each 3/4 lbs.

## Seymour Smith Tree Pruner



The operating and cutting mechanism of this type pruner is incorporated in the head and is very simple. There are only two moving parts. The spring and the blade are easily renewed. The operator is insulated from any high tension wire by the wooden pole and hemp rope. There is no danger of this tool short-circuiting line wires and causing damage to electrical equipment. The head and lever are made of the best grade malleable iron. The blade is of high quality tool steel, properly hardened and tempered. The spring is of Vanadium spring steel, carefully hardened and tempered. The poles are made from selected airplane Sitka Spruce. They come in sections, joined with a simple and positive hard brass locking joints. The No. 1 poles are made from 1 1/4 inch and the No. 2 from 1 3/4 inch octagon stock. For general use the No. 1-18 Trimmer is recommended. It will cut with ease branches up to one inch in diameter. For heavy duty work the 2-18 trimmer is recommended. It easily cuts branches up to one and one-half inches in diameter.

Cat. No.	Description
1-18	Complete trimmer including Pruner head and rope, six foot handle head section, and 2 six foot handle extensions.
2-18	Complete heavy duty trimmer including pruner head, six foot handle head section and 2 six foot handle sections.

### Replacement Parts

1-18	
Cat. No.	Description
1	Pruner Head with rope guide
1	Six foot handle head section
1	Six foot handle extension section
1	Eight foot handle head section
1	Eight foot handle extension section
2-18	
2-18	Heavy Duty Pruner Head with rope guide
2	Six foot handle head sections
2	Six foot handle extension sections
2	Eight foot handle head sections
2	Eight foot handle extension sections

### Docking Saw



No. 1-18

A useful saw for rough, fast sawing around docks, ship yards, car shops, lumber yards, farms and for bridge, mine, railroad and contractors' work. Full breasted blade, 18 gauge on toothed edge, taper ground to 20 gauge for clearance, bevel filed teeth, 4 1/2 points to inch, peg shape. Handle, easy grip pattern, malleable iron, tinned and riveted. High-grade special steel. Each saw sharpened and set ready for use.

Cat. No.	Length
590	30 in.

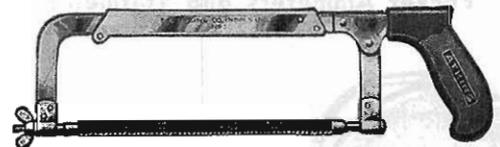
### Forester Pruner



The blade is of Silver Steel and is 26 inches long, 1 1/4 inches wide at point, 3/4 inches at butt. Being narrow, the blade cannot bind, and the wider butt adds stiffness. Three points to the inch gives large teeth that cut large or small limbs readily. Teeth are filed and set. The handle is of fine beech, varnished edges, extra large grip for use with gloves, if desired. Fastened to blade with three brass screws.

Cat. No.	Length
17	26 in.

### Hacksaw Frames



Has a hard rubber, open grip handle which gives the operator complete control of the saw at all times. Frame is made of high grade steel 1 1/8 inch wide and 3/8 inch thick. Strong and stiff but light. Adjustable from 8 to 12 inches and to four different angles. Depth under back to cutting edge, 3 inches.

Packed one in a box with 10 inch blade.

Cat. No.	Wt. per Doz.
11	8 to 12 in. adjustable 20 lbs.

### Hacksaw Blades

For cutting iron, steel, brass and copper tubing; wrought iron pipe; drill rod; conduit, extra light structural shapes; and sheet metal thicker than 18 ga.

Cat. No.	Length	Teeth per In.	Width
210-12	12	24	3/4 in.

# Kellogg

# TOOLS

## Standard Blade Screw Driver



A superior quality driver. Blades of extra fine, special grade steel; every point given two severe turning tests before shipment. Selected hardwood handles finished in dead black, grooved and shaped for grip and comfort. Fastening of blades in handles by unique method, without pins; cannot loosen in use and stands the hardest abuse. Blades and ferrules finely polished. An extra strong, durable, well balanced tool.

Cat. No.	Length Blade Inches	Length Over All Inches	Wt., Lbs. per Doz.
90-3	3	6 $\frac{3}{4}$	1 $\frac{1}{2}$
90-4	4	9 $\frac{1}{4}$	2 $\frac{3}{4}$
90-6	6	11 $\frac{3}{4}$	4 $\frac{1}{4}$
90-8	8	14	6 $\frac{1}{4}$
90-10	10	16 $\frac{3}{4}$	9 $\frac{1}{2}$

## Cabinet Screw Driver



Same as standard style except light, slim blades. All lengths have about same size points. Blade same width all way back and slightly tempered entire length. Six in a box.

Cat. No.	Length Blade Inches	Length Over All Inches	Wt., Lbs. per Doz.
95-4 $\frac{1}{2}$	4 $\frac{1}{2}$	8 $\frac{1}{4}$	1 $\frac{1}{2}$
95-6 $\frac{1}{2}$	6 $\frac{1}{2}$	10 $\frac{1}{4}$	1 $\frac{3}{4}$
95-8 $\frac{1}{2}$	8 $\frac{1}{2}$	13	2 $\frac{1}{2}$
95-12 $\frac{1}{2}$	12 $\frac{1}{2}$	17	3 $\frac{1}{4}$

## Ratchet Screw Driver



Save time and labor. No tiresome grip-and-let-go movement necessary. Right-hand Ratchet, Left-hand Ratchet and Rigid adjustments. Quickly changed by sliding shifter. Every blade given two severe twisting tests. Polished hardwood handles. Polished blades and nicked ratchet case.

Cat. No.	Length Blade Inches	Wt., Lbs. per Doz.
10-3	3	3
10-4	4	3 $\frac{1}{4}$
10-6	6	4 $\frac{3}{8}$

## Spiral Screw Drivers



These drive or draw screws by pushing on the handle or by a ratchet movement, or they can be made rigid as an ordinary screw driver. The movement is changed instantly by a simple shifter. Spindle can be locked closed. Three bits of different sizes furnished with each driver; of extra high quality steel and thoroughly tested. Metal parts nickel plated; hardwood handle polished.

Quick Return Style—Same as drivers above, but a spring added in the handle. Spring pressure keeps blade in screw slot and pushes handle back after each stroke. Bits and attachments same for both.

Cat. No.	Length with Bit, Closed, Inches	Wt., Lbs. per Doz.
30-A	13	12
130-A (Quick Return)	14 $\frac{3}{4}$	12 $\frac{3}{4}$

## Automatic Drills



For rapidly boring holes in wood by pushing down on the handle, which is forced back by a spring. The drill point revolves backward on up stroke of handle, clearing the chips and freeing the point. Points are held in chuck so they cannot be pulled out. Drill made of brass and steel, the outside nickel plated and polished. The handle is a magazine for holding the drill points. It is quickly closed and locked and when unlocked the drill points are forced up into plain sight. Eight drill points are included with each drill:  $\frac{1}{8}$ ,  $\frac{3}{16}$ ,  $\frac{1}{4}$ ,  $\frac{5}{16}$ ,  $\frac{3}{8}$ ,  $\frac{7}{16}$ ,  $\frac{1}{2}$ ,  $\frac{5}{8}$ ,  $\frac{3}{4}$ ,  $1\frac{1}{8}$ -inch diameter. Extra points in wood boxes, either sets of eight, or dozen of one size.

No. 41. Capacity, holes  $\frac{1}{8}$  to  $\frac{1}{4}$ -inch diameter. Length including drill point 11 $\frac{3}{8}$  inches. Weight, per dozen, 8 lbs.

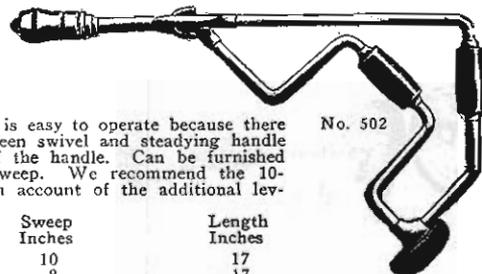
## Ratchet Braces



This Ratchet Brace is especially adapted for telephone work. The 10-inch sweep brace is most commonly used.

Cat. No.	Sweep Inches
5308	8
5310	10

## Corner Braces



This corner brace is easy to operate because there is ample space between swivel and steadying handle to allow free use of the handle. Can be furnished in 8 and 10-inch sweep. We recommend the 10-inch sweep brace on account of the additional leverage secured.

Cat. No.	Sweep Inches	Length Inches
502	10	17
503	8	17

## Cross Arm and Pole Bit



A valuable addition to telephone companies' service car equipment. This single cutter tool having one outlying spur with one chip lifter has a very wide channel insuring proper elevation and clearance of chips. This style of head will bore very easily, smoothly and quickly through cross arms and poles. Twist, 12 inches long. Overall length, approximately 17 inches.

Cat. No.	Size Inches	Cat. No.	Size Inches
56-G-6	$\frac{3}{8}$	56-G-10	$\frac{5}{8}$
56-G-7	$\frac{7}{8}$	56-G-11	$\frac{1}{2}$
56-G-8	$\frac{1}{2}$	56-G-12	$\frac{3}{4}$
56-G-9	$\frac{1}{8}$	56-G-14	$\frac{7}{8}$

## Woodboring Brace Drill



The body of metal in the twist is sufficiently heavy to give strength but yet does not interfere with chip clearance. Length of twist varies from 2 $\frac{1}{4}$  to 4 inches and overall length from 4 $\frac{1}{2}$  to 8 inches.

Cat. No.	Size Inches	Cat. No.	Size Inches
46-8	$\frac{1}{4}$	46-16	$\frac{1}{2}$
46-10	$\frac{3}{8}$	46-18	$\frac{5}{8}$
46-12	$\frac{1}{2}$	46-20	$\frac{3}{4}$
46-14	$\frac{5}{8}$	46-22	$\frac{1}{2}$

## Bell Hanger Drill



This quality Bell Hanger Drill is made with 4 $\frac{1}{2}$ -in. twist and can be furnished in 12, 18, 24 or 30-inch lengths.

Cat. No.	Size Inches	Cat. No.	Size Inches
48-6	$\frac{3}{8}$	48-16	$\frac{1}{2}$
48-8	$\frac{1}{4}$	48-18	$\frac{5}{8}$
48-10	$\frac{1}{2}$	48-20	$\frac{3}{4}$
48-12	$\frac{3}{8}$	48-22	$\frac{1}{2}$
48-14	$\frac{1}{8}$	48-24	$\frac{3}{4}$

# TOOLS

## Sheath Splitting Knives



No. 1515-1

A sturdy tool. Knife edge tempered and ground to a keen edge. The handles are made of leather and the weight per doz. is 6 $\frac{3}{8}$  lbs.

## Cable Stripper Knives



No. 1560-2

For stripping heavy insulated wire and cable. Has hardwood handle, which fits the hand comfortably. Blade securely riveted in handle, but rivet is deeply countersunk, eliminating chance of shock. Length over all is 8 $\frac{1}{2}$  inches, length of blade 3 $\frac{1}{2}$  inches and weight per doz., 2 $\frac{1}{4}$  lbs.

Used for scraping lead sleeves, pipe, cable ends, potheads, etc. The blade is fastened in place with a nut, so that it can be replaced when required. The pattern is half oval and weight per doz. is 2 $\frac{1}{2}$  lbs.

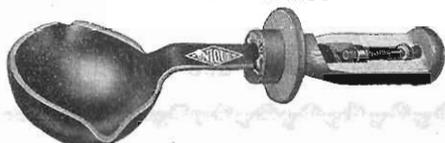
## Shave Hooks



No. 304

Used for scraping lead sleeves, pipe, cable ends, potheads, etc. The blade is fastened in place with a nut, so that it can be replaced when required. The pattern is half oval and weight per doz. is 2 $\frac{1}{2}$  lbs.

## Balanced Ladles



These ladles enable the user to pour the metal more accurately and easily. The close to the bowl grip relieves the user of considerable strain and the wood handle is always cool because of the air space around the shank. A fibre washer between ferrule and wood handle protects the user from burns. To attach or remove handle, only a screwdriver is required. Ladles are furnished in 2 $\frac{1}{2}$ ", 3", 3 $\frac{1}{2}$ ", and 4" bowl diameters.

## PERFECT WIPE JOINTS



## Formed Flexible Wiping and Catch Cloths

For wiping cable joints. Curved press leaves symmetrical wiping surfaces. No waste of time or wear on cloth in breaking in. Can be had either in Herringbone Ticking or English Moleskin.

## Formed Wiping Cloths

Standard Sizes 2"x2", 2 $\frac{1}{2}$ "x2 $\frac{1}{2}$ ", 3"x3".

## Flat Catch Cloths

Standard Sizes 5"x5", 6"x6", 6"x7".

## Melting Pots

Made of the finest grey-iron nicely proportioned. The 8-inch pot is 8 inches wide and 5 inches deep.

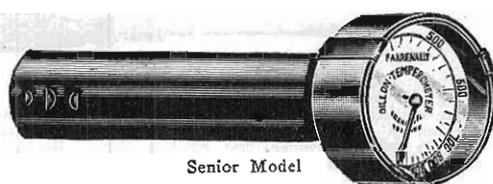
This makes a low-setting "squatty" pot. The  $\frac{1}{2}$ " handle is fitted to the reinforced ears with the ends projecting inward to avoid catching the clothing.

No.	Size	Weight	Lead Capacity
39	5 inches	2 $\frac{1}{2}$ lbs.	16 lbs.
40	6 inches	5 lbs.	25 lbs.
41	8 inches	9 lbs.	60 lbs.



## Dillon Temperometers

**DELUXE MODEL.** A scientific instrument designed to register correct temperatures of 150 to 1000 degrees F. of



Senior Model

waxes, paraffine, compounds, wiping solder, etc. Tube is made of seamless steel, 1 $\frac{1}{4}$  inches in diameter and 9 $\frac{1}{2}$  inches long. Dial is 2 $\frac{1}{2}$  inches in diameter. Correct temperatures of various materials calibrated right on face of dial. Spot welded construction and retains its accuracy under the severest field usage. Shipping weight 20 oz.



Junior Model

**JUNIOR MODEL.** Designed for registering temperatures of wiping solders only. Mechanism is contained in a metal tube 10 inches long and 1 $\frac{1}{4}$  inches in diameter. No glass or delicate parts, nothing to break or get out of calibration under even the roughest handling. All metal and spot welded construction. Insure perfect cable joints by checking solder temperature with the Dillon Temperometer. Shipping weight 10 oz.

## Hardwood Dressers



No. 296

Made of hardwood for shaping and dressing lead sleeving, pipe, potheads, etc.

Cat. No. 296

Wt., per Doz. 15 lbs.

## Electrician's Scissors



No. 1075-5

Cat. No. 1075-5

Size 5-inch

A scissors designed for the electrician and mechanic. Will stand continued hard service. Made of high-grade steel properly tempered. Has a screw hinge, allowing adjustment. Nickel-plated finish.

Weight, per Doz. 2 lbs.

## Electrician's Knife



Cat. No. 1550-2

Description Electrician's Knife, Double Blade

## Fibre Test Boards

Numbers that you can read. Numbers that will not wash off. Standard numbering.

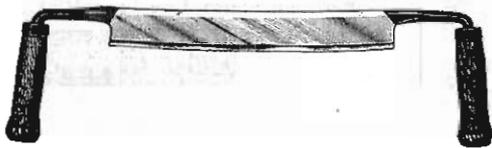
Cat. No.	Numbering	Cat. No.	Numbering
810	1-51	822	607-657
811	51-101	823	657-707
812	102-152	824	708-758
813	152-202	825	758-808
814	203-253	826	809-859
815	253-303	827	859-909
816	304-354	828	910-960
817	354-404	829	960-1010
818	405-455	830	1011-1061
819	455-505	831	1061-1111
820	506-556	832	1112-1162
821	556-606	833	1162-1212



# Kellogg

# TOOLS

## Draw Knife



For use in shaving poles preparatory to painting or treating with preservatives. Consists of a heavy blade  $2\frac{1}{2}$  inches wide and 14 inches long. Length overall, 24 inches. The blades are full polished and shanks are enameled black.

The handles are hardwood finished natural and are large and full formed with an enlarged end providing the best grip.

They are fitted with heavy steel ferrules, but with this form of handle no cap is required.

This knife is recommended for the user whose requirements are unusually severe. It offers real economy where maximum wear is desired.

Cat. No.	Weight, lbs. Each
625X	$3\frac{1}{2}$

## Side Cutting Pliers



No. 201 Pattern

The Lineman's Special Side-Cutting Plier is 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 reinforced cutting knives make this plier adaptable for heavy cutting in telephone and telegraph work.

Cat. No.	Size in inches	Weight, lbs. per doz.
201-6 Kleins	6 inches	5
201-7 Kleins	7 inches	$7\frac{1}{2}$
201-8 Kleins	8 inches	12
201-9 Kleins	9 inches	$12\frac{1}{2}$

## Side Cutting Pliers With Sleeve Twister



No. 212 Pattern

This plier is same as No. 201 series, with the addition of chambers for twisting double sleeve joints.

Cat. No.	Wt. per doz.	Size Sleeve Twister
212-6	5 lbs.	17 B. & S.
212-7	$7\frac{1}{2}$ lbs.	17 B. & S.
212-8	12 lbs.	10 B. & S.

## Oblique Cutting Pliers For Close Cutting

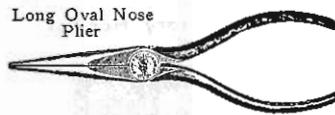


No. 202 Pattern

Electricians, telephone men and switchboard builders will find this particular oblique cutting plier one of the most useful in their kits. Cuts close, the narrow head permitting its use in confined places. The knives are perfectly fitted, so that they meet accurately at all points. This plier is of the lap joint type, and this superior feature makes it an advance over the old box joint method.

Cat. No.	Size in inches	Weight, lbs. per doz.
202-5 Kleins	5 inches	4
202-6 Kleins	6 inches	$4\frac{1}{4}$

## Long Oval Nose Pliers



No. 301 Pattern

### With or Without Cutters

Style 301-6 plier has been perfected to meet a long-felt want of the electrician and general mechanic. A special feature is its adaptability to stripping the ends of insulated wire. This tool is properly tempered and hardened, so that the jaw will not spring when pressure is applied.

No. 203-6 has the same features as the No. 301-6 series with the addition of the cutting knives. The knives are carefully fitted and the body of the plier is tempered and hardened, assuring true cutting.

Cat. No.	Size in inches	Weight, lbs. per doz.
301-6 Kleins (without cutter)	6	3 lbs.
203-6 Kleins (with cutter)	6	3 lbs.

## Wire Splicing Clamps



No. 102-3

Forged from a select grade of tool steel properly hardened and tempered. Handles will not buckle when closed. Have polished heads and black handles.

### No. 102-3—Standard Size

Used in telephone and telegraph line work, covering wide range of wires. Large hole can also be used in serving guy wire or messenger strand. Has six round holes accommodating all sizes of iron wire from 4 to 14 B. W. G. and all sizes of copper wire from 2 to 12 B. & S. gauge. Size in length,  $10\frac{3}{4}$  in., weight per doz.;  $4\frac{3}{4}$  lbs.

### No. 102-1—Baby Pattern

A handy vest pocket size adapted for telephone troublemen. Has fine round holes, accommodating all sizes of copper wire from 8 to 16 B. & S. gauge, and all sizes of iron wire from 10 to 18 B. W. G. Size in length 8 in., weight per doz.  $4\frac{1}{2}$  lbs.

## Combination Wire and Sleeve Clamps

### No. 132-12—Light Weight



No. 132-12

Standard telephone clamp for general line and trouble work. Has four round holes, accommodating all sizes of

copper wire from 6 to 12 B. & S. gauge, and all sizes of iron wire Nos. 8 to 14 B. W. G. The reverse side has four sets of chambers adapted for twisting double tube copper sleeve joints Nos. 8 to 14 B. & S. gauge, and iron sleeve joints Nos. 10 to 19 B. W. G.

Cat. No.	Size in Length	Weight per doz.
132-12 Kleins	9 in.	$10\frac{1}{4}$ lbs.

### No. 132-15—Heavy Weight



No. 132-15

Covers the range of bare wires telephone and telegraph linemen usually handle. The large hole also can be used in serving guy wire, or messenger strand. Has five round holes which will accommodate all sizes of iron wire Nos. 6 to 14 B. W. G. and all sizes of copper wire Nos. 4 to 12 B. & S. gauge. The reverse side has five sets of chambers adapted for twisting double tube copper sleeve joints Nos. 6 to 17 B. & S. gauge, and iron sleeve joints Nos. 8 to 19 B. W. G.

Cat. No.	Size in Length	Weight per doz.
132-15 Kleins	$11\frac{1}{4}$ inches	$15\frac{1}{2}$ lbs.

The dies in the above clamps fit the sleeves snugly so the sleeve is not injured in twisting.

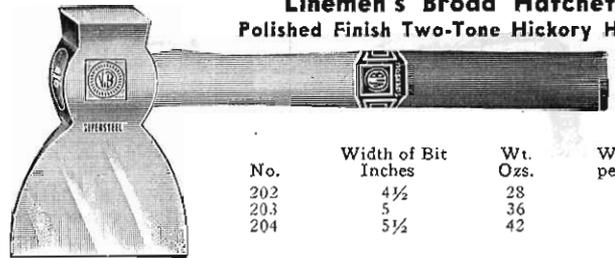
# TOOLS

**Bell Face Nail Hammer**  
Polished Two-Tone Hickory Handles



No.	Weight Ozs.	Length Inches	Wt., Lbs. per Doz.
11	20	14	21½
11½	16	13	18½
12	13	13	14½
12½	10	12½	12

**Linemen's Broad Hatchets**  
Polished Finish Two-Tone Hickory Handle



No.	Width of Bit Inches	Wt. Ozs.	Wt., Lbs. per Doz.
202	4½	28	34
203	5	36	39
204	5½	42	42

**Plain Face Ripping Hammer**  
Two-Tone Hickory Handles



No.	Weight Ozs.	Length Inches	Wgt., Lbs. per Doz.
1R	20	14	21½
1½R	16	13	18½

**Linemen's Broad Hatchets**



Short, strong blade with special blunt edge. Heavy, hardened head. Gun metal finish. Length of handle, 16 inches.

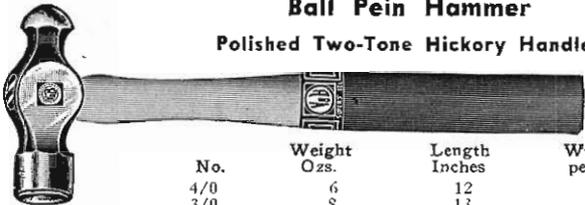
No.	Width of Bit Inches	Wt. Lbs.	Wt., Lbs. per Doz.
58	4¼	4	48

**Hand Axe**  
Michigan Pattern



Weight Lbs.	Length Handle Inches	Wgt., Lbs. per Doz., Handled
3½	36	58

**Ball Pein Hammer**  
Polished Two-Tone Hickory Handles



No.	Weight Ozs.	Length Inches	Wt., Lbs. per Doz.
4/0	6	12	7¼
3/0	8	13	10½
2/0	12	14	14
0	16	14	16
1	20	15	21
2	24	16	24
3	28	17	28
4	32	17	30

**Cold Chisels**



No. 45. Extra Refined Octagon Steel. Polished and Gun Metal Head and Taper. Natural finish body. This chisel is the standard pattern, first quality.

Diam. of Steel, Ins.	Size of Cut	Length Inches	Wt., Lbs. per Doz.
¼	7/8	5	1
5/16	¾	5¼	1½
3/8	¾	5½	2¼
7/16	¾	6	3½
½	¾	6	4
5/8	¾	7	7
¾	¾	7½	11
1	¾	8	15
1	1½	8½	20

**Lineman's Double Face Hammer**  
White Hickory Handles



No.	Weight Ozs.	Length Inches	Wgt., Lbs. per Doz.
13	36	15	33

**Socket Framing Chisels**

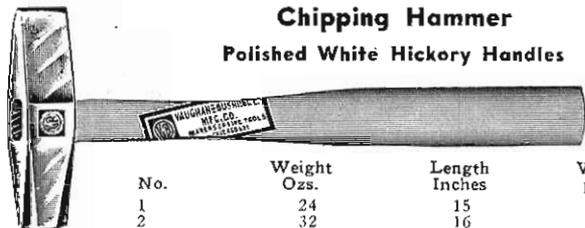


These Socket Framing Chisels have beveled edges and long hardwood handles fitted with nicked pressed steel rings. The blades, sockets and handles are fully polished.

The blades, measuring 8 inches long, are of extra heavy cross section, made of solid steel, and the sockets are of heavier gauge, proportionately longer than the firmer chisels. The overall length ranges from 16 inches on the smallest to 17½ inches on the largest sizes.

No.	Width, Inches	No.	Width, Inches
261—¾-inch	¾	261—1-inch	1
261—1-inch	1	261—1¼-inch	1¼
261—1½-inch	1½	261—1¾-inch	1¾
261—2-inch	2	261—2½-inch	2½
261—2½-inch	2½	261—3-inch	3

**Chipping Hammer**  
Polished White Hickory Handles



No.	Weight Ozs.	Length Inches	Wt., Lbs. per Doz.
1	24	15	22
2	32	16	31
3	40	16	34

**Wrecking Bars**  
Light Gooseneck Pattern

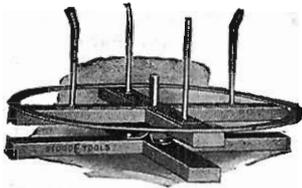


No.	Length Inches	Painted black. Diam. of Oct. Steel, Inches	Wt., Lbs. per Doz.
12	12	½	9
18	18	¾	22

# Kellogg

# TOOLS

## Pay-Out Reel



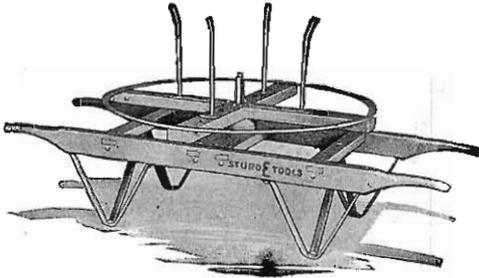
This reel is of hardwood, reinforced and braced throughout with metal strips. The pins are adjustable for 12, 18, 21 and 24-inch coils. Wood painted delft blue, metal parts black.

Cat. No.  
10-510-902

Description  
Pay-out

Wt., Lbs. Each  
40

## Barrow Reels



Made of hardwood and is of strong, durable construction, well able to withstand heavy work. The large metal discs on the reel and barrow form a common bearing surface around the center pin. Reel pins are adjustable for 12, 18, 21 and 24-inch coils. Wood painted delft blue, metal parts black.

Cat. No.  
10-520-900  
10-521-901

Description  
Barrow Reel  
Extra guard pins

Wt., Lbs. Each  
80  
1½



## Folding Take-Up Reels

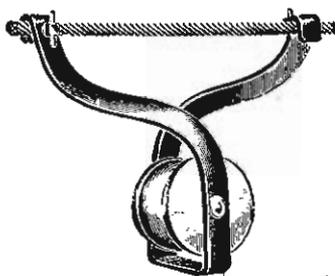
This reel is the collapsible type, composed of two parts—the wooden stand and the metal reel. The stand is of hardwood mortised and tenoned and reinforced with steel. Reel is malleable iron and steel. Wood painted delft blue, reel and metal parts black.

Cat. No.  
10-501-897

Size of Coil, Inches  
21

Wt., Lbs. Each  
42

## "Matlock" Cable Roller



No. 501

By use of the "Matlock" Cable Roller, the work of running Aerial Cable is greatly expedited. A suitable number of "Matlock" rollers are attached to the messenger wire, in the simple manner shown in the cut, fastened in place by the T handle screws. The cable is then placed on the rollers and carried on to any required distance. A great many feet of cable can thus be run with ease and in a short time. The roller has a metal bushing extending

beyond each end. This prevents wear on the roller and keeps it in the center of the frame. The frame is forged of mild steel.

Cat. No.	Wt., Each
501	4½ lbs.
502	8 lbs.

With Wooden Roller
With Iron Roller

## Lineman's Safety Chair

### Rigid Type



Blackburn's Rigid Cable Chairs are made very strong and rigid. The design and construction of these chairs assures long continued service.

The chair frame is made of cold rolled steel and steel channels braced with steel straps.

The seat is made of Western White Pine, reinforced with strap steel imbedded in wood to prevent bolts from pulling out of wood ends.

Holes are provided in open side of chair frame for snapping on safety belt. All chairs are equipped with hand brake to hold Chair stationary when desired. Blackburn's rubber tread wheels are made with the very best quality of automobile tire tread and will therefore give long service without any apparent wear of rubber. If necessary chairs can be re-tired in a few minutes. Chairs are furnished with or without wheel guards. If wheel guards are desired, they should be applied at the factory, at an additional cost.

Cat. No.  
20

Height  
25½ in.

Width  
21 in.

Weight Crated  
28 lbs.

## Lineman's Safety Chair

### Flexible Type



Blackburn's Flexible Cable Chair can be collapsed, strapped or tied for convenient transportation aboard a train, bus or automobile. It is adjustable, up or down, by snaps and chain. The chain is made of steel, electric welded on sides of links to guard against weld opening. Snaps used are lineman's snaps of drop forged steel and galvanized. Flexible chairs can be furnished with No. 7 Seat or No. 8 Seat. The No. 7 Seat is made of high grade fir lumber, reinforced with strap steel imbedded in wood. No. 8 Seat is made with beiting of the best canvas, riveted at ends with copper rivets around electric welded iron hangers. Holes are provided in open side of chair frame for snapping on safety chains. All chairs are equipped with hand brake to hold chair stationary when desired. The rubber tread wheels will give long service without any apparent wear of rubber as they are made with the highest quality of automobile tire tread. Chairs can be re-tired in a few minutes if necessary. Chairs are furnished with or without wheel guards. If desired they should be applied at the factory at an additional cost.

Cat. No.	Height	Width	Weight Crated	Seat Number
21	Adjustable	21 in.	33 lbs.	No. 7
22	Adjustable	21 in.	33 lbs.	No. 8

21	Adjustable
22	Adjustable

Width	21 in.
Width	21 in.

Weight Crated	33 lbs.
Weight Crated	33 lbs.

Seat Number	No. 7
Seat Number	No. 8

## TOOLS

### Combination Steel Wrench For Lag Screws



No. 3109-20

These wrenches are forged from select bar steel. The slot is formed in a cross shape, and will fit machine bolts, nuts or lag screws, from  $\frac{3}{8}$  inch to  $\frac{5}{8}$  inch. The small end of the wrench is arranged for  $\frac{1}{8}$  inch medium bolts or lag screws. The round hole allows the end of a bolt to come through as the nut is run on.

The jaw is wider at its upper end and when this wrench is put on a nut or bolt the tendency is to draw the bolt-head or nut into the wrench and prevent slipping off.

Cat. No.	Size in Length	Weight, per doz.
3109-20 Kleins	13½ in.	20 lbs.

