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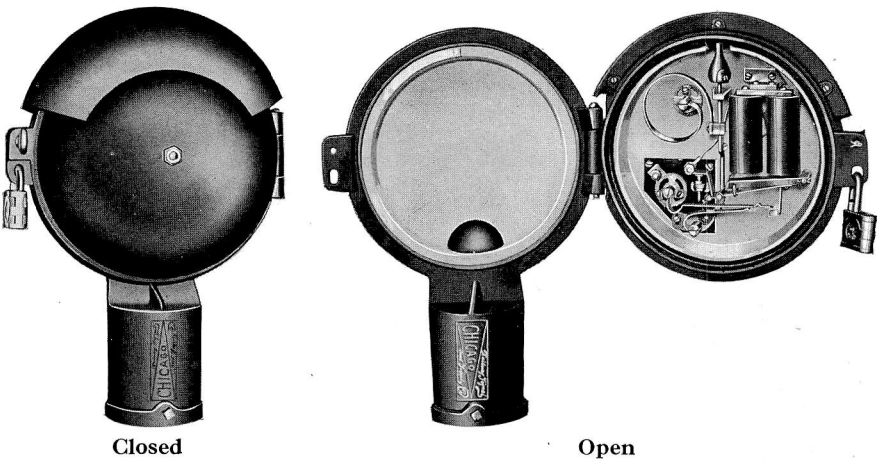
CATALOGUE AND PRICE LIST

SECTION F

ELECTRIC BELLS

Annunciator Bells
Indicator Bells
Electric Flag
Time Bell
Highway Crossing Bells
Locomotive Type Bells
Motor Type Bells

STYLE "E" CROSSING BELL



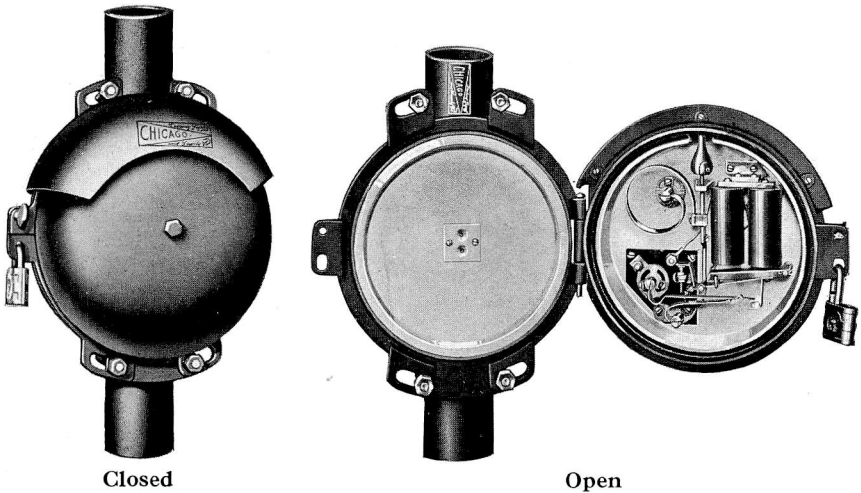
STYLE "E" CROSSING BELLS HAVE FOLLOWING ADVANTAGES:

The mechanism is gravity operated and not dependent on springs. Case is very heavy and strong and is well gasketed making same absolutely water, dust and bug proof.

The Gong is 12" diameter and has a loud, clear and distinct tone.

Bells are furnished regularly at 10 Ohms resistance, but may be furnished any resistance up to 1,000 Ohms. Can be furnished to operate on any Voltage from 2 Volts to 110 Volts Direct Current and are guaranteed to operate on a minimum amount of current.

STYLE "E" CROSSING BELL



The Case on either style may be opened for inspection and adjustment without removing Gong or disconnecting the wires.

Bells are furnished with Sockets for top of Poles or Lugs to fasten to side of Steel Poles with U Bolts or Wood Poles with Lag Screws as listed.

Contact Springs are heavy Phosphor Bronze with three fingered Platinum Contacts or large Graphite Contacts when specified. Contacts are self-cleaning and require no adjustments.

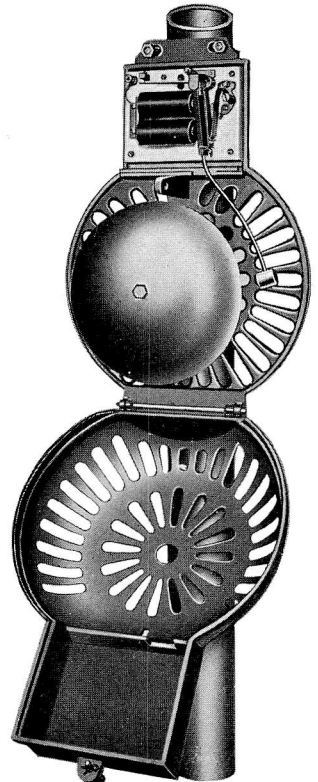
All parts are strong and simple, jig drilled and machined to insure durability and interchangeability and are held securely in place with cotters and lock washers, thus eliminating failures.

