

GENERAL RAILWAY SIGNAL COMPANY

1905

SECTION 1

ELECTRIC INTERLOCKING

CATALOGUE AND PRICE-LIST
OF
ELECTRIC INTERLOCKING
AND
SIGNALING DEVICES

MADE BY
THE GENERAL RAILWAY SIGNAL COMPANY
OF BUFFALO, N. Y.

Owners of the Patent Rights formerly owned by The Taylor Signal Company of Buffalo, N. Y.; The Pneumatic Signal Company of Rochester, N. Y., and The Standard Railroad Signal Company of Troy, N. Y.

Also Designers, Manufacturers and Erectors of Electric, Electro-Pneumatic, Electro-Mechanical, Pneumatic and Mechanical Appliances for Railway Protection; Crossing Gates; Automatic, Semi-Automatic and Manually Operated Block Signals; Electric, Electro-Pneumatic and Mechanical Interlockings to suit conditions

GENERAL OFFICES

BUFFALO, N. Y.

DISTRICT OFFICES

NEW YORK—Broad Exchange Bldg.
CHICAGO—Monadnock Block

WORKS

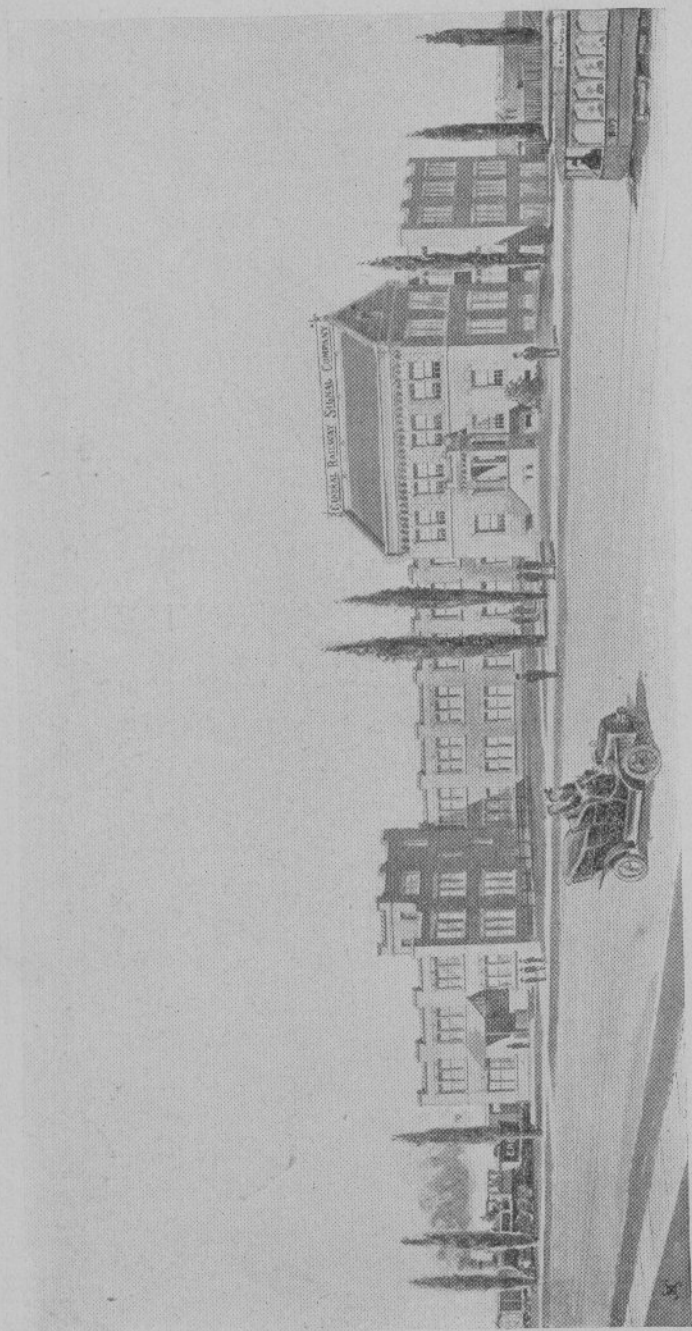
BUFFALO, NEW YORK
ROCHESTER, NEW YORK

1905

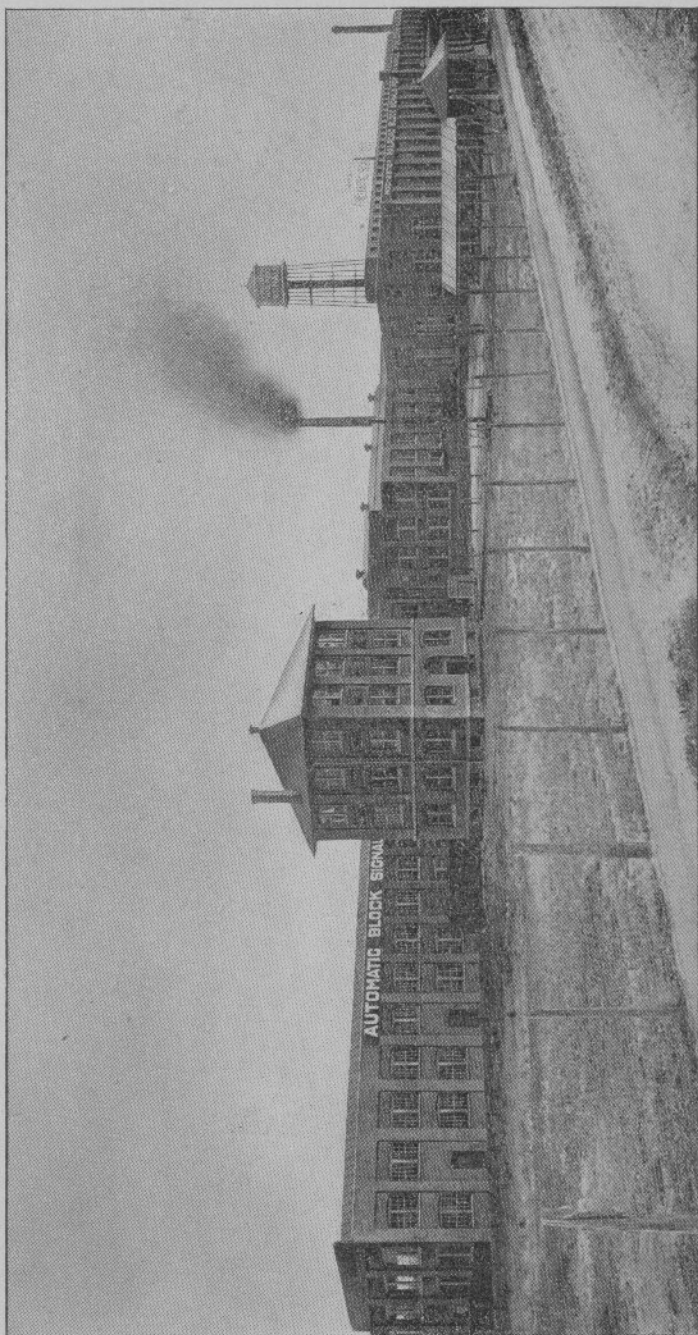
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GENERAL RAILWAY SIGNAL COMPANY
BUFFALO, N. Y.

HAUBAUER-JONES PRINTING CO.
BUFFALO, N. Y.