### Eastern Climbers

In considering the manufacture of lineman's pole climbers, several points present themselves, and the most prominent to guide in output are safety, comfort, and longevity. They are produced from the very best grade of spring steel hardened and tempered under expert supervision, making them absolutely trustworthy. They are designed to fit the foot and limb, giving the lineman the greatest freedom of action and comfort. The stock from which they are produced insures long life and service. Furnished less strap, unless otherwise specified.

Code No.	Style of loop	Weight, per pair
1900 Kleins	Riveted	3½ lbs.
1901 Kleins	Punched	3¾ lbs.

Sizes 15½ to 17 inches carried in stock.

Length from 15 to 18 inches from the instep to the end of shank, by ½-inch variations, can be furnished.

### Straps for Eastern Climbers



No. 5301-1

straps (over all), 22 inches long by 1¼ inches wide. (over all), 22 inches long by 1¼ inches wide.

5301-1	Standard	15 lbs.
5301-2	Same as above, with sheep lined pads	16 lbs.
5301-3	Same as above, with felt lined pads	16 lbs.
5301-4	Straight strap without pad (2 straps)	6 lbs.
5301-5	Strap with plain pad (2 straps)	9 lbs.



DROP FORGED DEE RINGS AND BUCKLE

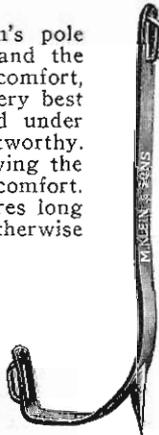
loops. It is provided with strong "D" rings securely sewed in and riveted to the main belt, which also passes through the "D" rings. This arrangement makes a strong, safe belt. They are made in lengths of 38, 40, 42, 44 and 46 inches. Always specify length. Sizes 38, 40 and 42 carried in stock.

Cat. No.	Sizes	Weight, per doz.
5202	2¼ in.	22 lbs.
5204	3½ in.	24 lbs.

### Tool Belts

#### Drop Forged "D" Rings and Buckle No. 5202

This belt is made of select harness leather. The top layer is 1½ inches wide, formed into six tool loops.



### Safety Straps

#### Drop Forged Snaps and Buckle No. 5253



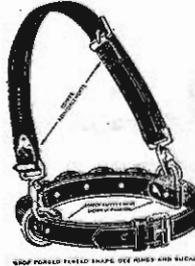
DROP FORGED SNAPS AND BUCKLES

This style of safety strap is known as the standard type. These straps are cut out of selected harness leather, securely sewed, riveted and doubly reinforced. Only the best grade hardware is used. Snaps are of Imperial type, japanned. Strap may be shortened or lengthened by adjusting buckle.

Cat. No.	Description of Snap	Sizes in inches	Wt., per doz.
5250	Imperial	1¾ in. x 6 ft	30 lbs.
5253	Roller	2 in. x 6 ft.	32 lbs.

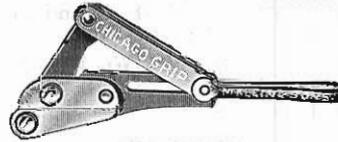
### Tool Belt and Safety Strap

The tool belt in this outfit is the same as No. 5202. The safety strap is the same as No. 5250—1¾ inches wide and 6 feet long, and is provided with a strong snap at each end. Strap may be shortened or lengthened by adjusting buckle, or it may be detached from the belt. Outfit complete, weight 42 lbs. per dozen.



No. 5206-1-A

### Chicago Grips Without Pulleys



No. 1613-20

Main body piece and lever are forged steel. Draw parts are of wrought steel. Gripping jaws are machined smooth. Rivets are machine turned and workmanship throughout is first class.

Once this grip seizes the wire it holds on with the tenacity of a bulldog. The harder the pull, the tighter the hold. It pulls straight without leaving kinks in the wire. It is handy to put on and holds itself in place by means of a spring acting on the compressing lever. A noteworthy feature is the arrangement of the draw link so that it does not hang down at right angles, and is therefore not in the way of the line when the grip is put on.

Cat. No.	Size of Wire Smaller Than	Weight, Each
1613-30	No. 6	1½ lbs.
1613-40	No. 0	2½ lbs.
1613-50	No. 0000	7½ lbs.

### Chicago Grips for Messenger Strand and Large Diameter Cables

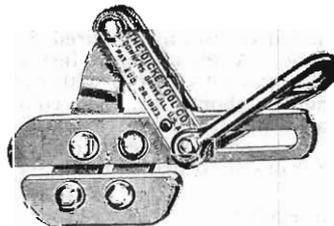
These grips are similar in construction to No. 1613 series, but are heavier. They can be modified to special order to accommodate strand and cable of larger diameters.

Cat. No.	Weight Each	Max. Opening
1628- 6 For 6,000 lb. Messenger Strand	8½ lbs.	1½ in.
1628-16 For 16,000 lb. Messenger Strand	14 lbs.	1½ in.

### Buffalo Grips

#### For Bare and Insulated Wire With or Without Pulleys

These pulleys are designed to fill the same requirements as stated under heading of "Chicago Grips."



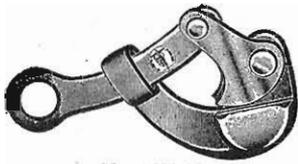
No. 420A-1

Cat. No.	Size of Wire Smaller Than	With or Without Pulley
420-1	No. 6	Without
420A-1	No. 6	With

# Kellogg

# TOOLS

## Haven's Steel Grip



No. 1604-10

Forged from crucible tool steel. The eccentric or dog is hand cut, hardened and tempered. All rivets are steel, machine turned. The handle and the eccentric allows instantaneous hold. A shake of the rope on the tackle disengages or releases the grip. It will not slip, heavy strain only making it grip the tighter.

Cat. No.	Can Be Used On Wire Size	Weight Per Doz.
1604-10 Kleins	No. 8 and smaller	12 lbs.
1604-20 Kleins	½ in. wire and smaller	30 lbs.
1625-20 Kleins	No. 4 to ¾ wire	69 lbs.

## Klein's Self-Locking Block Tackle



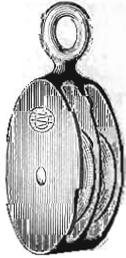
No. 1802-30

Designed for use with Chicago and Haven's grips. Consists of light steel shell, block galvanized, fitted with a snubbing hack to lock load in any position.

This is a great time saver for the man on the pole. Also in handling a vertical load. To lock the load, simply pull the luff rope under the hook. To release, pull the rope. The blocks are arranged with spring guard snap hooks. When pulling up wire to make a splice, it may be used with two grips attached to the snaps, or with the drop forged hook to anchor to an insulator pin or any other convenient anchorage. Furnished with 25-foot ¾-inch manilla rope and detachable hook.

## Pulley Blocks

### Malleable Iron Pulley Blocks



No. 369

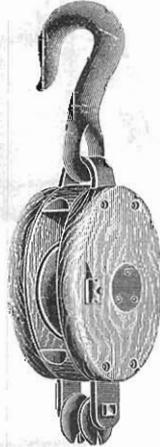
Cat. No.	Sheave	Eye	Cat. No.	Sheave	Eye
368	Single	Single	370	Single	Double
369	Double	Single	371	Double	Double

Remarks: These pulleys come with a shell 2¼" in length and 1½" in diam, taking a rope ¾" in diam, and the sheave thickness is ½". Please order by number.

## Wood Pulley Blocks

These are regular inside iron strapped blocks. Becketts are furnished in all single, one-half double and one-third triple blocks without charge. If a greater number is wanted an extra charge will be made. Furnished with single, double or triple sheave. Please be sure and specify catalog number, size of shell and number of sheaves when ordering.

Cat. No.	Shell Length	Size Rope	Diam. Sheave
26 Single	6"	¾"	3½"
26 Single	8"	1"	4¾"
27 Double	6"	¾"	3½"
27 Double	8"	1"	4¾"
28 Triple	6"	¾"	3½"
28 Triple	8"	1"	4¾"



No. 26

## Galvanized Wire Rope Thimbles

Wire rope thimbles should be used on all guy anchor rods to give the guy wire the reinforcement at rod eye and eliminate shore kinks in bending.

Cat. No.	Size	Size Strand	Weight per 100
1057	¾ in.	¼-⅝	10 lbs.
1058	½ in.	⅜-⅝	18 lbs.
1059	¾ in.	½	36 lbs.

## Reliable Cable Grips

### Single Eye—Hard Wire For Conduit Construction



Duplex hard tough wire grip for attaching pulling line to the end of a cable. Resists wear in rough, sandy conduits. Large sizes used on aerial cable.

For Cable Diam. Inches	Cat. No.	Size Inches	Cat. No.	Size Inches
¾ to 7/8	802	¾ x 22	812	¾ x 30
1 to 1 1/8	803	1 x 22	813	1 x 30
1 1/2 to 1 7/8	804	1 1/2 x 22	814	1 1/2 x 30
2 to 2 3/8	805	2 x 22	815	2 x 30
2 1/2 to 2 7/8	806	2 1/2 x 30	816	2 1/2 x 45
3 to 3 3/8	807	3 x 30	817	3 x 45
3 1/2 to 3 7/8	808	3 1/2 x 30	818	3 1/2 x 45

### Single Eye—Soft Wire For Aerial Construction



To be used only for drawing aerial cable through rings. The eyes are soft and do not wear well. They save trouble by feeding through aerial rings without displacing the rings.

For Cable Diam. Inches	Cat. No.	Size Inches	Cat. No.	Size Inches
¾ to 7/8	822	¾ x 24	832	¾ x 36
1 to 1 1/8	823	1 x 24	833	1 x 36
1 1/2 to 1 7/8	824	1 1/2 x 24	834	1 1/2 x 36
2 to 2 3/8	825	2 x 24	835	2 x 36
2 1/2 to 2 7/8	826	2 1/2 x 24	836	2 1/2 x 36

### Double Eye Luffing



Used for pulling slack or removing old cable. Shortest body permits longest pull in cramped manhole.

For Cable Diam. Inches	Cat. No.	Size Inches	Cat. No.	Size Inches
¾ to 7/8	842	¾ x 18	852	¾ x 24
1 to 1 1/8	843	1 x 18	853	1 x 24
1 1/2 to 1 7/8	844	1 1/2 x 18	854	1 1/2 x 24
2 to 2 3/8	845	2 x 18	855	2 x 24
2 1/2 to 2 7/8	846	2 1/2 x 18	856	2 1/2 x 24
3 to 3 3/8	847	3 x 18	857	3 x 24
3 1/2 to 3 7/8	848	3 1/2 x 18	858	3 1/2 x 24

### Double Eye Split



Used for pulling slack in working cables. Can be attached and removed without cutting cables.

For Cable Diam. Inches	Cat. No.	Size Inches	Cat. No.	Size Inches
¾ to 7/8	862	¾ x 18	872	¾ x 24
1 to 1 1/8	863	1 x 18	873	1 x 24
1 1/2 to 1 7/8	864	1 1/2 x 18	874	1 1/2 x 24
2 to 2 3/8	865	2 x 18	875	2 x 24
2 1/2 to 2 7/8	866	2 1/2 x 18	876	2 1/2 x 24
3 to 3 3/8	867	3 x 18	877	3 x 24
3 1/2 to 3 7/8	868	3 1/2 x 18	878	3 1/2 x 24

# TORCHES, BURNERS

## Unique Blow Torches



The torch for use in cold blasts and zero weather. It is simple of design and of sturdy construction. The long horizontal generating veins are placed parallel with and directly under the flame. This insures the complete and thorough vaporizing of the fuel, producing an even, forceful blue flame of intense heat, which can be throttled down fine.

The orifice is kept clear of dirt and foreign particles by means of a steel needle which works in and out of it as the flame regulating valve is opened and closed. This eliminates the necessity of poking with pin or

wire at the orifice and the resulting damage to the most delicate part of the torch.

The orifice is located  $\frac{3}{8}$ " forward of fuel control valve seat—a separate threaded block which is easily replaced. All channels and generating veins are fitted with removable plugs and are easily accessible for cleaning and repairing.

The tanks are of 18 gauge steel with brazed fittings and bottom welded.

No.	Size	Fuel	Flame Size	Weight
2	1 pint	Gasoline	6" x $\frac{3}{4}$ "	3 $\frac{1}{2}$ lbs.
3	1 quart	Gasoline	9" x 1"	4 $\frac{1}{4}$ lbs.
5	1 quart	Kerosene	8" x 1"	4 $\frac{1}{4}$ lbs.
7	2 quarts	Gasoline	9" x 1"	5 $\frac{1}{2}$ lbs.

## Unique Furnaces



The Unique Furnace will melt 50 pounds of solder in 10 minutes—but more important is the length of time it will function without attention.

Generator—The patented figure "8" seamless steel tubing generator is responsible for the intense heat which actually consumes the carbon.

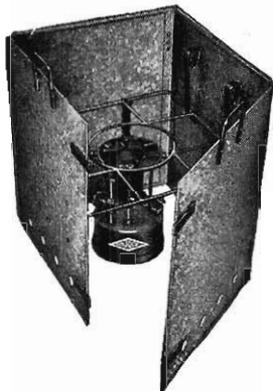
Regulating Valve and Orifice Scraper—Perfect control of the flame—regulated as easily as a gas stove burner. As the control valve is opened and closed, the orifice—hole through which the gas blows—is automatically scraped and cleared of dirt particles.

Upper Structure—The generator, control valve and orifice scraper are removable for cleaning and repairing by simply loosening union and coil cup. All vital parts are replaceable without removing the top plate or disturbing uprights.

Tank—A drawn shell of 16 gauge steel with welded fittings and bottom. A steel protecting ring is welded into the bottom of the finished tank.

No.	Capacity	Top Plate	Weight	Dimensions	Fuel
53	1 gallon	*7-inch	12 $\frac{1}{2}$ lbs.	8 x 12 $\frac{1}{2}$ "	Gasoline
55	1 gallon	7-inch	12 $\frac{1}{2}$ lbs.	8 x 12 $\frac{1}{2}$ "	Kerosene

\*Accommodates 3" solder pot.



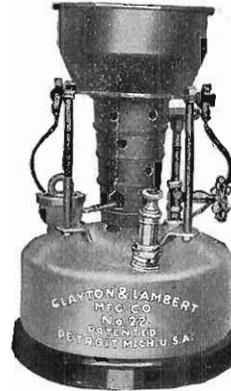
## Safety Folding Windshields

Protects the furnace from wind and the public from danger. Sturdy and light. Made of 22-gauge galvanized iron reinforced by double folding the edges, hinged at the corners. No. 50 is 4-sided, with sturdy grate. No. 50-A is 4-sided, without grate. No. 50-C 3-sided, without grate.

No.	Size, In.	Wt., Lbs.
50	23x19 x19	29
50-A	23x19 x19	25
50-C	22x17 $\frac{1}{2}$ x17 $\frac{1}{2}$	18

## Gasoline Furnaces

The tank is made of heavy gauge steamless drawn steel, tinned inside and out, making it absolutely rustproof and fitted with patented cushion protection band at base of tank. It is supplied with brass ears, elbows and tees, patented pump, large funnel and filler plug with dustproof cap; also with latest patented three-piece coil cup and top plate which enables the operator to remove top section by unscrewing three large brass nuts, exposing the burner and coil. There are no coil cup bugs or small nuts to burn off.



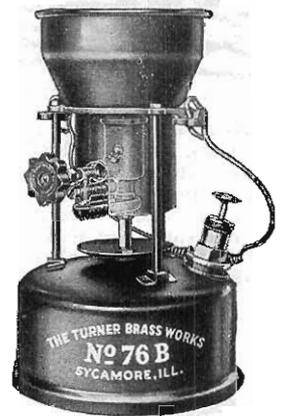
No. 22-A

Cat. No.	Capacity	Shipping Weight
22-A	1 gal.	9 $\frac{3}{4}$ lbs.
12-A	Same as No. 22 except fitted with air valve and bulb.	

## Turner Gasoline Furnace

The Turner No. 76-B Gasoline Furnace is recommended for telephone and other public utility companies. It will quickly melt lead, tin, zinc, rosin, paraffin and other materials, and keep them molten for hours at a time with a minimum amount of fuel. It eliminates coil replacements, costly repairs or job tie-ups.

The patented copper bronze burner will last a lifetime. It gives accurate and efficient control of the flame at all times. The gas orifice is automatically cleared when the shut off valve is closed. The furnace is provided with cool composition valve handle, effective quick-acting trouble-free pump, heavy lead coated welded steel tank.



Cat. No.	Capacity, Quarts	Wt., Lbs. Each
76-B	4	13

## Gasoline Torches

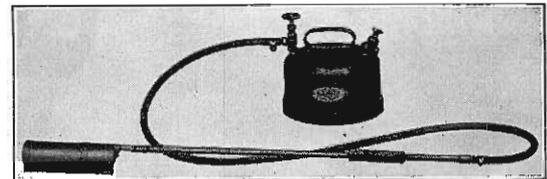


No. 32-A

This torch is fitted with back-flow burner, made of bronze, which super-heats the gas and produces a perfect blue flame of intense heat in wind or extreme cold. Hook for soldering iron cast in burner tube. Heavy gauge seamless drawn brass tank, reinforced, and has concave brass bottom. Fitted with automatic brass pump with double spring check valve. No. 38 torch same in construction as No. 32-A, only it is pint size.

Cat. No.	Capacity	Consumption	Shipping Wt.
32-A	1 qt.	$\frac{1}{2}$ pt. per hour	5 $\frac{1}{2}$ lbs.
38	1 pt.	$\frac{1}{2}$ pt. per hour	3 $\frac{1}{2}$ lbs.

## Torch and Weed Burner



A sure and effective means of retarding and eradicating all undesirable weeds, grass, etc. Used effectively for thawing frozen pipes in cold weather. Sturdy in construction and fully guaranteed. Has a steel fuel and air tank of one gallon capacity. All seams are welded and fittings brazed. Fitted with fuel regulating valve, powerful trouble-free pump, and well balanced steel carrying handle. Burner is of the seamless steel coil-type with adjustable windshield. Has a cool wood handle and five feet of oil resisting hose. Flame dimensions 16 inches long by 3 inches wide. 2000° Fahrenheit. Fuel consumption  $\frac{1}{2}$  gallon per hour. Net weight 9 lbs. Burns gasoline or kerosene. Specify choice of fuel.

# TORCHES, SOLDERING IRONS

## Prest-O-Lite Equipment

The use of Prest-O-Lite Gas as a fuel saves delays and interruptions. It furnishes an intense heat in a concentrated, easily controlled flame. No preheating, pumping-up or generating required. Just turn on the gas and light the torch. This, together with the lightness and balance of the torches, makes possible neater and stronger connections that are solid through and through. Experienced linemen require no special training to use Prest-O-Lite equipment.

The most popular outfits are listed below. Other styles and sizes can be furnished. Complete information will gladly be furnished when desired.



No. 0-6120

### Prest-O-Lite No. 0-6120 Lineman's Outfit

The Prest-O-Lite No. 0-6120 Lineman's Outfit is for use where open flame work only will be encountered. Particularly suitable for wire splicing. In addition, it may also be used for light brazing. The Prest-O-Lite 0-6120 Lineman's Outfit consists of the following:

- 1—Cat. No. O-2343 MC Tank with gas and key
  - 1—Cat. No. A-6103 Torch
  - 1—Cat. No. A-3321 MC Handle Assembly
  - 1—Cat. No. A-2345 MC Union
  - 2—Cat. No. A-437 Hose Bands
  - 6 ft.—Cat. No. Z-54 Fabric Hose
- (Any of the above parts may be ordered separately.)

No. 0-6119 same as above with addition of soldering iron head.

### No. 0-6109 5-in-1 Outfit



The Prest-O-Lite 5-in-1 Outfit includes four interchangeable torches and one soldering iron so that five distinct torches may be assembled. This wide assortment enables the user to apply the proper flame and the right temperature to obtain the best results for each job. Used for a large variety of soldering, brazing, sweating, melting, tempering and other heating operations. Comes packed in a neat, durable metal box with snap lock. The Prest-O-Lite 0-6109 5-in-1 Outfit consists of the following, any of which may be ordered separately:

Cat. No. A-6058 Handle



- Cat. No. A-6085 Assembly Small Curved Stem and Mixer
- Cat. No. A-6086 Short Curved Stem and Mixer
- Cat. No. A-6083 Medium Curved Stem and Mixer
- Cat. No. A-6089 Long Curved Stem and Mixer
- Cat. No. A-3710 Friction Lighter furnished at additional cost

- Cat. No. A-6314 Soldering Iron Stem, Sleeve, Mixer and Copper Tip
- Cat. No. A-3879 Union for B Tank
- Cat. No. A-6081 Wrench
- Cat. No. L-6299 Box
- Cat. No. Z-54 Hose, 6 ft.
- Cat. No. A-963 Hose Bands, two

Replacement Parts for Soldering Iron  
1 L-6312 Copper Tip Only



### Staysalite Lineman's Alcohol Torch

The Staysalite torch is the invention of a practical, experienced telephone man. It stays lighted in the wind; it can be lighted and extinguished in a moment; it burns alcohol without odor or noise; it has no adjusting parts, therefore cannot get out of order; it can be carried on lineman's belt.

Cat. No. 3420 Weight 1 1/4 lbs.

## Kellogg Electric Soldering Irons



Kellogg Iron with Pointed Tip

A good, sturdy soldering iron built to give continuous, uninterrupted service under the hardest usage. The Kellogg factory as well as installing department have standardized on this iron because they can use it eight or more hours a day continuously without the slightest danger of burning it out.

The heating element is designed and insulated to furnish the correct amount of heat at the tip and yet keep the handle cool at all times. These irons can be furnished in two degrees of heat, "Medium Hot" or "Hot." The "Medium Heat" is for general use, being suitable for light work such as radio sets, telephone and switchboard wiring, etc. The "Hot Heat" is for heavier work and is more suitable for working with enameled wire. This heating element can be easily replaced when burned out.

The pointed tip furnished is most practical for general all around use. A heavier flat tip can be furnished in addition, at a small cost, by specifying 1 extra piece No. 47794 flat tip.

Designed to operate from either 110 volt alternating current or 115 volt direct current. Furnished with 6 foot heater cord and separable plug. Overall length less cord 14 inches. Net weight with cord and plug 28 ounces.

Code No.	Heat	Watts	Style of Tip
1-A	Medium	105	Pointed
2-A	Hot	150	Pointed

### Repair parts for Kellogg Irons

- 47796 Pointed Tip only.
- 47794 Flat Tip only.
- 47777 Medium Heat Element only.
- 47778 Hot Heat Element only.

## Vulcan Electric Soldering Irons

No. 100 vulcan soldering iron has a one-piece handle which unscrews and slides back on cord, exposing conveniently arranged terminals. It is 13 3/4 inches in length, weighs 12 oz. and consumes 70 watts. Furnished with 6-foot cord and attachment plug, wired for 110 volts when not otherwise specified.

### Solder Copper Handles



This handle was specially designed for use around Telephone Main Frames. The piano wires expand and contract as the steel shank does, thus maintaining a tight grip on the shank at all times. Since the only point of contact between the shank and the wood is at the extreme point of the shank the charring customary with most handles is eliminated. No tools required to attach this handle—just insert point of shank in square formed by the wires and force down until point is slightly imbedded in the wood.  
No. 1 Handle for shanks 3/8 to 1/2". No. 2 Handle for shanks 1/2 to 5/8".

### Manual Soldering Irons



No. 1. Manual Type

These are carried in stock and are furnished without handles.

Cat. No.	Wt., Each
1	1/2 lb.
2	1 lb.
6	3 lb.

# Kellogg

## TOOLS

### Octagon Tamping and Digging Bars



Double beveled cutting blade at one end; fitted with heavy tamping shoe at the other end.

Cat. No.	Size	Wt., Lbs. Each
10-408-1071	1 in. x 7 ft.	20
10-409-1072	1 in. x 8 ft.	25
10-411-1074	1 1/8 in. x 7 ft.	25
10-412-1075	1 1/8 in. x 8 ft.	30

Packed 2 in a bundle.

### Light Shoe Tamping Bars



Select maple handle, 2 inches in diameter, tapered at lower end, fitted with steel shoe, 1 3/4 x 1/4 inch securely riveted to handles. Tamping end dipped in creosote to prevent decay, then painted delft blue. Handles smoothly sand finished.

Cat. No.	Length Feet	Wt., Lbs. Each
10-417-854	7	10
10-418-855	8	11

Packed 2 in a bundle.

### Heavy Duty Type Pike Pole



Poles of Douglas Fir with 2 1/2-inch diameter at center tapering to 2 inches at ends. This gives extra strength at center where needed with very little extra weight. Pikes project 4 inches. Metal parts painted delft blue.

Cat. No.	Size	Wt., Lbs. Each
10-212-818	2 1/2 in. x 12 ft.	12
10-213-819	2 1/2 in. x 14 ft.	14
10-214-820	2 1/2 in. x 16 ft.	16
10-215-821	2 1/2 in. x 18 ft.	18
10-216-822	2 1/2 in. x 20 ft.	20

Packed 6 in a bundle.

### Guarded Pike Pole



Made of selected Douglas Fir with malleable iron ferrule and fork on one piece driven onto pole and secured by a rivet. Handles are furnished in two sizes—the 2-inch are parallel, and the 2 1/2-inch are tapered to 2 inches at the ends. Metal parts painted delft blue.

Cat. No.	Size	Wt., Lbs. Each
10-226-832	2 in. x 10 ft.	9
10-227-833	2 in. x 12 ft.	11
10-228-834	2 in. x 14 ft.	13
10-229-835	2 1/2 in. x 16 ft.	17
10-230-836	2 1/2 in. x 18 ft.	19
10-231-837	2 1/2 in. x 20 ft.	21

Packed 6 in a bundle.

### Shovels



The blade of the straight type shovel is in direct line with the handle, making this shovel especially adapted to digging and lining up. Crucible steel blades, with 9- or 22-inch polished straps; selected second growth hickory, ash or maple handle; 1 3/4-inch diameter at swell; smoothly finished.

#### Straight Shovels

Cat. No.	Material	Size Handle Feet	Strap Inches	Wt., Lbs. Each
10-043-867	Maple Handle	7	22	8
10-044-868	Maple Handle	8	22	9
10-044-A-869	Maple Handle	9	22	10

#### Spoons Western Union Pattern



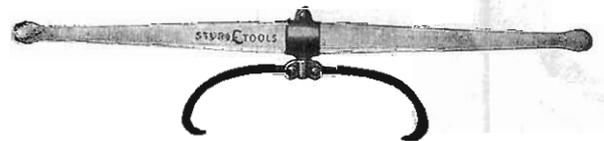
Cat. No.	Material	Size Handle Feet	Strap Inches	Wt., Lbs. Each
10-059	Maple Handle	7	9	8
10-060	Maple Handle	8	9	9
10-061	Maple Handle	9	9	10
10-062-859	Maple Handle	7	22	8
10-063-860	Maple Handle	8	22	9
10-064-861	Maple Handle	9	22	10

#### Handles Only

##### Straight Shovel and Spoon

Cat. No.	Material	Length Feet	Wt., Lbs. Each
10-071-993	Maple	7	5
10-072-994	Maple	8	6
10-073-995	Maple	9	7

#### Carrying or Lug Hooks Standard Type



For handling poles, ties and heavy timbers. Handles of selected, air-seasoned hickory and hard maple with hand-turned knobs, smoothly sand finished. Hooks are crucible steel with duck bill points, hung in heavy malleable iron clasp and swivel. Metal parts painted delft blue.

Cat. No.	Size	Wt., Lbs. Each
10-100-295	2 1/2 in. x 4 ft. Maple	7
10-101-296	2 1/2 in. x 4 1/2 ft. Maple	8
10-102-297	2 1/2 in. x 5 ft. Maple	9

Packed 6 in a crate.

#### Peavies



Handles of selected air-seasoned hickory or hard maple, with hand-turned knobs, smoothly sand finished. Malleable iron sockets and crucible steel hooks with duck bill points. Pikes are of crucible steel securely driven in. Metal parts are painted delft blue.

Cat. No.	Size	Wt., Lbs. Each
10-124	2 1/2 in. x 4 ft. Hickory	8
10-127	2 1/2 in. x 4 ft. Maple	8

Packed 6 in a crate.

# EMERGENCY EQUIPMENT, WIRE

## Davis Emergency Equipment

Since the Davis system of Emergency Equipment has been made available to the telephone industry you no longer have to buy equipment you will never use—equipment that tries to cover every kind of an accident for every kind of industry. No longer need you throw away left over remnants of first aid dressings, or use material that has been handled previously and hence is insanitary. No longer must you fumble around among the disordered contents of a tin box, searching for first aid material that is probably missing.

Now you can get a first aid kit that gives you equipment you will actually need and use. Each of the dressings and treatments in the Kit is individual, and hence surgically clean when used. There is never anything left over to put back or throw away; therefore there is no waste or any danger of infection. The entire Kit contents are instantly accessible and completely visible at all times.

The Kits are sturdily constructed of 20 gauge steel with spot welded corners and are finished in green ducro.



### No. 1 Phone-Kit— Assortment G

Size  $4\frac{1}{8} \times 2\frac{1}{8} \times 1\frac{1}{4}$  inches

Specially adapted for the use of:

- (1) Troublemen
- (2) Installers
- (3) Inspectors
- (4) Linemen

### No. 10 Phone-Kit— Assortments

Size  $7\frac{3}{4} \times 4\frac{5}{8} \times 2\frac{3}{8}$  inches

For the use of the small gang, two to four men, this kit is ideal.

- (1) Cable Splicers
- (2) Drop Wire Installers
- (3) Heavy Construction Gangs

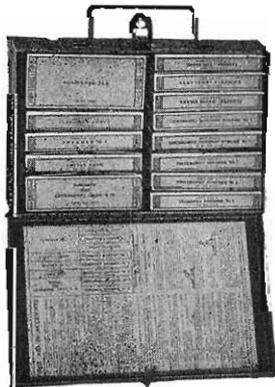


### No. 16 Phone-Kit— Assortment F

Size  $9 \times 6\frac{1}{2} \times 2\frac{3}{8}$  inches

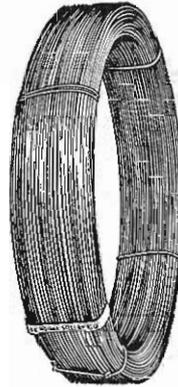
This Kit is well adapted to medium size groups, 4 to 6 men, in construction and distribution departments.

Larger Kits are also furnished.



## Indiana Iron Telephone Wire

(Crapo Galvanized)



This wire is made in three grades. Extra B. B., B. B. and steel. Extra B. B. is made from the very best material and has the highest conductivity of any galvanized wire. Mile ohm 4700 to 5000.

B. B. wire is somewhat stronger than extra B. B., but has a lower conductivity. It is used mostly on farm line circuits, by telephone companies and, for railroad work. Mile ohm 5600 to 6000.

Steel wire is made from a special grade of material of greater strength, but less conductivity than the other grades. Mile ohm 6500 to 7000.

We do not break coils: Nos. 10, 12 and 14 put up in coils of  $\frac{1}{2}$  mile, No. 6 put up in  $\frac{1}{3}$  mile coils.

