

1914

CATALOGUE AND PRICE LIST

SECTION E

HIGHWAY CROSSING ALARMS

Highway Crossing Alarms

Mechanically Operated Crossing Bells

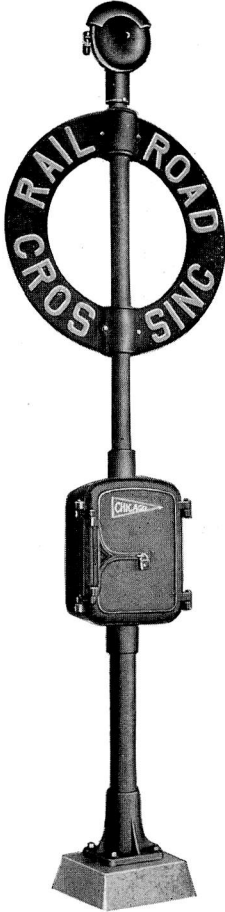
Mechanically Operated Tower Bells

Crossing Signs

Illuminated Signs

HIGHWAY CROSSING ALARMS

Style No. 2000



No. 2000

This Signal is furnished complete as shown and total height is 12 feet. It is equipped with Style E Crossing Bell, No. 434 Sign, Style A Relay Box and Style A Base. The lower pipe is 4½" outside diameter and 3 feet long, the upper pipe 3½" outside diameter, 6 feet long.

Signal may be equipped with Style B or C Base without change in list price. The Relay Box is sufficiently large to accommodate all necessary Relays (of any manufacture) together with Lightning Arresters, Terminals, etc.

Signal may also be equipped with Illuminated Sign or our Illuminating Outfit, also any other style of Sign shown in catalogue.

Trade No.	DESCRIPTION	List Price
2000	Crossing Signal complete as shown with Style E Bell.....	\$116.00
2000-1	Same as above with Style F Bell.....	110.00
2000-2	“ “ “ “ “ G “.....	164.00
2000-3	“ “ “ “ “ H “.....	144.00
2000-4	“ “ “ “ “ K “.....	180.00
2000-5	“ “ “ “ “ T “.....	130.00
2000-6	“ “ “ “ “ No. 1680-1 Electric Flag.....	298.00

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current. Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2001

Highway Crossing Alarm No. 2001 is furnished complete as shown consisting of Style F Bell, Style A Relay Box, Style A Base, No. 430 Crossing Signs and Standard No. 900 Pinnacle.

This Signal may also be equipped with same pattern Crossing Sign having 9" letters (No. 430-9) and with Illuminated Sign or our Standard Sign Illuminating Outfit. Total height of Signal, 12 feet.

Where desired, Signal will be furnished with Style B or C Base without change in price.



No. 2001

Trade No.	DESCRIPTION	List Price
2001	Crossing Signal complete as shown with Style F Bell.....	\$91.00
2001-1	Same as above with Style E Bell.....	87.00
2001-2	“ “ “ “ “ G “.....	146.00
2001-3	“ “ “ “ “ H “.....	126.00
2001-4	“ “ “ “ “ K “.....	161.00
2001-5	“ “ “ “ “ T “.....	111.00
2001-6	“ “ “ “ “ No. 1680-1 Electric Flag.....	299.00

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2002



No. 2002

This type of Signal is equipped with Style C Base and Pole $3\frac{1}{2}$ " outside diameter, 12 feet long, to which is fastened with two U Bolts our No. 165-11 Relay Box, intended to hold Style A or similar Interlocking Relay, also Style E Bell and No. 434 Crossing Sign. Signal is used at locations where a substantial but inexpensive Crossing Signal is desired without using a Concrete Foundation. Signal may also be equipped with any of our other styles of Relay Boxes, Illuminated Sign or Illuminating Outfit. Style A or B Base is furnished when specified without change in price.

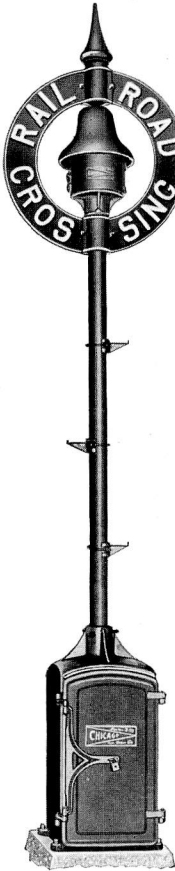
Unless otherwise specified, Signal will be furnished as shown and listed.

Trade No.	DESCRIPTION	List Price
2002	Crossing Signal complete as shown with Style E Bell.	\$85.00
2002-1	Same as above with Style F Bell.	89.00
2002-2	" " " " " G "	144.00
2002-3	" " " " " H "	124.00
2002-4	" " " " " K "	159.00
2002-5	" " " " " T "	109.00
	This style Signal may also be equipped with Styles A, B, C, D, or E Relay Boxes at difference in price.	

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current. Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2004



No. 2004

The illustration shows one of our most substantial Crossing Signals. The Combination Relay and Battery Case at Base is similar to an Automatic Signal Case and is large enough to hold all necessary Batteries, Relays, Lightning Arresters, Terminals, etc., for any location, thus making an ideal "Standard" Crossing Signal suitable for any location regardless of local conditions on a railroad. For detail description of Relay Box No. 350, see elsewhere in catalogue. On top of the case is mounted a 4½" outside diameter pole 9 feet long which supports the Bell and Sign. Total height is 17 feet. The Pole is equipped with Adjustable Pole Steps thus providing easy access to Bell. The illustration shows Signal equipped with our large size Locomotive Type Crossing Bell but Signal is also furnished with any of our other Bells as listed. Any style Sign having 6" letters is furnished without change in price.

Trade No.	DESCRIPTION	List Price
2004	Crossing Signal complete as shown with Style G Bell	\$216.40
2004-1	Same as above but with Style F Bell	161.40
2004-2	" " " " " " E "	175.40
2004-3	" " " " " " H "	196.40
2004-4	" " " " " " K "	231.40
2004-5	" " " " " " T "	181.40

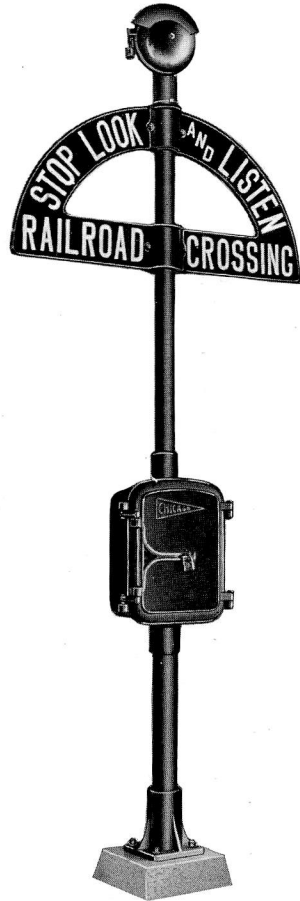
List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2005

This type of Crossing Signal is equipped with Sign No. 436 which is securely fastened to the top pipe which is $3\frac{1}{2}$ " outside diameter and 6 feet long. Style A Relay Box is supported on $4\frac{1}{2}$ " outside diameter pipe 3 feet long securely held in Style A Base Casting. The Relay Box is sufficiently large to hold all necessary Relays (of any manufacture), Lightning Arresters, Terminals, etc. Total height of Signal is 12 feet. Signals may be equipped with any of our other styles of Signs having 6" letters without change in price.

Orders should state Voltage on which Signal will be used so properly wound Bell may be furnished.



No. 2005

Trade No.	DESCRIPTION	List Price
2005	Crossing Signal complete as shown with Style E Bell	\$106.00
2005-1	Same as above but with Style F Bell	110.00
2005-2	“ “ “ “ “ “ G “	164.00
2005-3	“ “ “ “ “ “ H “	144.00
2005-4	“ “ “ “ “ “ K “	180.00
2005-5	“ “ “ “ “ “ T “	130.00
2005-6	“ “ “ “ “ “ No. 1680-1 Electric Flag	298.00

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2006



No. 2006

On this type of Signal we illustrate the use of a separate "Danger" Sign having 6" raised letters as required by law in State of Indiana and several other localities. The Signal as shown consists of Style F Bell, No. 430 Crossing Sign, No. 448 "Danger" Sign, 3½" outside diameter Pole 12 feet long, Pinnacle and Style B Base. When specified, Signal is also furnished with Style A or C Base without change in price. The Relay Box furnished is our No. 165-11 intended to hold our Style A or similar Interlocking Relay. When desired, Pole may be equipped with Style A, B, C, D or E Relay Box at correspondingly higher list price. Unless otherwise specified, Signals will be furnished with Signs as listed and shown. Orders should specify Voltage on which Signal will be used so proper Bell may be furnished.

Trade No.	DESCRIPTION	List Price
2006	Crossing Signal complete as shown with Style F Bell.....	\$112.00
2006-1	Same as above but with Style E Bell.....	108.00
2006-2	" " " " " " G ".....	167.00
2006-3	" " " " " " H ".....	147.00
2006-4	" " " " " " K ".....	182.00
2006-5	" " " " " " T ".....	132.00
2006-6	" " " " " " No. 1680-1 Electric Flag.....	300.00

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2007

This type of Signal is furnished with our Standard Illuminated Sign and No. 432 Highway Crossing Sign. When specified, any other Sign having same list price will be furnished without change in price. Total height of Signal is 12 feet, the upper pipe is $3\frac{1}{2}$ " outside diameter and lower pipe $4\frac{1}{2}$ " outside diameter. Style A Relay Box, which is large enough to hold all necessary Relays, Lightning Arresters, etc., is furnished with this Signal. In ordering, specify Voltage on which Signal is to operate so proper Lamps and Bell may be furnished.