ENCLOSED CROSSING BELL

Style "F"



Closed



Open

This Bell is equipped with a heavy iron case and is practically indestructible.

Case is hinged on extreme bottom allowing entire Bell to be inspected easily and quickly without removing any parts.

The works are mounted upon a heavy porcelain base affording highest insulation. The Gong is 12" in diameter and has a clear, loud and distinct tone.

The Magnets are large, enclosed in waterproof covers wound with high grade enameled wire and tested with 3,000 Volts, Alternating Current, before shipment.

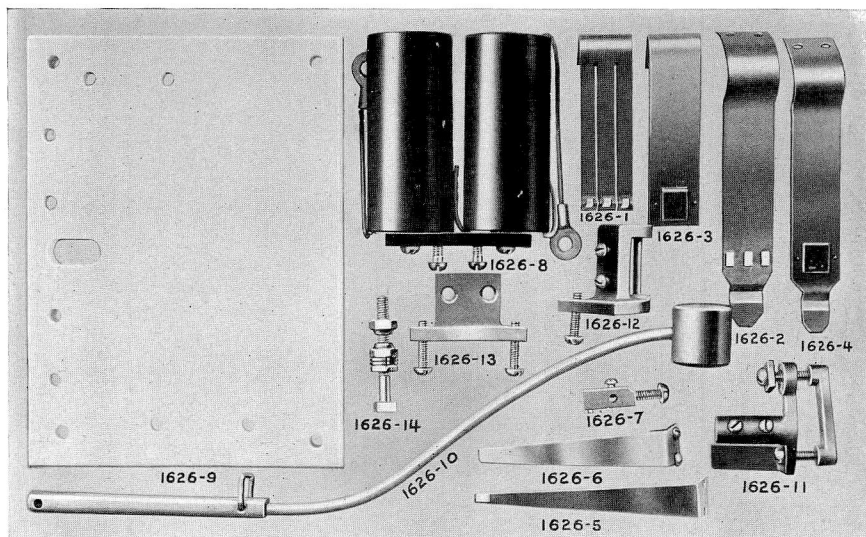
Contact Springs are three fingered platinum to platinum or graphite to graphite as specified.

All parts are simple and strong and held securely in place, guaranteed not to work out of adjustment under constant use.

Standard Resistance is 8 Ohms, but also furnished wound to any desired resistance and Voltage up to 600 Volts Direct Current.

ENCLOSED CROSSING BELL

Style "F"



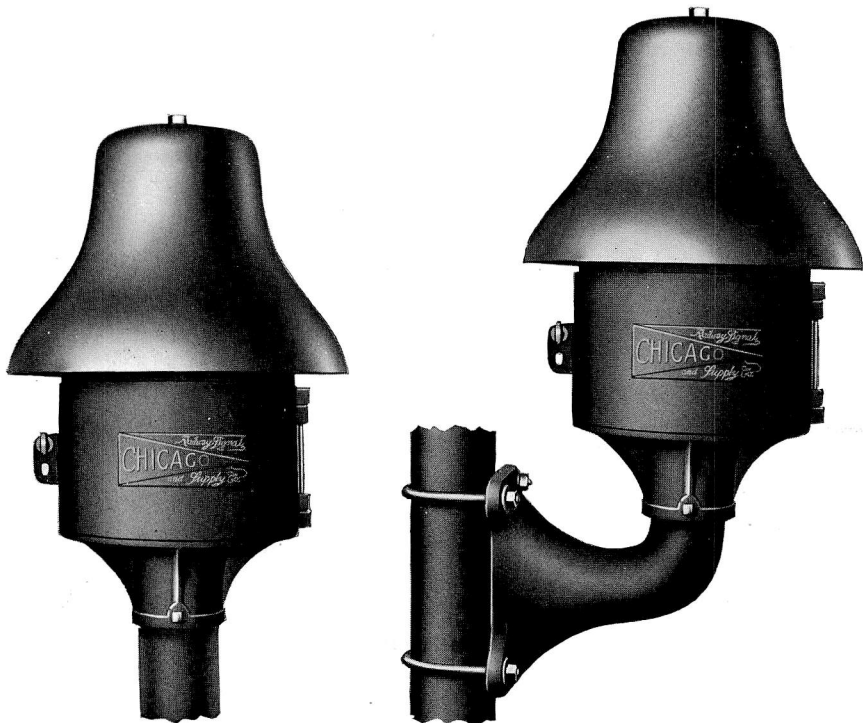
Repair Parts for Style "F" Bells

Trade No.	DESCRIPTION	List Price
1626	Style F Crossing Bell complete with Four Lag Screws for Wood Posts.....	\$40.00
1627	Style F Crossing Bell complete with Two U Bolts for side of 3 1/2" O. D. Steel Pole.....	40.00
1628	Style F Crossing Bell complete with Two U Bolts for side of 4 1/2" O. D. Steel Pole.....	40.00
1626-1	Back Contact Spring, Platinum Contacts, each.....	2.50
1626-2	Front " " " " " ".....	2.50
1626-3	Back " " " Graphite " ".....	2.25
1626-4	Front " " " " " ".....	2.25
1626-5	" " " for Electric Light or Tell Tale Circuits, each.....	1.25
1626-6	Aluminum Spring Support for above with Screws.....	.60
1626-7	Contact Post, Platinum Pointed for 1626-5.....	.80
1626-8	Magnets complete as shown. Specify Resistance.....
1626-9	Porcelain Base.....	2.00

If other repair parts than those listed are required, order by number as shown. Bells will be furnished with Platinum Contacts unless Graphite Contacts are specified. Bells will be furnished standard resistance, 8 Ohms, unless otherwise specified. An extra charge will be made for Bells wound above 50 Ohms.