Size B.W.G. No.	Diam.	Breaking Strain in Lbs.			Approx. Weight per Mile
		E. B. B.	B. B.	Steel	
6	.203 in.	1475	1652	1770	590 lbs.
10	.134 in.	645	722	774	258 lbs.
12	.109 in.	425	476	510	170 lbs.
14	.083 in.	247	277	297	99 lbs.

## Galvanized Steel Strand

(Indiana Crapo Galvanized)



Regular galvanized steel strand oval Siemens-Martin strand are recommended for regular exchange, farm line and toll construction work.

Single galvanized regular strand should be used in country line construction line only, where there is no possibility of deterioration from smoke conditions. Double galvanizing insures long life under smoky conditions.

Size Ins.	Size Wires	Wt. per 100 feet	Strength in Lbs.		Siemens Martin
			Regular Single or Double Galvanized	Regular Double	
$\frac{3}{8}$	16	8 lbs.	1,150	1,900	1,900
$\frac{1}{4}$	14	13 lbs.	1,900	3,150	3,150
$\frac{5}{16}$	12	22 lbs.	3,200	5,350	5,350
$\frac{3}{8}$	11	27 lbs.	4,250	6,950	6,950
$\frac{7}{16}$	$9\frac{1}{2}$	40 lbs.	5,700	9,350	9,350
$\frac{1}{2}$	8	52 lbs.	7,400	12,100	12,100

Size Ins.	Size Wires	Wt. per 100 feet	Strength in Lbs.		A. T. & T. Spec.
			High Strength	Extra High Strength	
$\frac{3}{8}$	16	8 lbs.	2,850	3,990	
$\frac{1}{4}$	14	13 lbs.	4,750	6,650	
$\frac{5}{16}$	12	22 lbs.	8,000	11,200	6,000
$\frac{3}{8}$	11	27 lbs.	10,800	15,400	10,000
$\frac{7}{16}$	$9\frac{1}{2}$	40 lbs.	14,500	20,800	16,000
$\frac{1}{2}$	8	52 lbs.	18,800	26,900	

# Kellogg

# WIRE

## Kellogg Bronze Drop Wire Specifications 2017-B



### Mica-Finish and Colored Rubber Tracers

Kellogg bronze drop wire needs no introduction. It is the finest and most perfect drop wire ever produced for the telephone industry.

The conductor is of special bronze throughout—with unusual conductivity—85% of pure copper. Its resistance is only 32 ohms per mile, permitting long spans to be strung without sacrificing transmission, or draining the power supply. It is completely non-corrosive—no uncertain combination of metals—no danger in scraping—no rusting at the ends—no deterioration under adverse climatic conditions.

The insulation is of the toughest, adding fifty per cent longer life to the drop wire. It consists of thirty per cent pure Para rubber, compounded by an exclusive Kellogg formula with special anti-oxidents, tubed onto the conductor without seams, slowly vulcanized and covered with a tightly woven two-ply, long wearing outer braid. Minimum tensile strength 1500 lbs. per sq. in. One wire is coated with white rubber and the other with black rubber, thus eliminating the old-fashioned raised tracer cord. Wherever it is cut, you know what side you are working on.

Kellogg Drop Wire is protected by a coat of Mica, impregnated right into the braid as well as coating the outside. Waterproof, reflects heat, and eliminates friction.

Kellogg Bronze Drop Wire is supplied in only one grade of insulation. It is furnished with  $\frac{3}{32}$ " specification rubber if not otherwise specified. It can also be furnished with  $\frac{5}{64}$ " or  $\frac{3}{16}$ " insulation in parallel or twisted pair construction.

Comes in 1000 foot coils with large 15-inch eye. Each coil is individually double paper wrapped.

Cat. No.	Size B. & S.	Diam. Over Rubber Inches	Wt. Lbs. per 1000 Feet
2017-B	17	$\frac{3}{32}$ "	33

## Ironite Drop Wire (Crapo)



### Mica-Finish and Colored Rubber Tracers

A special conductor of pure basic steel, accurately annealed by a special process to provide great tensile strength, high conductivity, and great flexibility. Lighter than copper and more flexible. Highly rust-resisting, due to the purity and density of the metal, and thoroughly protected by a heavy uniform coating of pure zinc galvanizing.

Insulated with a special rubber—containing a pure rubber content equal to Code requirements—highly elastic, tough and wear resisting. Braided with strictly two-ply long fibre cotton, and thoroughly saturated with weatherproofing and wax, and impregnated with Mica to give a heat reflecting, moisture-proof, frictionless coating. Minimum tensile strength 1500 lbs. per sq. in. One wire is coated with white rubber and the other with black rubber, thus eliminating the old-fashioned raised tracer cord. Wherever it is cut, you know what side you are on. Shipped in standard 1000-ft. coils with large 15-inch eye to fit standard reels. USE BWG GAUGE WHEN ORDERING.

Cat. No.	Size BWG	Diam. Inches Over Rubber	No. of Conductors	Wt. Lbs. Per 1000 Ft.
1019-B	19	$\frac{7}{32}$ "	Duplex	27
1018-B	18	$\frac{1}{2}$ "	Duplex	39
1016-B	16	$\frac{3}{8}$ "	Duplex	65
1014-B	14	$\frac{1}{2}$ "	Duplex	80

## Hard Drawn Copper Drop Wire (Mica Finish)



Insulated with a special rubber—containing a pure rubber content equal to Code Requirements—highly elastic, tough and wear resisting. Protected with a Mica-finish, thoroughly impregnated into the braid. Braided with strictly two-ply long fibre cotton, and thoroughly saturated with weatherproofing and wax. A small raised cord marker is woven into the braid of one of the conductors of the pair for tracing. Shipped in standard 1000-ft. coils with large 15-inch eye to fit standard reels. USE B&S GAUGE WHEN ORDERING.

Cat. No.	Size B&S	Diam. Inches Over Rubber	No. of Conductors	Wt. Lbs. Per 1000 Ft.
1216-B	16	$\frac{1}{2}$ "	Duplex	45
1214-B	14	$\frac{5}{8}$ "	Duplex	62

## Bridle or Spider Wire (Mica Finish)



Mica-finished rubber covered, black saturated weatherproof braid soft drawn tinned copper conductor wire, used for connecting open lines to cable terminals. Single conductor No. 18 for installing grounds at subscribers stations. Duplex wire is furnished with a small raised cord marker in the braid of one of the conductors for tracing. Put up in coils of approximately 500-feet. USE B&S GAUGE WHEN ORDERING.

Cat. No.	Size B. & S. Gauge	Diam., Inches Over Rubber	No. of Conductors	Wt., Lbs. per 1000 Ft.
1519-A	19	$\frac{3}{32}$ "	Single	13
1519-B	19	$\frac{3}{32}$ "	Duplex	25
1518-A	18	$\frac{1}{16}$ "	Single	15
1518-B	18	$\frac{1}{16}$ "	Duplex	31
1516-A	16	$\frac{1}{8}$ "	Single	22
1514-A	14	$\frac{3}{16}$ "	Single	30

## Copper Interior Telephone Wire



This wire is used for interior telephone wiring, furnished in single, duplex and triple conductors. Conductors are of tinned soft copper covered with a rubber insulating compound. Braid consists of closely woven hard glazed two-ply, two-end cotton thread. Color, olive green. When furnished in duplex and triple, each conductor has a colored thread in the braid for tracing purposes. Put up in coils of approximately 500 ft. USE B&S GAUGE WHEN ORDERING.

Cat. No.	Size B. & S. Gauge	Diam. Over Rubber	No. of Conductors	Weight Lbs. per 1000 Ft.
1619-A	19	$\frac{3}{32}$ -in.	Single	10
1619-B	19	$\frac{3}{32}$ -in.	Duplex	20
1619-C	19	$\frac{3}{32}$ -in.	Triplex	30
1618-A	18	$\frac{1}{16}$ -in.	Single	12
1618-B	18	$\frac{1}{16}$ -in.	Duplex	24
1618-C	18	$\frac{1}{16}$ -in.	Triplex	35
1622-A	22	$\frac{1}{16}$ -in.	Single	8
1622-B	22	$\frac{1}{16}$ -in.	Duplex	15
1622-C	22	$\frac{1}{16}$ -in.	Triplex	23

## Flameproof Jumper Wire



Used on main distributing and intermediate distributing frames, distributing boxes and cross connecting racks. This wire consists of a soft tinned copper conductor insulated with a high grade rubber and covered with a flame-proof braid that does not fray out. Put up in coils of approximately 500 ft. USE B&S GAUGE WHEN ORDERING.

Cat. No.	Size B. & S. Gauge	Diam. Over Rubber	No. of Conductors	Color of Conductors	Weight Lbs. per 1000 Ft.
1320-A	20	$\frac{1}{16}$ -in.	Single	Red	6
1320-B	20	$\frac{1}{16}$ -in.	Duplex	Red and White	12
1320-C	20	$\frac{1}{16}$ -in.	Triplex	Red, White; White with Red Tracer	18
1322-A	22	$\frac{1}{16}$ -in.	Single	White	5
1322-B	22	$\frac{1}{16}$ -in.	Duplex	Red and White	10
1322-C	22	$\frac{1}{16}$ -in.	Triplex	Red, White; White with Red Tracer	15

## Kellac Flameproof Jumper Wire



Made of 22 B&S Gauge tinned or tinned-enamel copper wire. Two wrappings of silk are applied in reverse direction and an outer covering of cotton. These wrappings are impregnated with a special Kellogg cellulose acetate lacquer, giving the wire a hard, smooth, dust-free finish, with clear, bright colors. Kellac Jumper Wire has lower mutual capacity and less bulk. Insulation is readily removed for soldering, yet the special impregnation prevents fraying at the ends. Put up in 500 and 1000-foot coils of one continuous length. Available in the standard colors of red and white in the duplex and red, white and blue in the triplex. Other colors can be furnished when reasonable quantities are ordered.

Code No.	Type of Wire	Number of Strands	Weight Lbs. Per 1000 Ft.
3002	Tinned	Two	10
3002-E	Tinned Enamel	Two	10
3003	Tinned	Three	15
3003-E	Tinned Enamel	Three	15

# Kellogg

## WIRE

### Pot Head Wire



Used to terminate a paper insulated cable for distribution in cable terminals and cable boxes to prevent moisture entering the cable. Consists of soft tinned copper conductor, rubber covered with no braid. Can be furnished in single or duplex. When furnished in duplex the insulation on the two wires is of different color for tracing purposes. Put up in coils of approximately 500 feet. **USE B&S GAUGE WHEN ORDERING.**

Cat. No.	Size B. & S. Gauge	Diam. Over Rubber	No. of Conductors	Weight, Lbs. per 1000 Ft.
1419-B	19	$\frac{3}{32}$ -in.	Duplex	17
1420-B	20	$\frac{3}{32}$ -in.	Duplex	15
1422-B	22	$\frac{3}{32}$ -in.	Duplex	15

### Weatherproof Iron Tree Wire



This wire is used where wires run through trees and keeps them free from grounds during damp weather. Consists of B B double galvanized iron conductor, insulated with double or triple close cotton braid impregnated with moisture proofing and weatherproofing compound. Put up in  $\frac{1}{2}$ -mile burlap coils. Always sold by weight. **USE BWG WHEN ORDERING,** also specify whether double or triple braid is desired.

Cat. No.	Insulation	Size B. W. G.	Weight per Mile
910-AA	Double Braid	10	350
910-AAA	Triple Braid	10	400
912-AA	Double Braid	12	225
912-AAA	Triple Braid	12	260
914-AA	Double Braid	14	145
914-AAA	Triple Braid	14	175
916-AA	Double Braid	16	90
916-AAA	Triple Braid	16	120

### Kellogg Special Tree Wire



Kellogg tree wire was designed to replace the ordinary two and three braid weatherproof iron tree wire. It is low in cost and has triple the life of ordinary weatherproofed wire.

The conductor consists of No. 14 or 16 BWG "Crapo" double galvanized ironite wire. This is insulated with a  $\frac{3}{32}$ " wall of 30% rubber to seal the conductor against moisture and to prevent the braid from slipping. The rubber is covered with a tough two-ply cotton braid thoroughly impregnated. This is followed by a special hard service Seine twine cable cord which is also heavily saturated. This Seine cord twine is the toughest cord obtainable, and is the same material used in the manufacture of mine cables.

Put up in 1000-foot coils. **USE BWG GAUGE WHEN ORDERING.**

Cat. No.	Size BWG	Tensile Strength	No. of Conductors	Weight per Mile
714-A	14	400 lbs.	1	175
716-A	16	250 lbs.	1	120

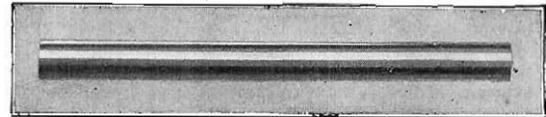
### Electric Light or Power Wires



This wire is used for electrical and power work, also radio aeriels and ground wire. Consists of a soft drawn tinned copper conductor, insulated with new code rubber saturated braid over all. Furnished in 500-ft. coils. **USE B&S WHEN ORDERING.**

Cat. No.	Size B. & S. Gauge	Conductor	Braid	Weight, Lbs. per 1000 Ft.
804-AA	4	Stranded	Double	230
806-AA	6	Stranded	Double	158
808-A	8	Stranded	Single	80
810-A	10	Solid	Single	55
812-A	12	Solid	Single	40
814-A	14	Solid	Single	30

### Bare Copper Wire



Supplied in soft, medium hard or hard drawn grades. Hard drawn grade is standard for toll line construction and unless otherwise specified, this grade will be furnished on all orders. The following table gives information on the hard drawn grade:

Size	Diam. Inches	Weight per 1000 Ft.	Weight per Mile	Approx. Wt. per Coil
6 B&S	.1620	79	420	220
8 B&S	.1285	50	265	220
9 B&S	.1144	40	210	220
10 B&S	.102	31	165	220
12 N.B.S.	.104	33	174	228
12 B&S	.0808	20	105	125
14 B&S	.0641	13	65	125

### Weatherproof Copper Wire



Weatherproof copper wire is especially adaptable to telephone, telegraph and railway signal work, combining high conductivity with great tensile strength. Consists of hard drawn copper conductor with either double or triple close cotton braid, impregnated with moisture proofing and weather proofing compound. **USE B&S GAUGE WHEN ORDERING.** Also specify whether double or triple braid is desired. Always sold by weight.

Size B. & S. Gauge	Approx. Weight Lbs. per 1000 Ft.		Approx. Weight Lbs. per Mile	
	Double Braid	Triple Braid	Double Braid	Triple Braid
6	100	112	529	590
8	66	75	349	395
10	40	53	241	280
12	30	35	158	185
14	25	25	107	130
16	20	20	83	105

Nos. 6 and 8 put up in standard coils of 150 or 300 lbs. Nos. 10, 12, 14 and 16 put up in standard coils of 100 to 125 lbs. and can also be furnished in 25-lb. coils.

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# KELLOGG Poles

Northern White Cedars . . . Western Red Cedars . . . Creosoted  
Yellow Pines . . . all sturdy, strong and straight poles . . . bored,  
gained, seasoned and treated to Kellogg specifications. Quality  
Guaranteed . . . all sizes stocked . . . abundant supply the year 'round  
. . . immediate shipments . . . conveniently located warehouses.  
Specify Kellogg "Doubly Guaranteed" Poles on your next order.

**KELLOGG**  
SWITCHBOARD AND SUPPLY COMPANY  
1066 West Adams Street, CHICAGO

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CONDENSED  
**PRICE LIST**

NUMBER 685



APPLYING TO

**KELLOGG**  
SWITCHBOARDS  
TELEPHONES  
APPARATUS  
CONSTRUCTION  
MATERIAL AND  
LINE SUPPLIES  
OF  
CATALOG No. 92

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**KELLOGG SWITCHBOARD & SUPPLY COMPANY**  
1066 West Adams Street  
CHICAGO, ILLINOIS

# CUSTOMER INFORMATION

## ORDERS

So that we may give you better service we would suggest that order blanks be used. We will be glad to furnish you a supply. In case blanks are not available, please write the items on a sheet separate from your letter; being sure that your name is written on this sheet.

We suggest that when ordering you give us the catalog number of the items required together with a brief description. Shipment on orders incorrectly written or lacking numbers and description may be delayed until full information is received.

Although we will do all possible to make correct shipments we cannot be responsible for errors in the transmission of orders by telephone and telegraph, or for duplicate shipments made on confirming orders which are not so marked. We would suggest that confirming orders be mailed promptly, for frequently we can correct errors in transmission before actual shipment.

## PRICES

The prices quoted herein do not include any Excise, Sales, Use, or similar taxes or duties. All such taxes and duties will be added on invoices, where applicable, as additional charges.

Prices shown in this list are subject to change without notice.

All unpriced orders will be invoiced at lowest prevailing prices for the quantity ordered.

On priced orders which cannot be filled at prices specified, due to change, we will invoice at lowest prevailing prices.

A service charge is added to the F.O.B. Chicago price of all Kellogg manufactured apparatus when delivered from branches. This charge partly covers the cost of transportation to the warehouse, the cost of additional handling and the cost of carrying in stock for immediate delivery. There is no extra charge on shipments from Chicago. A stated flat charge is made on certain items such as telephones, desk set boxes, etc., but the service charge on other items is as follows, (except where specific F.O.B. prices are shown for Kansas City and San Francisco).

Kansas City Stock.....2%      San Francisco Stock.....5%

## GUARANTEE

We guarantee goods of our own manufacture against manufacturing defects for a period of one year from date of invoice when such goods prove defective while being used for the purpose for which they were manufactured.

All line supplies and construction material listed herein carry the guarantees of their respective manufacturers. We guarantee these products to the extent that we will replace defective products or their component parts after inspection by us or our suppliers, within 90 days from date of purchase.

It is our desire and intent to furnish first class materials at all times, and we insist on rigid manufacturing inspections by our suppliers.

Under this guarantee we will make replacement of defective products and parts only and will not be liable for any charges or costs incurred in the removal or replacement of the defective products or parts.

No goods should be returned and no credit will be allowed unless a return permit has been obtained before shipment.

## TERMS

Our terms are 30 days net from date of invoice unless discounts are otherwise specified, as in the case of certain supply items. The terms are clearly specified on our acknowledgment of orders.

Purchasers unknown to us will avoid delays if bank or commercial references accompany their first order for goods to be shipped on open account. We would suggest full remittance with the first order under such circumstances. We will be glad, however, to ship by freight with sight draft attached to bill of lading or by express collect on delivery if more convenient.

## CHANGES AND CANCELLATIONS

Changes and cancellations cause delays in our service to you and increased expense. No such changes or cancellations may be made without permission from us and agreement on your part to stand any additional expense.

## SHIPMENTS

Shipments will be made in accordance with directions received with your orders. In absence of definite instructions we will use our best judgment in making selections of routes, etc. Be sure to state whether you desire shipment to be made by freight, express or parcel post collect or prepaid. You will expedite shipment if you will order by catalog number.

## CLAIMS FOR BREAKAGE AND NON-DELIVERY

All of our goods are checked and packed by experienced packers. As our receipts from transportation companies clearly specify that shipments are received in good condition we are not responsible for any loss or damage in transit.

If a freight shipment is delivered to you in bad order or with a shortage when compared to bill of lading be sure to have shortage or damage noted by freight agent on both receipt and expense bill.

If packages or cases are apparently in good order but on opening a shortage or damage is found, call the Freight Agent or Adjuster to view same and have him mark the freight bill.

While we are willing to assist you in every possible manner in collecting claims for loss or damage in shipments we will not be responsible for such collections or replacements.

Claims on parcel post shipments may be made on us as we insure the shipments and make the adjustments. These claims should be made immediately upon receipt of goods and should be accompanied by the packer's ticket which is placed in each package and by our invoice number. No claims can be considered five days after receipt of shipment.

## RETURNING GOODS

No goods should be returned for credit without first writing us giving full information as to the reason and requesting a return permit. This is for your protection.

Your name and address should be marked plainly on the package of returned goods. Notice of shipments should be forwarded to us. Your cooperation in this manner will enable us to quickly identify the goods and give you better service.

We are ready at all times to rectify errors we make, without cost to our customers. Our liability for errors or defective merchandise, however, is limited to the price of the goods in question only. No credit will be allowed for repair of our merchandise unless such repair has been authorized by us.

## MARINE AND PARCEL POST INSURANCE

Unless otherwise directed, we reserve the right to insure against non-delivery all shipments made by steamer or parcel post. A nominal charge will be made for this service.

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# Kellogg

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## TELEPHONES

### Cat. Page 2

#### DESK MASTERPHONE

To obtain price of complete Masterphone desk set add price of Masterphone to desk set boxes listed on page 3.

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
900-A	\$12.65	\$12.80	\$13.05
950-LR	14.40	14.70	15.10

#### SIDE MOUNTING EXTENSION MASTERPHONE

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
9830	\$12.35	\$12.50	\$12.75
9735	10.55	10.70	10.95

#### WALL MASTERPHONE EXTENSION

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
F9827	\$12.35	\$12.50	\$12.75

### Cat. Page 3

#### DESK MASTERPHONE

To obtain price of complete desk set add price of 700-A Masterphone to standard desk set box listed below.

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
700-A	\$12.85	\$12.80	\$13.05

#### DESK SET BOXES

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
F2328	\$12.55	\$12.80	\$13.20
F2326	13.10	13.35	13.75
F2361	13.25	13.50	13.90
F2370	13.90	14.15	14.55
F2374	14.65	14.90	15.30
F2376	14.40	14.65	15.05

#### WALL MASTERPHONE

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
3809-M	\$22.65	\$23.05	\$23.65
3812-M	23.55	23.95	24.55
3816-M	24.20	24.60	25.20
3820-M	24.70	25.10	25.70
3824-M	24.70	25.10	25.70

#### CONVERSION KIT

Code No.	Price Complete		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
Kit No. 7			\$7.50
Kit No. 8			8.25

#### 4-CONDUCTOR HANDSET

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
40-C			\$7.25

### Cat. Page 4

#### COMPACT WALL TYPE

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
F2808	\$19.35	\$19.75	\$20.35
F2809	19.25	19.65	20.25
F2812	20.15	20.55	21.15
F2816	20.80	21.20	21.80
F2820	21.55	21.95	22.55
F2824	21.30	21.70	22.30
F2859	20.40	20.80	21.40
F2860	21.55	21.95	22.55
F2880	21.05	21.45	22.05

#### LARGE CABINET TELEPHONES

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
4886	\$21.05	\$21.45	\$22.05
4885	20.40	20.80	21.40
4884	21.15	21.55	22.15

#### RESIDENCE TYPE

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
F1809	\$19.25	\$19.65	\$20.25

### Cat. Page 5

#### DESK STANDS

Price Each

To obtain price of complete desk set add price of F118 desk stand to standard desk set box listed on page 3.

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
F118	\$8.45	\$8.60	\$8.85

#### DESK SETS

Price Complete

Code No.	Price Complete		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
F 9	\$21.05	\$21.40	\$22.00
F 7	21.55	21.95	22.55
F 12	21.70	22.10	22.70
F 16	22.35	22.75	23.35
F 20	23.10	23.50	24.10
F 24	22.85	23.25	23.85

#### KELLOGG OUTDOOR TELEPHONE

Price Each

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
4883	5-bar, 1 to 4		\$54.00
5	or more		49.50
4888	6-bar, 1 to 4		56.00
5	or more		51.50

#### PORTABLE TELEPHONES

Price Each

Code No.	Quantity	Price Each		
		F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
3001	1 to 4			\$32.00
3001	5 to 19			30.00
3001	20 to 49			28.00
3001	50 to 100			26.00
3001	100 and over			25.00

#### TEST SETS

Price Each

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
1016	\$20.70	\$21.10	\$21.70

## TELEPHONE PARTS

### Cat. Page 6

#### TRANSMITTER ARMS

Price Each

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
42			\$ .65
50			.80

#### MAGNETO EXTENSION BELL

Price Each

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
37-SA	\$4.90	\$5.05	\$5.20
37-SD	5.25	5.40	5.55
37-SG	6.00	6.15	6.30
37-BA	5.00	5.15	5.30
37-HB			
or 37-HA	5.45	5.60	5.75

#### WEATHERPROOF LOUD RINGING BELL

Price Each

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
65-SA	\$9.45	65-HB	\$12.10
65-SD	9.60	65-HA	12.10
65-SG	9.75		
65-SA with condenser			\$10.30
65-SD with condenser			10.45
65-SG with condenser			10.60

#### INDUCTION COILS

(See Page 22)

Price Each

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
108-A			\$ .95
100-A			1.20
105-A			2.00
109-A			1.75

### Cat. Page 6—Cont'd.

#### CONDENSERS

Price Each

28		\$ .60
67		.85

Discounts on above Condensers: Less than 25, Net; 25 and over, 10%.

#### CORDS

Price Per 100

F641-D		\$48.00
641-D		48.00
F640-D		48.00

Discount on quantity of cords. Various Code Nos. may be combined to make up quantity. 1 to 99, Net; 100 to 499, less 10%; 500 and over, less 15%.

### Cat. Page 7

#### CORDS

Price Per 100

Code No.	Price Per 100		F.O.B. Chicago
	F.O.B. Chicago	Code No.	
640-D	\$48.00	F644-TR	\$21.00
F666-D	60.00	644-TR	21.00
666-D	60.00	F642-TR	21.00
F454-C	62.00	F674-D	48.00
454-C	62.00	F673-C	50.00

Discount on quantity of cords. Various Code Nos. may be combined to make up quantity. 1 to 99, Net; 100 to 499, less 10%; 500 and over, less 15%.

#### EXTENSION KEY BOX

Price Each

8		\$5.00
9		5.50

#### GENERATORS

Price Each

15		\$7.25
53		8.75
59		8.90

#### HINGE

Price Per 100

Code No.	Description	Price Per 100	
		F.O.B. Chicago	F.O.B. San Francisco
37778	Hinge		\$8.00
7865	Screw		1.00

#### POSTS—BINDING

Price Each

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
11			\$ .02 1/2
63			.04

#### CABINET LOCK

Price Each

14		\$ .12
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#### NUMBER PLATES

Price Each

87		\$ .10
88	Less than 1000.	.08
	1000 and Over	.06

### Cat. Page 8

#### RECEIVERS—SUBSCRIBERS

Price Each

Code No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
F41-A with cord			\$2.20

#### RECEIVER SHELL AND CAP

1 to 99

Price Each

27944	Shell		\$ .50
32307	Cap		.28

#### HOOKSWITCHES

Price Each

Code No.	Price Each		F.O.B. Chicago
	F.O.B. Chicago	Code No.	
103	\$1.25	156	\$1.50
155			1.60

# Kellogg

**Cat. Page 8—Cont'd.**

RINGERS With Gongs Price Each		
Code No.		F.O.B. Chicago
78-A		\$2.50
78-D		2.65
78-G		2.90
79-A		2.60
79-D		2.75
79-G		3.05

Note: Ringers with special gongs priced on application. Deduct 25c each ringer when furnished less gongs.

**Not Listed in Cat. No. 9**

RINGER COILS Price Each		
Piece No.	Used with Ringer No.	F.O.B. Chicago
51066	79-D and 84-D	\$ .87 1/2
51081	79-G and 84-G	1.00
51098	78-A	.82 1/2
51140	78-G	1.00
51156	78-D	.87 1/2
51198	79-A and 84-A	.82 1/2

**MASTERPHONE RECEIVER**

Piece No.	Price Each	F.O.B. Chicago
55919		\$2.20

**MASTERPHONE TRANSMITTER**

57340		\$2.50
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**TRANSMITTER CORDS**

Piece No.	F.O.B. Chicago	Piece No.	F.O.B. Chicago
11171	\$.05	11172	\$.05

**TRANSMITTERS**

**No. 22 Type—Complete**

Code No.	Price Each	F.O.B. Chicago
22-L		\$2.25
22-LC		2.25

When mouthpiece is not desired, deduct 15c.

**No. 64 Type—No Back but with Mouthpiece**

64-L		\$2.05
64-LC		2.05

When mouthpiece is not desired, deduct 15c.