No. 2007

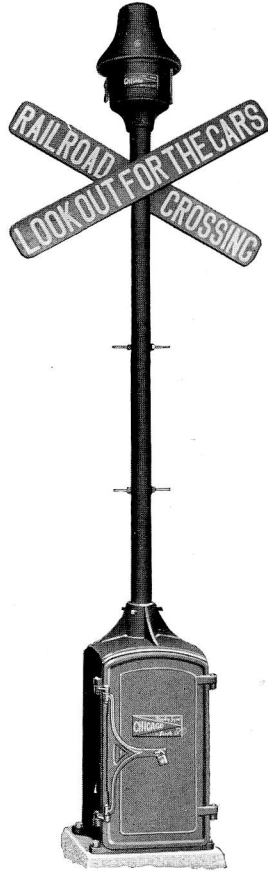
Trade No.	DESCRIPTION	List Price
2007	Crossing Signal complete as shown with Style E Bell.....	\$130.00
2007-1	Same as above but with Style F Bell.....	134.00
2007-2	“ “ “ “ “ “ G “	188.00
2007-3	“ “ “ “ “ “ H “	168.00
2007-4	“ “ “ “ “ “ K “	204.00
2007-5	“ “ “ “ “ “ T “	154.00
	When Illuminated Sign is not required, deduct.....	24.00

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2009

The type of Crossing Alarm here shown is equipped with our No. 350 Combination Battery and Relay Case in the top of which is mounted a 4½" outside diameter Pole supporting the Crossing Sign and Bell. Locomotive Type Bell shown is our Style G, large size. The Pole is provided with two Double Pole Steps, for convenient access to Bell by inspectors. Total height of Signal is 15 feet. The Combination Relay and Battery Box is wood lined and provided with shelves to hold any required number of Batteries and Relays for any location regardless of number of tracks, etc., thus making this an ideal Signal for use as a Standard and thus provide uniform Crossing Signals on entire railroad. Signal is provided with any of our Standard Crossing Signs with 6" letters without change in price. For detail description of 350 Relay Box, see elsewhere in catalogue.



No. 2009

Trade No.	DESCRIPTION	List Price
2009	Crossing Signal complete as shown with Style G Bell.....	\$214.50
2009-1	Same as above but with Style F Bell.....	159.50
2009-2	“ “ “ “ “ “ E “	155.50
2009-3	“ “ “ “ “ “ H “	194.50
2009-4	“ “ “ “ “ “ K “	229.50
2009-5	“ “ “ “ “ “ T “	179.50
2009-6	“ “ “ “ “ “ No. 1680-1 Electric Flag.....	347.50

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2010



No. 2010

On this Signal the Battery Chute at its base serves as the Foundation. Signal is furnished regularly with 5 foot Single or Double Battery Chutes for four or eight cells of Batteries respectively.

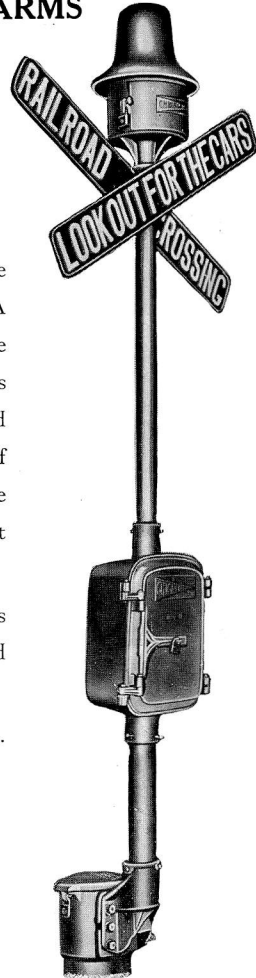
Signal is furnished complete as shown and may also be furnished with any other Standard Sign without change in price, except in cases where Signs with 9" raised letters are specified. The Signal consists of Single or Double Battery Chute as specified, Style A Relay Box, Style H Bell, Sign and Pinnacle. Pole is 3½" outside diameter and total height is 12 feet.

Signals may also be equipped with 6 foot, 7 foot or 9 foot Battery Chutes at a corresponding increase in price. Orders should state Voltage on which Bell is to operate.

Trade No.	DESCRIPTION	List Price
2010	Crossing Signal complete as shown with Style H Bell and 5 foot Single Battery Chute with 4-Cell Elevator.....	\$165.60
2010-1	Same as above but with Style F Bell.....	130.60
2010-2	" " " " " " " G ".....	185.60
2010-3	" " " " " " " E ".....	126.60
2010-5	" " " " " " " T ".....	150.60
2010-13	Crossing Signal complete as shown with style H Bell and 5 foot Double Battery Chute with Two 4-Cell Elevators, (capacity Eight Cells).....	176.40
2010-10	Same as above but with Style E Bell.....	137.40
2010-11	" " " " " " " F ".....	141.40
2010-12	" " " " " " " G ".....	196.40
2010-15	" " " " " " " T ".....	161.40

HIGHWAY CROSSING ALARMS

Style No. 2011



No. 2011

This type of Signal consists of our large size Locomotive Type Crossing Bell, Style G, No. 428 Crossing Signs, Style A Relay Box, all of which is mounted on 3½" and 4½" outside diameter pipe which is fastened securely to Battery Chutes which serves double purpose of housing the Bell Batteries and as a substantial foundation for the Signal. Total height of Signal is 12 feet. Any of our Standard Crossing Signs may be substituted for the Sign shown without change in price, except where signs having 9" raised letters are specified.

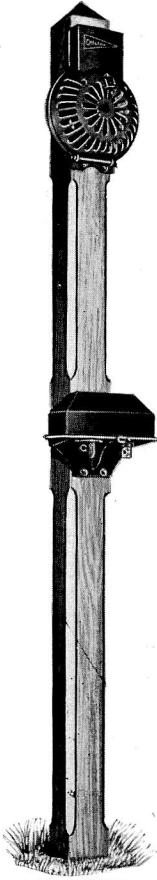
The Battery Chute regularly furnished with Signals is 5 feet long, but 6 foot, 7 foot or 9 foot chutes may be specified at a corresponding advance in price.

Orders should state Voltage on which Bell is to operate. List prices are for Bells up to 10 Volts Direct Current.

Trade No.	DESCRIPTION	List Price
2011	Signal complete as shown with Style G Bell and Single 5 foot Battery Chute with 4-Cell Elevator.....	\$183.00
2011-1	Same as above but with Style F Bell.....	128.00
2011-2	" " " " " " E ".....	124.00
2011-3	" " " " " " H ".....	163.00
2011-5	" " " " " " T ".....	148.00
2011-12	Signal complete as shown with Style G Bell and Double 5 foot Battery Chute with Two 4-Cell Elevators (capacity Eight Batteries).....	193.80
2011-10	Same as above but with Style E Bell.....	134.80
2011-11	" " " " " " F ".....	138.80
2011-13	" " " " " " H ".....	173.80
2011-15	" " " " " " T ".....	158.80

HIGHWAY CROSSING ALARMS

Style No. 2012



No. 2012

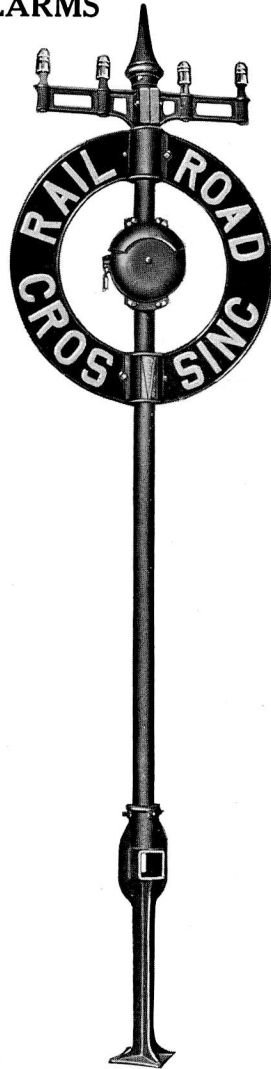
We illustrate herewith the Standard Crossing Alarm on many large railroads. The design shown is the simplest form and consists of Style E Bell and No. 165-10 Relay Box fastened to a wooden pole 8" x 8" x 16 feet with lag screws. The wires are carried on back of Pole in Trunking and Capping. The Relay Box is intended to hold our Style A or similar Relay. Any of our other Relay Boxes can be furnished for these outfits at a correspondingly higher list price. This outfit has the advantage that Railroad Companies' Standard Wooden Crossing Sign can easily be attached to the wooden post.

Trade No.	DESCRIPTION	List Price
2012	Crossing Signal complete as shown with Style F Bell	\$72.00
2012-1	Same as above but with Style E Bell	68.00
2012-2	" " " " " " G "	127.00
2012-3	" " " " " " H "	107.00
2012-4	" " " " " " K "	142.00
2012-5	" " " " " " T "	92.00
	For Standard Crossing Signs having 6" raised letters ready to attach to above Signals, add to list price	24.00
	For Wood Pole, if not wanted, deduct from list price	24.00

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660 Volts.