LOCOMOTIVE TYPE CROSSING BELL

Style "G"



1630 For Top of 3" Pole
1630-1 " " " 4" "

1630-2 With Lag Screws for Wood Poles
1630-3 With Bracket and U Bolts for 3" Steel Pole
1630-4 " " " " " 4" " "
1630-5 " " " " " 5" " "
1630-6 " " " " " 6" " "

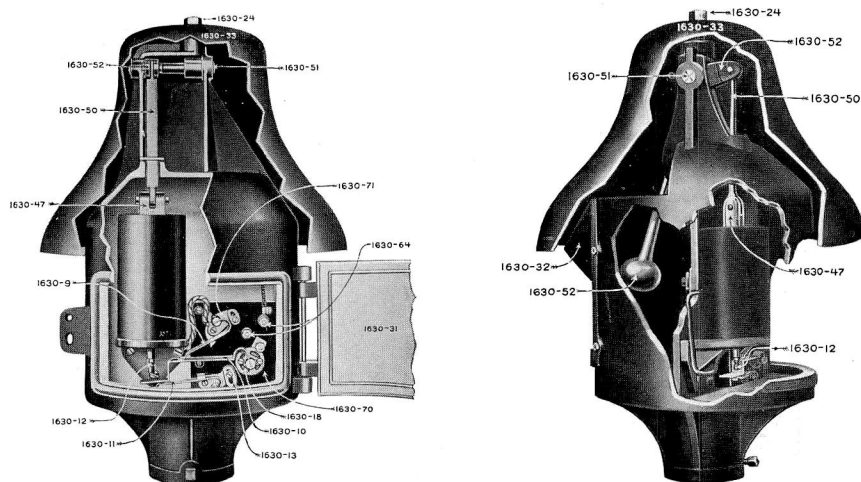
Style "G" Bell is equipped with 18" Crucible Bell Steel Locomotive Type Gong and rings the same as a gong on a locomotive, thus making an ideal crossing alarm. The iron covered Solenoid Magnet which is form-wound is large, powerful and highly efficient and may be wound to operate on any Voltage from 2 Volts to 650 Volts Direct Current.

The operation of Bell is entirely gravity actuated and does not depend upon any spring or cam action, thus avoiding bell failures of every kind. The Contacts are large, heavy three fingered platinum contacts on phosphor bronze springs. The entire mechanism including the magnet is located in the dust and weather proof compartment of case provided with a large gasketed door and is easily accessible and may be inspected or removed from case without dismounting the Gong.

Contact Springs and Binding Posts are mounted upon a heavy slate base assuring perfect insulations. No current carrying part is "grounded", and Bell may be equipped with extra Contacts for the operation of illuminating devices, etc., operating from Bell Battery.

LOCOMOTIVE TYPE CROSSING BELL

Style "G"



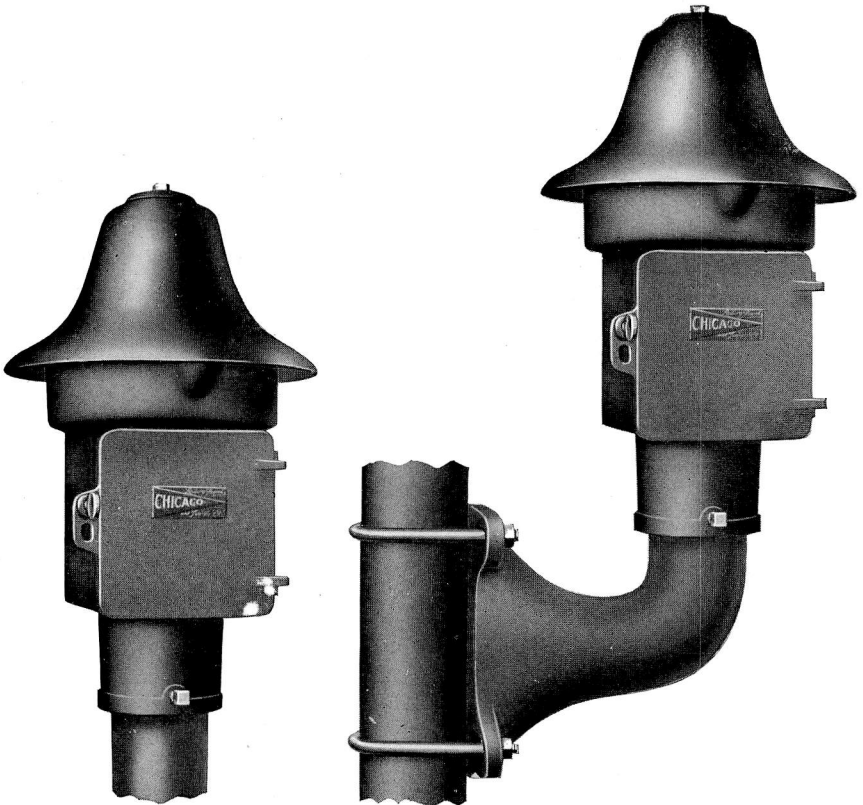
All Bearings are steel and phosphor bronze, accurately machined, and parts are jig drilled and machined to size, assuring durability, smoothness in operation and interchangeable repair parts.