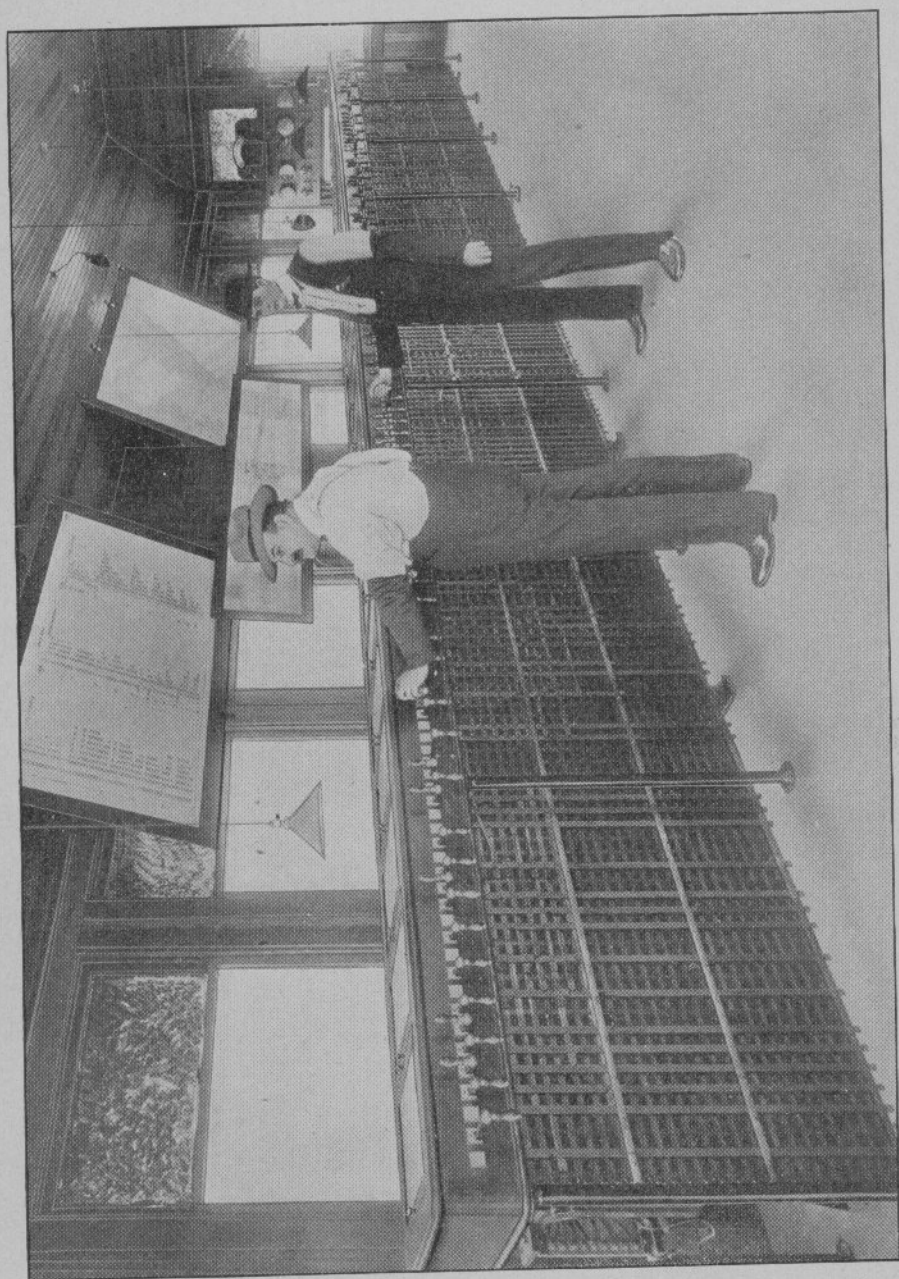
ELECTRIC
INTERLOCKING DEVICES
SECTION I



GENERAL RAILWAY SIGNAL COMPANY'S BUFFALO, N. Y. WORKS.



GENERAL RAILWAY SIGNAL COMPANY'S ROCHESTER, N. Y. WORKS.



INTERIOR OF TOWER AT LA SALLE STREET STATION, CHICAGO, ILL.