HIGHWAY CROSSING ALARMS

Style No. 2013



No. 2013

This type of Signal is furnished without Relay Box and is intended for use at locations where Bell is operated by an attendant at a nearby tower, gatehouse, etc.

It is also used (especially when equipped with our Time Bell) on both steam and electric railroads where Track Instruments and line wire control are used (see Circuits elsewhere).

Signal is equipped with "Time" Bell, Standard Sign No. 434, Four Pin Iron Cross Arm complete with Insulators, Pinnacles, Style B Base and 3½" outside diameter pole 12 feet long. Style A or C Base or any Standard Crossing Sign with 6" letters is furnished without change in price. Orders should specify Voltage and type of Circuit to be used so that properly wired Bell may be furnished.

Trade No.	DESCRIPTION	List Price
2013	Crossing Signal complete as shown with Time Bell	\$103.50
2013-1	Same as above but with Style F Bell	83.50
2013-2	" " " " " " " G "	138.50
2013-3	" " " " " " " H "	118.50
2013-4	" " " " " " " K "	153.50
2013-5	" " " " " " " E "	79.50
	When Illuminating Outfit is required, add.	24.00
	Where a Relay Box is required, add list price of same and necessary Fittings to attach to Pole to above prices.	

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current. Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style 2014



No. 2014

This type of Signal has the advantage that no foundation is required, the Battery Chute holding Signal firmly in place and at same time housing necessary Batteries to operate the Bell.

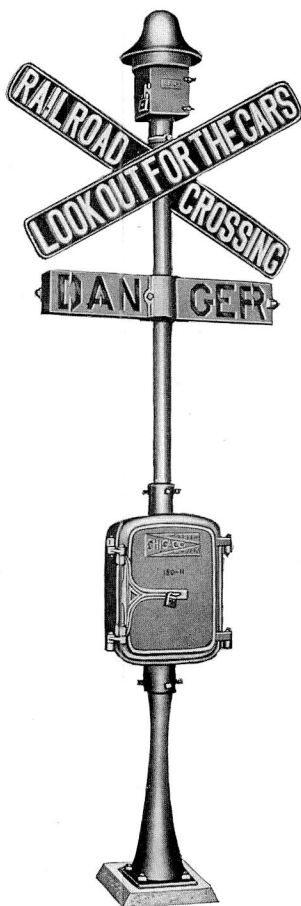
This Signal can be furnished in many different styles, viz., any Sign of same list price may be had without change in cost. Any style Relay Box can be fastened to Pole and Signal can be furnished with Single or Double Battery Chutes 5 feet, 6 feet, 7 feet or 9 feet long. When other lengths or sizes of Battery Chutes than listed below are specified, deduct or add difference in list price.

Signal as shown is complete with No. 438 Crossing Sign, Style F Bell, Style A Relay Box, Pole and Pinnacle. Pole is 12 feet long and $3\frac{1}{2}$ " outside diameter. Orders should state Voltage on which Bell is to operate.

Trade No.	DESCRIPTION	List Price
2014	Signal complete as shown with Style F Bell and 5 foot Single Battery Chute with 4-Cell Elevator	\$124.25
2014-1	Same as above with Style E Bell	120.25
2014-2	" " " " " G "	179.25
2014-3	" " " " " H "	159.25
2014-4	" " " " " T "	144.25
2014-11	Signal complete as shown with Style F Bell and 5 foot Double Battery Chute with Two 4-Cell Elevators (total capacity, Eight Cells)	135.05
2014-10	Same as above with Style E Bell	131.05
2014-12	" " " " " G "	190.05
2014-13	" " " " " H "	170.05
2014-15	" " " " " T "	155.05

HIGHWAY CROSSING ALARMS

Style No. 2015



No. 2015

The various types of Style No. 2015 Crossing Signals listed are equipped with our One Piece Base and Support for Relay Box. Signal as shown is complete with No. 428 Sign, Style H Bell, Illuminated "Danger" Sign and Style A Relay Box. This Signal is also furnished with other Standard Crossing Signs having 6" letters without change in price. Orders should state Voltage on which it is desired to operate Signal so that proper Lamps and Bell may be furnished for same.

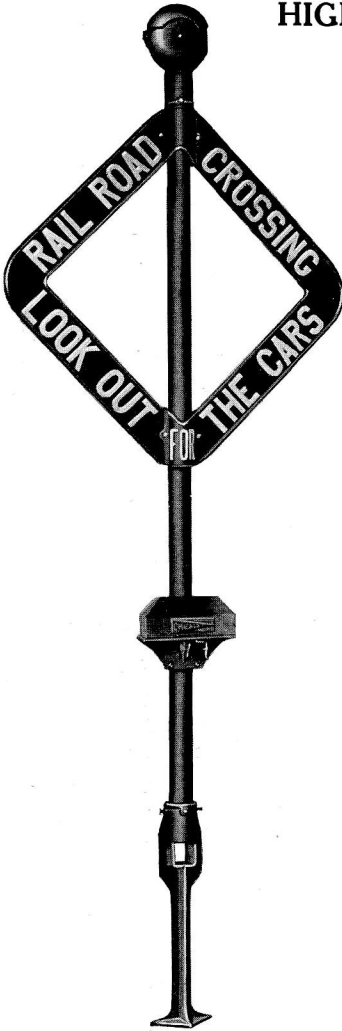
For detail description of Illuminated Sign, see elsewhere in catalogue.

Trade No.	DESCRIPTION	List Price
2015	Crossing Signal complete as shown with Style H Bell.....	\$167.30
2015-1	Same as above equipped with Style F Bell.....	132.30
2015-2	" " " " " " G ".....	187.30
2015-3	" " " " " " E ".....	128.30
2015-4	" " " " " " K ".....	202.30
2015-5	" " " " " " T ".....	152.30

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current. Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2016



No. 2016

This type of Signal is intended for location where a concrete foundation is not required and is furnished complete as shown consisting of Bell, Sign, $3\frac{1}{2}$ " x 12 foot Pole, Style B Base and No. 165-11 Relay Box.

Any Standard Crossing Sign of same list price may be furnished without change in cost. The Relay Box on this Signal is intended for our Style A or similar Interlocking Relay. Signal may be equipped with Style A, B, C, D or E Relay Boxes at correspondingly higher price, also with our Illuminated Sign or Sign Illuminating Outfit.

Trade No.	DESCRIPTION	List Price
2016	Crossing Signal complete as shown with Style E Bell	\$83.92
2016-1	Same as above equipped with Style F Bell	87.92
2016-2	“ “ “ “ “ “ G “	142.92
2016-3	“ “ “ “ “ “ H “	122.92
2016-4	“ “ “ “ “ “ K “	157.92
2016-5	“ “ “ “ “ “ T “	107.92
2016-6	“ “ “ “ “ “ No. 1680-1 Electric Flag	275.92

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2017



No. 2017

Signal as shown is furnished complete with Style A Relay Box, Style A Base, No. 436 Crossing Sign and Style T Crossing Bell. A removable pinnacle is furnished which makes wiring easy and at the same time gives Signal a neat appearance.

Style B or C Base Castings can be furnished on this Signal without affecting list price.

Signal is also furnished without change in price with any of our other Signs having 6" raised letters.

Trade No.	DESCRIPTION	List Price
2017	Crossing Signal complete as shown with Time Bell.....	\$131.35
2017-1	Same as above equipped with Style F Bell.....	111.35
2017-2	" " " " " " G ".....	166.35
2017-3	" " " " " " H ".....	146.35
2017-4	" " " " " " K ".....	181.35
2017-5	" " " " " " E ".....	107.35

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

Style No. 2018



No. 2018

This Signal was especially designed for Electric Street Railway use, where an efficient and strong Signal is required at a low cost. Signal is equipped with 12 foot Steel Pole, Base, Standard "Danger" and Crossing Sign, Style E Bell and No. 166-3 Relay Box, as shown. Signal is well adapted for use on Trolley Roads. Almost any desired changes can be made such as a larger Relay Box, the elimination of one or both Signs, and Signal is also furnished with any of our Standard Crossing Bells as listed.

Trade No.	DESCRIPTION	List Price
2018	Crossing Alarm complete as shown with Style E Bell.	\$114.00
2018-1	Same as above except equipped with Style F Bell.	118.10
2018-2	" " " " " " " " G "	175.00
2018-3	" " " " " " " " H "	153.00
2018-4	" " " " " " " " K "	188.00
2018-5	" " " " " " " " T "	138.00
2018-6	" " " " " with No. 1680-1 Electric Flag.	306.00

List price includes only Direct Current Bells for operation on 10 Volts or less. All Bells can be furnished to operate on up to 650 Volts Direct Current and Style K Bell can be furnished for Alternating Current for Voltages up to 660.