**KELLITE  
TRANSMITTER MOUTHPIECE  
—For Kellogg Transmitters**

Piece No.	Telephone Price Each	F.O.B. Chicago
29779	1 to 99	\$.15
	100 to 299	.14
	300 to 499	.13
	500 to 999	.12
	1000 and over	.11

**Operators**

29776		\$.55 each
39354		.85 each

**COMPOSITION MOUTHPIECES**

**For Kellogg Transmitters**

Piece No.	Price Each	F.O.B. Chicago
1750	1 to 49	\$.09
	50 to 99	.08
	100 and over	.07

**WRITING SHELVES**

Piece No.	Price Each	F.O.B. Chicago
26743		\$1.00
43720		.85

**Cat. Page 9**

**RECEIVER PIECE PARTS**

Piece No.	Description	Price Per 100	F.O.B. Chicago
1400	Diaphragm Replaced by 58015		\$ 3.50
2462	Washer		2.00
3874	Washer		1.00
5057	Screw		1.00
9233	Receiver Coil		40.00
9234	Receiver Coil		40.00
13477	Cups		30.00
13480	Terminal Assembly		7.00
13481	Insulation		1.00
13482	Bushing		2.00
13485	Nuts		1.00
13573	Washer		1.00
41958	Magnet		8.00
41959	Magnet		8.00
41961	Screw		1.00
41998	Screws		2.00
51270	Terminal Post Assembly		6.00

**TRANSMITTER PIECE PARTS**

Piece No.	Description	Price Per 100	F.O.B. Chicago
2629	Screw		\$ 1.00
4169	Insulation		2.00
4172	Followers		1.00
4175	Washers		1.00
4176	Bushing		1.00
5079	Screw		1.00
5670	Screw		1.00
5671	Screw		1.00
6008	Block		15.00
6643	Bridge		12.00
8859	Screw		1.00
9164	Transmitter Front		50.00
9196-L	Diaphragm		100.00
9227	Transmitter Front		50.00
10259	Transmitter Back		15.00
12341	Bridge Assembly		50.00
12344	Cushion Assembly		3.00
12348	Screw		2.00
12349	Screw		1.00
17099	Insulation		1.00
18024-L	C Diaphragm		100.00
29636-C	Diaphragm		100.00
38389	Insulation		2.00
41019	Washer		1.00
41020	Connector		2.00
46279	Transmitter Back		20.00

**Cat. Pages 10-11**

**RINGER PIECE PARTS**

Piece No.	Description	Price Per 100	F.O.B. Chicago
1874	Spring		\$ 4.00
2441	Heel Iron		8.00
2445	Magnets		12.00
2448	Screws		2.00
2449	Nuts		1.00
2451	Screws		2.00
2452	Yoke Assembly		12.00
2455	Support Adj.		8.00
2522	Nuts		1.00
2552	Terminals		6.00
2838	Stud		4.00
3491	Screw		1.00
4375	Screws		1.00
4722	Nuts		1.00
6121	Screw		1.00
6498	1st Party Armature		75.00
6690	Nut		2.00
6705	Magnets		10.00
6718	2nd Party Armature		75.00

**Cat. Pages 10-11—Cont'd.**

Piece No.	Description	Price Per 100	F.O.B. Chicago
6719	3rd Party Armature		75.00
6720	4th Party Armature		75.00
7122	Washer		3.00
8692	Screw		1.00
8973	Thread		1.00
11540	Screw		1.00
11611	Arm. Assembly		15.00
11612	Armature		20.00
12154	Ringer Magnet		12.00
12157	Arm. Assembly		15.00
12160	Arm. Support Assembly		12.00
12161	Screw		1.00
14762	Washer		1.00
15193	Armature 1st		75.00
15194	Armature 2nd		75.00
15195	Armature 3rd		75.00
15196	Armature 4th		75.00
29079	Sleeving		1.00
30488	Gongs		15.00
35042	Mounting		4.00
39400	Screws		1.00
40492	Assembly Heel Iron		25.00
42291	Assembly Heel Iron		42.50
42296	Screws		2.00
46105	Washer		8.00
46936	Washer		1.00
46943	Screw		2.00

**Cat. Page 12**

**GENERATOR PIECE PARTS**

Piece No.	Description	Price Per 100	F.O.B. Chicago
2936	Bushing		\$ 1.00
3264	Collar		6.00
3265	Collar Assembly		7.00
3266	Springs		3.00
3267	Gear Wheel Assembly		85.00
3270	Collars		15.00
3272	Stop Collar		4.00
3273	Gear Wheel		12.00
3274	Washer Assembly		3.00
3276	Magnet		50.00
3281	Pole Piece		80.00
3668	Screw		1.00
4107	Screw		1.00
4378	Cont. Spring		10.00
4445	Pole Piece Assembly		100.00
4417	Shaft		30.00
4500	Shaft		35.00
4748	Mtg. Plates		15.00
5019	Washers		1.00
5026	Screw		1.00
5075	Screw		1.00
5076	Screw		1.00
5416	Cont. Spring		10.00
6130	Screw		1.00
7732	Insulation		4.00
9247	Screw		1.00
9765	Spring		10.00
9893	Fibre Washer		1.00
12172	Bracket Assembly		40.00
12175	Bracket Assembly		40.00
12973	Armature		300.00
12974	Armature		300.00
13458	Pole Piece Assembly		115.00
13459	Magnets		50.00
13461	Mtg. Plate		20.00
13462	Magnet		50.00
18070	Insulation		1.00
18071	Insulation		1.00
20093	Washer		1.00
28670	Screw		3.00
29992	Magnet		50.00
31453	Washer		1.00

**Cat. Page 12—Cont'd.**

Place No.		F.O.B. Chicago
38400	Fibre Washer	1.00
40875	Thick Insulation	1.00
41591	Screws	1.00
42343	Washer	1.00
42647	Cont. Spring	10.00
42655	Spring	10.00
42687	Spring Assembly for 15 53 Gen.	50.00
48033	Oil Wick	1.00
	3/2"x3/4" Cotter Pin	2.00
15911	Gen. Handles Assembly	
	Lots of 1 to 10	25.00
	Lots of 10 to 25	22.00
	Lots of 25 and over	18.00
51527	Shaft	20.00
51515	Shaft	30.00

**Cat. Pages 13-20**

**SWITCHBOARDS**

**Magneto**  
Send for bulletin and prices  
**Masterbuilt**  
Send for bulletin and prices

**Cat. Page 21**

**ARRESTERS**  
Price Per Strip

Code No.	F.O.B. Chicago
6	\$15.00
9	7.20

**COOK "L"-9 WALL FRAME**  
Price Each

Code No.	F.O.B. Chicago
1050	\$ 9.50
1052	12.00
1054	16.00

The above frame takes No. 10, 10-W, H-36, 100 or 105 protectors. Add price of protector selected from previous protectors.

**COOK H-36 CENTRAL OFFICE PROTECTORS**  
Price Per Pair

Code No.	F.O.B. Chicago
1202	\$ .70
1203	.70

**No. 100 Central Office Protectors**

Code No.	F.O.B. Chicago	Discount 100 Pcs. and Over
1230	\$1.29	
1231	1.19	
1232	.18 ea.	5%
1234	7.50 ea.	

**COOK "L"-10 MAIN DISTRIBUTING FRAME**

Code No.	F.O.B. Chicago
1260	\$ .10
1040	1.00

**Cat. Page 22**

**COILS—INDUCTION**  
Price Each

Code No.	F.O.B. Chicago
108-A	\$ .95
7-D	2.35
81-A	1.75

**OPERATOR'S FEED COIL**  
Price Each

Code No.	F.O.B. Chicago	Code No.	F.O.B. Chicago
3-A	\$5.50	4-A	\$5.50

**REPEATING COILS**

19-A	\$4.50	20-A	\$4.25
16-A	4.75		

**COIL MOUNTINGS**

1012	\$ .75	1014	\$ .75
1013	.75		

**Cat. Page 22—Cont'd.**

**PHANTOM COILS**

Code No.	F.O.B. Chicago	Discount 20 & Over
21-A	\$ 6.50	Less 10%
24-A	7.50	Less 10%
22-A	14.00	Less 10%

**PHANTOM COIL HOUSING**  
Price Each

	Less than 10	10 or More
For 1-24-A Coil	\$15.25	\$13.90
For 2-24-A Coil	21.50	19.25
Complete with		
1 No. 24-A Coil	22.75	21.40
2 No. 24-A Coils	36.50	34.25
1 No. 18-A Coil	27.00	25.65
2 No. 18-A Coils	45.00	42.75

Write for Repeating and Drainage Coils Bul. No. 206 for complete information.

**INSULATING TRANSFORMER**  
Price Each

Code No.	F.O.B. Chicago
19-B	\$17.50
19-A	20.00

**CONDENSERS**

64	\$1.25
66	1.15
67	.85
68	.85

Discounts on above Condensers: Less than 25, Net; 25 and over, 10 per cent.

**Cat. Page 23**

**CONDENSERS**  
Price Each

Code No.	F.O.B. Chicago
24	\$1.50
25	1.30
36	1.15

Discounts on above Condensers: Less than 25, Net; 25 and over, 10 per cent.

**COMBINED DROPS AND JACKS**

Code No.	Price Each	Code No.	Price Each
300-A	\$2.50	301-A	\$2.25
300-C	2.80	301-C	2.55
300-E	2.65	301-E	2.40

Note: Price of Drop and Jack does not include mounting strip.

**MOUNTINGS**  
Price Per Strip

Code No.	F.O.B. Chicago
257	\$2.25
258	3.50
329	3.50
333	2.25
395	2.25
426	3.50

**COILS ONLY FOR ABOVE DROPS AND JACKS**  
Price Each

Ohms	F.O.B. Chicago
500	\$ .85
1000	1.00

**DROPS—CLEAR OUT**

(Prices do not include mountings)

Code No.	F.O.B. Chicago
51-DC	\$1.60
51-DE	1.45

**COILS ONLY FOR ABOVE DROPS**

500 Ohms	\$ .85
1000 Ohms	1.00

**MOUNTINGS**  
Price Per Strip

Code No.	F.O.B. Chicago
259	\$1.75

**Cat. Page 24**

**MOUNTINGS—Continued**  
Price Per Strip

Code No.	F.O.B. Chicago
433	\$2.40

**COMB. RINGER-DROP AND NO. 319 JACK**

Code No.	F.O.B. Chicago	Per Strip of 1	Per Strip of 2	Per Strip of 3
3-A On 1 No.				
455 Mtg.	\$5.75	\$10.50	\$15.25	
3-D On 1 No.				
455 Mtg.	5.75	10.50	15.25	
3-E On 1 No.				
455 Mtg.	6.05	11.10	16.15	

**MOUNTING**  
Price Per Strip

Code No.	F.O.B. Chicago
455	\$1.05
276	Price on application

**NO. 10 NUMBER PLATE**

Quantity	Price Per 100	Quantity	Price Per 100
1 to 100	\$8.75	250 & over	\$ 5.00
100 to 250	6.25	Single letter	40.00

Note—No. 10 plates with more than 3 figures, more than 1 letter, or a combination of figures and letters is special. Price only on application.

**SWITCHBOARD CORDS**  
Price Each

Code No.	36"	48"	60"	72"	84"
304-ST	\$ .50	\$ .55	\$ .60	\$ .65	\$ .70
353-ST	.55	.60	.65	.70	.75
301-TO	.47	.51	.55	.59	.63

**PLUGS**  
Price Each

Code No.	F.O.B. Chicago
42	\$ .75
247	.75

**CORD FASTENERS**

4	\$ .05
5	.05

Lots of 100 and over 10%.  
1000 and over 20%.

**CORD HOOK**  
Price Each

Code No.	F.O.B. Chicago
2	\$ .03

**CORD WEIGHT**

9	\$ .35
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**GENERATORS**

63	\$8.75
72	8.75

**GENERATOR CRANKS**

9	\$ .75
14	.75
17	.75
15911	1 to 10..... .25
	10 to 25..... .22
	25 and over..... .18

**Cat. Page 25**

**SWITCHBOARD KEYS**  
Price Each

Code No.	F.O.B. Chicago	Code No.	F.O.B. Chicago
1002	\$1.40	1033	\$1.20
1028	1.30	1041	1.60
1029	1.90	1042	1.25
1030	1.95	1043	1.85
1031	1.80	33	1.20
28	1.30	41	1.60

**KEY ESCUTCHEONS**

1012	\$ .75	1026	\$ .75
1013	.75	1030	1.10
1021	.25	1065	.75
301	.35	303	.75

**Cat. Page 26**

**OPERATOR'S RECEIVERS AND TRANSMITTERS**  
 Price Each

Code No.	Description	F.O.B. Chicago
65-A	with No. 12 head band	\$3.00
65-A	less head band	2.65
46-A	with No. 2 head band	3.50
46-A	less head band	2.65
14-A	with No. 2 head band	3.50
14-A	less head band	2.65
55-C	with cord	2.75
76-C	less cord	4.00
1076-C	less cord	4.25

**HEAD BANDS**

12		\$ .40
2		1.00

**OPERATOR'S HAND SET**

39-C		\$7.25
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**OPERATOR'S CORDS, JACKS, PLUGS**

110-OR	Cord	\$ .50
146	Plug	1.25
43	Jack	.75
111-0	Cord	.95
145	Plug	1.25
26-OR	Cord	.66
107	Plug	1.25
237-OR	Cord	.66
75	Plug	1.25
24	Jack	1.00
67-O	Cord	.95
25	Plug	2.50
57	Jack	1.25
439-O	Cord	.95
182	Plug	1.25
325-A	Jack	1.25

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**TOOLS**

Code No.	F.O.B. Chicago	Code No.	F.O.B. Chicago
8	\$ .15	42	\$ .55
9	.15	50	4.50
10	.15	51	3.50
12	.75	71	.75
16	1.50	67	2.00
22	.55	68	.40

**SWITCHBOARD CABLE**

Two Silk and One Cotton Tinned Wire  
 Round Type Wax Core  
 Round Type

Code No.	Less than 100 ft.	100 to 500 ft.
65-A	\$10.75	\$ 8.15
149-A	13.75	11.00
127-A	16.50	12.50
42-A	19.00	14.25
112-A	25.00	19.00
63-A	42.00	31.50
62-A	84.00	63.00

**Lead Covered**

Code No.	Less Than 100 Ft.	100 to 500 Ft.	500 to 2500 Ft.
148-L			Price on application
1/8" Lead	\$18.50	\$14.00	Price on application
1/4" Lead	21.00	16.00	Price on application
1/2" Lead	26.00	20.00	Price on application
3/4" Lead	30.00	22.50	Price on application
1" Lead	55.00	41.50	Price on application
1 1/2" Lead	99.00	75.00	Price on application

**POWER APPARATUS**

**Cat. Pages 28-31**

**POWER UNIT**

Code No.	Description	F.O.B. Chicago
1-A		\$75.00

**EXIDE BATTERIES**

Price Each  
 F.O.B. Philadelphia, Pa.

Type	Description	11 Cells Complete In Crata
BTR-5	(Old BTE-5)	\$32.63
BTER-7	(Old BTE-7)	37.61

**PHILCO BATTERIES**

Price Each

Description	F.O.B. Phil., Pa.
522 CF-B 11 Cell	\$31.50
922 PF-B 11 Cell	33.75

**GOULD BATTERIES**

Description	F.O.B. Depew, N. Y.
MSC-52 (1 Tray)	\$34.00
MSX-73 (1 Tray)	37.63

**FANSTEEL OPERATORS' POWER UNIT**

Code No.	Description	F.O.B. Chicago
CAB-4		\$28.60
CAB-6		35.75

**TELERING**

Code No.	Description	F.O.B. Elyria, Ohio
EX3		\$44.00

**SUB-CYCLE RINGING MACHINE**

Description	F.O.B. Lorain, Ohio
Sub-Cycle	\$45.00

**POLE CHANGERS**

Catalog No.	Description	F.O.B. Chicago
30		\$27.00
36-A		43.00

**APPARATUS PANELS**

2		\$25.00
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**SYNCHROVERTER**

Description	F.O.B. Cedar Rapids, Ia.
Synchroverter	\$66.00

**FANSTEEL RECTIFIER**

Description	F.O.B. North Chicago, Ill.
G30	\$36.40

**MOTOR GENERATOR**

Description	F.O.B. Boston, Mass.
MG-125	\$61.20

**PIECE PARTS**

**MASTERPHONE PIECE PARTS**

Piece No.	Description	F.O.B. Chicago
58015	Diaphragm	\$ 3.50
55367	Handle	300.00
55369	Transmitter Mouthpiece Ring	25.00
55370	Ear Cap	25.00
55398	Moulded Kellite Base only	250.00
55919	Receiver	220.00
57340	Transmitter	250.00
57623	Transmitter Mouthpiece	50.00
F673-G	Cord	50.00

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**RECEIVER PIECE PARTS**  
 Price Per 100

Piece No.	Description	F.O.B. Chicago
58015	Diaphragm	\$ 3.50
2109	Screw	3.00
2115	Thumb Nut	10.00
2117	Lock Nut	3.00
2875	Nuts	1.00
4460	Screws	1.00
5085	Shell	50.00
5086	Cap	25.00
5094	Binding Posts	7.00
5101	Screw	3.00
5102	Bushing	3.00
5103	Washers	1.00
5115	Screw	3.00
8106	Receiver Coil	40.00
8107	Receiver Coil	40.00
8784	Washer	1.00
13602	Magnet	20.00
26550	Washer	1.00
27585	Receiver Cap	25.00
30208	Shell	50.00
43360	Receiver Cap	25.00
43371	Receiver Coil	40.00
43372	Receiver Coil	40.00
43396	Screw	1.00
44354	Receiver Body Assembly	40.00
44358	Cap	25.00
44674	Magnets.....Replaced by 56131	
44676	Nut	1.00
45171	Yoke Assembly	8.00
49358	Wire	2.00
56131	Magnet	20.00
58016	Diaphragm	3.50

**Cat. Pages 33-34**

**DROP AND JACK PIECE PARTS**  
 Price Per 100

Piece No.	Description	F.O.B. Chicago
116	Screw	\$ 1.00
1161	Shells	30.00
1164	Screw	2.00
1263	Clips	2.00
1443	Insulation	1.00
2233/14993	Arm. and hook assembly	25.00
2233/7519/25761/29378	Armature and hook assembly	45.00
2233/1086	Arm. and hook assembly	21.00
2233/4813/7519/25761	Armature and hook assembly	40.00
2928	Arm. Support	9.00
2936	Bushing	1.00
4106	Screws	1.00
4722	Nuts	1.00
7519	Pins	1.00
10001	Washer	1.00
10077	Frame Assembly	20.00
10369	Screw	1.00
10485	Screw	2.00
12891	Shells	40.00
12895	Cont. Spring	15.00
12897	Screws	3.00
12960	Washers	1.00
13149	Screws	1.00
13725	Screws	1.00
14155	Terminals	1.00
16106	Washer	1.00
16216	Bushing	1.00
16918	Spring Assembly	25.00
16923	Spring Assembly	15.00

**Cat. Pages 33-34—Cont'd.**

Piece No.	Description	F.O.B. Chicago
17795	Insulation	1.00
18069	Terminal	2.00
18070	Insulation, Thin	1.00
18071	Insulation, Thick	1.00
18994	Bushing	1.00
19107	Bushing	1.00
25759	Shell	30.00
25761	Cont. Spring	10.00
25766	Washer	1.00
25767	Bushing	1.00
25769	Cont. Screw	15.00
25773	Terminal	8.00
27781	Separator	2.00
28184	Screw	2.00
29284	Terminal	5.00
29290	Connectors	2.00
29291	Connectors	2.00
29293	Sleeves	9.00
29308	Springs	10.00
31446	Separator	2.00
31449	Separator	2.00
39467	Cont. Spring Assembly	20.00
39470	Cont. Spring	10.00
39474	Cont. Spring	15.00
39476	Terminal	6.00
39478	Terminal	7.00
39561	Terminal	8.00
39635	Shell	25.00
40872	Separator	1.00
42225	Sleeves	9.00
42907	Screw	2.00
DJA or DA Coil		Each \$ .70
DJE or DE Coil		.85
DJC or DC Coil		1.00

**Cat. Pages 35-36**

**MOUNTING PIECE PARTS**  
Price Per 100

Piece No.	Description	F.O.B. Chicago
1100	Bushing	\$ 1.00
1295	Cont. Spring	10.00
2038	Bushing	1.00
3709	Screws	2.00
12902	Cont. Terminal	10.00
12903	Mounting Strip	50.00
12904	Insulation	15.00
12905	Insulation	22.00
12906	Insulation	20.00
12907	Insulation	9.00
12909	Bushing	2.00
12916	Insulation	30.00
12918	Insulation	35.00
12919	Insulation	20.00
12928	Insulation	30.00
13097	Mounting Strip	50.00
13098	Insulation	11.00
25013	Insulation	40.00
25015	Insulation	35.00
25858	Insulation	10.00
25927	Mounting Strip	75.00
28085	Nut	1.00
29350	Insulation	20.00
30967	Mounting Strip	75.00
39454	Shutter	7.00
39458	Supports	7.00
39459	Insulation	2.00

**555 RELAY PIECE PARTS**  
Price Per 100

Piece No.	Description	F.O.B. Chicago
11	Binding Posts	\$ 2.75
103	Condensers	85.00
203	Insulation	1.00
327	Insulation...Replaced by	18071
2445	Magnets	12.00
2448	Screws	2.00

**Cat. Pages 35-36—Cont'd.**

Piece No.	Description	F.O.B. Chicago
2449	Nuts	1.00
3434	Screws	2.00
4138	Washers	1.00
4140	Screws	1.00
4176	Bushing	1.00
4372	Connector	1.00
4375	Screws	1.00
5019	Washers	1.00
18071	Insulation	1.00
22051	Washer	1.00
32196	Separator	1.00
34744	Cont. Spring	25.00
25610	Spring	5.00
35627	Rivet	1.00
36479	Cont. & Screw Assm.	50.00
39753	Cont. Screw Support	15.00
39761	Armature Assembly	50.00
39763	Mounting	25.00
39764	Mounting	55.00
39765	Bushing	1.00
39766	Stud	3.00
39768	Screw	5.00
39770	Insulation	2.00
39813	Coil Assembly	160.00
39859	Sleeving	1.00
39861	Rivets	1.00
42270	Pins	3.00
42282	Assm. Arm Support	200.00
43921	Wrench	20.00
50787		Price on application

**Cat. Pages 37-38**

**VIBRATOR PIECE PARTS**  
Price Per 100

Piece No.	Description	F.O.B. Chicago
2388	Insulation	\$ 3.00
7428	Cont. Assembly	100.00
7450	Screw	3.00
8771	Cont. Assembly	85.00
8777	Screw	5.00
8778	Screw	5.00
8779	Screw	5.00
8780	Screw	3.00
8784	Washer	1.00
8790	Insulation	3.00
8798	Cont. Spring	125.00
8800	Spring	10.00
8801	Spring	10.00
3389	Bushing	1.00
4138	Washer	1.00
5019	Washer	1.00
5243	Terminal	1.00
5445	Washer	1.00
6216	Hex. Nut	1.00
7408	Weight	25.00
7433	Adj. Plate	11.00
7437	Spring	55.00
7440	Spring Separator	4.00
7451	Screw	5.00
8772	Adj. Plate	15.00
8780	Screw	3.00
8881	No. 6x1/2 Wood Screw	1.00
10064	Screw and Nut Assembly	4.50
11643	No. 8-32 x 3/8 Screw	3.00
11952	Frame	50.00
11953	Frame	50.00
11954	Clamp	20.00
11955	Clamp	20.00
11956	Heel Iron	7.00
11961	Cont. Stud Assembly	140.00
11962	Cont. Stud Assembly	100.00
11963	Reed Assembly	50.00
11967	Weight	20.00
11972	No. 6-32 x 1 Screw	1.00
11982	Spring Stiffener	6.00

**Cat. Pages 37-38—Cont'd.**

Piece No.	Description	F.O.B. Chicago
11985	Spring Stiffener	6.00
11986	Spring Stiffener	6.00
11991	No. 8-32 x 1/2 Screw	1.00
12008	No. 6-32 x 1 Screw	1.00
12024	Hex. Nut	2.00
12052	Bushing	3.50
15820	Screw	1.00
15962	Bushing	1.00
16105	No. 4-36 x 7/8 Screw	1.00
17014	Insulation	4.00
17016	Insulation	4.00
33159	Separator	4.00
35316	Stud	12.00
35318	Washer	1.00
35323	Coil Assembly	100.00
37771	Insulation	1.50
37788	No. 2-56 x 1/2 Mach. Screw	3.00
51060	Coil Assembly	82.50

**Cat. Pages 39-40**

**KEY PIECE PARTS**  
Price Per 100

Piece No.	Description	F.O.B. Chicago
915	Spring with Contact	\$15.00
2051	Insulation	1.00
10875	Screw	2.00
10897	Special Screw	2.00
10905	Special Screw	1.00
14778	Special Screw	2.00
15171	Key Handle	10.00
19329	Special Screw	1.00
27146	Special Screw	2.00
27210	Spring with Contact	12.50
27355	Spring with Contact	10.00
27357	Spring with Contact	17.50
27386	Spring with Contact	10.00
27499	Spring with Contact	10.00
27561	Separator	2.00
28684	Frame	25.00
28688	Cam Assembly	30.00
28689	Roller	3.00
28697	Insulation	2.00
28700	Pin	3.00
28868	Cam Stop	2.00
28870	Screw	1.00
28872	Nut	1.00
28985	Nut	2.00
29023	Screw	1.00
29033	Insulation	2.00
29184	Washer	1.00
29215	Insulation	2.00
29216	Bushing	2.00
29223	Bushing	2.00
29225	Bushing	2.00
29501	Spring	8.00
30206	Bushing	2.00
32475	Bushing	2.00
32690	Washer	1.00
47557	Washer	2.00

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**TRANSMITTER PIECE PARTS**  
Price Per 100

Code No.	Description	F.O.B. Chicago
2972	Mouthpiece Support Bearing	\$18.00
2975	Nuts	3.00
2979	Band	5.00
2980	Clasp	6.00
2982	Buckle	3.00
3874	Washer	1.00
4138	Washer	1.00
4169	Insulation	2.00

**Cat. Page 41—Cont'd.**

Piece No.	Description	F.O.B. Chicago
4172	Followers	1.00
4175	Washers	1.00
5079	Screws	1.00
5175	Plate Assembly	125.00
5176	Springs	4.00
5178	Bridges	15.00
5183	Bushings	1.00
5191	Screws	1.00
5959	Screws	1.00
6201	Screws	1.00
8542	Tubes and Cup Assem.	25.00
9175	Cushion Assembly	3.00
9448-L	Diaphragm Assem.	100.00
12348	Screw	2.00
12834	Throat	10.00
12842	Screw	2.00
15739	Block	15.00
15745	Screws	2.00
17099	Insulation	1.00
29637-C	Diaphragm Assem.	100.00
29776	Mouthpiece	55.00
32549	Transmitter Front	50.00
39353	Transmitter Cover	55.00
39354	Mouthpiece	85.00
39356-LC	Diaphragm	100.00
40863	Insulation	2.00
41018	Screw	1.00
41019	Washer	1.00
41020	Connector	2.00
43674	Breastplate Assembly	150.00
43873	Breastplate Assembly	125.00
47798	Band Assembly	20.00
51614	Rubber Band	2.00

**ARRESTER PIECE PARTS**

Piece No.	Description	F.O.B. Chicago
334	Washer	1.00
989	Nut	1.00
2615	Carbon Block	5.00
2616	Mica Insulator	2.00
3823	Terminal Assembly	8.00
32438	Washer	1.00
28254	Stud	2.00
37211	Round Nut	2.00
40132	Washer	2.00

**SUPPLIES**

**Cat. Page 42**

**NEVER-CREEP ANCHOR PLATES ONLY**

Cat. No.	Price Each F.O.B. Destination Eastern Zone			
	Less Than 100	100 to 249	250 to Carload	Carload and Over
510	\$1.05	\$ .99	\$ .94	\$ .89
615	1.50	1.42	1.35	1.27
620	2.10	1.99	1.89	1.78

Cat. No.	Price Each F.O.B. Destination Western Zone			
	Less Than 100	100 to 249	250 to Carload	Carload and Over
510	\$1.19	\$1.14	\$1.09	\$1.03
615	1.71	1.63	1.56	1.48
620	2.39	2.28	2.18	2.07

Terms: Net 30 days.

**THIMBLE EYE RODS ONLY (Hardware)**

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 or Over	Less Than \$25.00	\$25.00 or Over
C-25	\$45.95	\$39.65	\$47.30	\$41.00
C-26	51.60	44.60	53.60	46.60
C-56	72.15	62.45	75.20	65.50
C-57	80.35	69.55	83.75	72.95

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 or Over	Less Than \$25.00	\$25.00 or Over
C-25	\$48.20	\$41.90	\$52.10	\$45.80
C-26	54.95	47.95	60.75	53.75
C-56	77.25	67.55	86.05	76.35
C-57	86.05	75.25	95.75	84.95

Terms: 2% 10 days, net 30 days.

**Cat. Page 42—Cont'd.**

**NEVER-CREEP TWINEYE RODS ONLY (Hardware)**

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 or Over	Less Than \$25.00	\$25.00 or Over
C-360	\$99.95	\$86.55	\$104.35	\$90.95
C-370	111.35	96.45	116.45	101.55
C-380	123.35	106.85	129.00	112.50

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 or Over	Less Than \$25.00	\$25.00 or Over
C-360	107.25	93.85	119.75	106.35
C-370	119.80	104.90	134.40	119.50
C-380	132.80	116.30	148.95	132.45

Terms: 2% 10 days, net 30 days.

**NEVER-CREEP INSTALLING TOOLS**

Cat. No.	Price Each F.O.B. Destination Eastern Zone		Western Zone	
	Less Than 100	100 to 249	250 to Carload	Carload and Over
C-15	\$2.50	each	\$2.85	each
C-16	2.00	each	2.28	each
Wood Inserts	.50	per pr.	.57	per pr.
C-610	8.50	each	9.69	each
C-812	8.50	each	9.69	each

Terms: Net 30 days.

**DRIVE AND TWIST ANCHORS**

Cat. No.	Price Each F.O.B. Chicago or La Crosse, Wis.		
	Less Than 100	100 to 249	250 and Over
1 Asphaltum Coated	\$1.25	\$1.20	
2 Asphaltum Coated	1.85	1.80	
3 Asphaltum Coated	2.20	2.15	
1 Galvanized	1.65	1.60	
2 Galvanized	2.55	2.50	
3 Galvanized	2.90	2.85	

Terms: 1% 10 days, net 30 days.

**MATTHEWS SCRULIX ANCHORS**

Cat. No.	Price Each F.O.B. Destination Round Eastern Zone		
	Less Than 100	100 to 249	250 and Over
612-R	\$1.55	\$1.47	\$1.40
658-R	1.75	1.65	1.58
758-R	2.05	1.95	1.85
858-R	2.70	2.57	2.43

Cat. No.	Price Each F.O.B. Destination Western Zone		
	Less Than 100	100 to 249	250 and Over
612-R	\$1.77	\$1.69	\$1.61
658-R	2.00	1.91	1.83
758-R	2.34	2.23	2.13
858-R	3.08	2.94	2.81

Terms: Net 30 days.

**MATTHEWS INSTALLING TOOLS**

Cat. No.	Price Each F.O.B. Destination Eastern Zone		Western Zone	
	Less Than 100	100 to 249	250 to Carload	Carload and Over
567 Wrench	\$8.00	\$9.12		
865 Anchor Ratchet Handle				
6810 Wrench	10.00	11.40		
300 Auger	6.50	7.41		
375 Auger	8.50	9.69		
381 Auger	10.00	11.40		

Net: 30 days.

**EVERSTICK INSTALLING TOOLS**

Cat. No.	Price Each F.O.B. Destination Eastern Zone		Western Zone	
	Less Than 100	100 to 249	250 to Carload	Carload and Over
No. 5 Auger Blades	\$3.00	\$3.42		
No. 6 Auger Blades	3.00	3.42		
No. 8 Auger Blades	3.00	3.42		
No. 10 Auger Blades	3.00	3.42		
No. 12 Auger Blades	6.00	6.84		
No. 8 Tel. Handles	3.50	3.99		
No. 10 Tel. Handles	3.50	3.99		
No. 9 ft. Tamp. Bar	5.00	5.70		
No. 12 ft. Tamp. Bar	6.00	6.84		

Net: 30 days.

**Cat. Page 42—Cont'd.**

**EVERSTICK EXPANDING ANCHORS Less Rods**

Cat. No.	Price Each F.O.B. Destination 3-Way Anchors Eastern Zone			
	Less Than 100	100 to 249	250 to Carload	Carload and Over
633	\$1.30	\$1.23	\$1.17	\$1.10
833	1.50	1.42	1.35	1.27
834	1.50	1.42	1.35	1.27
836	1.70	1.61	1.53	1.44

Cat. No.	Price Each F.O.B. Destination Western Zone			
	Less Than 100	100 to 249	250 to Carload	Carload and Over
633	\$1.48	\$1.41	\$1.35	\$1.28
833	1.71	1.63	1.56	1.48
834	1.71	1.63	1.56	1.48
836	1.93	1.85	1.76	1.68

**2-Way Anchors**

Code No.	Price Each F.O.B. Destination Eastern Zone			
	Less Than 100	100-249	250-CL	CL
52	\$ .80	\$ .76	\$ .72	\$ .68
62	1.05	.99	.94	.89
82	1.70	1.61	1.53	1.44

Code No.	Price Each F.O.B. Destination Western Zone			
	Less Than 100	100-249	250-CL	CL
52	\$ .91	\$ .87	\$ .83	\$ .79
62	1.19	1.14	1.09	1.03
82	1.93	1.85	1.76	1.68

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**AIKEN MASTERGRIP ANCHORS**

Code No.	Price Each F.O.B. Destination 3-Way Anchors Eastern Zone Prices			
	Less Than 100	100-249	250-CL	CL
H5	\$1.25	\$1.18	\$1.12	\$1.05
G4	1.45	1.37	1.30	1.22
F1	1.65	1.56	1.48	1.39
F2	2.05	1.94	1.84	1.73
F3	3.00	2.70	2.54	2.38

Code No.	Price Each F.O.B. Destination Western Zone Prices			
	Less Than 100	100-249	250-CL	CL
H5	\$1.43	\$1.36	\$1.30	\$1.23
G4	1.66	1.58	1.51	1.43
F1	1.88	1.79	1.71	1.62
F2	2.34	2.23	2.13	2.02
F3	3.44	3.14	2.98	2.82

**2-Way Anchors**

Code No.	Price Each F.O.B. Destination Eastern Zone Prices			
	Less Than 100	100-249	250-CL	CL
O5	\$ .80	\$ .76	\$ .72	\$ .68
M4	1.05	.99	.94	.89
L1	1.50	1.42	1.35	1.27
L2	1.60	1.52	1.45	1.37
L3	1.70	1.61	1.53	1.44

Code No.	Price Each F.O.B. Destination Western Zone Prices			
	Less Than 100	100-249	250-CL	CL
O5	\$ .90	\$ .88	\$ .84	\$ .80
M4	1.20	1.14	1.08	1.02
L1	1.70	1.62	1.56	1.48
L2	1.80	1.74	1.66	1.58
L3	1.90	1.84	1.76	1.68

**Rodless Anchors**

Code No.	Price Each F.O.B. Destination Eastern Zone Prices			
	Less Than 100	100-249	250-CL	CL
P5	\$ .76	\$ .72	\$ .68	\$ .64

Code No.	Price Each F.O.B. Destination Western Zone Prices			
	Less Than 100	100-249	250-CL	CL
P5	\$ .86	\$ .82	\$ .78	\$ .74

Terms: Net 30 days.