PREFACE

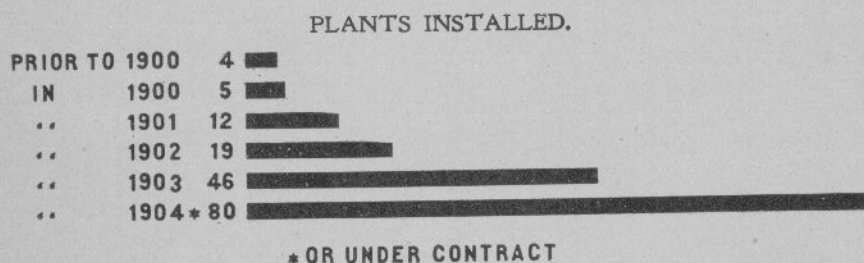
THIS section of our catalogue deals only with Electric Interlocking Devices, and is the first of a series of sections which will be issued from time to time, pertaining to Pneumatic, Electro-Pneumatic and Mechanical Interlocking Apparatus, Station Block, Automatic and other Signaling Devices manufactured by this company.

In presenting this catalogue to our patrons, we feel that inasmuch as the principles involved in the operation of Electric Interlocking have become familiar to the engineering and other departments of railroads in the country, it will be unnecessary to enter into a detailed description or explanation of those principles employed in the apparatus listed in this section.

We have, therefore, endeavored to make this edition purely an order catalogue, and as such, list prices have been extended opposite each item, and list prices given for a number of combined parts, which we believe will be of great assistance in ordering. Where prices are not extended same will be furnished on application.

GENERAL RAILWAY SIGNAL CO.

AS ILLUSTRATIVE of the great advancement in the use of Electric Interlocking Devices, perhaps the following graphic representation of the percentage of increase, together with a statement showing the number of plants which have been erected or contracted for since the introduction of such devices, will better portray the growth and the favor with which a "one power" device has been received, than anything that may be said.



From the above diagram it will be seen that the number of plants in any one year exceeds the number installed or contracted for in any two preceding years.

We will state here that all of the electric plants in service in this country at this time are protected by patents owned by this company, which company also controls all of the patent rights in the Western Hemisphere, formerly owned by the Taylor Signal Company of Buffalo, N. Y., Pneumatic Signal Company of Rochester, N. Y., and the Standard Railroad Signal Company of Troy, N. Y.

List of railroads on which Electric Interlocking Plants have been erected or contracted for up to January 1, 1905, together with statement of number of plants and functions operated on each road, is shown on opposite page.

<i>Name of Road.</i>	<i>No. Plants.</i>	<i>Functions.</i>
Atlanta Terminal Co.....	2	124
Atchison, Topeka & Santa Fe.....	16	408
Baltimore & Ohio.....	15	467
Cleveland, Cincinnati, Chicago & St. Louis.....	6	227
Chesapeake & Ohio.....	2	59
Chicago, Burlington & Quincy.....	2	63
Chicago, Milwaukee & St. Paul.....	1	28
Chicago Great Western.....	2	41
Copper Range.....	1	36
Chicago & Northwestern.....	6	210
Chicago & Eastern Illinois.....	3	92
Chicago, St. Paul, Minneapolis & Omaha.....	3	30
Chicago, Rock Island & Pacific.....	2	128
Cincinnati, New Orleans & Texas Pacific.....	2	27
Delaware & Hudson.....	2	64
Elgin, Joliet & Eastern.....	3	75
Erie.....	4	207
Grand Trunk.....	1	46
Hocking Valley.....	1	65
Houston & Texas Central.....	8	243
Illinois Central.....	9	353
Indiana Harbor.....	1	113
Lake Shore & Michigan Southern.....	15	730
Long Island.....	1	28
Lehigh Valley.....	7	248
Monon.....	1	22
Michigan Central.....	4	76
Norfolk & Western.....	1	13
Pennsylvania.....	1	32
Pennsylvania Lines West of Pittsburg.....	6	332
Pittsburg & Lake Erie.....	3	157
Pere Marquette.....	4	145
Southern Pacific.....	10	313
Southern Indiana.....	1	28
Southern.....	1	16
Savannah Union Station Co.....	2	67
Terminal Railroad Assn. of St. Louis.....	6	417
Texas Pacific.....	2	186
Toledo Railway & Terminal Co.....	1	43
Union Pacific.....	2	155
Wisconsin Central.....	2	39
Total Number Roads, 41.....	162	6153