Trade No.	DESCRIPTION	List Price
1630	Style G Crossing Bell with Socket for 3" Pole.....	\$95.00
1630-1	“ “ “ “ “ 4" “	95.00
1630-2	Style G Crossing Bell with Bracket and Lag Screws for Wood Poles.....	98.90
1630-3	Style G Crossing Bell with Bracket and U Bolts for 3" Steel Poles.....	100.00
1630-4	Same as above but for side of 4" Steel Poles.....	100.00
1630-5	“ “ “ except for 5" Steel Poles.....	100.00
1630-6	“ “ “ “ 6" “	100.00
1630-10	Main Phosphor Bronze Platinum Pointed Contact Spring..	3.00
1630-9	Upper Three Fingered “ “ “ “ “ ..	3.00
1630-11	Lower “ “ “ “ “ “ “ ..	3.00
1630-73	Extra Contact for Illuminating Devices, etc., complete, add to list price.....	5.00
	For Bells equipped with Genuine Bell Metal Gong, add to list price.....	45.00

Unless otherwise specified, Bells will be furnished wound 10 Ohms, and extra charge will be made for winding Bells to operate on higher than 25 Volts.
If other repair parts than those listed are required, order by number as shown.

LOCOMOTIVE TYPE CROSSING BELL

Style "H"



1631 For Top of 3" Pole
1631-1 " " " 4" "

1631-2 With Lag Screws for Wood Poles
1631-3 With Bracket and U Bolts for 3" Poles
1631-4 " " " " " 4" "
1631-5 " " " " " 5" "
1631-6 " " " " " 6" "

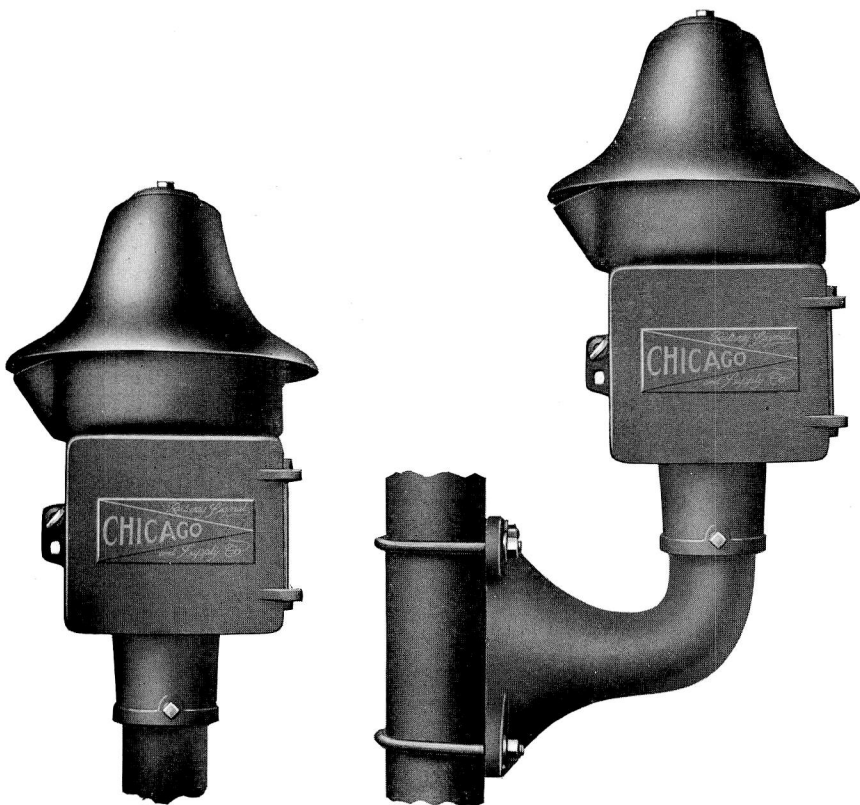
Style "H" Locomotive Type Bell is equipped with 14" Locomotive Type Gong. The works are contained in a dust and water proof compartment and are mounted upon a removable base, making inspections, repairs, or removal very easy. Contact Springs and Binding Posts are mounted on slate.