HIGHWAY CROSSING ALARMS

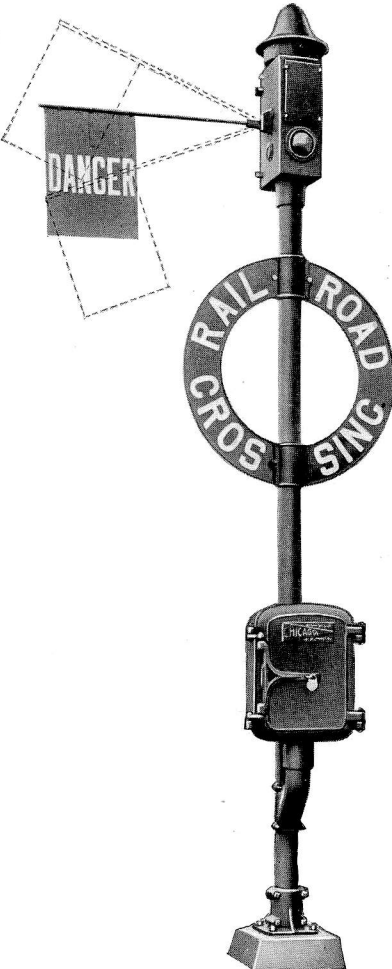
No. 2019

The Signal is equipped with our "Electric Flag," and is especially adapted for use at highways having automobile traffic or where trolley lines cross the right of way.

The Red Flag waves up and down, the red lenses in case flash at regular intervals and the locomotive type bell on top rings vigorously, thus making it practically impossible to cross the tracks without either seeing or hearing the warning regardless of surrounding noisy conditions such as noisy automobile engines, street cars, etc. A pair of small green lenses flash up and down the railroad, thus giving train crews a positive notice before reaching the crossing, that Signal is in operation.

Complete Signal consists of "Electric Flag," No. 434 Crossing Sign, Style A Relay Box on Hollow Bracket, 4" Steel Pole and Style C Base with Anchor Bolts. Height over all 15 feet. Any of our Standard Crossing Signs having same list price may be furnished in place of sign shown. Signal may also be equipped with Style A or B Base without change in price.

This Signal may be varied to suit nearly all conditions, and we will furnish plans of Signal, Circuits, etc., covering any track condition upon request.



Highway Crossing Alarm No. 2019

Trade No.	DESCRIPTION	List Price
2019	Highway Crossing Alarm, complete as shown for operating on 110 or 220 Volts Direct or Alternating Current.....	\$262.00
2019-1	Same as above except with Style B Relay Box.....	253.70
2019-2	“ “ “ “ “ “ C “ “	251.85
2019-3	“ “ “ “ “ “ D “ “	248.60
2019-4	“ “ “ “ “ “ E “ “	246.60
	When above are wanted for operating on 440 to 600 Volt Direct Current, add to list price.....	8.00
	When wanted for operating on 10 Volt Direct Current or 440 to 660 Volt Alternating Current, add to list price.....	10.00

Orders should specify Voltage at which Signal is to operate, also whether for Direct or Alternating Current and number of Cycles.

HIGHWAY CROSSING ALARM

No. 2020



This Signal is equipped with our "Electric Flag," and is especially adapted for use at highways having automobile traffic, or where trolley lines cross railroad. The Red Flag waves up and down, thus giving a positive stop signal, at the same time the red lenses mounted in case flash at regular intervals, and the locomotive bell on top rings vigorously. This combination compels attention, and it is impossible to cross the tracks without hearing or seeing the warning, night or day, regardless of other noises, such as automobile engines, etc.

A pair of green lenses flash at regular intervals up and down the tracks, thus giving engine men positive evidence of the operation of the Signal before train reaches the crossing.

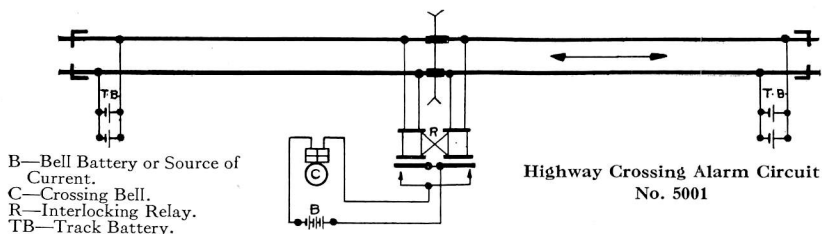
The Signal is 15 feet high, Pipe Post is 4" (4½" O. D.) Steel Pipe equipped with four Pressed Steel Pole Steps, the No. 350 Combination Battery and Relay Box is amply large to accommodate Batteries, Relays, Terminals, etc. No. 429 Highway Crossing Sign is of the Standard type. This Signal can be furnished in any number of variations and with any of our numerous crossing signs. We will furnish plans, Circuits, etc., upon request.

Highway Crossing Alarm No. 2020

Trade No.	DESCRIPTION	List Price
2020	Highway Crossing Alarm complete as shown with 110 or 220 Volt Direct Current or Alternating Current Motor.....	\$294.50
	When Sign is not wanted, deduct from list price.....	24.00
	When 10 Volt D. C. Motor is required, add to list price.....	10.00
	When Signal is to operate on 440 to 650 Volt Direct Current, add to list price.....	8.00
	When Signal is to operate on 440 to 660 Volt Alternating Current, add to list price.....	10.00

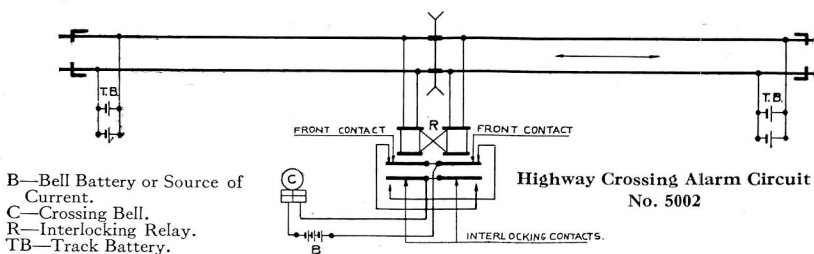
Orders should specify Voltage at which Signal is to operate, also whether for Direct or Alternating Current and number of Cycles.

HIGHWAY CROSSING ALARM CIRCUITS



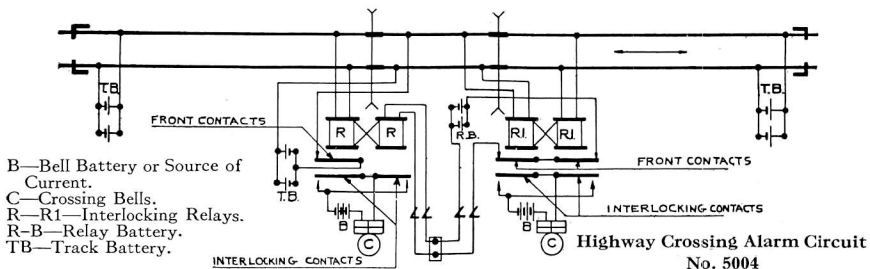
Single Track with Track Circuit

Operation: Bell starts ringing as engine reaches outer end of track circuit and rings until last car leaves crossing.



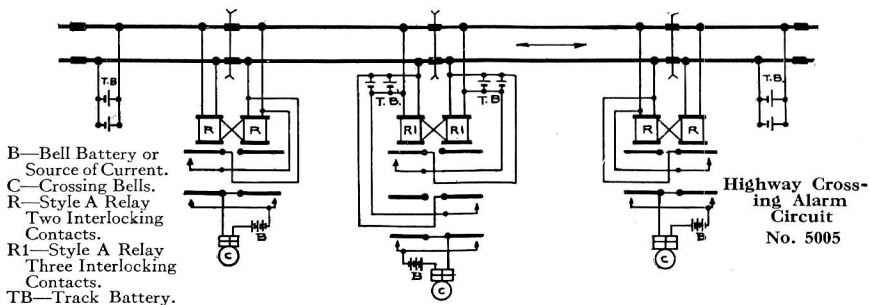
Single Track with Track Circuit

Operation: Bell starts ringing as engine reaches outer end of track circuit and rings until engine reaches crossing.



Single Track with Track Circuits and Two Crossing Bells

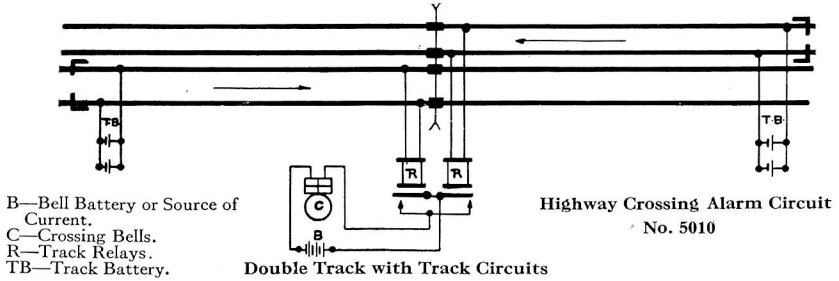
Operation: Both bells start ringing as engine reaches outer end of track circuit and each bell is silenced as last car passes over crossing.



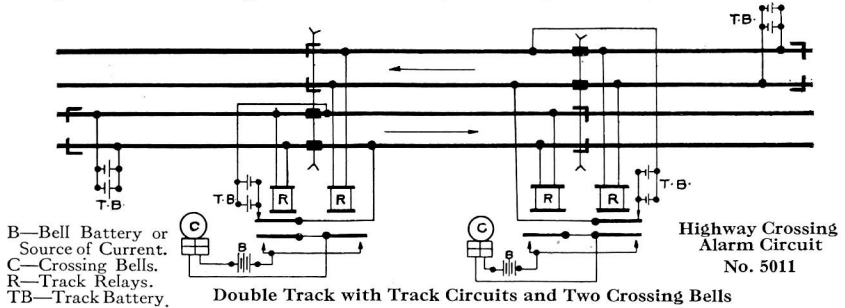
Single Track with Track Circuits and Three Crossing Bells

Operation: All bells start ringing as engine reaches outer end of track circuit and each bell is silenced as last car passes over crossing.