**DRYVIN ANCHORS WITH NAILS**

Code No.	Price Per 100 F.O.B. Chicago or Kansas City		
	Less Than 100	100 to 500	500 and Over
3678	\$2.80	\$2.40	\$2.00
1410	3.50	3.00	2.50
1414	3.85	3.30	2.75
5614	4.90	4.20	3.50
5624	6.30	5.40	4.50
3820	7.00	6.00	5.00
1224	10.50	9.00	7.50



FOR ZONE LOCATIONS SEE BACK COVER

**Cat. Page 43—Cont'd.**

**SPERRY EXTENSION ARMS**

Cat. No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
<b>Standard Style</b>			
8	\$4.00	\$4.00	\$4.25
10	4.50	4.50	4.75
12	5.00	5.00	5.25
14	5.50	5.50	5.75
16	6.00	6.00	6.25

Cat. No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
<b>Universal Style</b>			
8	\$5.50	\$5.50	\$5.75
10	6.00	6.00	6.25
12	6.50	6.50	6.75
14	7.00	7.00	7.25
16	7.50	7.50	7.75

Note: Above prices include one mounting. If ordered with No. 3 mounting, add 50c to price. If ordered less mounting, deduct 75c. See discounts below.

**PARTS**

No. 20, 21 or 22 Clamps Minute Clamps only, per pair No. 3 Mounting, ea. All Mountings, ex- cept No. 3, ea. Receiver Hook, ea. Cord Holders, doz. Universal Attachment	F.O.B. Chicago	F.O.B. Kan. City	F.O.B. San Fran.
	.....	.50	.50
.....	.35	.35	.35
.....	1.25	1.25	1.25
.....	.75	.75	.75
.....	.25	.25	.25
.....	.25	.25	.25
.....	1.50	1.50	1.50

Discounts: Dealers and telephone companies, 1 to 6, 25%; 6 to 12, 33 1/3%; 12 to 50, 40%; 50 and over, special prices on application.

Terms: 2% 10 days.

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**MCCORMICK FIR CROSS ARMS**

Price Per 100

**Electric Light Arms 3 1/4 x 4 1/4 Inches**

Length		F.O.B.	
		Chicago, Ill. Dallas, Texas	Kansas City, Mo. Minn. Transfer Atlanta, Ga.
3 feet	2 pins	\$ 44.62	\$ 43.31
4 feet	4 pins	59.50	57.75
5 feet	4 pins	74.37	72.19
6 feet	4 pins	89.25	86.63
6 feet	6 pins	89.25	86.63
8 feet	6 pins	119.00	115.50
8 feet	8 pins	119.00	115.50
8 1/2 feet	10 pins	133.87	129.93
10 feet	8 pins	148.75	144.38
10 feet	10 pins	148.75	144.38
10 feet	12 pins	148.75	144.38

Length		F.O.B.	
		Cincinnati	New Orleans
3 feet	2 pins	\$ 46.73	\$ 42.26
4 feet	4 pins	62.30	56.35
5 feet	4 pins	77.88	70.44
6 feet	4 pins	93.45	84.52
6 feet	6 pins	93.45	84.52
8 feet	6 pins	124.60	112.70
8 feet	8 pins	124.60	112.70
8 1/2 feet	10 pins	140.18	126.78
10 feet	8 pins	155.75	140.87
10 feet	10 pins	155.75	140.87
10 feet	12 pins	155.75	140.87

**CROSS ARMS—Continued**

**Pony Telephone Arms 2 3/4 x 3 3/4 Inches**

Length		F.O.B.	
		Chicago, Ill. Dallas, Texas	Kansas City, Mo. Minn. Transfer Atlanta, Ga.
24 in.	2 pins	\$ 22.67	\$ 22.00
30 in.	2 pins	28.34	27.50
36 in.	2 pins	34.00	33.00
42 in.	4 pins	45.33	44.00
62 in.	6 pins	68.00	66.00
82 in.	8 pins	79.33	77.00
102 in.	10 pins	102.00	99.00
120 in.	12 pins	113.33	110.00

Length		F.O.B.	
		Cincinnati	New Orleans
24 in.	2 pins	\$ 23.73	\$ 21.47
30 in.	2 pins	29.67	26.83
36 in.	2 pins	35.60	32.20
42 in.	4 pins	47.47	42.93
62 in.	6 pins	71.20	64.40
82 in.	8 pins	83.07	75.13
102 in.	10 pins	106.80	96.60
120 in.	12 pins	111.67	107.33

**SIDE OR POLE BRACKETS**

Cat. No.	Price Per 1000		
	F.O.B. Chicago	F.O.B. Cincinnati	F.O.B. Minn. Transfer
2550-4	\$25.20	\$21.00	\$19.00
2551-1	27.00	22.50	21.00
2552-3	30.00	25.00	22.50
2553-LD	30.00	25.00	22.50
2554-2	39.60	33.00	30.00
2555-W.U.	39.60	33.00	30.00
2557-New W.U.	49.20	41.00	37.50
2560-Special	25.20	21.00	19.00
2561-Giant	39.60	33.00	30.00

**WOOD POLE STEPS**

2556 Plain	\$19.20	\$16.00	\$14.50
2556 Painted	19.20	16.00	14.50
2662 Plain	27.60	23.00	21.00
2662 Painted	27.60	23.00	21.00

Terms: 1% 10 days, net 30 days.

**LOCUST PINS**

Cat. No.	Price Per 100 F.O.B. Chicago			
	Less Than 250	250 to 1000	1000 to 5000	5000 and Over
1760	\$25.00	\$20.00	\$19.00	\$18.00
1761	38.75	31.00	29.00	27.00

Cat. No.	F.O.B. Kansas City-St. Paul		
	Chicago	Cincinnati	Minneapolis
1760	\$26.25	\$21.00	\$20.00
1761	40.00	32.00	30.00

Cat. No.	F.O.B. Cincinnati		
	Chicago	Minneapolis	St. Paul
1760	\$24.75	\$19.75	\$18.75
1761	38.30	30.50	28.50

Terms: 1% 10 days, net 30 days.  
Note: For Creosoted pins, steps or brackets add \$5.50 per thousand. Less than one thousand \$1.00 minimum charge.

**WESTERN UNION PINS (Hardware)**

Cat. No.	Price Per 100 F.O.B. Destination			
	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1190	\$12.45	\$10.75	\$12.80	\$11.00
1191	16.20	14.00	16.70	14.50
1193	13.70	11.80	13.95	12.05
1194	15.20	13.10	15.45	13.25
1195	16.90	14.60	17.25	14.95
1196	18.70	16.10	19.10	16.50

Cat. No.	Price Per 100 F.O.B. Destination			
	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1190	\$13.05	\$11.35	\$14.05	\$12.35
1191	17.05	14.85	18.50	16.30
1193	14.10	12.20	14.75	12.85
1194	15.60	13.50	16.30	14.20
1195	17.50	15.20	18.45	16.15
1196	19.35	16.75	20.55	17.95

Terms: 2% 10 days, net 30 days.

**Cat. Pages 44-45—Cont'd.**

**ARRESTERS**

Cat. No.	Price Each	
	F.O.B. Chicago	F.O.B. Kansas City
202	\$2.10	\$2.10
402-S	.80	.80

Discount: Less than 25, net. 25 to 100, 5%. 100 and over, 10%.

**"O" TYPE SUBSTATION ARRESTER**

Cat. No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	100 and Over
O-7	\$1.10	\$1.05	\$1.00
O-9	1.10	1.05	1.00
O-12	1.00	.95	.90
O-44	1.00	.95	.90
O-52	1.25	1.19	1.13

For F.O.B. San Francisco add \$0.05 each.  
Terms: Net 30 days.

**ARRESTERS**

Cat. No.	Price Each	
	F.O.B. Chicago or Kansas City	F.O.B. San Francisco
977-A	\$ .55	\$ .57 1/2
977-AA	.65	.67 1/2
977-D	.95	.....
977-DD	1.10	.....
975-B with cover	.75	.....
975-B less cover	.60	.....

Discount: Less than 25, net. 25 to 100, 5%. 100 and over, 10%.

Note: 977-D, 977-DD Arresters can be furnished with asbestos mats at an additional cost of \$0.05 to above prices.

Terms: Net 30 days.

**ARRESTERS**

Cat. No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	100 and Over
2	\$ .55	\$ .52	\$ .50
B-13	1.10	1.05	1.00
2 with true gap	.65	.62	.59

For F.O.B. San Francisco add \$0.05 each.

Terms: Net 30 days.

Note: The B-13 can be furnished with asbestos mat at an additional cost of \$0.05 to above prices.

**ARRESTERS**

Cat. No.	Price Each	
	F.O.B. Chicago	F.O.B. Kansas City
1000	\$1.25	.....
1000-A	.....	1.10
1000-E	.....	1.10

Discount: Less than 25, net. 25 to 100, 5%. 100 and over, 10%.

Terms: Net 30 days.

**ARRESTER PARTS**

Cat. No.	Price Per 100		
	F.O.B. Chicago		
	Less Than 500	500 and Over	F.O.B. Kansas City or San Francisco
495 Discharge Block	\$7.00	\$6.30	.....
4500 True Gap Dischargers	7.50	6.75	.....
2080 Plain Carbon	1.50	1.35	.....
2081 Grooved Carbon	1.50	1.35	.....
2090 Celluloids, "U" Shape	.....	.75	.67
2091 Perforated Celluloid Dielectrics	.....	1.00	.90
2092 Mica, "U" Shape	4.00	3.60	.....
2094 Celluloids	1.00	.90	.....

Terms: Net 30 days.



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**BATTERIES**

Price Per 100 F.O.B. Destination

Cat. No.	Description	Price
6	Columbia Gray Label.....	\$22.50
6	Columbia Ignitor .....	23.00
6	French Telephone .....	22.50
6	French Ignitor .....	23.00
6	Columbia Long Life Tele....	28.50
86-T	Unit Type (Ray-O-Vac).....	45.00
89-T	Unit Type (Ray-O-Vac).....	67.50

Price Each

T-300	Air Cell.....	2.80
T-600	Air Cell.....	4.17
9451	Transmitter Battery.....	2.20

Terms: 2% 10 days, net 30 days.

**Warehouse Locations**

Columbia: Chicago, Kansas City, Minneapolis, Fremont, Atlanta, Houston and Jersey City.

French: Madison, Chicago, Kansas City, Dallas, Atlanta, New York, and Lancaster, Ohio.

Note: Shipments weighing less than 100 pounds F.O.B. Shipping Point.

**TEST SET BATTERIES**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
04	\$.33	\$.35	\$.40
03	.60		

Terms: 2% 10 days, net 30 days.

**BATTERY BOXES**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
2	\$1.05	\$1.05	\$1.05
3	1.15		1.15

Terms: 2% 10 days, net 30 days.

**GRAVITY TYPE BATTERIES**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
5x7 Complete	\$1.20	\$1.30	
6x8 Complete	1.45	1.55	
6x8 Jars only	.85	.95	\$1.00
5x7 Jars only	.65	.75	
6x8 Zincs	.45	.50	
5x7 Zincs	.35	.40	
6x8 Coppers	.12	.13	
5x7 Coppers	.10	.11	
Blue Vitriol, per pound	.12	.13	.16

Terms: Net 30 days.

**EDISON PRIMARY BATTERIES**

Price Each

Cat. No.	F.O.B. Silver Lake, N. J.
S403 Battery Complete	\$4.40
Complete Renewal	2.15
S403 Zinc-Oxide Assembly only	1.90
S403 Caustic Soda only	.42
S403 Special Oil only	.08

**WEATHERPROOF LOUD RINGING BELL**

Price Each

Code No.	F.O.B. Chicago
65-SA	\$ 9.45
65-SD	9.60
65-SG	9.75
65-HB	12.10
65-HA	12.10

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**BOOTHS**

Price Each

**Unit Installation**

Cat. No.	F.O.B. Chicago
2-A	\$96.25
2-B	98.50
2-C	98.50
2-G	93.00
2-H	95.00
2-J	95.00
3—Oak finish	65.00
3—Mahogany finish	65.00
4—Oak finish	59.00
4—Mahogany finish	59.00

**Extra Charges Applying to Above Booths**

Crating charge, each booth.....	5.25
Knock-down charge, each booth	1.60
Seats	2.75
Electric light equipment, each booth	10.00
Ventilation equipment	25.00

Terms: Net 30 days.

**GROUP INSTALLATION**

PRICES ON APPLICATION

**BELL**

Price Each

Code No.	Description	F.O.B. Chicago
I-A	4 ohm	\$1.70
I-B	300 ohm	1.95
I-C	500 ohm	2.10

**BUZZER**

10-A	4 ohm	1.15
10-B	300 ohm	1.70
10-C	500 ohm	1.85

Terms: Net 30 days.

**PUSH BUTTONS**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City
200	\$.25	\$.25

Terms: 1% 10 days, net 30 days.

**WOOD OPERATOR'S CHAIRS**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. Gardner, Mass.
1104-C	\$14.15	\$14.40	\$13.65
1110-C	12.75		12.25
1114-C	14.25	14.50	13.75
Seats only	2.50	2.60	2.50

Terms: 2% 10 days, net 30 days.  
Note: Dark or light mahogany finish is special and requires four weeks to make shipment. Specify number of finish or send sample of woodwork.

**DO/MORE METAL CHAIRS**

Price Each

Cat. No.	F.O.B. Elkhart, Ind. 1 to 5	F.O.B. 6 and Over
1822-RGL	\$16.50	\$15.60
2428-RGL	17.30	16.20
2832-RGL	18.00	16.90
1822-RWC	15.90	14.90
2428-RWC	16.60	15.60
2832-RWC	17.30	16.20

Terms: Net 30 days.

**Cat. Page 48**

**CARRIAGE OR BRACE BOLTS**

(Hardware)

Price Per 100 F.O.B. Destination

**3/8-Inch Bolts**

No.	Zone 1	Zone 2	Zone 1		Zone 2	
			Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8633	-3"	\$2.35	\$2.05	\$2.40	\$2.10	
8633	1/2-3 1/2"	2.45	2.15	2.55	2.25	
8634	-4"	2.75	2.35	2.85	2.45	
8634	1/2-4 1/2"	2.90	2.50	2.95	2.55	

**Zone 3 Zone 4**

8633	-3"	\$2.45	\$2.15	\$2.60	\$2.30
8633	1/2-3 1/2"	2.60	2.30	2.75	2.45
8634	-4"	2.90	2.50	3.10	2.70
8634	1/2-4 1/2"	3.00	2.60	3.25	2.85

**1/2-Inch Bolts**

No.	Zone 1	Zone 2	Zone 1		Zone 2	
			Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8644	-4"	\$4.55	\$3.95	\$4.65	\$4.05	
8644	1/2-4 1/2"	4.85	4.15	5.00	4.30	

**Zone 3 Zone 4**

8644	-4"	\$4.75	\$4.15	\$5.15	\$4.55
8644	1/2-4 1/2"	5.10	4.40	5.50	4.80

Terms: 2% 10 days, net 30 days.

**MACHINE BOLTS (Hardware)**

Price Per 100 F.O.B. Destination

**3/8-Inch Bolts**

No.	Zone 1	Zone 2	Zone 1		Zone 2	
			Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8603	-3"	\$2.35	\$2.05	\$2.40	\$2.10	
8603	1/2-3 1/2"	2.65	2.25	2.75	2.35	
8605	-5"	3.40	2.90	3.45	2.95	
8605	1/2-5 1/2"	3.60	3.10	3.70	3.20	

**Zone 3 Zone 4**

8603	-3"	\$2.45	\$2.15	\$2.60	\$2.30
8603	1/2-3 1/2"	2.80	2.40	3.00	2.60
8605	-5"	3.50	3.00	3.75	3.25
8605	1/2-5 1/2"	3.75	3.25	4.00	3.50

**5/8-Inch Bolts**

No.	Zone 1	Zone 2	Zone 1		Zone 2	
			Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8810-10"	\$11.15	\$ 9.65	\$11.60	\$10.10		
8812-12"	12.40	10.70	12.90	11.20		

**Zone 3 Zone 4**

8810-10"	\$11.90	\$10.40	\$13.25	\$11.75
8812-12"	13.25	11.55	14.75	13.05

Terms: 2% 10 days, net 30 days.

**LAG SCREWS (Hardware)**

Price Per 100 F.O.B. Destination

**3/8-Inch Screws**

Cat. No.	Zone 1	Zone 2	Zone 1		Zone 2	
			Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8742	1/4-2 1/4"	\$1.95	\$1.65	\$2.00	\$1.70	
8742	1/2-2 1/2"	1.95	1.65	2.00	1.70	
8743	-3"	2.15	1.85	2.20	1.90	
8743	1/2-3 1/2"	2.35	2.05	2.40	2.10	
8744	-4"	2.65	2.25	2.70	2.30	
8744	1/2-4 1/2"	2.75	2.35	2.85	2.45	

**Zone 3 Zone 4**

8742	1/4-2 1/4"	\$2.00	\$1.70	\$2.10	\$1.80
8742	1/2-2 1/2"	2.00	1.70	2.10	1.80
8743	-3"	2.20	1.90	2.35	2.05
8743	1/2-3 1/2"	2.45	2.15	2.60	2.30
8744	-4"	2.75	2.35	2.95	2.55
8744	1/2-4 1/2"	2.85	2.45	3.05	2.65



FOR ZONE LOCATIONS SEE BACK COVER

**Cat. Page 48—Cont'd.**

**THIMBLE EYE STRAIGHT BOLTS (Hardware)**  
Price Per 100 F.O.B. Destination  
5/8-Inch Bolts

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8050-8"	\$26.90	\$23.20	\$27.45	\$23.75
8051-10"	28.20	24.30	28.80	24.90
8052-12"	29.35	25.35	30.10	26.10
8060	36.75	31.75	37.55	32.55
8061	38.80	33.50	39.75	34.45
8062	40.70	35.10	41.80	36.20

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8050-8"	\$27.80	\$24.10	\$29.35	\$25.65
8051-10"	29.25	25.35	31.05	27.15
8052-12"	30.55	26.55	32.65	28.65
8060	38.10	33.10	40.45	35.45
8061	40.35	35.05	43.05	37.75
8062	42.50	36.90	45.60	40.00

**THIMBLE EYE ANGLE BOLTS (Hardware)**  
Price Per 100 F.O.B. Destination  
5/8-Inch Bolts

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8150-8"	\$28.50	\$24.60	\$29.05	\$25.15
8151-10"	29.80	25.70	30.40	26.30
8152-12"	31.25	26.95	32.00	27.70
8160	38.85	33.55	39.65	34.35
8161	41.00	35.40	41.95	36.35
8162	43.00	37.10	44.10	38.20

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8150-8"	\$29.40	\$25.50	\$30.95	\$27.05
8151-10"	30.85	26.75	32.65	28.55
8152-12"	32.45	28.15	34.55	30.25
8160	40.20	34.90	42.55	37.25
8161	42.55	36.95	45.25	39.65
8162	44.80	38.90	47.90	42.00

Terms: 2% 10 days, net 30 days.

**GUY PLATES (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
7889	\$11.35	\$ 9.95	\$11.75	\$10.35
7890	15.40	13.30	15.90	13.80
7891	18.60	16.25	19.20	16.90

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
7889	\$12.00	\$10.60	\$13.10	\$11.70
7890	16.25	14.15	17.75	15.65
7891	19.60	17.30	21.40	19.10

Terms: 2% 10 days, net 30 days.

**DOUBLE ARMING OR SPACING BOLTS (Hardware)**  
Price Per 100 F.O.B. Destination  
5/8-Inch Bolts

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8862-12"	\$18.05	\$15.65	\$18.70	\$16.30
8864-14"	19.35	16.75	20.15	17.55
8866-16"	20.45	17.65	21.30	18.50
8868-18"	21.55	18.65	22.40	19.50

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8862-12"	\$19.15	\$16.75	\$21.10	\$18.70
8864-14"	20.65	18.05	22.95	20.35
8866-16"	21.85	19.05	24.20	21.40
8868-18"	23.00	20.10	25.55	22.65

Terms: 2% 10 days, net 30 days.

**Cat. Page 48—Cont'd.**

**FLAT CROSS ARM BRACES (Hardware)**  
Price Per 100 F.O.B. Destination

No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
7020	\$10.90	\$9.50	\$11.55	\$10.15
7022	11.85	10.25	12.55	10.95
7024	12.90	11.20	13.70	12.00
7026	13.75	11.95	14.60	12.80
7028	14.95	12.95	15.80	13.80
7030	15.80	13.70	16.75	14.65
7032	16.75	14.55	17.75	15.55
7120	12.00	10.40	12.75	11.15
7122	12.95	11.25	13.80	12.10
7124	14.15	12.25	15.05	13.15
7126	15.10	13.10	16.10	14.10
7128	16.30	14.20	17.35	15.25
7130	17.35	15.05	18.45	16.15

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
7020	\$11.95	\$10.55	\$13.80	\$12.40
7022	13.05	11.45	15.05	13.45
7024	14.20	12.50	16.40	14.70
7026	15.15	13.35	17.55	15.75
7028	16.40	14.40	18.95	16.95
7030	17.40	15.30	20.10	18.00
7032	18.45	16.25	21.35	19.15
7120	13.25	11.65	15.40	13.80
7122	14.35	12.65	16.70	15.00
7124	15.65	13.75	18.20	16.30
7126	16.75	14.75	19.50	17.50
7128	18.05	15.95	21.05	18.95
7130	19.20	16.90	22.45	20.15

Terms: 2% 10 days, net 30 days.

**CROSS ARM BACK BRACES**  
PRICES ON APPLICATION

**ROUND AND SQUARE WASHERS (Hardware)**  
Price Per 100 F.O.B. Destination

**Square Washers**

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1074	\$1.65	\$1.45	\$1.75	\$1.55
1075	2.30	2.00	2.40	2.10
1076	2.30	2.00	2.40	2.10
1078	5.00	4.30	5.20	4.50
1079	5.95	5.15	6.25	5.45
1080	8.15	7.05	8.55	7.45
1081	21.65	18.75	22.70	19.80

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1074	\$1.75	\$1.55	\$1.95	\$1.75
1075	2.45	2.15	2.75	2.45
1076	2.45	2.15	2.75	2.45
1078	5.35	4.65	6.00	5.30
1079	6.45	5.65	7.25	6.45
1080	8.80	7.70	9.95	8.85
1081	23.35	20.45	26.30	23.40

**Round Washers**

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1085	\$ .50	\$ .40	\$ .50	\$ .40
1086	.70	.60	.75	.65
1088	1.35	1.15	1.35	1.15
1089	1.65	1.45	1.70	1.50

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1085	\$ .55	\$ .45	\$ .55	\$ .45
1086	.75	.65	.80	.70
1088	1.40	1.20	1.50	1.30
1089	1.75	1.55	1.95	1.75

Terms: 2% 10 days, net 30 days.

**Cat. Page 49**

**HOUSE, POLE AND CORNER BRACKETS (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1200-9200	\$7.60	\$6.60	\$7.85	\$6.85
1202-9202	11.15	9.65	11.55	10.05
2584	16.55	14.25	16.80	14.50

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1200-9200	\$8.00	\$7.00	\$8.66	\$7.65
1202-9202	12.85	10.35	12.95	11.45
2584	17.00	14.70	17.80	15.50

Note: Above prices do not include knobs. See page 167 for knob prices.  
Terms: 2% 10 days, net 30 days.

**STOVE BOLTS (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8232	\$1.55	\$1.35	\$1.55	\$1.35
8233 1/2	2.05	1.75	2.10	1.80

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8232	\$1.55	\$1.35	\$1.65	\$1.45
8233 1/2	2.05	1.75	2.20	1.90

Terms: 2% 10 days, net 30 days.

**MACHINE BOLTS (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8603	\$2.35	\$2.05	\$2.40	\$2.10
8605 1/2	3.60	3.10	3.70	3.20

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
8603	\$2.45	\$2.15	\$2.60	\$2.30
8605 1/2	3.75	3.25	4.00	3.50

Terms: 2% 10 days, net 30 days.

**PEARL DROP WIRE BRACKETS**  
Price Each

Cat. No.	F.O.B. Chicago		F.O.B. Indianapolis	
	Less Than 25	25 to 100	Less Than 25	25 to 100
100	\$.18	\$.17	\$.17	\$.16
200	.18	.17	.17	.16
202	.16	.15	.15	.14

Terms: 2% 10 days, net 30 days.

**HIGHWAY CROSS OVER BRACKET (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1207	\$134.45	\$116.65		
1207	\$142.35	\$124.55		
1207	\$147.60	\$129.80		
1207	\$170.25	\$152.50		

Terms: 2% 10 days, net 30 days.

**CABLE**  
PRICES ON APPLICATION

**CABLE COMPOUND**  
Kellogg Formula No. 401  
Price Per 100 Pounds

Description	F.O.B. Whiting, Ind.	
	Less Than 25	25 to 100
Drums (approx. 400 lbs.)	\$3.00	
Pails (25 lbs. each)	7.50	

Terms: 1% 10 days, net 30 days.

**CABLE SUSPENSION CLAMPS (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1095	\$10.65	\$ 9.25	\$11.05	\$ 9.65
1096	27.85	24.05	28.80	25.00

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1095	\$11.30	\$ 9.90	\$12.35	\$10.95
1096	29.50	25.70	32.35	28.55

Terms: 2% 10 days, net 30 days.



FOR ZONE LOCATIONS SEE BACK COVER

**Cat. Page 49—Cont'd.**

**GUY CLAMPS (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1061	\$13.15	\$11.35	\$13.45	\$11.65
1030	16.95	14.65	17.55	15.25
1031	23.90	20.70	24.70	21.50
1033	29.15	25.25	30.25	26.35
1032	35.60	30.80	36.85	32.05
932	47.35	40.95	49.00	42.60

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1061	\$13.65	\$11.85	\$14.45	\$12.65
1030	17.95	15.65	19.65	17.35
1031	25.25	22.05	27.65	24.45
1033	31.00	27.10	34.15	30.25
1032	37.70	32.90	41.40	36.60
932	50.05	43.65	54.80	48.40

Terms: 2% 10 days, net 30 days.

**KLING GROUND CLAMPS**

Price Per 100

Size	F.O.B. Chicago		1000 and Over
	Less Than 100	100 to 1000	
1/2 inch	\$10.00	\$ 9.50	\$ 9.00
3/8 inch	12.00	11.40	10.80

F.O.R. Kansas City

Size	F.O.R. Kansas City		1000 and Over
	Less Than 100	100 to 1000	
1/2 inch	\$10.00	\$ 9.50	\$ 9.00
3/8 inch	12.00	11.40	10.80

**ADJUSTABLE GROUND CLAMPS**

Price Per 100

Cat. No.	F.O.B. Chicago		500 and Over
	Less Than 25	25 to 500	
0	\$5.25	\$4.75	\$4.25
1	5.50	5.00	4.50

F.O.B. Kansas City

Cat. No.	F.O.B. Kansas City		500 and Over
	Less Than 25	25 to 500	
0	\$5.75	\$5.25	\$4.75
1	6.00	5.50	5.00

F.O.B. San Francisco

Cat. No.	F.O.B. San Francisco		500 and Over
	Less Than 25	25 to 500	
0	\$11.00	\$8.35	\$6.50
1	11.00	8.35	6.50

Terms: Net 30 days.

**Cat. Page 50**

**CALCULAGRAPHS**

Spring Drive Price Each

Description	F.O.B. Harrison, N. J.
Model 6	\$100.00
Model 6x	125.00
Pedestal only	15.00
Case only	4.00

**Motor Drive**

Model 25	\$ 90.00
Model 25x	115.00
Model 30	90.00
Model 30x	115.00
Extra Ribbons, less than 12	—\$0.85
each. 12 and over	\$0.50 each.

Terms: Net 30 days.

**CHRONOSCOPE**

Price Each

Description	F.O.B. Chicago, Ill.
Chronoscope	\$9.30

Terms: Net 30 days.

**PHONOMETERS**

Price Each

Description	F.O.B. Phil., Pa.
Phonometers	\$10.00

**FIBRE CLEATS**

Price Per 1000

Style No. 1—2A	F.O.B. Chicago		F.O.B. San Fran.
	Less than 1,000	1,000-10,000	
Less than 1,000	\$10.00	\$10.00	
1,000-10,000	9.50	9.50	
10,000-20,000	8.00	8.00	
20,000 and over	7.50	7.50	

Terms: 2% 10 days, net 30 days.

**Cat. Page 50—Cont'd.**

**STRAIGHT COUNTERS**

Price Each

Cat. No.	F.O.B. Chicago, Ill.		F.O.B. Kansas City, Mo.		F.O.B. San Francisco, Calif.	
	Less Than 10	10 to 100	Less Than 10	10 to 100	Less Than 10	10 to 100
8	\$2.50	\$2.50	\$2.50	\$2.75		

Terms: Net 30 days.

**SWITCHBOARD JACK CLEANERS**

Price Each

No.	F.O.B. Chicago		F.O.B. Kansas City	
	221	221	249	249
No. 22 Diam.	.25	.25	.25	.25
Liquid, 4 oz. Bottle	.40	.40		
Liquid, 8 oz. Bottle	.60	.60		

Terms: Net 30 days.

Note: When ordering cleaners, specify catalog number or size of jack.

**UNIVERSAL DUSTERS**

Price Each

Cat. No.	F.O.B. Chicago		F.O.B. Kansas City		F.O.B. San Fran.	
	3.00	3.10	3.10	3.25 <td></td> <td></td>		
1	\$3.00	\$3.10	\$3.10	\$3.25		

Terms: Net 30 days.