GENERAL RAILWAY SIGNAL CO.

IMPORTANT

HOW TO ORDER

On the following pages our latest devices, and many of those which the latest have superseded, are illustrated, described and listed in complete assembly and in detail.

Wherever feasible, we have shown assembled, or in groups, the parts that naturally belong together, and by so doing, we have indicated with greater clearness than could be obtained by description, the use and location of the individual parts. To each of these groups we have given, in heavy type, a number which, if rightly used, will facilitate the finding of any small part.

In ordering apparatus or parts listed in this catalogue, give, in addition to the regular shipping instructions, etc., the *Order Number and Name appearing in LARGE Type*, together with such additional specifications as may be necessary.

PATTERN NUMBERS ARE NOT ORDER NUMBERS

Attention is called to the fact that pattern numbers which occasionally appear on castings are *not* listed order numbers. Therefore, in ordering, care should be taken to see that the order number is given and not the pattern number. If for any reason a pattern number is given, it should be specifically stated that such is the case. For convenience, a list of pattern numbers with their corresponding order numbers is given on pages 306 to 311, inclusive.

TO ORDER APPARATUS NOT LISTED

Some of the appliances which have been superseded by improved devices are not illustrated in this catalogue. We are, however, prepared to furnish duplicates of all such apparatus. In ordering a device, or part thereof, of this kind, it will be necessary to give its correct name, exact location, and such information as circumstances may warrant, together with the name of the plant for which it is required. The proper name may be found by reference to a like part that is illustrated in this or other catalogues.

INTERLOCKER, MODEL 2.

The following list of parts will indicate what is required when it is desired to add a new lever to an existing Interlocker without individual Polarized Relays on Terminal Board.

Order No.	LIST OF PARTS.	List Price.
3174	SWITCH LEVER includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6765, 1 Indication Selector 2550, 1 Controller 3252, 1 Set of Lead Wires 3082, 1 Glass Insulator 4022, 2 Insulator Blocks 2570, 2 Caps 1222, etc., 1 Tappet Bar 3152, etc., also all necessary Screws, Binding Posts, etc. If Lever Latches are required, give order number	64.00
3175	SWITCH LEVER, SHORT. Parts required when adding a short lever to connect with an existing lever: 1 Lever 3096, 1 Guide 3098, 1 Set of Magnets 6765, 1 Indication Selector 2550, 1 Controller 3252, 1 Set of Lead Wires 3082, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps 1222, etc., and all necessary Screws, Binding Posts, Etc.	60.00
3176	HIGH SIGNAL LEVER includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6767, 1 Controller 2676, 1 Set of Lead Wires 3081, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps holding Lever 1222, etc., 1 Tappet Bar 3152, etc. Also all necessary Screws, Binding Posts, Etc. If Lever Latches are required, give order number.....	44.00
3177	DWARF SIGNAL LEVER includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6766, 1 Controller 2673, 1 Set of Lead Wires 3080, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps 1222, etc., 1 Tappet Bar 3152, etc. Also all necessary Screws, Binding Posts, Etc. If Lever Latches are required, give order number	48.00
7916	DOUBLE LEVER for Switch, Derail, Etc., includes 1 Lever 3096, 1 Lever 3825, (Specify Color or Number of Grip and Number of Lever.) 2 Guides 3098, 2 Sets of Magnets 6765, 2 Indication Selectors 2550, 2 Controllers 3252, 2 Sets of Lead Wires 3082, 4 Insulator Blocks 2570, 2 Glass Insulators 4022, 4 Caps 1222, etc., 1 Tappet Bar 3152, etc. Also all necessary Screws, Binding Posts, Etc. If Lever Latches are required, give order Number.....	124.00

Order by NUMBER and NAME Appearing in Large Type.