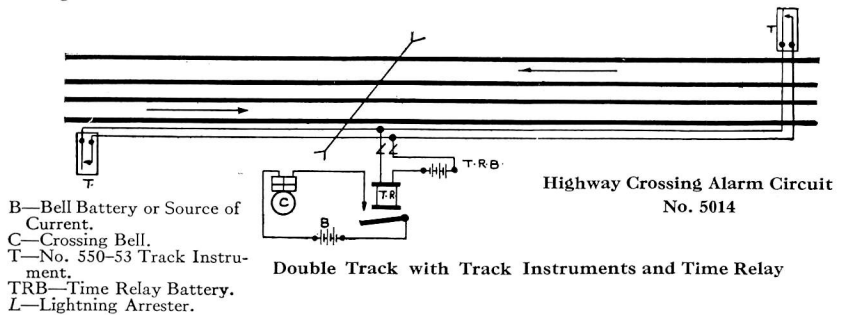
HIGHWAY CROSSING ALARM CIRCUITS



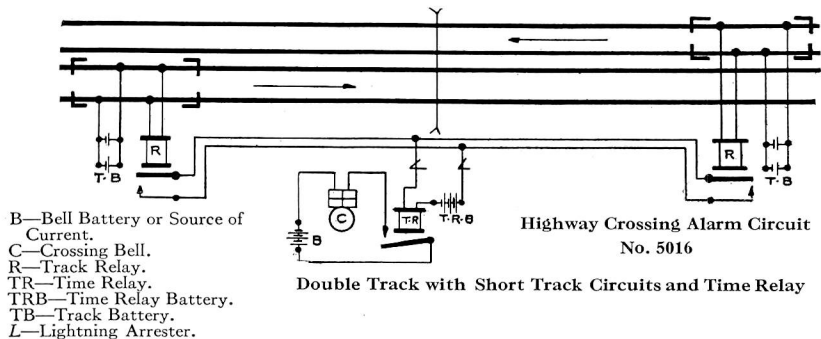
Operation: Train entering track circuit starts bell, bell will ring till last car passes crossing.



Operation: Train entering track circuit will start both bells, each bell will stop as last car leaves crossing.

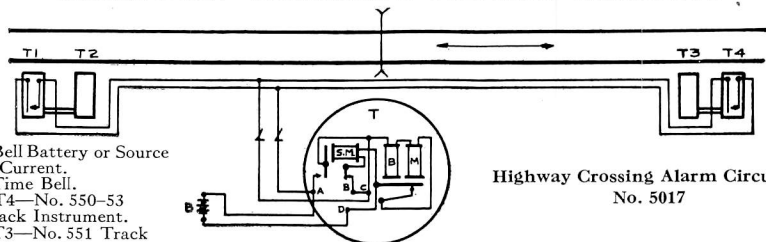


Operation: Train passing over "T" closes time relay contacts, bell will ring predetermined time.



Operation: Train passing short track circuit closes time relay contact, bell will ring predetermined time.

HIGHWAY CROSSING ALARM CIRCUITS



B—Bell Battery or Source of Current.

T—Time Bell.

T1, T4—No. 550-53

Track Instrument.

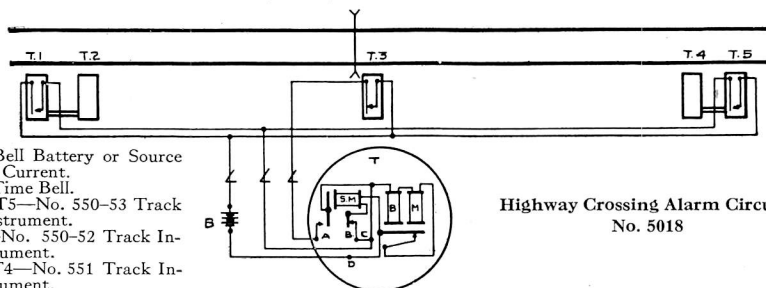
T2, T3—No. 551 Track Instrument.

L—Lightning Arrester.

**Highway Crossing Alarm Circuit
No. 5017**

Single Track with Time Bell and Track Instruments. Line Wire Control

Operation: Left to right, train passing T1 will start bell ringing, and bell will ring predetermined time and stop, train passing T3 will not ring bell, operation in opposite direction similar.



B—Bell Battery or Source of Current.

T—Time Bell.

T1, T5—No. 550-53 Track Instrument.

T3—No. 550-52 Track Instrument.

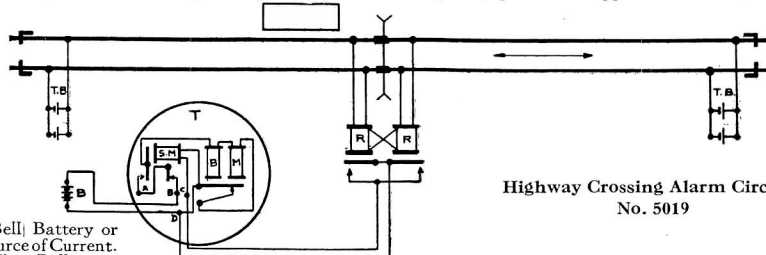
T2, T4—No. 551 Track Instrument.

L—Lightning Arrester.

**Highway Crossing Alarm Circuit
No. 5018**

Single Track with Time Bell and Track Instruments. Line Wire Control

Operation: Left to right, train passing T1 will start bell ringing, bell will ring predetermined time or until train passes T3, and stop, train passing T4 will not ring bell, operation in opposite direction similar.



B—Bell Battery or Source of Current.

T—Time Bell.

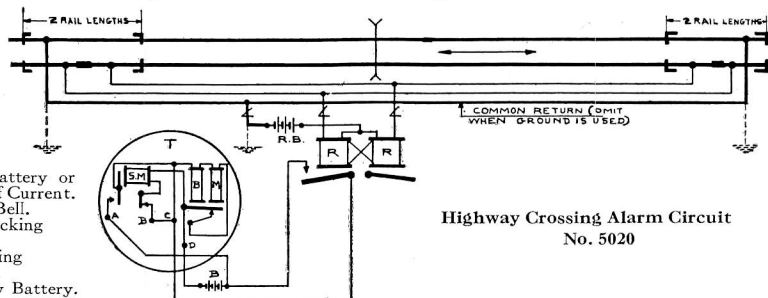
R—Interlocking Relay.

TB—Track Battery.

**Highway Crossing Alarm Circuit
No. 5019**

Single Track with Time Bell and Track Circuit. Track Circuit Control

Operation: Train entering track circuit will cause bell to ring predetermined time or until train reaches crossing.



B—Bell Battery or Source of Current.

T—Time Bell.

R—Interlocking Relay.

L—Lightning Arrester.

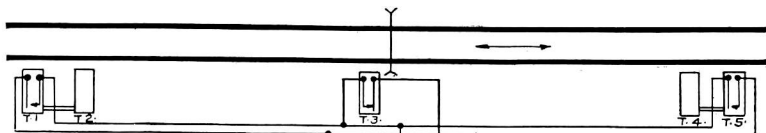
RB—Relay Battery.

**Highway Crossing Alarm Circuit
No. 5020**

Single Track with Time Bell and Short Track Circuits. Line Wire Control

Operation: Left to right, train passing over short track circuit causes bell to ring a predetermined time and stop, leaving over opposite short track circuit will not ring bell.

HIGHWAY CROSSING ALARM CIRCUITS



B—Battery or Current Supply.

C—Crossing Bell.

R—Relay.

T1, T5—550-53 Track Instruments.

T3—No. 550-52 Track Instruments.

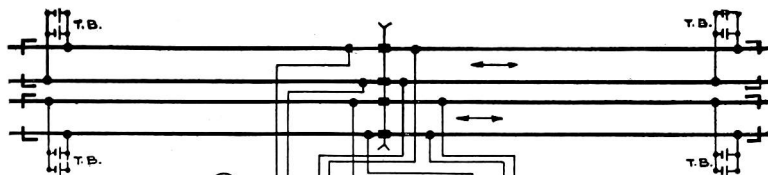
T2, T4—No. 551 Track Instruments.

L—Lightning Arrester.

Highway Crossing Alarm Circuit
No. 5012

Single Track with Track Instruments

Operation: Left to right, train passing T1 will start bell, bell will ring until train passes T3 and stop, train passing T4 will not ring bell, operation in opposite direction similar.



B—Battery or Current Supply.

C—Crossing Bell.

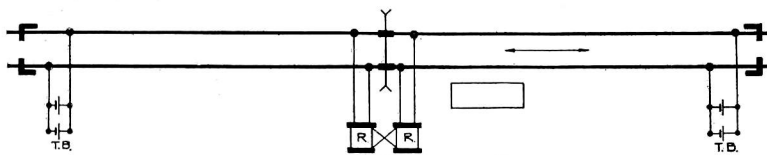
R—Interlocking Relay.

TB—Track Battery.