**Cat. Page 51**

**FAHNESTOCK CLIPS**

Price Per 100

Cat. No.	BRASS		BRONZE	
	Less Than 12	12 to 100	Less Than 12	12 to 100
3	\$5.00	\$4.17	\$ 6.00	\$ 5.00
4	5.00	5.00	6.00	5.83
5	7.00	5.83	8.00	6.65
8	5.00	6.25	6.00	7.00
9	8.00	6.25	10.00	7.00
34			10.00	9.00
30			15.00	10.00
31			10.00	9.15

F.O.B. San Francisco

Cat. No.	BRONZE	
	Less Than 12	12 to 100
34	\$10.50	\$ 9.50
30	15.50	10.50
31	10.50	9.65

Terms: 2% 10 days, net 30 days.

**TEST CONNECTORS**

Price Per 100

Cat. No.	F.O.B. Chicago		F.O.B. Kansas City	
	Less Than 100	100 and Over	Less Than 100	100 and Over
1	\$ 5.00	\$ 4.50	\$ 5.00	\$ 4.50
2	6.00	5.40	6.00	5.40
3	10.50	9.45	10.50	9.45
4	11.50	9.35	11.50	9.35
6	21.00	18.90	21.00	18.90

F.O.B. Chicago

Cat. No.	Copper		Tinned Copper	
	Less Than 100	100 and Over	Less Than 100	100 and Over
7-A	\$ 5.00	\$ 6.00		
257		8.00		
260		10.00		11.00
155		8.00		

F.O.B. Kansas City

Cat. No.	F.O.B. Kansas City		F.O.B. San Francisco	
	Less Than 100	100 and Over	Less Than 100	100 and Over
7-A	\$ 5.00	\$ 6.00		
260		10.00		11.00

**CONNECTING BLOCKS**

Price Each

Description	F.O.B. Chicago	
	1 to 11	12 and Over
No. 25-A (no cover)	.18 ea.	.15 ea.
Pc. 58887 cover only	.08 ea.	.06 ea.
No. 25-B (no cover)	.23 ea.	.20 ea.
Pc. 58889 cover only	.10 ea.	.08 ea.

Terms: Net 30 days.

**Cat. Page 51—Cont'd.**

**TEST CLIPS**

Price Each

Cat. No.	F.O.B. Chicago		500 and Over	
	Less Than 10	10 to 100	Less Than 10	10 to 100
27	\$.12 1/2	\$.08 3/4	\$.07 1/2	\$.07
28	.23	.16	.15	.13
2	.15	.15	.12	.12

F.O.B. Kansas City

Cat. No.	F.O.B. Kansas City		500 and Over	
	Less Than 10	10 to 100	Less Than 10	10 to 100
27	\$.12 1/2	\$.08 3/4	\$.07 1/2	\$.07

F.O.B. San Francisco

Cat. No.	F.O.B. San Francisco		500 and Over	
	Less Than 10	10 to 100	Less Than 10	10 to 100
27	\$.12 1/2	\$.08 3/4	\$.07 1/2	\$.07
28	.23	.16	.15	.13
2	.15	.15	.12	.12

Terms: Net 30 days.

**GROUND CONES**

Price Each

Cat. No.	F.O.B. Chicago		100 and Over	
	Less Than 10	10 to 25	Less Than 10	10 to 25
3	\$2.48	\$2.25	\$2.14	\$2.03
4	3.02	2.75	2.61	2.48

F.O.B. Kansas City

Cat. No.	F.O.B. Kansas City		100 and Over	
	Less Than 10	10 to 25	Less Than 10	10 to 25
3	\$2.53	\$2.30	\$2.20	\$2.10
4	3.10	2.85	2.70	2.55

F.O.B. San Francisco

Cat. No.	F.O.B. San Francisco		100 and Over	
	Less Than 10	10 to 25	Less Than 10	10 to 25
3	\$2.75	\$2.50	\$2.40	\$2.30
4	3.50	3.35	3.10	3.00

Terms: 2% 10 days, net 30 days.

**Cat. Page 52**

**PYRENE FIRE EXTINGUISHERS**

Price Each—Discount 33 1/3% Bracket Type

Cat. No.	Description	F.O.B. Chicago	
		100 and Over	500 and Over
C-11-A	1 pint Polished Brass with Auto Bracket	\$10.50	
C-11	1 pint Polished Brass with Wall Bracket	10.00	
C-21	1 quart Polished Brass with Wall Bracket	12.25	
CR-1	1 pint can Pyrene Liquid	.75	
CR-2	1 quart can Pyrene Liquid	1.50	
CR-4	1 gallon can Pyrene Liquid	5.40	

**BLOW-RITE FUSE WIRE**

Price Per 300 Ft. Spool

1 to 10 Amp.	F.O.B. Chicago		F.O.B. San Francisco	
	Less Than 100	100 and Over	Less Than 100	100 and Over
Per spool	\$.85	\$.85	\$1.25	

Terms: Net 30 days.

**LEAD FUSE WIRE PRICES ON APPLICATION**

**WOOD, FIBRE AND COMPOSITION FUSES**

Price Per 100

Cat. No.	F.O.B. Chicago		500 and Over	
	Less Than 500	500 and Over	Less Than 500	500 and Over
6	\$ 8.00	\$ 7.20		
A-7	8.00	7.20		
A-9	10.00	9.00		
27	8.00	7.20		
29	8.00	7.20		
A-46	10.00	9.00		

F.O.B. Kansas City

Cat. No.	F.O.B. Kansas City		500 and Over	
	Less Than 500	500 and Over	Less Than 500	500 and Over
A-7	\$ 8.00	\$ 7.20		
A-9	10.00	9.00		
27	8.00	7.20		
A-46	10.00	9.00		

F.O.B. San Francisco

Cat. No.	F.O.B. San Francisco		500 and Over	
	Less Than 500	500 and Over	Less Than 500	500 and Over
A-9	\$11.00	\$10.00		
27	9.00	8.20		

Terms: Net 30 days.



FOR ZONE LOCATIONS SEE BACK COVER

**Cat. Page 52—Cont'd.**

**COMBINATION HEAT COIL AND FUSE**  
Price Per 100

Cat. No.	F.O.B. Chicago	
	Less Than 500	500 and Over
107	\$20.00	\$18.00

Terms: Net 30 days.

**COPPER TERMINAL FUSES**  
Price Per 1000 Enclosed Type

Cat. No.	Chicago or Kansas City		San Francisco	
	Less Than 1000	1000 and Over	Less Than 1000	1000 and Over
8	\$24.00	\$21.60	\$26.00	\$23.60
11	26.00	23.40	28.00	25.20
19	24.00	21.60	26.00	23.60
21	26.00	23.40	28.00	25.20
22	28.00	25.20	30.00	27.00
25	30.00	27.00		
137	26.00	23.40		

Terms: Net 30 days.

**UNIVERSAL MESSENGER HANGERS (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1070-1	\$47.00	\$40.60	\$48.55	\$42.15
1071-2	42.90	37.00	44.00	38.10
	Zone 3		Zone 4	
1070-1	\$49.55	\$43.15	\$53.90	\$47.50
1071-2	44.75	38.85	47.90	42.00

Terms: 2% 10 days, net 30 days.

**GUY OR JAY HOOKS (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1016	\$ 5.25	\$ 4.55	\$ 5.45	\$ 4.75
1017	8.05	6.95	8.30	7.20
1018	11.35	9.85	11.75	10.25
1019	11.35	9.85	11.75	10.25
	Zone 3		Zone 4	
1016	\$ 5.55	\$ 4.85	\$ 6.10	\$ 5.40
1017	8.50	7.40	9.30	8.20
1018	12.05	10.55	13.20	11.70
1019	12.05	10.55	13.20	11.70

Terms: 2% 10 days, net 30 days.

**Cat. Page 53**

**UNGLAZED PORCELAIN TUBES**

Price Per 1000

Description	F.O.B. Chicago, Ill.		Carcy, Ohio		Macomb, Ill.		Kansas City, Mo.		or Minnesota Trans.	
	Quan.	Bbl.	Quan.	Bbl.	2 1/2 Bbl.	1 1/2 Bbl.	Quan.	1 1/2 Bbl.	Quan.	Carton
1 1/2 x 3"	4500	\$ 5.70	1000	\$ 6.00	500	\$ 6.40	100	\$ 6.70		
1 1/2 x 4"	3600	7.10	1000	7.50	500	7.80	100	8.20		
1 1/2 x 6"	2000	11.90	1000	12.30	500	12.70	100	13.10		
3/8 x 6"	1400	20.70	1000	21.70	500	22.60	100	24.60		
3/8 x 8"	1200	52.50	500	63.00	250	73.50	50	84.00		
3/8 x 10"	1000	83.00	400	111.60	200	130.20	50	148.80		

Terms: Net 30 days.

**PORCELAIN KNOBS**

6061 Two Gr.									
Tel.	1900	\$ 31.80	800	\$ 32.40	400	\$ 33.00	100	\$ 33.30	
6062 Four Gr.									
Tel.	1000	48.10	400	49.30	200	50.50	50	52.90	
4 Single Gr.	2000	19.10	800	19.60	400	20.20	100	20.90	
4 Two Gr.	2000	20.90	800	21.60	400	22.10	100	22.80	
22 Victor Split	1250	50.50	500	51.50	250	52.40	50	55.20	
37 Split	1800	47.10	700	47.90	350	48.70	100	50.20	
Nail Knobs—									
Glzd.	3000	14.50	1000	14.80	500	15.20	100	15.60	
No. 1916 Buckeye									
Knobs	2600	16.60	1000	17.10	500	17.40	100	18.10	
Type C (In Prs.)	5000	19.70	2000	21.30	1000	22.90	100	26.00	

Terms: Net 30 days.

Note: When shipped from factory LCL freight allowed on shipments of 100 pounds or more to points in Zone One as follows: Minnesota, Iowa, Missouri, Kentucky, Virginia, and all states north and east thereof. Also, Omaha and Lincoln, Nebraska, and Atchison and Leavenworth, Kansas.

**Cat. Page 52—Cont'd.**

**GUY WIRE PROTECTOR (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1617	\$149.60	\$129.20	\$154.10	\$133.70
1618	161.60	139.60	166.55	144.55
1604	167.85	145.05	173.25	150.45
1605	179.85	155.45	185.70	161.30
	Zone 3		Zone 4	
1617	\$157.10	\$136.70	\$170.00	\$149.60
1618	169.85	147.85	184.05	162.05
1604	176.85	154.05	192.30	169.50
1605	189.60	165.20	206.40	182.00

Terms: 2% 10 days, net 30 days.

**U-CABLE GUARDS (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
985	\$ 57.80	\$ 50.00	\$ 59.80	\$ 52.00
986	91.95	79.55	95.30	82.90
987	148.70	128.60	154.45	134.35
988	134.10	116.00	139.05	120.95
989	214.05	185.15	221.90	193.00
	Zone 3		Zone 4	
985	\$ 61.15	\$ 53.35	\$ 66.95	\$ 59.15
986	97.55	85.15	107.25	94.85
987	158.30	138.20	174.80	154.70
988	142.35	124.95	156.55	138.45
989	227.15	198.25	249.75	220.85

Terms: 2% 10 days, net 30 days.

**MOUNTING STRAPS (Hardware)**  
Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
995	\$ 4.95	\$ 4.25	\$ 5.05	\$ 4.35
996	7.20	6.20	7.30	6.30
997	15.15	13.05	15.40	13.30
	Zone 3		Zone 4	
995	\$ 5.10	\$ 4.40	\$ 5.30	\$ 4.60
996	7.35	6.35	7.60	6.60
997	15.55	13.45	16.25	14.15

Terms: 2% 10 days, net 30 days.

**Cat. Page 53—Cont'd.**

**KELLOGG GUY THIMBLE HOLDER**  
Price Each

Kellogg Guy Thimble Holder.....	F.O.B. Chicago	
	Less Than 1000	1000 and Over
	\$1.50	

Terms: 2% 10 days, net 30 days.

**GLASS INSULATORS**  
Price Per 1000 F.O.B. Muncton, Ind.

Cat. No.	Std. Pkg. Qn.	Less Than Std. Pkg.		5000 to Carload
		1 to 5000	5000 to Carload	
9	250	\$66.09	\$44.06	\$41.81
10	250	68.77	45.85	43.51
12	250	67.86	45.24	42.93
16	175	81.59	54.39	51.61
53	50	226.31	150.87	143.17

For Shipment From Warehouse Stock Use the Following Adders Per 1000 Pieces

Cat. No.	Chicago	Kansas City	Minn. Trans.
9	\$ 3.17	\$ 6.28	\$ 6.74
10	3.44	6.82	7.32
12	3.68	7.29	7.82
16	5.17	10.25	11.00
53	10.78	21.34	22.90

Terms: 2% 10 days, net 30 days.

**POLE PULLING JACKS**  
Price Each F.O.B. Destination

Cat. No.	Chicago	Kansas City	Price
310			\$38.40
329			56.00
322			52.00

Note: West of Rockies plus 5%.  
Terms: 1% 10 days, net 30 days.

**Cat. Page 54**

**BAR SOLDER, PLAIN WIRE SOLDER, WIPING SOLDER**  
PRICES ON APPLICATION

**KESTER SOLDER**  
Price Per Pound

Description	F.O.B. Chicago		
	1 lb.	5 lb.	20 lb.
Spool	\$.59	\$.55	\$.52
	F.O.B. Kansas City		
Spool	\$.60	\$.56	\$.53
	F.O.B. San Francisco		
Spool	\$.63	\$.59	\$.57

Discount: 50 lb. lots less 10% from above prices. Terms: 2% 10 days, net 30 days.

**ALLEN SOLDERING STICK**

Price Each

Cat. No.	F.O.B. Chicago, Kansas City, or San Francisco		
	1 to 24	24 to 100	100 to 500
039534	\$ .30	\$.25	\$.20

**ALLEN SOLDERING PASTE**

Price Each

Cat. No.	F.O.B. Chicago or Kansas City		F.O.B. San Francisco	
	1 to 9	10 to 100	1 to 9	10 to 100
039538	\$.13	\$.11	\$.14	\$.12
039565	.25	.23	.26	.24
039539	.50	.40	.51	.41
039540	.90	.80		

Terms: Net 30 days.

**ALLEN SOLDERING SALTS**

Price Per Bottle

Cat. No.	F.O.B. Chicago	
	Less Than 25	25 to 50
039547	\$.40	\$.36
039548	.59	.55

Terms: Net 30 days.

**SOLDERALL**

Price Per Tube

Description	F.O.B. Chicago		F.O.B. San Fran.	
	Chicago	Kansas City	San Fran.	
Solderall	\$.35	\$.35	\$.37	

Terms: 2% 10 days, net 30 days.

**MARLINE**

Price Per Pound

Description	F.O.B. Chicago or Kansas City	
	Chicago	Kansas City
3 ply. 1 lb. ball.....	\$ .35	

Terms: 2% 10 days, net 30 days.



FOR ZONE LOCATIONS SEE BACK COVER

**Cat. Page 54—Cont'd.**

**KELLOGG BLACK FRICTION TAPE**  
Price Per Roll

Cat. No.	F.O.B. Chicago		Kansas City		San Francisco	
	Less Than 5	5 to 100	Less Than 50	50 to 100	Less Than 100	100 and Over
5 Black	\$.20	\$.18	\$.16	\$.15		

**MANSON FRICTION TAPE**  
Price Per Pound

F.O.B. Chicago	F.O.B. Kansas City		F.O.B. San Francisco	
	Less Than 100	100 and Over	Less Than 100	100 and Over
\$.62 1/2	\$.57 1/2	\$.65 1/2	\$.60 1/2	\$.70

**OKONITE TAPE**  
\$.70 \$.64 \$.73 \$.67

**LEAD SLEEVES  
PRICES ON APPLICATION**

**PAPER SLEEVES**  
Price Per 1000

Size	F.O.B. Chicago		Kansas City		San Francisco	
	Less Than 1000	1000 to 10,000	Less Than 1000	1000 to 10,000	Less Than 1000	1000 and Over
1/8 x 3	\$.90	\$.85	\$.85	\$.80		
3/16 x 3	.90	.85	.85	.80		
1/8 x 3	\$.91	\$.86	\$.86	\$.81		
3/16 x 3	.91	.86	.86	.81		
1/8 x 3	\$.95	\$.90	\$.90	\$.85		

Terms: 2% 10 days, net 30 days.

**Cat. Page 55**

**COTTON SLEEVING**  
Price Per Pound

Cat. No.	F.O.B. Chicago		Kansas City		San Francisco	
	Less Than 10	10 and Over	Less Than 10	10 and Over	Less Than 10	10 and Over
1-(1/8")	\$1.53	\$1.25				
3-(3/8")	1.53	1.25	\$1.53	\$1.25		

Terms: 2% 10 days, net 30 days.

**WAXED COTTON SLEEVES**  
Price Per Carton

4-(5/8")	\$.65	\$.50	\$.67	\$.52
5-(1/8")	.75	.60	.77	.62

Terms: 2% 10 days, net 30 days.

**METAL RIM TAGS**  
Price Per 1000

Description	F.O.B. Chicago	F.O.B. Kansas City
32 Metal Rim	\$3.00	\$3.05
554 Plain	2.00	

Terms: Net 30 days.

**INSULATING CABLE COMPOUND**  
Price Per Gallon

Description	F.O.B. Chicago		Kansas City	
	Less Than 10 Gal.	10 Gal. or More	Less Than 10 Gal.	10 Gal. or More
1 gal. can.	\$.70	\$1.35		

Terms: 2% 10 days, net 30 days.

**PARAFFINE**  
Price Per Pound

Under 50	F.O.B. Chicago		F.O.B. Kansas City		F.O.B. San Francisco	
	Over 50	Under 50	Over 50	Under 50	Over 50	Under 50
\$.11	\$.09	\$.12	\$.10			

Terms: Net 30 days.

**BEESWAX**  
Price Per Pound

\$.40	\$.35	\$.40	\$.35	\$.45	\$.40
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Terms: Net 30 days.

**PLUMBER'S STEARINE CANDLES**  
Price Each

F.O.B. Chicago	F.O.B. Kansas City
\$.09	\$.10

Terms: 1% 10 days, net 30 days.

**LASHING WIRE**  
Price Per Pound

Description	F.O.B. Chicago
1 to 10 lbs.	\$.35
10 to 25 lbs.	.31
25 lbs. and over.	.29

Net 30 days.

**Cat. Page 55—Cont'd.**

**INSULATED STAPLES**

Cat. No.	F.O.B. Chicago		
	Less Than 5000	5000 to 10,000	10,000 and Over
1	\$1.35	\$1.25	\$1.05
3	1.35	1.25	1.05
5	1.45	1.30	1.15
6	1.45	1.30	1.15

F.O.B. Kansas City

1	\$1.40	\$1.30	\$1.10
3	1.40	1.30	1.10
5	1.50	1.35	1.20
6	1.50	1.35	1.20

F.O.B. San Francisco

1	\$1.45	\$1.35	\$1.15
3	1.45	1.35	1.15
5	1.55	1.40	1.25
6	1.55	1.40	1.25

Terms: 1% 10 days, net 30 days.

**METAL-NAILS**

Price Per 1000

Cat. No.	F.O.B. Chicago		
	Less Than 5000	5000 to 10,000	10,000 and Over
333	\$1.25	\$1.15	\$.95

Small Head

Large Head

555	\$1.25	\$1.15	\$.95
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Terms: 2% 10 days, net 30 days.

**MILONITE OR PERFECTION NAILS**

Price Per 1000

Cat. No.	F.O.B. Chicago		
	Less Than 5000	5000 to 10,000	10,000 and Over
1887-1/2G	\$1.25	\$1.15	\$.95
1887-3/8G	1.25	1.15	.95
1887-7/8G	1.25	1.15	.95

F.O.B. Kansas City

1887-1/2G	\$1.25	\$1.15	\$1.00
1887-3/8G	1.25	1.15	1.00
1887-7/8G	1.25	1.15	1.00

F.O.B. San Francisco

1887-1/2G	\$1.25	\$1.15	\$1.05
1887-3/8G	1.25	1.15	1.05
1887-7/8G			

Terms: 2% 10 days, net 30 days.

**IRON WOOD SCREWS**

Price Per Gross

Size in Inches	F.O.B. Chicago				
	No. 6	No. 7	No. 8	No. 14	No. 16
3/8	\$.38	\$.42	\$.46		
1/2	.40	.44	.48		
3/4	.46	.50	.54	\$.90	
7/8	.52	.56	.60	1.05	
1	.54	.58	.62	1.10	\$1.40
1 1/4	.58	.62	.66	1.25	1.55
1 1/2	.66	.70	.75	1.35	1.70
1 3/4	.72	.78	.84	1.50	1.90
2	.78	.84	.90	1.60	2.00
2 1/4	.82	.88	.95	1.75	2.20
2 1/2	.90	.96	1.05	1.85	2.40
2 3/4			1.10	2.05	2.60
3			1.20	2.25	2.80
3 1/2				2.80	3.35
4				3.00	3.55
4 1/2				3.30	3.85
5				3.65	4.20

Discounts: Less than gross lots.....Net

Flat Head, gross lots less.....	40%
10 gross or over less.....	45%
Round Head Blued, gross lots	
less .....	35%
10 gross or over less.....	40%
Round Head Oval, gross lots	
less .....	35%
10 gross and over less.....	40%
Nickel Plated .....	Net

**Cat. Page 55—Cont'd.**

**NAILS (GALV.)**

Price Per 100 Lbs.

Size	F.O.B. Chicago		Kansas City	
	Less Than 100 Lbs.	100 Lbs. and Over	Less Than 100 Lbs.	100 Lbs. and Over
6D	\$8.25	\$6.75	\$8.25	\$7.25
20D, 30D,				
40D, 50D,				
60D	7.75	6.25	7.75	6.75

Terms: 2% 10 days, net 30 days.

**GALVANIZED IRON WOOD SCREWS**

Price Per Gross

Size in Inches	Type Head	F.O.B. Chicago	
		Less Than 10 Gross	10 Gross and Over
1 1/2 x 14	Round	\$1.35	\$1.10
1 1/2 x 16	Round	1.70	1.35
2 x 14	Round	1.60	1.30
2 1/2 x 16	Flat	2.40	1.90
3 x 16	Flat	2.80	2.25
3 1/2 x 16	Flat	3.35	2.70
2 1/2 x 18	Flat	3.00	2.40
3 x 18	Flat	3.40	2.70
3 1/2 x 18	Flat	3.95	3.15
4 x 18	Flat	4.20	3.36

F.O.B. Kansas City

1 1/2 x 14	Round	\$1.35	\$1.10
1 1/2 x 16	Round	1.70	1.35
2 1/2 x 16	Flat	2.40	1.90
3 x 16	Flat	2.80	2.25
3 1/2 x 16	Flat	3.35	2.70
2 1/2 x 18	Flat	3.00	2.40
3 x 18	Flat	3.40	2.70
3 1/2 x 18	Flat	3.95	3.15

F.O.B. San Francisco

3 x 16	Flat	\$3.00	\$2.40
3 1/2 x 16	Flat	3.85	3.10

Terms: 2% 10 days, net 30 days.

**Cat. Page 56**

**PAY STATIONS**

Price Each

Cat. No.	F.O.B. Hartford, Conn.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
14	\$16.50	\$17.00	\$17.33	\$17.82
11	12.00	12.36	12.60	12.96
11A	12.50	12.88		
23D	20.50	21.12		

Terms: Net 30 days. The above prices do not include Transmitter or Receiver.

**PAY STATION SIGNS**

Price Each

Cat. No.	F.O.B. Chicago
4	\$2.00

Terms: Net 30 days.

**BRIDLE RINGS**

Price Per 100

Style	F.O.B. Chicago	
	Galvanized	Enameled
A-1 3/8"	\$2.15	\$6.00
C-1 1/4"	1.85	5.75
E-5/8"	.80	4.00
F-3"	8.95	19.30

Terms: 2% 10 days, net 30 days.

**DRIVE RINGS**

Price Per 1000

Style	F.O.B. Chicago	
	Less Than 250	250 and Over
1/2"	\$8.90	\$7.90
1/4"	20.25	18.00
1/2"	\$9.00	\$8.00
1/4"	20.50	18.50
1/2"	\$9.50	\$8.50
1/4"	20.75	18.25

Terms: 2% 10 days, net 30 days.

**Cat. Page 56—Cont'd.**

**NATIONAL CABLE RINGS**

Price Per 1000  
F.O.B. Cleveland, Ohio  
Packed in "Handy-Five" Clusters

Size Inches	Std. Pkg.	Std. Pkg.	Less Std. Pkg.
1 1/2	1000	\$15.00	\$16.50
2L	500	17.15	18.85
2H	500	20.25	22.30
2 1/2	500	25.20	27.75
3	400	28.60	31.45
3 1/2	300	32.45	35.70

Terms: 1% 10 days, net 30 days.

**NEVER SLIP CABLE RINGS**

Price Per 1000  
F.O.B. Centralia, Mo.  
No Tangle Boxes

Size Inches	Std. Pkg.	Std. Pkg.	Less Std. Pkg.
1 1/2	500	\$19.80	\$21.80
2H	250	26.70	29.40
2 1/2	200	33.00	36.60
3	200	37.70	41.50
3 1/2	200	42.80	47.10

Terms: 1% 10 days, net 30 days.

**DUPLEX CABLE RINGS**

Price Per 1000  
F.O.B. Centralia, Mo.  
No Tangle Boxes

Size Inches	Std. Pkg.	Std. Pkg.	Less Std. Pkg.
1 1/2	500	\$15.00	\$16.50
2	250	20.25	22.30
2 1/2	250	25.20	27.75
3	200	28.60	31.45
3 1/2	200	32.45	35.70

Note: Blackburn Rings made in Round or V Bottoms. Specify when ordering.

Terms: 1% 10 days, net 30 days.

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**THIMBLEYE ANCHOR RODS (Hardware)**

Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
7406-6'	\$51.60	\$44.60	\$53.60	\$46.60
7416-6'	72.15	62.45	75.20	65.50
7418-8'	88.20	76.30	91.90	80.00
7426-6'	94.15	81.55	98.45	85.85
7428-8'	117.45	101.75	123.05	107.35
7438-8'	208.65	180.75	219.00	191.10
7440-10'	248.20	215.00	259.90	226.70

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
7406-6'	\$54.95	\$47.95	\$60.75	\$53.75
7416-6'	77.25	67.55	86.05	76.35
7418-8'	94.40	82.50	105.10	93.20
7426-6'	101.35	88.75	113.70	101.10
7428-8'	126.75	111.05	142.85	127.15
7438-8'	225.90	198.00	255.60	227.70
7440-10'	267.70	234.50	301.25	268.05

Terms: 2% 10 days, net 30 days.

**GUY RODS (Hardware)**

Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1000-5'	\$41.45	\$35.85	\$42.95	\$37.35
1002-6'	46.60	40.30	48.40	42.10
1005-5'	58.15	50.35	60.60	52.80
1006-6'	66.15	57.25	69.05	60.15
1007-7'	74.55	64.55	77.90	67.90
1011-7'	98.95	85.75	103.70	90.50
1012-8'	111.60	96.70	117.20	102.30
1015-10'	241.60	209.40	254.30	222.10

**GUY RODS—Continued**

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1000-5'	\$44.00	\$38.40	\$48.35	\$42.75
1002-6'	49.65	43.35	54.85	48.55
1005-5'	62.20	54.40	69.20	61.40
1006-6'	71.00	62.10	79.40	70.50
1007-7'	80.15	70.15	89.85	79.85
1011-7'	106.90	93.70	120.60	107.40
1012-8'	120.90	106.00	136.90	122.00
1015-10'	262.80	230.60	299.30	267.10

Terms: 2% 10 days, net 30 days.

**GROUND RODS (Hardware) Without Wire**

Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1102	\$20.00	\$17.30	\$20.80	\$18.10
1103	23.25	20.15	24.25	21.15
1104	31.50	27.30	32.95	28.75
1105	37.10	32.10	38.80	33.80

Wired Ground Rods

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1098	\$41.30	\$35.70	\$42.80	\$37.20
1099	46.70	40.40	48.40	42.10
1100	65.60	56.80	68.30	59.50

Terms: 2% 10 days, net 30 days.

**IRON POLE STEPS (Hardware)**

Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1116	\$ 8.90	\$ 7.70	\$ 9.25	\$ 8.05
1117	10.05	8.65	10.45	9.05
1118	10.70	9.30	11.15	9.75

Terms: 2% 10 days, net 30 days.

**POLE SEATS (Hardware)**

Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
755-				
285	\$268.00	\$231.30	\$274.30	\$237.60
757-				
287	255.50	220.50	261.15	226.15

Terms: 2% 10 days, net 30 days.

**PLATES, GUARDS AND SHIMS (Hardware)**

Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1034	\$11.10	\$ 9.60	\$11.50	\$10.00
1036	6.20	5.40	6.50	5.70
1037	123.75	107.15	129.15	112.55
6576	11.70	10.10	12.10	10.50
6577	23.20	20.00	27.95	24.25

**PLATES—Continued**

Cat. No.	Zone 3		Zone 4	
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over
1034	\$11.80	\$10.30	\$13.00	\$11.50
1036	6.70	5.90	7.55	6.75
1037	132.75	116.15	148.20	131.60
6576	12.40	10.80	13.60	12.00
6577	28.35	24.65	25.75	22.55

Terms: 2% 10 days, net 30 days.

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**DOUBLE TUBE SPLICING SLEEVES**

Price Per 1000  
Copper

B&S	DWG	NBS	F.O.B. Chicago		F.O.B. Kansas City		F.O.B. San Francisco	
			10	12	10	12	10	12
10	12	12	\$28.00	\$28.00	\$28.00	\$30.00		
12	14	14	24.00	24.00	24.00	26.00		
14	16	...	23.00	23.00	23.00	25.00		
16	18	...	22.20	...	...	...		
17	...	...	16.50	16.50	...	...		

Discount: (5,000 lots—assorted less 10%).

**Tinned Copper**

Tinned copper sleeves No. 8 B & S and larger add 20%. No. 9 B & S and smaller, add \$3.00 per M.

**Tinned Steel**

B&S	DWG	NBS	F.O.B. Chicago		F.O.B. Kansas City		F.O.B. San Francisco	
			10	12	10	12	10	12
...	10	...	\$36.10	\$36.10	...	...	...	...
...	12	...	29.70	29.70	29.70	\$31.70	...	...
...	14	...	27.80	27.80	27.80	...	...	...
...	16	...	26.60	...	...	...	...	...

Discount: (5,000 lots—assorted—less 10%).

Terms: 1% 10 days, net 30 days.

**BABY KNIFE SWITCHES**

Price Each

Cat. No.	F.O.B. Chicago		F.O.B. Kansas City		F.O.B. San Francisco	
	Less Than 100	100 and Over	Less Than 100	100 and Over	Less Than 100	100 and Over
450	\$.20	\$.18	\$.25	\$.22 1/2	...	...
452	.32	.29	.38	.34	...	...
454	.35	.31 1/2	.42	.38	...	...
456	.50	.45	.58	.52	...	...