The Magnets which are form-wound, can be furnished of any resistance for operation on from 2 to 220 Volts Direct Current. The Contact Springs are heavy and equipped with three fingered Platinum Contacts. Extra Contacts may be provided for operating Lamps or Tell Tale Bells.

All bearings are steel and phosphor bronze and parts are jig drilled and machined perfectly to insure durability and interchangeability. Adjustments are simple and secured with double nuts or cotter pins to prevent coming loose in operation.

MOTOR TYPE CROSSING BELL

Style "K"



1632 For Top of 3" Pole
 1632-1 " " " 4" "

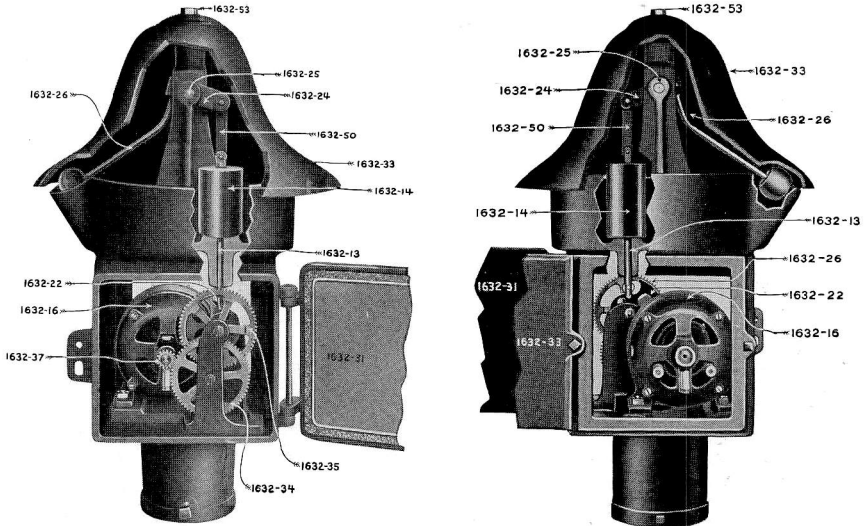
1632-2 With Lag Screws for Wood Poles
 1632-3 With Bracket and U Bolts for 3" Poles
 1632-4 " " " " " 4" "
 1632-5 " " " " " 5" "
 1632-6 " " " " " 6" "

This Bell is absolutely reliable and operates by motor. It is furnished to operate on Direct Current of any Voltage from 10 Volts to 650 Volts and on Alternating Current for 110, 220, 440 or 660 Volts, either 25 or 60 Cycle.

The mechanism is extremely simple and without any "make and break" contact springs. The motor is small and highly efficient. The entire mechanism is mounted upon a removable base and is contained in a dust and moisture proof compartment. The Gears and Pinion are bronze against steel and entire mechanism including case, are jig drilled and accurately machined to size, thus assuring smoothness in operation, durability and interchangeable parts.

MOTOR TYPE CROSSING BELL

Style "K"

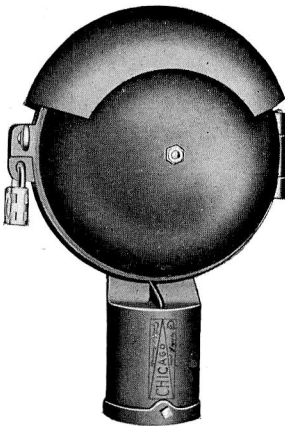


The Gong is 14" diameter at the mouth and made of special bell steel heavily copper plated to prevent rust. The mechanism delivers evenly timed heavy blows on inside of Gong, which may be heard distinctly above all other noises.

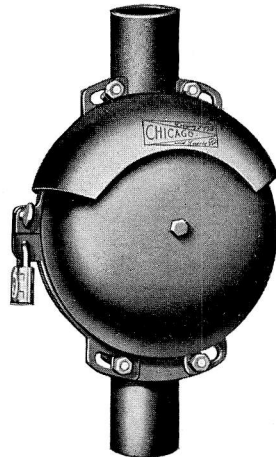
Trade No.	DESCRIPTION	List Price
1632	Motor Type Crossing Bell for D. C. or A. C. 110 or 220 Volts for Top of 3" Steel Pole	\$110.00
1632-1	Same as above for Top of 4" Steel Pole	110.00
1632-2	Motor Type Crossing Bell for D. C. or A. C. 110 or 220 Volts with Bracket and Lag Screws for Wood Poles.....	114.00
1632-3	Motor Type Crossing Bell for D. C. or A. C. 110 or 220 Volts with Bracket and U Bolts for 3" Steel Poles.....	115.00
1632-4	Same as above but for 4" Poles.....	115.00
1632-5	" " " " " 5" "	115.00
1632-6	" " " " " 6" "	115.00
	For Motor Type Bells with 10 Volt D. C. Motors, add to list price.....	10.00
	For Motor Type Bells arranged to operate on 450 to 600 Volts D. C., add to list price.....	8.00
	For Motor Type Bells to operate on 400 to 660 Volts A.C., add to list price.....	10.00
	For Bells equipped with Genuine Bell Metal Gong, add to list price.....	35.00
	For Bells equipped with Crucible Bell Steel Gong, add to list price.....	15.00

Information regarding Voltages A. C. or D. C. must accompany orders. Repair part orders should give part numbers as shown above.