Highway Crossing Alarm Circuit
No. 5009

Two Adjacent Single Tracks with Track Circuits

Operation: Train entering track circuit will start bell, bell will ring until last car leaves crossing.



B—Bell Battery or Current Supply.

C—Crossing Bell.

R—Interlocking Relay.

SR—Stick Relay.

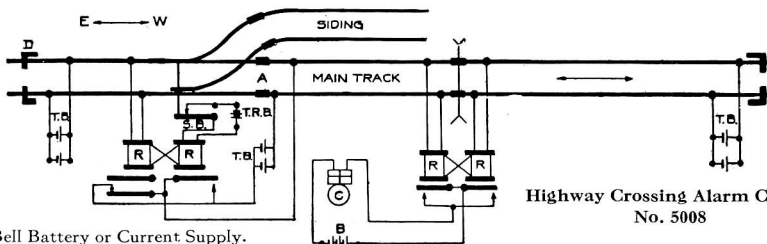
TB—Track Battery.

K, K1—Strap Keys (usually located in station).

Highway Crossing Alarm Circuit
No. 5006

Single Track with Track Circuits and Keys for Silencing and Starting Bells

Operation: Train entering track circuit starts bell, bell rings until last car passes crossing or until Key K is depressed, bell may again be started by depressing Key K1.



B—Bell Battery or Current Supply.

C—Crossing Bell.

R—Interlocking Relay.

SB—Switch Box.

TB—Track Battery.

TRB—Track Relay Battery.

Single Track Guarding Against False Alarm with Track Circuits

Operation: Train going east from siding to main line will not start bell, should train come out of siding and start west, bell will ring when passing "A" and ring until last car leaves crossing, west bound main line trains start bell at "D".

MECHANICAL CROSSING BELL

Style "E"



Complete Signal
No. 884-1



Crossing Bell
No. 884-3

These Signals are similar to our Style C and D except they are equipped with Style 884-3 Bells. The Bells have mechanisms completely protected from the weather and Gong has a shield over top to prevent snow and sleet from deadening the sound. The Gong is made of high carbon pressed steel and is 12" in diameter giving a clear and distinct tone. The operating rod has a large eye on its lower end serving as a handle, this eye fits over a special locking device bolted to the pole, permitting the use of a padlock. This prevents boys and mischievous persons from ringing the Gong while watchman is absent.

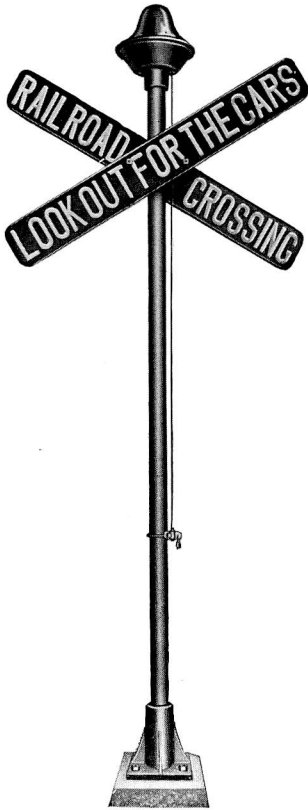
These Signals are furnished with or without foundation base as listed.

Trade No.	DESCRIPTION	List Price
884-1	Style E, Mechanical Crossing Signal with Sign and Foundation Casting, height 12 feet, complete as shown	\$41.85
884-2	Same as above but with Pipe Post 2 feet longer for setting into Concrete Foundation.....	36.05
884-3	Style E Mechanical Crossing Bell to fit over 3" (3½" O. D.) Pipe complete with Operating Rod (no Pole or Signs)	7.00

When Signs shown above are not wanted, deduct \$24.00 from list price. When other Signs than those shown are wanted, add or deduct difference in list price of Signs.

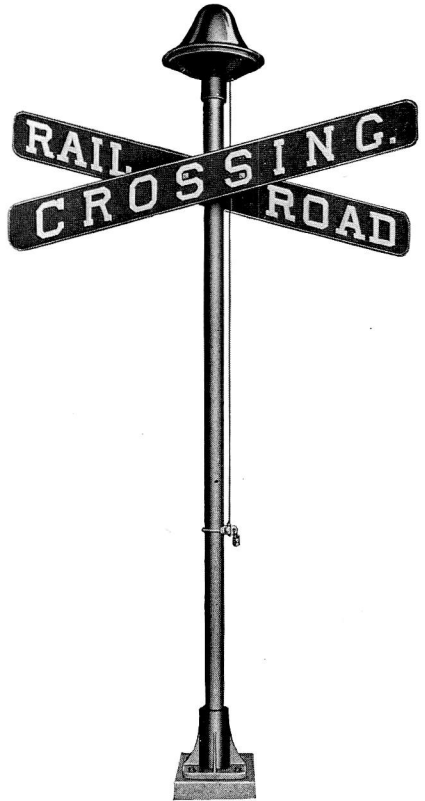
MECHANICAL CROSSING SIGNALS

Style "C" 15"



No. 882-1

Style "D" 20"



No. 883-1

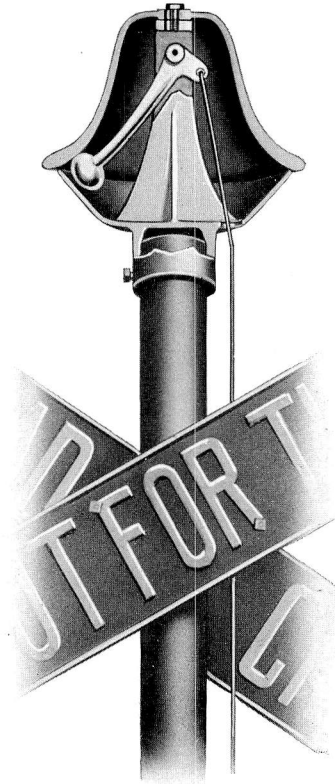
These Mechanically Operated Crossing Signals are used at the curb line of highway crossings, thus compelling watchmen to give the public warning of approaching trains from a point where the watchman has a clear view of the crossing.

The Signals are 12 feet high and are furnished with or without Standard Crossing Signs as shown. Any Standard Sign can be used. The Operating Rod has a large eye on its lower end which serves as a handle to operate the Gong and also to lock the rod to the special locking device furnished on the pole, to prevent mischievous persons or boys operating the Gong in watchman's absence.

MECHANICAL CROSSING SIGNALS

Style "C" 15"

Style "D" 20"



The Bells are furnished in two sizes, Style C—15" diameter and Style D—20" diameter. The Gongs are made of a special bell alloy and have a loud, clear, penetrating sound that can be heard clearly above noise of passing trains. The Main Casting supporting the Gong is of heavy cast iron and entirely encloses the lower portion of Gong, and has a socket to fit over 3" (3½" O. D.) Pipe Poles.

Sectional View of Style C and D Bells

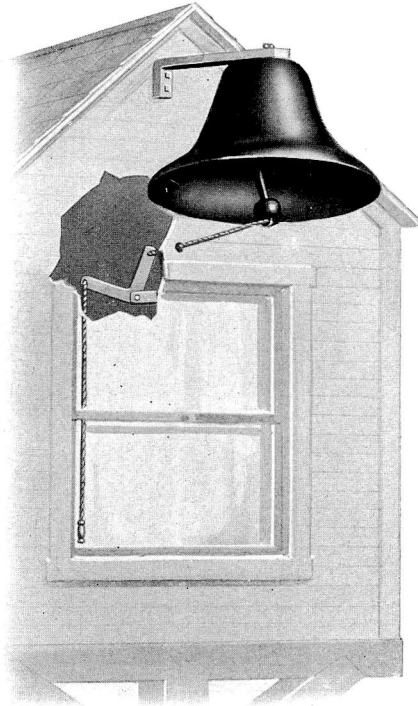
Trade No.	DESCRIPTION	List Price
882-1	Style E Mechanically Operated Crossing Signal complete with Signs and Foundation Base, height 12 feet as shown	\$42.75
882-2	Style E Mechanically Operated Crossing Signal same as above but without Base and with Pole 2 feet longer to set directly into a Concrete Foundation	36.95
883-1	Style D Mechanical Crossing Signal complete with Signs and Foundation Base, height 12 feet as shown	45.75
883-2	Style D Mechanically Operated Crossing Signal same as above, but without Base and with Pole 2 feet longer to set directly into a Concrete Foundation	39.75
882-3	Style C 15" Mechanical Crossing Bell Only Complete with Operating Rod with Socket to fit over 3" (3½" O. D.) Pipe Poles	6.90
883-3	Style D 20" Mechanical Crossing Bell Only complete with Operating Rod with Socket to fit over 3" (3½" O. D.) Pipe Poles	9.90

When Signs shown above are not wanted, deduct \$24.00 from list price. When other Signs than those shown are wanted, add or deduct difference in list price of Signs.