Terms: Net 30 days.

**JUNCTION BOXES**

Cat. No.	F.O.B. Chicago	
	Less Than 100	100 and Over
1885	...	\$17.50
1886	...	17.50

Note—When Junction boxes are to be equipped with nozzles be sure to add the price of nozzles.

**SELF-SOLDERING NOZZLES**

Price Each

Cat. No.	F.O.B. Chicago	
	Less Than 100	100 and Over
1890	...	\$1.00
1891	...	1.00
1892	...	1.00
1893	...	1.25
1894	...	1.50
1895	...	1.50
1896	...	1.75

Terms: 1% 10 days, net 30 days.



**RELIABLE TYPE R-U & GR. TERMINALS**

Capacity	Price Each F.O.B. Destination			Price Each F.O.B. Destination		
	1 to 19	20 to 99	100 & Over	1 to 19	20 to 99	100 & Over
11 pair, without stub.....	\$ 6.05	\$ 5.45	\$ 5.15	\$ 6.35	\$ 5.70	\$ 5.40
11 pair, with 6' stub.....	8.55	7.70	7.25	8.95	8.05	7.60
16 pair, without stub.....	7.15	6.45	6.10	7.50	6.75	6.40
16 pair, with 6' stub.....	10.20	9.20	8.65	10.70	9.65	9.10
26 pair, without stub.....	10.20	9.20	8.65	10.70	9.65	9.10
26 pair, with 6' stub.....	14.05	12.65	11.95	14.75	13.30	12.55

**RELIABLE CABLE TERMINALS (PROTECTED TYPE)**

Capacity	Price Each F.O.B. Destination			Price Each F.O.B. Destination		
	1 to 19	20 to 99	100 & Over	1 to 19	20 to 99	100 & Over
11 pair, without stub.....	\$15.25	\$13.75	\$12.95	\$16.00	\$14.40	\$13.60
11 pair, with 6' stub.....	17.75	16.00	15.10	18.60	16.75	15.80
16 pair, without stub.....	21.00	18.90	17.85	22.05	19.85	18.75
16 pair, with 6' stub.....	24.00	21.60	20.40	25.20	22.70	21.40
26 pair, without stub.....	28.85	25.95	24.50	30.30	27.25	25.75
26 pair, with 6' stub.....	32.70	29.45	27.80	34.35	30.90	29.20
51 pair, without stub.....	48.00	43.20	40.80	50.40	45.35	42.85
51 pair, with 6' stub.....	53.00	47.70	45.05	55.65	50.10	47.30
100 pair, without stub.....	100.00	90.00	85.00	105.00	94.50	89.25

Terms: Net 30 days.

**COOK S-6 TERMINALS**

Capacity	Price Each F.O.B. Destination			Price Each F.O.B. Destination		
	1 to 19	20 to 99	100 & Over	1 to 19	20 to 99	100 & Over
11 pair, without stub.....	\$15.25	\$13.75	\$12.95	\$16.00	\$14.40	\$13.60
11 pair, with 6' stub.....	17.75	16.00	15.10	18.60	16.75	15.80
16 pair, without stub.....	21.00	18.90	17.85	22.05	19.85	18.75
16 pair, with 6' stub.....	24.00	21.60	20.40	25.20	22.70	21.40
26 pair, without stub.....	28.85	25.95	24.50	30.30	27.25	25.75
26 pair, with 6' stub.....	32.70	29.45	27.80	34.35	30.90	29.20
51 pair, without stub.....	48.00	43.20	40.80	50.40	45.35	42.85
51 pair, with 6' stub.....	53.00	47.70	45.05	55.65	50.10	47.30
100 pair, without stub.....	100.00	90.00	85.00	105.00	94.50	89.25

Terms: Net 30 days.

**COOK TYPE XB TERMINALS**

Capacity	Price Each F.O.B. Destination			Price Each F.O.B. Destination		
	1 to 19	20 to 99	100 & Over	1 to 19	20 to 99	100 & Over
11 pair, without stub.....	\$ 6.05	\$ 5.45	\$ 5.15	\$ 6.35	\$ 5.70	\$ 5.40
11 pair, with 6' stub.....	8.55	7.70	7.25	8.95	8.05	7.60
16 pair, without stub.....	7.15	6.45	6.10	7.50	6.75	6.40
16 pair, with 6' stub.....	10.20	9.20	8.65	10.70	9.65	9.10
26 pair, without stub.....	10.20	9.20	8.65	10.70	9.65	9.10
26 pair, with 6' stub.....	14.05	12.65	11.95	14.75	13.30	12.55

Various sizes and types of terminals may be combined for quantity prices for a single shipment to one destination.

Terms: Net 30 days.

**TELOHM**  
Price Each

Description	F.O.B. Cedar Rapids, Ia.
Telohm .....	\$11.50

Terms: 2% 10 days, net 30 days.

**STEWART TEST SETS**

Description	Price Each	
	F.O.B. Ottawa	F.O.B. San Francisco
Midget .....	\$31.00	\$32.00
Heavy Duty .....	31.00	32.00

Discount: Less than 5, net. 5 to 10, 5%. 10 or more, 10%. Terms: Net 30 days.

**WEST TEST SET**

Description	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Fran.
West Test Set.....	\$40.00	\$40.25	\$41.00

Discounts: Less than 5, net. 5 to 10, 5%. 10 or more, 10%. Terms: Net 30 days.

**TELEFAULT-MATTHEWS**

Description	Price Each	
	F.O.B. St. Louis	F.O.B. St. Louis
Type L .....	\$60.00	
Extra Exploring Coil.....	15.00	
Extra Receivers .....	6.00	

Terms: Net 30 days.

**PORTIS TEST METER**

Description	Price Each	F.O.B. Portia, Kansas
Voltmeter Set .....		\$10.00

Terms: 2% 10 days, net 30 days.

**STEWART TESTING EQUIPMENT**

Description	Price Each	F.O.B. Ottawa or Chicago
Cable Tester Complete.....	\$49.00	
Exploring Coil and Receiver.....	15.00	
15 Volt Direct Reading Cabinet .....	43.00	
150 Volt Direct Reading Cab.....	49.00	

Terms: Net 30 days.

**STEWART MIDGET DETECTO-METER**

Description	Price Each	F.O.B. Ottawa, Ill.
0 to 3 volts, 0 to 10,000 ohms.....	\$10.00	
0 to 60 volts, 0 to 10,000 ohms.....	14.00	

Terms: Net 30 days.

**STEWART POCKET PHONE**

Description	Price Each	F.O.B. Ottawa, Ill.	F.O.B. San Francisco
Pocket Phone .....	\$5.85	\$6.15	

**STEWART DETECTO-METER**

Description	Price Each	F.O.B. Ottawa, Ill.
Detecto-Meter .....	\$39.00	

Terms: Net 30 days.

**KELLOGG VOLT-OHM-METER**

Cat. No.	Price Each		F.O.B. Chicago	F.O.B. Kansas City
	Chicago	Kansas City		
279 .....	\$20.50	\$20.50		
280 .....	34.50	34.50		

Terms: Net 30 days.

**AMMETERS AND VOLTMETERS**

Cat. No.	Price Each			
	Chicago or Kansas City Less Than 10	F.O.B. 10 and Over	San Francisco Less Than 10	F.O.B. 10 and Over
24 .....	\$ .70	\$ .65		
34C .....	1.50	1.45	\$1.50	\$1.45
44 .....	1.05	1.00	1.05	1.00

Terms: Net 30 days.

**TAPES**

Cat. No.	Price Each		F.O.B. Saginaw, Mich.
	Chicago	Kansas City	
403 .....			\$3.75
406 .....			5.75
3100 .....			9.50
3150 .....			12.50
263 .....			5.25
266 .....			8.75

Terms: Net 30 days.

**KLEIN TREE TRIMMER**

Cat. No.	Price Each		F.O.B. Chicago
	Chicago	Kansas City	
3628 .....	\$4.25	\$4.25	each
3601-6 .....	4.50	4.50	per set
3601-9 .....	3.75	3.75	per set

Terms: 2% 10 days, net 30 days.

Note: All orders amounting to \$25.00 or more for Klein tools are subject to a discount of 10% from the above prices.

**SAWS**

Cat. No.	Price Each		F.O.B. Chicago or Indianapolis, Ind.
	Chicago	Kansas City	
24-14 .....	\$1.25	\$1.25	
590 .....	3.00	3.00	
17 .....	2.00	2.00	
913-12 .....	1.25	1.25	
913-15 .....	1.25	1.25	
913-G .....	.75	.75	
11 Frames .....	1.20	1.20	
210-12 Hacksaw Blade.....	.08	.08	

Terms: 2% 10 days, net 30 days.

**SEYMOUR SMITH TREE PRUNER**

Cat. No.	Description	Price Each		F.O.B. Ossipee, Conn.
		Chicago	Kansas City	
11-18 .....	Complete Trimmer.....	\$6.00	\$6.00	
(Old No. 1-18) Replacement Parts				
11 .....	Pruner Head Only.....	\$1.35	\$1.35	
1 .....	6' Handle Head Section.....	1.25	1.25	
1 .....	6' Handle Extension .....	1.85	1.85	
1 .....	8' Handle Head Section.....	1.55	1.55	
1 .....	8' Handle Extension .....	2.30	2.30	
2-18 .....	Complete Trimmer .....	9.55	9.55	

**Replacement Parts**

2 .....	Heavy Duty Pruner Head with Rope Guide.....	\$3.00	\$3.00	
2 .....	6' Handle Head Section.....	1.65	1.65	
2 .....	6' Handle Extension Section..	2.60	2.60	
2 .....	8' Handle Head Section.....	2.30	2.30	
2 .....	8' Handle Extension Section..	3.30	3.30	
21 .....	Tapered Section, 6 ft. for joining 1 and 2 Poles.....	3.00	3.00	

Terms: 2% 10 days, net 30 days.



**Cat. Page 63**

**SCREW DRIVERS**

Cat. No.	Price Each		
	F.O.B. Philadelphia	F.O.B. Chicago	F.O.B. Kansas City
90-3	\$.30	\$.30	
90-4	.34	.34	
90-6	.48	.48	
90-8	.67	.67	
90-10	.81	.81	
95-4 1/2	.36	.36	\$ .36
95-6 1/2	.42	.42	.42
95-8 1/2	.50	.50	.50
95-12 1/2	.70	.70	.70
10-3	.65	.65	
10-4	.70	.70	
10-6	.85	.85	

Discount: 6 or more, less 10%.  
Terms: 2% 10 days, net 30 days.

**SPIRAL SCREW DRIVER**

Cat. No.	Price Each	
	F.O.B. Philadelphia	F.O.B. Chicago
30-A	\$2.25	\$2.25
31-A	3.05	3.05
35	1.70	1.70
130-A	2.65	2.65

**AUTOMATIC DRILLS**

Cat. No.	Price Each	
41	\$2.00	\$2.00

**RATCHET BRACES**

5308	\$3.75
5310	3.75

**CORNER BRACES**

502	\$9.40
503	9.40

**CROSS ARM AND POLE BIT**

Cat. No.	Size	Price Each	
		F.O.B. Chicago	F.O.B. Kansas City
56C-6	3/8"	\$.70	
56C-7	1/2"	.80	
56C-8	5/8"	.90	
56C-9	3/4"	1.00	
56C-10	7/8"	1.10	
56C-11	1"	1.20	
56C-12	1 1/8"	1.30	
56C-14	1 1/4"	1.50	

**BELL HANGER DRILL**

Cat. No.	Size	Price Each	
		F.O.B. Chicago	F.O.B. Kansas City
48-6	3/8"	\$.60	\$.85
48-8	1/4"	.75	.90
48-10	5/16"	.80	.95
48-12	3/8"	.85	1.00
48-14	7/16"	.90	1.10
48-16	1/2"	.95	1.20
48-18	5/8"	1.15	1.30
48-20	3/4"	1.25	1.45
48-22	7/8"	1.40	1.60
48-24	1"	1.55	1.80
48-6	3/8"	\$1.00	\$1.20
48-8	1/4"	1.10	1.25
48-10	5/16"	1.15	1.30
48-12	3/8"	1.20	1.40
48-14	7/16"	1.30	1.50
48-16	1/2"	1.40	1.60
48-18	5/8"	1.50	1.70
48-20	3/4"	1.60	1.85
48-22	7/8"	1.80	2.00
48-24	1"	2.00	2.35

Discount: 6 or more, less 10%.  
Terms: 2% 10 days, net 30 days.

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**WOODBORING BRACE DRILL**

Cat. No.	Size	Price Each
46-8	1/4"	\$.40
46-10	3/8"	.50
46-12	1/2"	.60
46-14	5/8"	.75
46-16	3/4"	.80
46-18	7/8"	.90
46-20	1"	1.00
46-22	1 1/8"	1.20

Brace drill 6 or more, less 10%.  
Terms: 2% 10 days, net 30 days.

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**KNIVES AND HOOKS**

Cat. No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
1515-1	\$2.75	\$2.75	\$2.85
1560-3	1.50	1.50	1.65
304	.60	.60	.70

**BALANCED LADLES**

Bowl Diameter	Price Each	
	F.O.B. Chicago	F.O.B. Kansas City
2 1/2"	\$1.25	
3"	1.25	
3 1/2"	1.35	
4"	1.35	

Terms: Net 30 days.

**FORMED WIPING CLOTH**

For wiping cable joints. Curved to leave symmetrical wiping surface.

Size	Price Each	
	F.O.B. Chicago	F.O.B. Kansas City
2" x 2"	\$.30	\$.40
3" x 3"	.40	.45
3 1/2" x 3 1/2"	.40	.45
4" x 4"	.45	.45

**FLAT CATCH CLOTH**

5" x 5"	\$.60	\$.75
6" x 6"	.70	.85
6" x 7"	.75	.90
7" x 8"	.90	1.05
8" x 8"	1.00	1.10

Terms: 2% 10 days, net 30 days.

**MELTING POTS**

39	\$ .60
40	1.30
41	1.70

Terms: Net 30 days.

**TEMPEROMETERS**

Description	F.O.B. Chicago
Deluxe Model	\$6.00
Junior Model	4.00

Terms: Net 30 days.

**HARDWOOD DRESSERS**

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
296	\$1.15	\$1.15	\$1.25

Terms: Net 30 days.

**ELECTRICIANS' SCISSORS**

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City
1075-5	\$1.00	\$1.00

Terms: Net 30 days.

**ELECTRICIANS' KNIVES**

1550-2	\$1.35	\$1.35
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Terms: 2% 10 days, net 30 days.

**FIBRE TEST BOARD**

Description	F.O.B. Chicago
Fibre Test Boards	\$.25

Discount: 100 or more, less 10%.  
Terms: Net 30 days.

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**DRAW KNIFE**

Cat. No.	Price Each	F.O.B. Chicago
625-X		\$3.50

Discount: 6 or more, less 10%.  
Terms: 2% 10 days, net 30 days.

**PLIERS—KLEIN'S**

Cat. No.	Price Each	F.O.B.	
		Chicago, Kansas City or San Francisco	Los Angeles
201-6		\$2.25	\$1.70
201-7		2.65	2.10
201-8		2.90	2.30
*201-9		3.55	2.85
*212-6		2.65	2.10
212-7		3.00	2.40
212-8		3.55	2.85
202-5		1.80	1.45
202-6		2.00	1.60
*301-5		1.60	1.30
301-6		1.75	1.40
*203-5		1.90	1.50
203-6		2.10	1.65

\*Not carried at Kansas City.

Prices in first column are subject to 10% discount on assorted orders for Klein material of \$25.00 or over. Prices shown in second column are net and are not subject to any further discount.

Terms: 2% 10 days, net 30 days.

Note: Various sizes and kinds of Pliers may be combined for quantity prices.

**WIRE CLAMPS**

Cat. No.	Price Each		
	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
102-1	\$2.60	\$2.60	\$2.60
102-3	3.35	3.35	3.35
132-12	3.50	3.50	3.50
132-15	4.75	4.75	4.75

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**HAMMERS**

Cat. No.	Price Each	F.O.B. Chicago
11		\$1.25
11 1/2		1.20
12		1.15
12 1/2		1.15
1-R		1.60
1 1/2-R		
4/0		1.10
3/0		1.10
2/0		1.10
0		1.15
1 Ball Pein		1.15
2 Ball Pein		1.20
3 Ball Pein		1.25
4 Ball Pein		1.40
13		2.60
1 Chipping Hammer		1.50
2 Chipping Hammer		1.65
3 Chipping Hammer		1.75

Discount: 6 or more, less 10%.

**LINEMAN'S BROAD HATCHETS**

201	\$2.00
202	2.25
203	2.50
204	2.60
58	2.75

Terms: 2% 10 days, net 30 days.

**Cat. Page 66—Cont'd.**

**HAND AXE**  
 3-3½ lb. .... \$2.25 ea.  
 Discount: 6 or more, less 10%.  
 Terms: 2% 10 days, net 30 days.

**WRECKING BARS**  
 Price Each

Cat. No.	F.O.B. Chicago
12	\$ .50
18	.60

Discount: 6 or more, less 10%.

**CHISELS**

Cat. No.	F.O.B. Chicago	Cat. No.	F.O.B. Chicago
45 1/4	\$ .40	45 1/2	\$ .60
45 1/8	.45	45 3/8	.65
45 3/8	.50	45 3/4	.70
45 1/8	.55	45 7/8	.75
		1	.85
261- 3/8	.95	261-1	1.35
261- 1/2	1.10	261-1 1/4	1.40
261- 5/8	1.15	261-1 1/2	1.50
261- 3/4	1.25	261-1 3/4	1.70
261- 7/8	1.30	261-2	1.80

Discount: 6 or more, less 10%.

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**REELS**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Oshkosh, Wis., or Columbus, Ind.
10-510-902	\$14.21	
10-520-900	23.82	
10-521-901	2.83	
10-501-897	21.48	

Terms: 2% 10 days, net 30 days.

**"MATLOCK" CABLE ROLLER**

Price Each

Cat. No.	F.O.B. Chicago
501	\$4.75
502	6.50

Terms: 2% 10 days, net 30 days.

**LINEMAN'S SAFETY CHAIR**

Price Each

Cat. No.	F.O.B. Centralia, Mo.
20	\$17.60
21-27	17.00
22-28	19.25

Terms: 1% 10 days, net 30 days.

Note: For wheel guards add \$1.75 to above price.

**Cat. Page 68**

**COMBINATION STEEL WRENCH FOR LAG SCREWS**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
3109-20	\$2.50	\$2.50	\$2.50

**EASTERN CLIMBERS**

Price Per Pair

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
1901	\$3.50	\$3.50	\$3.50
1900	3.50	3.50	3.50
1903	3.50		

See Note in next column.

**STRAPS FOR EASTERN CLIMBERS**

Price Per Set

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
5301-1	\$3.45	\$3.45	\$3.45
5301-2	3.70	3.70	
5301-3	3.70	3.70	

Price Per Pair

5301-4	\$1.45	\$1.45	\$1.45
5301-5	2.05	2.05	

See Note in next column.

**Cat. Page 68—Cont'd.**

**TOOL BELTS AND SAFETY STRAPS**

Price Each

Cat. No.	F.O.B. Chicago or Kansas City	F.O.B. San Francisco
5202	\$4.75	\$4.75
5204	5.10	
5206-1A	9.60	
5250	4.85	
*5253	6.20	6.20

\*Not carried at Kansas City.

Terms: 2% 10 days, net 30 days.

Note: All orders amounting to \$25.00 or more are subject to a discount of 10% from the above prices.

**CHICAGO GRIPS**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
1613-30	\$ 2.00	\$2.00	\$2.00
1613-40	4.00		
1613-50	6.75		
1628- 6	11.20		
1628-16	22.35		

See Note below.

**BUFFALO GRIPS**

420-1	\$2.15	\$2.20
420A-1	3.40	3.45

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**HAVEN'S STEEL GRIPS**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. San Francisco
1604-10	\$2.00	\$2.00	\$2.00
1604-20	3.00	3.00	3.00
1625-20	7.00	7.00	

Terms: 2% 10 days, net 30 days.

See Note below.

**KLEIN'S SELF-LOCKING BLOCK TACKLE**

Price Per Set

1802-30	\$3.60	\$3.60	\$3.60
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Terms: 2% 10 days, net 30 days.

Note: All orders amounting to \$25.00 or more are subject to a discount of 10% from the above prices.

**MALLEABLE IRON PULLEY BLOCKS**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City
368	\$ .35	
369	.45	\$ .45
370	.35	
371	.45	.45

**WOOD PULLEY BLOCKS**

Cat. No.	Shoal Length	F.O.B. Chicago
26	6	\$ .85
26	8	1.30
27	6	1.60
27	8	2.25
28	6	2.30
28	8	3.40

Terms: 1% 10 days, net 30 days.

**GALVANIZED WIRE ROPE THIMBLES (Hardware)**

Price Per 100 F.O.B. Destination

Cat. No.	Zone 1		Zone 2		
	Less Than \$25.00	\$25.00 and Over	Less Than \$25.00	\$25.00 and Over	
1057	\$4.75	\$4.05	\$4.80	\$4.10	
1058	6.10	5.30	6.20	5.40	
1059	8.70	7.50	8.85	7.65	
		Zone 3		Zone 4	
1057	\$4.85	\$4.15	\$4.95	\$4.25	
1058	6.25	5.45	6.50	5.70	
1059	9.00	7.80	9.55	8.35	

Terms: 2% 10 days, net 30 days.

**Cat. Page 69—Cont'd.**

**RELIABLE CABLE GRIPS**

Price Each

**Single Eye-Hard Wire**

Cat. No.	F.O.B. Chicago	Cat. No.	F.O.B. Chicago
802	\$3.50	812	\$4.50
803	3.75	813	4.75
804	4.00	814	5.00
805	4.25	815	5.25
806	4.50	816	5.50
807	4.75	817	5.75
808	5.00	818	6.00

Terms: Net 30 days.

**Single Eye-Soft Wire**

Cat. No.	F.O.B. Chicago	Cat. No.	F.O.B. Chicago
822	\$2.25	832	\$3.25
823	2.50	833	3.50
824	2.75	834	3.75
825	3.00	835	4.00
826	3.25	836	4.25

**Double Eye Luffing**

Cat. No.	F.O.B. Chicago	Cat. No.	F.O.B. Chicago
842	\$2.75	852	\$3.75
843	3.00	853	4.00
844	3.25	854	4.25
845	3.50	855	4.50
846	3.75	856	4.75
847	4.00	857	5.00
848	4.25	858	5.25

Terms: Net 30 days.

**Double Eye Split**

Cat. No.	F.O.B. Chicago	Cat. No.	F.O.B. Chicago
862	\$3.25	872	\$4.25
863	3.50	873	4.50
864	3.75	874	4.75
865	4.00	875	5.00
866	4.25	876	5.25
867	4.50	877	5.50
868	4.75	878	5.75

Terms: Net 30 days.

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**UNIQUE TORCHES AND FURNACES**

Price Each

Cat. No.	F.O.B. Chicago
2	\$ 6.80
3	6.80
5 (New No. 3K)	8.15
7	10.90
53 Gasoline (Old No. 63)	13.50
55 Kerosene (Old No. 65)	15.00

**UNIQUE FOLDING WINDSHIELD**

50	\$11.50
50A	7.50
50C	5.25

Terms: 2% 10 days, net 30 days.

**CLAYTON LAMBERT GASOLINE FURNACES**

Price Each

Cat. No.	F.O.B. Chicago	F.O.B. Kansas City
22A	\$8.00	\$8.00
12A	7.94	

Terms: 2% 10 days, net 30 days.

**TORCHES**

32A	\$5.67	\$6.00
238 (Old No. 38)	4.33	4.70

Terms: 2% 10 days, net 30 days.

**GASOLINE FURNACE**

Price Each

Cat. No.	F.O.B. Chicago
76B (Gasoline)	\$8.40

Terms: 2% 10 days, net 30 days.

**TORCH AND WEED BURNER**

Price Each

Description	F.O.B. Chicago
Torch and Weed Burner	\$9.60 each

Terms: 2% 10 days, net 30 days.



FOR ZONE LOCATIONS SEE BACK COVER

**Cat. Page 71**

**PREST-O-LITE EQUIPMENT**  
Price Each

Cat. No.	Description	F.O.B. Indianapolis or Chicago
0-6119	Complete	\$12.75
0-6120	Complete	10.75
0-6109	Complete	15.50
0-6102	Complete	2.00

Discount: 6 or more, less 10%.

**PREST-O-LITE PARTS**

Cat. No.	Description	F.O.B. Indianapolis or Chicago	Cat. No.	Description	F.O.B. Indianapolis or Chicago
A-963		\$.05	A-6081		\$.25
O-2343		6.50	A-6083		1.90
A-2345		.25	A-6084		1.75
A-3321		1.00	A-6085		1.75
A-3710		.20	A-6086		1.90
A-3879		.30	A-6103		2.75
L-6014		.75	A-6089		1.90
A-6015		.65	A-6103		2.50
A-6016		.90	A-6108		3.25
A-6058		.75	A-6299		1.50
L-6312		1.00	Z-54		11 per ft.

Discount: 12 or more, less 10%.  
Terms: 2% 10 days, net 30 days.

**STAYSALITE LINEMAN'S TORCH**  
3420 ..... \$5.00 \$5.00

Terms: 2% 10 days, net 30 days.

**KELLOGG SOLDERING IRON**

Cat. No.	Description	F.O.B. Chicago	F.O.B. Kansas City	F.O.B. Frisco	F.O.B. San Diego
1A	Medium	\$7.00	\$7.00	\$7.10	
2A	Hot	7.00			

**Repair Parts for Kellogg Iron**

47796	Tip—Pointed	\$.20	\$.20
47794	Tip—Flat	.20	
47777	Element—Med.	2.75	
47778			

Terms: Net 30 days.

**VULCAN ELECTRIC SOLDERING IRON**

30		\$ 6.25	\$6.35
50		8.00	
300		10.75	

Terms: Net 30 days.

**SOLDERING COPPER HANDLES**

Cat. No.	Description	F.O.B. Chicago	F.O.B. Kansas City
1		\$.75	
2		1.00	

Terms: 2% 10 days, net 30 days.

**MANUAL SOLDERING IRONS**

1		\$.50	\$.55
2		.80	.85
6		1.40	

Terms: Net 30 days.

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**OCTAGON TAMPING AND DIGGING BARS**

Price Each	F.O.B. Destination Zone 1	F.O.B. Destination Zone 2
10-408-1071	\$5.05	\$5.10
10-409-1072	5.31	5.38
10-411-1074	5.57	5.65
10-412-1075	6.44	6.53
Price Each	F.O.B. Destination Zone 3	F.O.B. Destination Zone 4
10-408-1071	\$5.21	\$5.37
10-409-1072	5.50	5.69
10-411-1074	5.78	6.00
10-412-1075	6.69	6.93

Terms: 2% 10 days, net 30 days.

**Cat. Page 72—Cont'd.**

**LIGHT SHOE TAMPING BARS**

Price Each	F.O.B. Destination Zone 1	F.O.B. Destination Zone 2
10-417-854	\$3.90	\$3.55 \$3.96 \$3.61
10-418-855	4.41	4.01 4.48 4.08
10-417-854	\$4.05	\$3.70 \$4.26 \$3.91
10-418-855	4.57	4.17 4.80 4.40

**HEAVY DUTY PIKE POLES**

Price Each	F.O.B. Destination Zone 1	F.O.B. Destination Zone 2
10-212-818	\$3.50	\$3.20 \$3.56 \$3.26
10-213-819	4.31	3.91 4.38 3.98
10-214-820	4.97	4.52 5.04 4.59
10-215-821	5.49	4.99 5.58 5.08
10-216-822	6.31	5.76 6.40 5.85
10-212-818	\$3.65	\$3.35 \$3.86 \$3.56
10-213-818	4.47	4.07 4.54 4.30
10-214-820	5.14	4.69 5.38 4.93
10-215-821	5.69	5.19 5.99 5.49
10-216-822	6.53	5.98 6.86 6.31

**GUARDED PIKE POLES**

Price Each	F.O.B. Destination Zone 1	F.O.B. Destination Zone 2
10-226-832	\$3.78	\$3.43 \$3.83 \$3.48
10-227-833	4.15	3.80 4.20 3.85
10-228-834	4.80	4.35 4.86 4.41
10-229-835	5.67	5.17 5.74 5.24
10-230-836	6.97	6.35 7.05 6.43
10-231-837	7.26	6.61 7.36 6.71
10-226-832	\$3.89	\$3.54 \$4.06 \$3.71
10-227-833	4.28	3.93 4.48 4.13
10-228-834	4.95	4.50 5.16 4.71
10-228-835	5.84	5.34 6.08 5.58
10-230-836	7.18	6.56 7.49 6.87
10-231-837	7.49	6.84 7.84 7.19

**SHOVELS, WOOD HANDLES**

Price Each	F.O.B. Destination Maple Zone 1	F.O.B. Destination Maple Zone 2
10-042	\$2.73	\$2.48 \$2.77 \$2.52
10-043-867	2.96	2.71 3.00 2.75
10-044-868	3.27	2.97 3.30 3.00
10-044A-869	3.48	3.18 3.52 3.22
10-042	\$2.84	\$2.58 \$3.00 \$2.73
10-043-867	3.05	2.80 3.18 2.93
10-044-868	3.37	3.07 3.52 3.22
10-044A-869	3.59	3.29 3.75 3.45

Terms: 2% 10 days, net 30 days.

**SPOONS**

Price Each	F.O.B. Destination Zone 1	F.O.B. Destination Zone 2
10-062-859	\$3.23	\$2.93 \$3.27 \$2.97
10-063-860	3.38	3.08 3.42 3.12
10-064-861	3.49	3.19 3.54 3.24
10-062-859	\$3.34	\$3.04 \$3.50 \$3.20
10-063-860	3.49	3.19 3.65 3.35
10-064-861	3.61	3.31 3.78 3.48

**SPOON HANDLES ONLY**

Price Each	F.O.B. Destination Maple Zone 1	F.O.B. Destination Maple Zone 2
10-071-993	\$1.48	\$1.33 \$1.50 \$1.35
10-072-994	1.64	1.49 1.67 1.52
10-073-995	1.80	1.65 1.83 1.68

**Cat. Page 72—Cont'd.**

	Zone 3	Zone 4
10-071-993	\$1.53	\$1.38 \$1.59 \$1.44
10-072-994	1.70	1.55 1.78 1.63
10-073-995	1.87	1.72 1.96 1.81

**CARRYING OR LUG HOOKS**

Price Each	F.O.B. Destination Standard Pattern Zone 1	F.O.B. Destination Standard Pattern Zone 2
10-100	\$3.16	\$2.86 \$3.19 \$2.89
10-101	3.22	2.92 3.25 2.95
10-102	3.32	3.02 3.35 3.05
10-100	\$3.24	\$2.94 \$3.35 \$3.05
10-101	3.30	3.00 3.43 3.13
10-102	3.40	3.10 3.53 3.23

**PEAVIES**

Price Each	F.O.B. Destination Zone 1	F.O.B. Destination Zone 2
10-124	\$3.97	\$3.62 \$4.01 \$3.66
10-127	3.47	3.17 3.51 3.21
10-124	\$4.07	\$3.72 \$4.22 \$3.87
10-127	3.57	3.27 3.72 3.42

Terms: 2% 10 days, net 30 days.