STYLE "T" TIME BELL



1633 For Top of 3" Poles
 1633-1 " " " 4" "



1633-2 with Lag Screws for Wood Poles
 1633-3 " U Bolts for 3" Poles
 1633-4 " " " 4" "
 1633-5 " " " 5" "
 1633-6 " " " 6" "

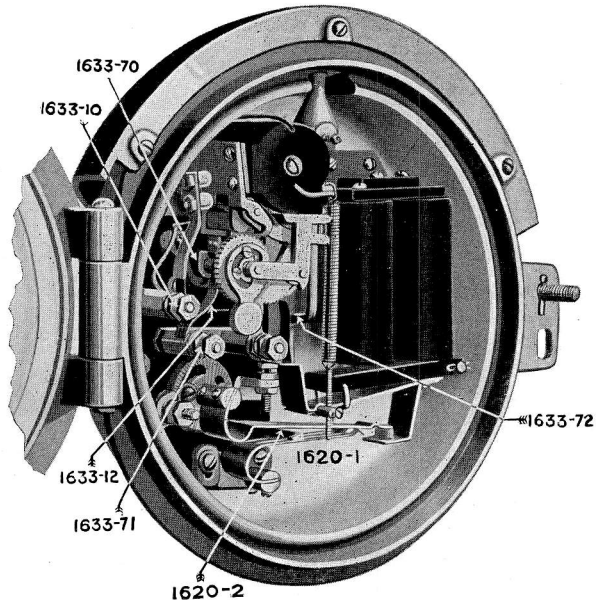
Style "T" Crossing Bell is of same type as our Type "E" Bell, except that it is equipped with a time feature, which automatically silences bell at the end of a pre-determined time. It is wired in two ways, viz.: for "Line Circuit Control" used with Track Instruments, Trolley Contactors, Short Insulated Rail Section, etc., or for "Track Circuit Control" for use with Standard Track Circuits and Track Relays. It is used extensively on Electric Street Railways and on Steam Railroads in Automatic Block Signal territory at locations where trains stand within the signal circuits.

The operation of Bell is very simple and can be easily maintained by anyone familiar with ordinary crossing bells. The time feature is adjustable to any required length of alarm. The works are mounted into a dust and weather proof case and all parts excepting the time feature are interchangeable with our Style "E" Crossing Bell.

STYLE "T" TIME BELL

The Case is hinged so that inspection and repairs may be made without removing the gong or disconnecting the control wires. The Mechanism is entirely gravity actuated and does not depend upon spring action.

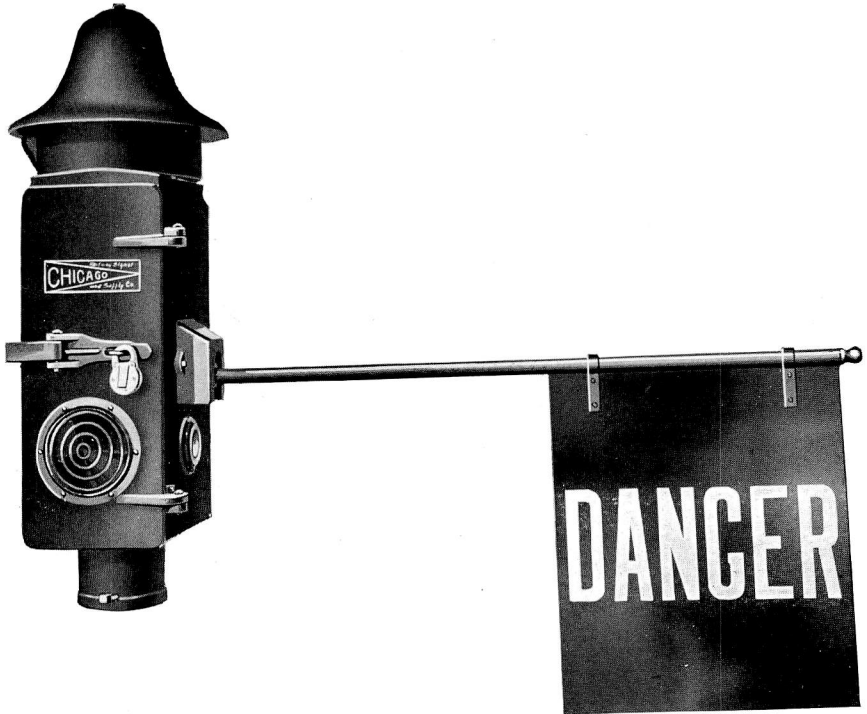
All Contact Springs, Binding Posts, etc., are mounted upon slate base and no current carrying part is "grounded". Contact Springs are three fingered platinum contacts which are interchangeable with Style "E" Bells. Magnets are large and wound to standard resistance of 10 Ohms, but can be furnished with any desired winding.