MECHANICAL TOWER BELLS

Style "A" 15"

Style "B" 20"



No. 881-2 and 880-2
Application No. 2

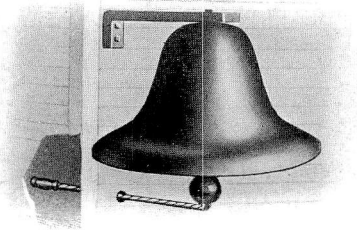
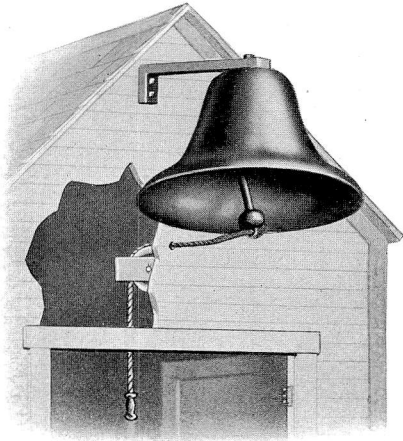
Showing Application of Mechanical Tower Bells

These Warning Bells are used at Watchmen's Shanties, Gate Houses and Towers. The Gongs are made of a special alloy and have a loud, clear, penetrating sound that can be plainly heard above the noise of passing trains. Bracket is rolled steel, all other parts heavy cast iron. All parts are simple and strong, designed for hard continuous use. Furnished in two sizes, viz.: Style A with 15" Gong and Style B with 20" Gong. Furnished complete with all Fittings as shown.

MECHANICAL TOWER BELLS

Style "A" 15"

Style "B" 20"



No. 881-3 and 880-3

Application No. 3

No. 881-1 and 880-1

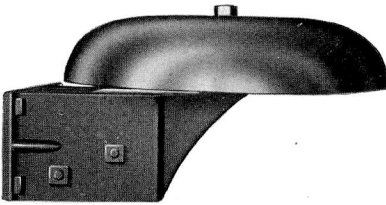
Application No. 1

Showing Applications of Mechanical Tower Bells

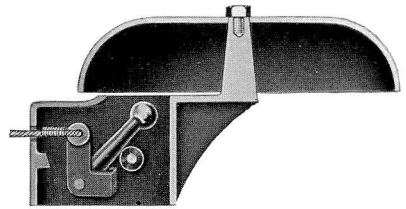
Trade No.	DESCRIPTION	List Price
880-1	Style A 15" Mechanical Tower Bell complete with all Fittings as shown for Application No. 1	\$4.50
881-1	Style B 20" Mechanical Tower Bell complete with all Fittings as shown for Application No. 1	6.50
880-2	Style A 15" Mechanical Tower Bell complete with all Fittings as shown for Application No. 2	5.50
881-2	Style B 20" Mechanical Tower Bell complete with all Fittings as shown for Application No. 2	7.50
880-3	Style A 15" Mechanical Tower Bell complete with all Fittings as shown for Application No. 3	6.00
881-3	Style B 20" Mechanical Tower Bell complete with all Fittings as shown for Application No. 3	8.00

MECHANICAL CROSSING BELLS

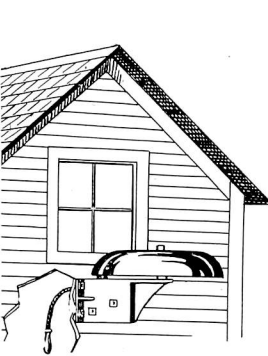
Style "F"



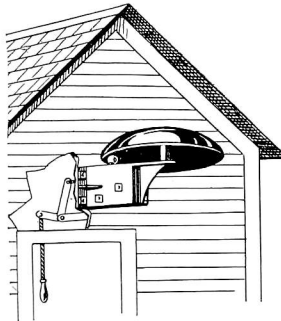
Perspective View



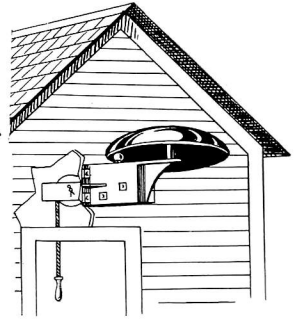
Sectional View



Application No. 1



Application No. 2



Application No. 3

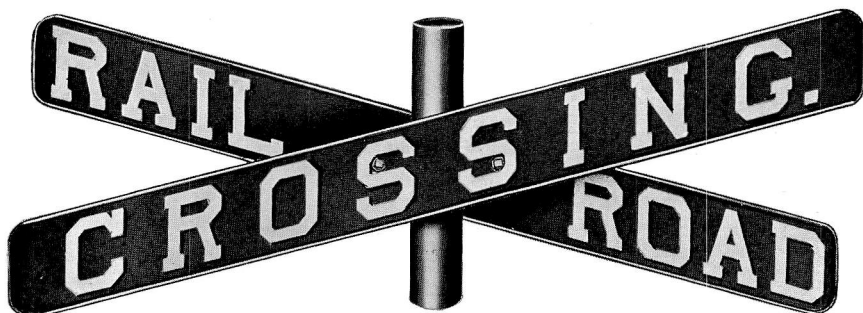
These Bells are used at Flagmen's and Gatemens Shanties to warn the public of approaching trains. The Gongs are 12" diameter made of pressed steel and have a clear and penetrating sound. The bell clapper is mounted separately to give a sharp blow on inside of Gong. The mechanism is entirely enclosed from the weather so snow and sleet cannot interfere with its proper working. Furnished complete for three methods of application as shown.

Trade No.	DESCRIPTION	List Price
885-1	Style F Mechanical Crossing Bell complete for operation by direct straight pull, per Application No. 1.....	\$5.68
885-2	Style F Mechanical Crossing Bell for Operation with downward pull and crank, per Application No. 2.....	7.54
885-3	Style F Mechanical Crossing Bell for operation with downward pull and pulley, per Application No. 3.....	6.44

IRON CROSSING SIGNS



Crossing Signs Nos. 428, 428-9, 429 and 429-9

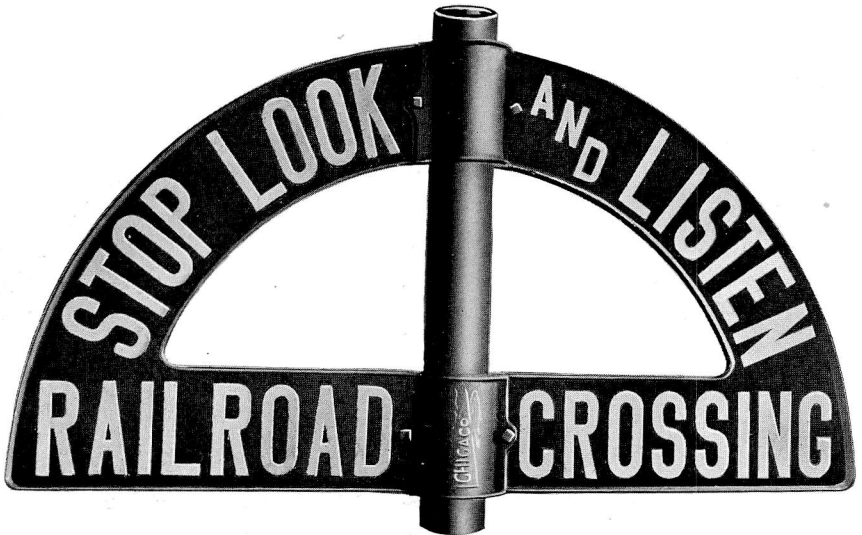


Crossing Signs Nos. 430, 430-9, 431 and 431-9

The Crossing Signs illustrated are the most conventional Standard Crossing Signs, and are made of extra heavy castings and with heavy raised 6" or 9" letters painted white, body of Sign is painted black. Signs 428 and 429 are 5 feet long and 8" high with 6" letters, and 7 feet long, 11" high with 9" letters. Signs 430 and 431 are 6' 3" long with 6" letters and 8 feet long with 9" letters. Signs are made in two pieces and furnished complete with Filler Blocks and Bolts for attaching to 3" (3½" O. D.) or 4" (4½" O. D.) Steel Poles. Signs read same on both sides.

Trade No.	DESCRIPTION	List Price
428	Double Crossing Sign with 6" Letters, complete ready to attach to 3" Steel Poles, each.....	\$24.00
428-9	Same as above but with 9" Letters.....
429	Double Crossing Sign with 6" Letters, complete ready to attach to 4" Steel Poles, each.....	24.00
429-9	Same as above but with 9" Letters.....
430	Double Crossing Sign with 6" Letters, complete with Bolts ready to attach to 3" Steel Poles, each.....	24.00
430-9	Same as above but with 9" Letters.....
431	Double Crossing Sign with 6" Letters, complete with Bolts ready to attach to 4" Steel Poles, each.....	24.00
431-9	Same as above but with 9" Letters.....

IRON CROSSING SIGNS



Crossing Signs Nos. 436 and 437

The above Signs are one half of a five-foot circle and five feet wide and have heavy 6" raised block letters. Made to fit 3" (3½" O. D.) and 4" (4½" O. D.) Steel Poles. Signs read the same on both sides. Raised letters are painted white and body of sign black, thus making them very attractive and easy to maintain as no skill is required when painting is necessary. Signs are cast extra heavy to prevent damage by bullet shots, etc.