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**FIRST AID KITS**

Cat. No.	Description	F.O.B. Chicago, Ill., or Hoboken, N. J.
No. 1	Kit Assortment G	\$1.30
No. 10	Kit Assortment S	4.20
No. 16	Kit Assortment F	6.05

Terms: 2% 10 days, net 30 days.

**BULK REFILLS FOR NO. 1 KIT**

Cat. No.	Description	Price Per 100
102-A	2" Compress	\$6.50
103-A	1" Adhesive Compress	.70
135-A	Iodine Swabs	4.30
105-A	Ammonia Inhalants	3.20
106-AT	Tannoid	5.80

**PACKAGE REFILLS FOR KITS**

Cat. No.	Description	Price Per Package
101	4" Bandage Compress 1	\$.18
102	2" Bandage Compress 4	.29
103	1" Adhesive Compress	.16
135	Iodine Swabs	.45
105	Ammonia Inhalants	.10
106T	Tannoid	.36
108	Tourniquet and Forceps	1 ea. .56
109	Wire Splint	1 .36
110	4" Bandages	1 .18
111	Gauze Compress	1 .23
112	Eye Dressing	1 .72
107	Triangular Bandage	1 .20
118	Aromatic Spirits Ammonia	4 .36
121	Jaw Wedge & Tongue Forcep	2 .78
131-T	Tannoid	2 .38
139-Y	Yuca Wood Splints	1 .08

Terms: 2% 10 days, net 30 days.



FOR ZONE LOCATIONS SEE BACK COVER

**INDIANA "CRAPO" GALVANIZED IRON WIRE**

Price Per 100 Lbs.  
"BB" Grade

F.O.B. Mills: Muncie, Ind., Waukegan, Ill., Pittsburgh, Pa., Cleveland, Ohio, Trenton, N. J., Sparrows Point, Md., and Worcester, Mass., plus all rail freight from the nearest mill to destination.

B. W. G. Gauge	Less Than 1500 Lbs.	15,000 to 25,000 Lbs.	25,000 to 50,000 Lbs.	Carload	Carload
6-8-9	\$5.66	\$5.11	\$4.96	\$4.81	\$4.56
10-11	5.83	5.28	5.13	4.98	4.73
12	5.91	5.36	5.21	5.06	4.81
14	6.34	5.79	5.64	5.49	5.24

**"Extra BB" Grade**

6-8-9	\$6.09	\$5.54	\$5.39	\$5.24	\$4.99
10-11	6.17	5.62	5.47	5.32	5.07
12	6.34	5.79	5.64	5.49	5.24
14	6.78	6.23	6.08	5.93	5.68

**"Steel" Grade**

6-8-9	\$5.31	\$4.76	\$4.61	\$4.46	\$4.21
10-11	5.48	4.93	4.78	4.63	4.38
12	5.66	5.11	4.96	4.81	4.56
14	6.09	5.54	5.39	5.24	4.99

Terms: 2% 10 days, net 30 days.

Note: Prices for less carload shipments are to be based on quantities ordered for one shipment, at one time, to one destination.

**INDIANA "CRAPO" GALVANIZED STEEL STRAND**

Price Per 1000 Feet  
(COMMERCIAL GRADE)  
Standard Double

F.O.B. Mills: Muncie, Ind., Waukegan, Ill., Pittsburgh, Pa., Cleveland, Ohio, Trenton, N. J., Sparrows Point, Md., and Worcester, Mass., plus all rail freight from the nearest mill to destination.

Diameter Inches	Less Than 1000 Feet	1000 to 10,000	10,000 to 75,000	75,000 to Carload	Carload One Destination
1/4	\$ 8.50	\$ 7.37	\$ 6.91	\$ 6.50	\$ 5.53
3/8	11.90	10.32	9.67	9.10	7.74
1/2	17.01	14.74	13.82	13.01	11.06
5/8	23.81	20.64	19.35	18.21	15.48
3/4	30.63	26.54	24.88	23.42	19.91
7/8	37.43	32.44	30.41	28.62	24.33

**Siemens-Martin**

1/4	\$10.96	\$ 9.50	\$ 8.91	\$ 8.38	\$ 7.13
3/8	13.81	11.97	11.22	10.56	8.98
1/2	20.32	17.61	16.51	15.54	13.21
5/8	26.41	22.89	21.46	20.20	17.17
3/4	34.95	30.29	28.40	26.72	22.72
7/8	42.67	36.98	34.67	32.63	27.74

**High Strength**

1/4	\$14.63	\$12.68	\$11.88	\$11.18	\$ 9.51
3/8	18.29	15.85	14.86	13.98	11.89
1/2	26.01	22.54	21.13	19.89	16.91
5/8	35.76	31.00	29.06	27.35	23.25
3/4	48.78	42.28	39.63	37.30	31.71
7/8	58.93	51.08	47.88	45.07	38.31

**Extra High Strength**

1/4	\$19.50	\$16.90	\$15.85	\$14.91	\$12.68
3/8	23.16	20.08	18.82	17.71	15.06
1/2	34.55	29.94	28.07	26.42	22.46
5/8	42.67	36.98	34.67	32.63	27.74
3/4	58.53	50.73	47.56	44.76	38.05
7/8	71.55	62.01	58.13	54.71	46.51

**A T & T Spec.**

1/4	\$10.96	\$ 9.50	\$ 8.91	\$ 8.38	\$ 7.13
3/8	16.66	14.44	13.53	12.74	10.83
1/2	20.32	17.61	16.51	15.54	13.21
5/8	35.76	31.00	29.06	27.35	23.25
3/4	58.93	51.08	47.88	45.07	38.31
7/8	71.55	62.01	58.13	54.71	46.51

Terms: 2% 10 days, net 30 days.

Note: Prices for less carload shipments are to be based on the total quantity involved but may be shipped to more than one destination. Such orders must be for immediate shipment. When less carload lots of strand are included with telephone wire basing point price to apply being that shown for quantity of strand ordered in car plus L.C.L. freight.

**RUBBER INSULATED TELEPHONE WIRES**

Price Per 1000 Feet F.O.B. Destination

Delivered Prices are Based on Shipments Aggregating 100 Pounds or More Made into the Zone Specified. Shipments Aggregating Less Than 100 Pounds will be Made at Zone Prices with Transportation Collect. Prices are Based on Quantity Ordered for Shipment at One Time. Various Sizes and Types of Wire shown below may be Combined to Get Quantity Net Prices.

**Bronze Drop Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000 Zone 1	25,000 to 50,000	50,000 to 100,000
2017B Twist. Pr.	\$12.85	\$11.57	\$10.94	\$10.30	\$9.66
2017P Parallel ..	12.09	10.89	10.29	9.69	9.09
2018B Twist. Pr.	12.85	11.57	10.94	10.30	9.66
2018P Parallel ..	12.09	10.89	10.29	9.69	9.09

**Bronze Drop Wire**

			Zone 2		
2017B Twist. Pr.	\$12.97	\$11.69	\$11.05	\$10.42	\$9.78
2017P Parallel ..	12.21	11.01	10.41	9.81	9.21
2018B Twist. Pr.	12.97	11.69	11.05	10.42	9.78
2018P Parallel ..	12.21	11.01	10.41	9.81	9.21

**Bronze Drop Wire**

			Zone 3		
2017B Twist. Pr.	\$13.10	\$11.82	\$11.18	\$10.55	\$9.91
2017P Parallel ..	12.33	11.13	10.53	9.93	9.33
2018B Twist. Pr.	13.10	11.82	11.18	10.55	9.91
2018P Parallel ..	12.33	11.13	10.53	9.93	9.33

**Bronze Drop Wire**

			Zone 4		
2017B Twist. Pr.	\$13.16	\$11.88	\$11.24	\$10.61	\$9.97
2017P Parallel ..	12.39	11.19	11.59	9.99	9.39
2018B Twist. Pr.	13.16	11.88	11.24	10.61	9.97
2018P Parallel ..	12.39	11.19	11.59	9.99	9.39

**Bronze Drop Wire**

			Zone 5		
2017B Twist. Pr.	\$13.34	\$12.06	\$11.42	\$10.79	\$10.15
2017P Parallel ..	12.56	11.36	10.76	10.16	9.56
2018B Twist. Pr.	13.34	12.06	11.42	10.79	10.15
2018P Parallel ..	12.56	11.36	10.76	10.16	9.56

**Bronze Drop Wire**

			Zone 6		
2017B Twist. Pr.	\$13.54	\$12.26	\$11.61	\$10.99	\$10.35
2017P Parallel ..	12.74	11.54	10.94	10.34	9.74
2018B Twist. Pr.	13.54	12.26	11.61	10.99	10.35
2018P Parallel ..	12.74	11.54	10.94	10.34	9.74

**Bronze Drop Wire**

			Zone 7		
2017B Twist. Pr.	\$14.15	\$12.87	\$12.23	\$11.60	\$10.96
2017P Parallel ..	13.32	12.12	11.52	10.92	10.32
2018B Twist. Pr.	14.15	12.87	12.23	11.60	10.96
2018P Parallel ..	13.32	12.12	11.52	10.92	10.32

Single conductor wire—1/2 the price of twisted pair.

Three conductor wire—1/2 times the price of twisted pair.

Terms: 1/2 of 1% 10 days, net 30 days.

**Bridle Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000 Zone 1	25,000 to 50,000	50,000 to 100,000
1519B Twist. Pr.	\$10.07	\$ 9.07	\$ 8.57	\$ 8.07	\$7.57
1518B Twist. Pr.	11.09	9.99	9.44	8.89	8.34
1520B Twist. Pr.	8.81	7.93	7.49	7.06	6.62
1522B Twist. Pr.	8.81	7.93	7.49	7.06	6.62
1216B Twist. Pr.	13.88	12.50	11.81	11.13	10.44
1214B Twist. Pr.	16.88	15.21	14.37	13.54	12.70

**Bridle Wire**

			Zone 2		
1519B Twist. Pr.	\$10.16	\$ 9.16	\$ 8.66	\$ 8.16	\$7.66
1518B Twist. Pr.	11.21	10.11	9.56	9.01	8.46
1520B Twist. Pr.	8.88	8.00	7.56	7.13	6.69
1522B Twist. Pr.	8.88	8.00	7.56	7.13	6.69
1216B Twist. Pr.	14.03	12.65	11.96	11.28	10.59
1214B Twist. Pr.	17.10	15.43	14.59	13.76	12.92

Prices for zones 3, 4, 5, 6 and 7 continued next page.



FOR ZONE LOCATIONS SEE BACK COVER

**RUBBER INSULATED TELEPHONE WIRES**

Price Per 1000 Feet F.O.B. Destination

Delivered Prices are Based on Shipments Aggregating 100 Pounds or More Made into the Zone Specified. Shipments Aggregating Less Than 100 Pounds will be Made at Zone Prices with Transportation Collect. Prices are Based on Quantity Ordered for Shipment at One Time. Various Sizes and Types of Wire shown below may be Combined to Get Quantity Net Prices.

**Bridle Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 3					
1519B Twist. Pr.	\$10.25	\$ 9.25	\$ 8.75	\$ 8.25	\$ 7.75
1518B Twist. Pr.	11.33	10.23	9.68	9.12	8.58
1520B Twist. Pr.	8.96	8.08	7.64	7.21	6.77
1522B Twist. Pr.	8.96	8.08	7.64	7.21	6.77
1216B Twist. Pr.	14.19	12.81	12.12	11.44	10.75
1214B Twist. Pr.	17.33	15.66	14.82	13.99	13.15

**Bridle Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 4					
1519B Twist. Pr.	\$10.30	\$ 9.30	\$ 8.80	\$ 8.30	\$ 7.80
1518B Twist. Pr.	11.39	10.29	9.74	9.19	8.64
1520B Twist. Pr.	9.00	8.12	7.68	7.25	6.81
1522B Twist. Pr.	9.00	8.12	7.68	7.25	6.81
1216B Twist. Pr.	14.28	12.90	12.21	11.53	10.84
1214B Twist. Pr.	17.45	15.78	14.94	14.11	13.27

**Bridle Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 5					
1519B Twist. Pr.	\$10.42	\$ 9.43	\$ 8.93	\$ 8.43	\$ 7.93
1518B Twist. Pr.	11.56	10.46	9.91	9.36	8.81
1520B Twist. Pr.	9.11	8.23	7.79	7.36	6.92
1522B Twist. Pr.	9.11	8.23	7.79	7.36	6.92
1216B Twist. Pr.	14.51	13.13	12.44	11.76	11.07
1214B Twist. Pr.	17.78	16.11	15.27	14.44	13.60

**Bridle Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 6					
1519B Twist. Pr.	\$10.58	\$ 8.58	\$ 9.08	\$ 8.58	\$ 8.08
1518B Twist. Pr.	11.74	10.64	10.09	9.54	8.99
1520B Twist. Pr.	9.23	8.35	7.91	7.48	7.04
1522B Twist. Pr.	9.23	8.35	7.91	7.48	7.04
1216B Twist. Pr.	14.76	13.38	12.69	12.01	11.32
1214B Twist. Pr.	18.14	16.47	15.63	14.80	13.96

**Bridle Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 7					
1519B Twist. Pr.	\$11.02	\$10.02	\$ 9.52	\$ 9.02	\$ 8.52
1518B Twist. Pr.	12.32	11.22	10.67	10.12	9.57
1520B Twist. Pr.	9.60	8.72	8.28	7.85	7.41
1522B Twist. Pr.	9.60	8.72	8.28	7.85	7.41
1216B Twist. Pr.	15.54	14.16	13.47	12.79	12.10
1214B Twist. Pr.	19.25	17.58	16.75	15.91	15.07

Single conductor wire—1/2 the price of twisted pair.

Three conductor wire—1/2 times the price of twisted pair.

Terms: 1/2 of 1% 10 days, net 30 days.

**Interior Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 1					
1622B Duplex-Br.	\$ 8.98	\$ 8.08	\$ 7.63	\$ 7.19	\$ 6.74
1619B Duplex-Gr.	10.36	9.33	8.81	8.30	7.78
1618B Twisted Pr.	12.08	10.88	10.28	9.68	9.08

**Interior Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 2					
1622B Duplex-Br.	\$ 9.02	\$ 8.12	\$ 7.67	\$ 7.23	\$ 6.78
1619B Duplex-Gr.	10.44	9.41	8.89	8.38	7.86
1618B Twisted Pr.	12.17	10.97	10.37	9.77	9.17

**Interior Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 3					
1622B Duplex-Br.	\$ 9.06	\$ 8.16	\$ 7.71	\$ 7.27	\$ 6.82
1619B Duplex-Gr.	10.52	9.49	8.97	8.46	7.94
1618B Twisted Pr.	12.27	11.07	10.47	9.87	9.27

**Interior Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 4					
1622B Duplex-Br.	\$ 9.08	\$ 8.18	\$ 7.73	\$ 7.29	\$ 6.84
1619B Duplex-Gr.	10.56	9.53	9.01	8.50	7.98
1618B Twisted Pr.	12.33	11.13	10.53	9.93	9.33

**Interior Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 5					
1622B Duplex-Br.	\$ 9.13	\$ 8.23	\$ 7.78	\$ 7.34	\$ 6.89
1619B Duplex-Gr.	10.68	9.65	9.13	8.62	8.10
1618B Twisted Pr.	12.47	11.27	10.67	10.07	9.47

Prices for zones 6 and 7 continued in next column

**RUBBER INSULATED TELEPHONE WIRES**

Price Per 1000 Feet F.O.B. Destination

Delivered Prices are Based on Shipments Aggregating 100 Pounds or More Made into the Zone Specified. Shipments Aggregating Less Than 100 Pounds will be Made at Zone Prices with Transportation Collect. Prices are Based on Quantity Ordered for Shipment at One Time. Various Sizes and Types of Wire shown below may be Combined to Get Quantity Net Prices.

**Interior Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 6					
1622B Duplex-Br.	\$ 9.19	\$ 8.29	\$ 7.84	\$ 7.40	\$ 6.95
1619B Duplex-Gr.	10.80	9.77	9.25	8.74	8.22
1618B Twisted Pr.	12.62	11.42	10.82	10.22	9.62
Zone 7					
1622B Duplex-Br.	\$ 9.38	\$ 8.48	\$ 8.03	\$ 7.59	\$ 7.14
1619B Duplex-Gr.	11.19	10.16	9.64	9.13	8.60
1618B Twisted Pr.	13.11	11.91	11.31	10.71	10.11

Single conductor wire—1/2 the price of twisted pair.

Three conductor wire—1/2 times the price of twisted pair.

Terms: 1/2 of 1% 10 days, net 30 days.

**Jumper Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 1					
1322B Dup.-R & W	\$ 9.54	\$ 8.59	\$ 8.11	\$ 7.64	\$ 7.16
1320B Dup.-R & W	10.04	9.04	8.54	8.04	7.54

**Jumper Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 2					
1322B Dup.-R & W	\$ 9.59	\$ 8.54	\$ 8.16	\$ 7.69	\$ 7.21
1320B Dup.-R & W	10.10	9.10	8.60	8.10	7.60

**Jumper Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 3					
1322B Dup.-R & W	\$ 9.64	\$ 8.69	\$ 8.21	\$ 7.74	\$ 7.26
1320B Dup.-R & W	10.16	9.16	8.66	8.16	7.66

**Jumper Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 4					
1322B Dup.-R & W	\$ 9.66	\$ 8.71	\$ 8.23	\$ 7.76	\$ 7.28
1320B Dup.-R & W	10.19	9.19	8.69	8.19	7.69

**Jumper Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 5					
1322B Dup.-R & W	\$ 9.74	\$ 8.79	\$ 8.31	\$ 7.84	\$ 7.36
1320B Dup.-R & W	10.27	9.27	8.77	8.27	7.77

**Jumper Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 6					
1322B Dup.-R & W	\$ 9.81	\$ 8.86	\$ 8.38	\$ 7.91	\$ 7.43
1320B Dup.-R & W	10.36	9.36	8.86	8.36	7.86

**Jumper Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 7					
1322B Dup.-R & W	\$10.06	\$ 9.11	\$ 8.63	\$ 8.16	\$ 7.69
1320B Dup.-R & W	10.64	9.64	9.14	8.64	8.14

Single conductor wire—1/2 the price of twisted pair.

Three conductor wire—1/2 times the price of twisted pair.

Terms: 1/2 of 1% 10 days, net 30 days.

**Pothead Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 1					
1419B Twist. Pr.	\$10.56	\$ 9.51	\$ 8.98	\$ 8.46	\$ 7.93

**Pothead Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 2					
1419B Twist. Pr.	\$10.63	\$ 9.58	\$ 9.05	\$ 8.53	\$ 7.99

**Pothead Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 3					
1419B Twist. Pr.	\$10.71	\$ 9.66	\$ 9.13	\$ 8.61	\$ 8.08

**Pothead Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 4					
1419B Twist. Pr.	\$10.75	\$ 9.70	\$ 9.17	\$ 8.65	\$ 8.12

**Pothead Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 5					
1419B Twist. Pr.	\$10.86	\$ 9.81	\$ 9.28	\$ 8.76	\$ 8.23

**Pothead Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 6					
1419B Twist. Pr.	\$10.98	\$ 9.93	\$ 9.40	\$ 8.88	\$ 8.34

**Pothead Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
Zone 7					
1419B Twist. Pr.	\$11.35	\$10.30	\$ 9.77	\$ 9.25	\$ 8.71

Single conductor wire—1/2 the price of twisted pair.

Three conductor wire—1/2 times the price of twisted pair.

Terms: 1/2 of 1% 10 days, net 30 days.



FOR ZONE LOCATIONS SEE BACK COVER

**RUBBER INSULATED TELEPHONE WIRES—Continued**

Nos. 1018-1019-1016 Ironite Drop Wire discontinued, substitute 3018-3019-3016.

**Ironite Drop Wire**

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
3019B	\$ 9.10	\$ 8.10	\$ 7.60	\$ 7.15	\$ 6.90
3019P	8.04	7.14	6.74	6.34	6.09
3018B	10.43	9.23	8.68	8.18	7.93
3018P	8.67	7.72	7.27	6.82	6.62
3016B	12.88	11.43	10.73	10.13	9.78

**Ironite Drop Wire**

	Zone 2				
	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
3019B	\$ 9.22	\$ 8.22	\$ 7.72	\$ 7.27	\$ 7.02
3019P	8.16	7.26	6.86	6.46	6.21
3018B	10.58	9.43	8.83	8.33	8.08
3018P	8.82	7.87	7.42	6.97	6.77
3016B	13.10	11.65	10.95	10.35	10.00

**Ironite Drop Wire**

	Zone 3				
	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
3019B	\$ 9.35	\$ 8.35	\$ 7.85	\$ 7.40	\$ 7.15
3019P	8.28	7.38	6.98	6.58	6.33
3018B	10.74	9.59	8.99	8.49	8.24
3018P	8.98	8.03	7.58	7.13	6.93
3016B	13.33	11.88	11.18	10.58	10.23

**Ironite Drop Wire**

	Zone 4				
	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
3019B	\$ 9.41	\$ 8.41	\$ 7.91	\$ 7.46	\$ 7.21
3019P	8.34	7.44	7.04	6.64	6.39
3018B	10.83	9.68	9.08	8.58	8.33
3018P	9.07	8.12	7.67	7.22	7.02
3016B	13.45	12.00	11.30	10.70	10.35

**Ironite Drop Wire**

	Zone 5				
	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
3019B	\$ 9.59	\$ 8.59	\$ 8.09	\$ 7.64	\$ 7.39
3019P	8.51	7.61	7.21	6.81	6.56
3018B	11.06	9.91	9.31	8.81	8.56
3018P	9.30	8.35	7.90	7.45	7.25
3016B	13.78	12.33	11.63	11.03	10.68

**Ironite Drop Wire**

	Zone 6				
	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
3019B	\$ 9.79	\$ 8.79	\$ 8.29	\$ 7.84	\$ 7.59
3019P	8.69	7.79	7.39	6.99	6.74
3018B	11.31	10.16	9.56	9.06	8.81
3018P	9.55	8.60	8.15	7.70	7.50
3016B	14.14	12.69	11.99	11.39	11.04

**Ironite Drop Wire**

	Zone 7				
	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 to 100,000
3019B	\$10.40	\$ 9.40	\$ 8.90	\$ 8.45	\$ 8.20
3019P	9.27	8.37	7.97	7.57	7.32
3018B	12.09	10.94	10.34	9.84	9.59
3018P	10.33	9.38	8.93	8.48	8.28
3016B	15.25	13.80	13.10	12.50	12.15

Single conductor wire—1/2 the price of twisted pair.  
Three conductor wire—1 1/2 times the price of twisted pair.

Terms: 1/2 of 1% 10 days, net 30 days.  
Note: Assorted kinds of wire MAY NOT be combined to obtain quantity prices with the exception of the wires listed under "Rubber Insulated Telephone Wires."

**KELLAC FLAMEPROOF JUMPER WIRE**

Price Per 1000 Ft. F.O.B. Chicago

	1 Ft. to 999 Ft.	1000 Ft. to 4999 Ft.	5000 Ft. to 24,999 Ft.	25,000 Ft. to 49,999 Ft.	50,000 Ft. to 249,999 Ft.	250,000 Ft. & Over
3002	\$9.50	\$8.50	\$8.10	\$7.60	\$7.20	\$6.95
3002-E	10.00	9.00	8.50	8.00	7.50	7.25
3003	14.25	12.75	12.15	11.40	10.80	10.43
3003-E	15.00	13.50	12.75	12.00	11.25	10.88

**KELLOGG SPECIAL TREE WIRE**

Price Per 1000 Ft. F.O.B. Marion, Indiana

	Less Than 1000	1000 to 5000	5000 to 25,000	25,000 to 50,000	50,000 and Over
712A	\$18.80	\$16.70	\$15.70	\$14.75	\$14.25
714A	15.85	14.05	13.20	12.40	12.00
716A	14.15	12.60	11.80	11.15	10.75

Terms: 1/2 of 1% 10 days, net 30 days.

**Cat. Pages 74-75—Cont'd.**

**WEATHERPROOF IRON TREE WIRE**

Shipments of 100 lbs. or more to points East of the Mississippi River F.O.B. Destination. West of the Mississippi add \$1.00 per cwt. Shipments less than 100 lbs. are F.O.B. Sycamore, Illinois. Furnished in 1/2 mile coils only. We do not break coils.

Price Per 100 Lbs.

Cat. No.	1/2 to 2 Miles	2 to 5 Miles	5 to 10 Miles
910AA	\$15.00	\$14.30	\$13.60
910AAA	16.70	15.90	15.20
912AA	16.30	15.30	14.80
912AAA	18.10	17.30	16.50
914AA	19.50	18.50	17.60
914AAA	21.30	20.30	19.30
916AA	24.70	23.30	22.00
916AAA	26.00	24.50	23.20

Terms: 1/2 of 1% 10 days, net 30 days.

**ELECTRIC LIGHT OR POWER WIRE**

Price Per 1000 Ft. F.O.B. Chicago

Cat. No.	Less Than 1000	1000 to 5000	5000 to 10,000	10,000 and Over
804AA	\$61.75	\$53.70		
806AA	48.00	41.80		
808A	28.65	24.90		
810A	16.80	24.90		
812A	12.20	10.60		
814A	8.50	7.70	\$7.20	\$6.85
814A	\$8.85	\$8.05	\$7.55	\$7.10

Terms: 1/2 of 1% 10 days, net 30 days.

**BARE WEATHERPROOF WIRE**  
PRICES ON APPLICATION

**NORTHERN WHITE CEDAR POLES**

PRICES ON APPLICATION

**WESTERN RED CEDAR POLES**

PRICES ON APPLICATION

**CREOSOTED PINE POLES**

PRICES ON APPLICATION

**CARBOSOTA**

Price Per Gallon

Capacity	F.O.B. Chicago or Philadelphia	Kansas City
5 Gallon Cans (Non-Returnable)	\$ .49	\$ .54
30 Gallon (1/2 Barrels) 235 lbs. (Non-Returnable)	.41	.46
50 Gallon (Barrels) 465 lbs. (Non-Returnable)	.39	.44

Discount: Quantities of 100 gallons and over deduct 2c per gallon.

Terms: 2% 10 days, net 30 days.  
Quantity of Carbosota Required for Surface Treatments of Cedar Poles

Pole Diam. Inches	Grd. Line	Length Feet	Gals. Carbosota Required for 100 Poles
5	7	20	27
6	9	20	29
6	10	25	31
7	11	25	35
6	11	30	36
7	12	30	37
6	12	35	37
7	13	35	41
6	13	40	46
7	14	40	51
8	15	40	53
7	14	45	58
8	16	45	67
7	15	50	62
8	16	50	67

**CARBOLINEUM**  
Price Per Gallon

Capacity	F.O.B. Milwaukee, Wis.
In 35 Gal. Returnable Drums	\$ .77
In 55 Gal. Returnable Drums	.72
In 10 Gal. Non-Returnable Drums	.90
In 5 Gal. Non-Returnable Drums	.95

Terms: 2% 10 days, net 60 days.  
Note: 35 gallon drums \$4.00 extra. 55 gallon drums \$5.00 extra. 80% of drum charges refunded upon return if in good condition, within 6 months, F.O.B. Milwaukee, Wisconsin.



FOR ZONE LOCATIONS SEE BACK COVER

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# Kellogg

# Location of Zones Applying to Delivered Prices

To determine the price of zoned supply items delivered to you, locate the zone in which your point of delivery lies according to products as shown at the head of each column.

	Pole Line Hardware and Specialties	Construction Tools	Rubber Covered Telephone Wires	Porcelain Knobs Tubes	anchors, Augers and Parts
Alabama .....	2	3	5	2	Eastern
Alaska .....			6		Western
Arizona .....		4	7	4	Western
Arkansas .....	2	2	6	2	Eastern
California .....		4	5		Western
Colorado .....	3	3	7	††4	Western
Connecticut .....	1	2	1	1	Eastern
Delaware .....	1	2	2	1	Eastern
District of Columbia .....	1		2	1	Eastern
Florida .....	2	4	5	2	Eastern
Georgia .....	2	3	5	2	Eastern
Hawaiian Islands .....			6		
Idaho .....	*4	4	7	4	Western
Illinois .....	1	1	4	1	Eastern
Indiana .....	1	1	3	1	Eastern
Iowa .....	1	1	5	1	Eastern
Kansas .....	†3	2	6	°°3	Eastern
Kentucky .....	1	1	4	1	Eastern
Louisiana .....	2	3	6	2	Eastern
Maine .....	1	2	2	1	Eastern
Maryland .....	1	2	2	1	Eastern
Massachusetts .....	1	2	1	1	Eastern
Michigan .....	1	1	3	1	Eastern
Minnesota .....	1	1	5	1	Eastern
Mississippi .....	2	3	6	2	Eastern
Missouri .....	1	1	5	1	Eastern
Montana .....	‡3	4	7	4	Western
Nebraska .....	**3	2	6	†††3	Eastern
Nevada .....	§4	4	7	4	Western
New Hampshire .....	1	2	2	1	Eastern
New Jersey .....	1	2	1	1	Eastern
New Mexico .....	3	4	7	4	Western
New York .....	1	2	1	1	Eastern
North Carolina .....	2	3	4	2	Eastern
North Dakota .....	3	2	6	***3	Eastern
Ohio .....	1	1	3	1	Eastern
Oklahoma .....	3	3	6	3	Eastern
Oregon .....		4	5		Western
Panama Canal Zone .....			5		
Pennsylvania .....	1	2	1	1	Eastern
Porto Rico .....			5		
Rhode Island .....	1	2	1	1	Eastern
South Carolina .....	2	3	5	2	Eastern
South Dakota .....	3	2	6	††3	Eastern
Tennessee .....	°2	2	5	2	Eastern
Texas .....	§3	3	5	°°°3	Eastern
Utah .....	4	4	7	4	Western
Vermont .....	1	2	2	1	Eastern
Virginia .....	1	2	2	1	Eastern
Washington .....		4	5		Western
West Virginia .....	1	1	3	1	Eastern
Wisconsin .....	1	1	4	1	Eastern
Wyoming .....	3	3	7		Western

\*Except Counties of Boundary, Bonner, Kootenai, Benewah, Shoshone, Latah, Clearwater, Nez Perce, Lewis and Idaho. (Prices on Application.) †Kansas City is in zone 2.

†Except Northern half of Lake County and the Counties of Flathead and Lincoln. (Prices on Application.)

‡Texarkana is in zone 2. §Counties of Elko, Eureka, White Pine and Lincoln only. (For all others, Prices on Application.)

\*\*Omaha is in zone 1. °Bristol is in zone 1. \*\*\*Fargo is in zone 1.

††Sioux Falls is in zone 1. †††Denver and Pueblo are in zone 3. °°°Kansas City is in zone 1.

†††Lincoln and Omaha are in zone 1. °°°El Paso is in zone 4.

## KELLOGG SWITCHBOARD AND SUPPLY CO., CHICAGO