Trade No.	DESCRIPTION	List Price
1633	Style "T" Time Bell, 10 Ohms resistance for use on top of 3" Steel Pole.....	\$60.00
1633-1	Same as above but for top of 4" Steel Pole.....	60.00
1633-2	" " " " with Lag Screws for Wood Poles.....	60.00
1633-3	" " " " " U Bolts for 3" Steel ".....	60.00
1633-4	" " " " " " 4" " ".....	60.00
1633-5	" " " " " " 5" " ".....	60.00
1633-6	" " " " " " 6" " ".....	60.00
1620-1	Back Contact Spring, Platinum Contacts.....	2.50
1620-2	Front " " " ".....	2.50
1620-3	Back " " " Graphite " each.....	2.25
1620-4	Front " " " " " each.....	2.25
1633-70	Contact Bar with Triple Fingered Contacts for Time Magnet	3.00
1633-10	" " Post (without Binding Post) for above.....	2.25
1633-12	Time Breaking Contact Spring.....	3.00
1633-71	Contact Post (without Binding Post) for above.....	2.25
1633-72	Steel Ratchet Pawl Spring with Rivets.....	.60

10 Ohm Bells will be furnished unless otherwise specified. An extra charge will be made for winding Bells to operate on higher than 25 Volts. Repair Parts are interchangeable with Style "E" Bells, and should be ordered giving part numbers as shown.

CHICAGO ELECTRIC FLAG



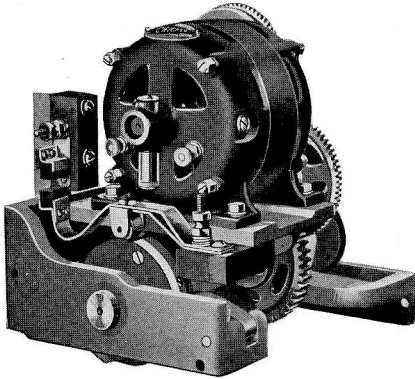
Chicago Electric Flag

The "Chicago" Electric Flag is without doubt the practical solution of the Highway Crossing Protection Problem, it combines in a reliable one piece apparatus:

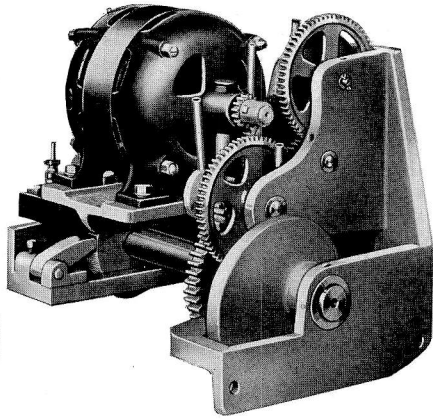
- AN AUDIBLE LOCOMOTIVE TYPE CROSSING BELL,
- A "WAVING" FLAG DAY SIGNAL,
- A RED FLASHING NIGHT SIGNAL,
- A GREEN FLASHING SIGNAL FOR ENGINE MEN.

The "Chicago" Electric Flag can be mounted on top of 3" (3½" O. D.) Poles or on top of 4" (4½" O. D.) Poles. It can also be supported on our Cantilever Brackets extending either three feet or eight feet into the highway. This last method of supporting COMPELS attention of passing traffic, and makes it practically impossible for anyone to cross tracks either by day or night without HEARING or SEEING the warning.