Trade No.	DESCRIPTION	List Price
436	Half Round Sign complete with Bolts ready to attach to 3" Steel Pole, each.....	\$25.00
437	Half Round Sign complete with Bolts ready to attach to 4" Steel Pole, each.....	25.00

IRON CROSSING SIGNS



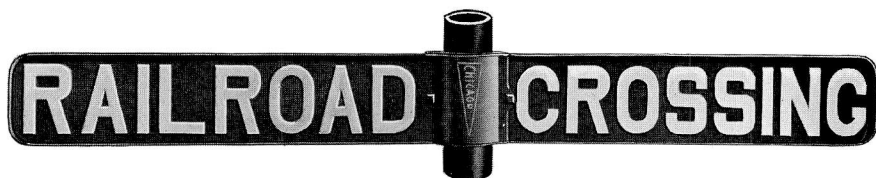
Crossing Signs Nos. 434 and 435

The Signs illustrated above are cast in two pieces and arranged to attach to 3" ($3\frac{1}{2}$ " O. D.) and 4" ($4\frac{1}{2}$ " O. D.) Steel Poles. Outside diameter of circle is 44", and letters are heavy 6" raised block letters. Body of Sign is painted black and the raised letters are painted white, making signs very attractive and extremely easy to maintain as no skill is required when repainting is necessary. Signs read alike from both sides and are made extra heavy, and sufficiently strong to prevent breakage by bullet shots, etc.

Trade No.	DESCRIPTION	List Price
434	Round Crossing Sign complete with Bolts ready to attach to 3" Steel Poles, each.....	\$24.00
435	Round Crossing Sign complete with Bolts ready to attach to 4" Steel Poles, each.....	24.00



IRON CROSSING SIGNS

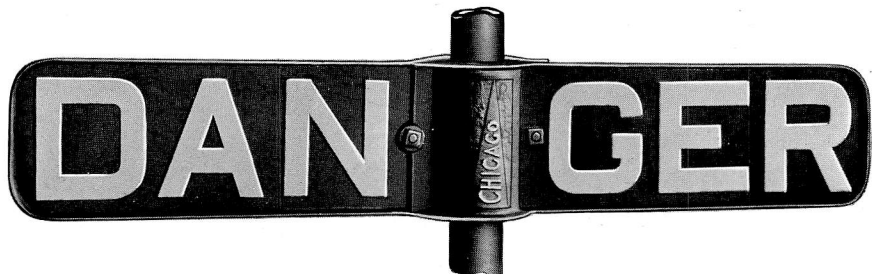


Crossing Signs Nos. 432 and 433

The Crossing Sign illustrated above makes a very attractive, distinctive and clear reading Highway Crossing Sign. It is extra long, to be sure to attract attention. Length is 6' 8", letters are 6" cast upon an 8" background.

Letters are heavy raised block letters, easily readable, and are painted white, body of Sign is painted black and is cast extra heavy, making it practically indestructible and bullet proof. Furnished to fit 3" (3½" O. D.) and 4" (4½" O. D.) Steel Poles.

Trade No.	DESCRIPTION	List Price
432	Straight Crossing Sign complete ready to attach to 3" Steel Poles.....	\$24.00
433	Straight Crossing Sign complete ready to attach to 4" Steel Poles.....	24.00



Crossing Signs Nos. 448, 448-9, 449 and 449-9.

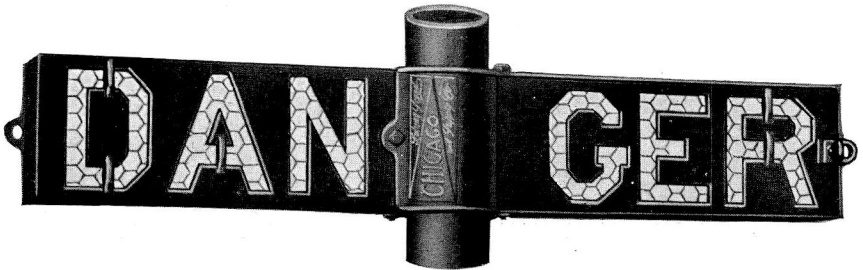
The above Sign is especially placed upon the market for use in the several States in which a separate warning sign reading "Danger" must be used at all highway crossings. It is furnished with 6" and 9" letters and Sign with 6" letters is 4 feet long and 8" high; Sign with 9" letters is 6 feet long and 11" high.

The body of Sign is painted white and letters are painted red thus making a very distinctive warning sign and complying with the laws of States requiring this added protection.

Signs are furnished ready to attach to 3" (3½" O. D.) and 4" (4½" O. D.) Steel Poles as shown.

Trade No.	DESCRIPTION	List Price
448	"Danger" Sign with 6" letters complete ready to attach to 3" Steel Poles.....	\$20.00
448-9	"Danger" Sign with 9" letters complete ready to attach to 3" Steel Poles.....
449	"Danger" Sign with 6" letters complete ready to attach to 4" Steel Poles.....	20.00
449-9	"Danger" Sign with 9" letters complete ready to attach to 4" Steel Poles.....

IRON CROSSING SIGNS



Electrically Illuminated Signs Nos. 440, 441, 442 and 443

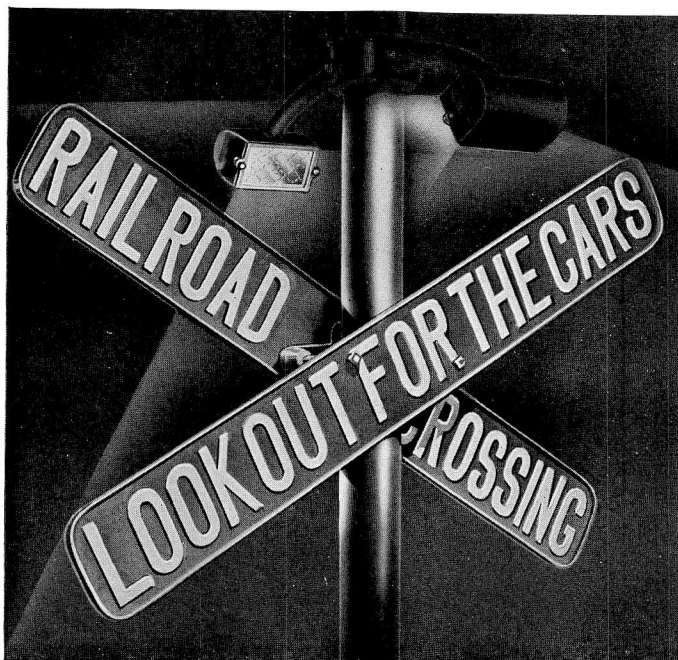
The Electrically Illuminated Signs are cast extra heavy and are provided with ruby wire glass $\frac{1}{4}$ " thick making them practically indestructible. The interior is fitted with electric lights and sockets as specified. Signs are double, reading "Danger" in 6" block letters from both sides.

Made for 3" ($3\frac{1}{2}$ " O. D.) and 4" ($4\frac{1}{2}$ " O. D.) Steel Poles. Each side is cast in two pieces giving easy access to lamps and wires. The door is held solidly into place with a cap screw and a lock lug is also provided so that Signs may be locked with padlocks.

The arrangement is such that lamps and sockets are absolutely protected from the weather. The lamps usually have current supplied from same source that operates the Crossing Bell. Contact for lamp circuit is made through an extra contact on Bell armature, thus flashing the lights on and off and making a very conspicuous sign at night that may be seen from a great distance.

Trade No.	DESCRIPTION	List Price
440	Illuminated "Danger" Sign with six Sockets (no lamps), wired complete for electric railway service ready to attach to 3" Poles, each.....	\$24.00
441	Same as above, but for attaching to 4" Steel Poles, each....	24.00
442	Illuminated "Danger" Sign with two Sockets, and two 6-Volt Lamps, wired complete for Crossing Signals on steam railroads , ready to attach to 3" Poles, each.....	24.00
443	Same as above, but for attaching to 4" Steel Poles, each....	24.00

CROSSING SIGN ILLUMINATING OUTFIT



Crossing Sign Illuminating Outfits Nos. 444, 445, 446 and 447

The Outfits shown above are used with Highway Crossing Signals with Illuminated Crossing Signs. The lamps are contained in the end of the hollow arms and are entirely enclosed, being protected with a heavy plate glass on the Sign side.

Current to lamps is usually provided from same source that rings the Crossing Bell and is controlled through an extra contact on Bell producing a flashing effect by turning current on and off with each stroke of the Bell, thus making the Crossing Sign very conspicuous and especially effective on automobile roads. The Outfit is weatherproof and strong enough to prevent injury by malicious persons. Lamps cast a clear white light upon Signs making them very conspicuous at night.

The Reflector Castings clamp to Poles and can be applied to any existing Crossing Signals by drilling a hole for wires through side of Pole. Furnished as listed ready to attach, or in connection with any Crossing Signals sold by us.

Trade No.	DESCRIPTION	List Price
444	Illuminating Outfit complete, consisting of two Reflectors each equipped with Standard Edison Base Socket (no lamps) wired ready to install on 3" Steel Pole (for use on high Voltages).....	\$22.00
445	Same as above to attach to 4" Steel Pole.....	22.00
446	Illuminating Outfit complete, consisting of two Reflectors each equipped with Candelabra Base Socket and 6-Volt Battery Lamps, wired ready to attach to Crossing Signals, having 3" Steel Poles (for use on Bell Batteries)....	24.00
447	Same as above but for 4" Steel Poles.....	24.00
444-1	Reflector Casting Only for No. 444 or 446, each.....	
445-1	Reflector Casting Only for No. 445 or 447.....	
444-2	Frame for Glass, each.....	
444-3	Plate Glass, each.....	
442-1	6-Volt Candelabra Base Lamp Only for 446 or 447, each.....	