CHICAGO ELECTRIC FLAG



Rear View



Front View

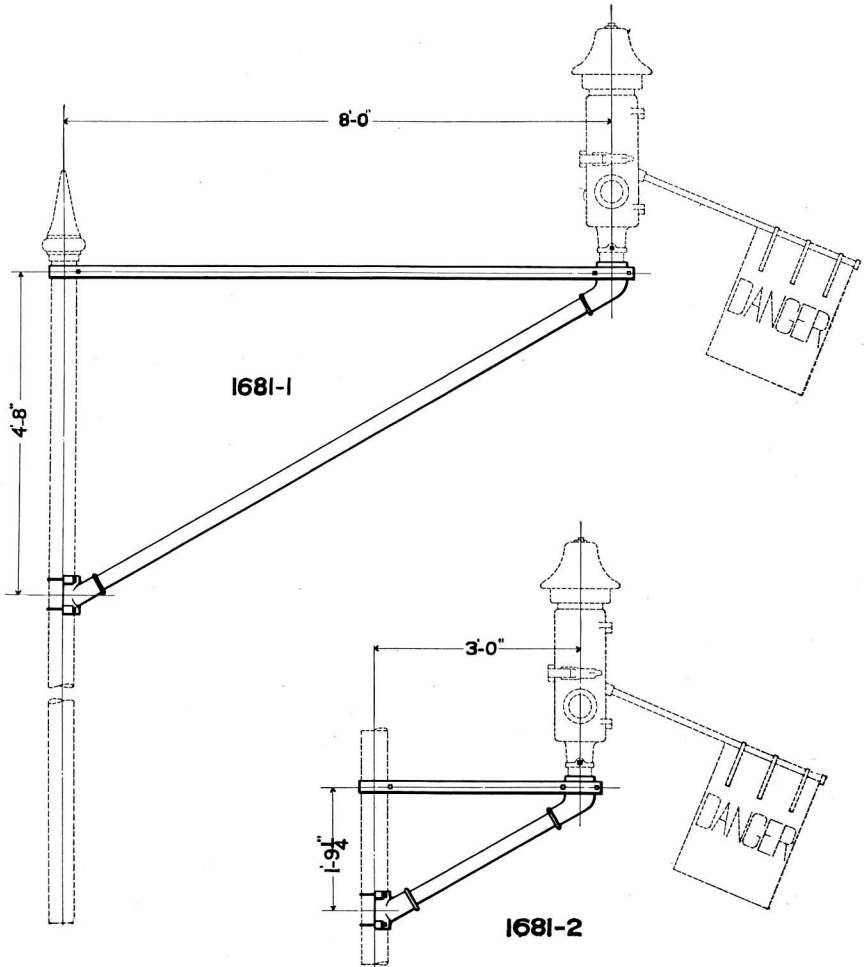
Works of "Chicago" Electric Flag

(Removable from Case as a Complete Unit on a Separate Base)

The Audible Locomotive Type Crossing Bell is operated by a set of Reduction Gears and a Cam. No contacts, trips or springs are used. Heavy evenly timed blows are struck on inside of Gong, which is 14" in diameter at the mouth, and made of special Bell Steel, heavily copper plated to prevent rusting. Special Gongs made of Genuine Bell Metal or Crucible Steel are furnished at a slight advance in price.

The "Waving Flag" Day Signal is a Flag 18" x 24" made of heavy sheet steel, enameled "RED" with the words "DANGER" or "STOP" painted white across both Faces in 6" Block Letters. The Flag moves Up and Down with a movement which leaves no doubt as to its intended meaning, viz.: "Danger". It moves through an arc of 45 deg., and operates without jerks or stops of any kind, movement being steady at all times. The operation of the Flag is also accomplished by a set of Reduction Gears and a Cam.

CHICAGO ELECTRIC FLAG



Brackets for Mounting Chicago Electric Flag

Flashing Night Signal—Two $5\frac{3}{8}$ " Red Lenses are mounted in the case, one on each side facing the highway. Each of these lenses has an electric lamp at its proper focal point, which is flashed at evenly timed intervals. Contacts make and break the lamp circuit with a quick snap action, and are provided with large Carbon Contact Blocks, which are easily and quickly removed, and are of such proportions so as to carry currents up to 10 Amperes at any Voltage up to 650 Volts.

Flashing Signal for Engine Men—Two Green Roundels, one on each side of case visible to approaching trains, flashing at regular intervals, give the train crew positive evidence that the signal is operating and also that Bell is ringing before train reaches the protected crossing, as all the mechanism is operated by the same Motor.



CHICAGO ELECTRIC FLAG

The Case is water, dust and bug proof, and has a large space with wood mounting boards for Resistance Units, Lightning Arresters, Terminals, etc. Motor is of standard design and has a high efficiency, entire mechanism is mounted on a separate base within the case, making it easy to remove for inspection or repairs. Gears and Pinions are Bronze against steel, minimizing the friction losses, entire mechanism is machined and jig drilled to insure smooth operation, durability and interchangeability. All bearings are provided with easily accessible oilers.

The Electric Flag can be furnished to operate on any voltage from 10 Volts to 650 Volts Direct Current, also on 110, 220 and 440 Volts Alternating Current of any Cycle, therefore it is well adapted for use on either Steam or Electric Railways, for either Power or Battery Current.

No lamps are included in prices given, but two lamp sockets are provided, mounted on mounting board at proper focal distance of lenses. Orders should specify voltage at which Electric Flag is to be operated, also number of cycles, when Alternating Current is used, and style of Lamps that will be used so proper sockets can be furnished.

Trade No.	DESCRIPTION	List Price
1680-1	Electric Flag with 110 or 220 Volt Alternating or Direct Current Motor, and Special Bell Steel Gong for mounting on top of 3" (3½" O. D.) Steel Poles.....	\$175.00
1680-2	Electric Flag with 110 or 220 Volt Alternating or Direct Current Motor and Special Bell Steel Gong for mounting on top of 4" (4½" O. D.) Steel Poles.....	175.00
	For Genuine Bell Metal Gong, add to list price.....	35.00
	For Crucible Steel Bell Gong, add to list price.....	15.00
	For Electric Flag equipped with 10 Volt Direct Current Motor, add to list price.....	10.00
	For Electric Flag equipped with Motor for Operating on 440 to 650 Volt Direct Current, add to list price.....	8.00
	For Electric Flag equipped with Motor for Operating on 440 to 660 Volt Alternating Current, add to list price.....	10.00
1681-1	Cantilever Bracket Only for Attaching to Signal Poles extending 8 feet into Highway (specify size of Pole for which Bracket is wanted).....	25.00
1681-2	Cantilever Bracket Only for attaching to Signal Poles extending 3" into Highway (specify size of Pole for which Bracket is wanted).....	20.00