INTERLOCKER, MODEL 2.

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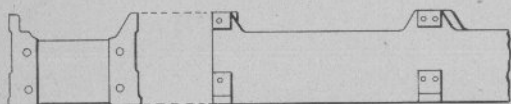
The following list of parts will indicate what is required when it is desired to add a new lever to an existing Interlocker with individual Polarized Relays on Terminal Board.

Order No.	LIST OF PARTS.	List Price.
7917	SWITCH LEVER includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6765, 1 Indication Selector 2550, 1 Controller 3252, 1 Set of Lead Wires 5075, 1 Glass Insulator 4022, 2 Insulator Blocks 2570, 2 Caps 1222, etc., 1 Tappet Bar 3152, etc., 1 Polarized Relay 4931. Also all necessary Screws, Binding Posts, etc. If Lever Latches are required, give order number.....	80.00
7787	SWITCH LEVER, SHORT. Parts required when adding a short lever to connect with an existing lever: 1 Lever 3096, 1 Guide 3098, 1 Set of Magnets 6765, 1 Indication Selector 2550, 1 Controller 3252, 1 Set of Lead Wires 5075, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps 1222, etc., 1 Polarized Relay 4931, and all necessary Screws, Binding Posts, etc.....	76.00
7919	HIGH SIGNAL LEVER includes 1 Lever 3097. (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6767, 1 Controller 2676, 1 Set of Lead Wires 5076, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps holding lever 1222, etc., 1 Tappet Bar 3152, etc. 1 Polarized Relay 4931. Also all necessary Screws, Binding Posts, Etc. If Lever Latches are required, give order number.....	60.00
7920	DWARF SIGNAL LEVER includes 1 Lever 3097, (Specify Color or Number of Grip and Number of Lever.) 1 Guide 3098, 1 Set of Magnets 6766, 1 Controller 2673, 1 Set of Lead Wires 5077, 2 Insulator Blocks 2570, 1 Glass Insulator 4022, 2 Caps 1222, etc., 1 Tappet Bar 3152, etc. 1 Polarized Relay 4931. Also all necessary Screws, Binding Posts, etc. If Lever Latches are required, give order number.....	64.00
7921	DOUBLE LEVER for Switch, Derail, etc., includes 1 Lever 3096, 1 Lever 3825, (Specify Color or Number of Grip and Number of Lever.) 2 Guides 3098, 2 Sets of Magnets 6765, 2 Indication Selectors 2550, 2 Controllers 3252, 4 Insulator Blocks 2570, 2 Glass Insulators 4022, 2 Sets of Lead Wires 5075, 4 Caps 1222, etc., 1 Tappet Bar 3152, etc. 1 Polarized Relay 4931. Also all necessary Screws, Binding Posts, etc. If Lever Latches are required, give order number	156.00

Order by NUMBER and NAME appearing in Large Type.

INTERLOCKER, MODEL 2.

FRAME.



3975 - 4 LEVERS

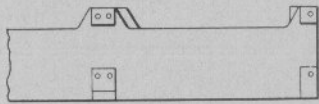
1585 - 8 "

1968 - 12 "

1586 - 16 "

1969 - 20 "

1587 - 24 "



1970 - 28 LEVERS

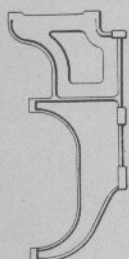
1588 - 32 "

1971 - 36 "

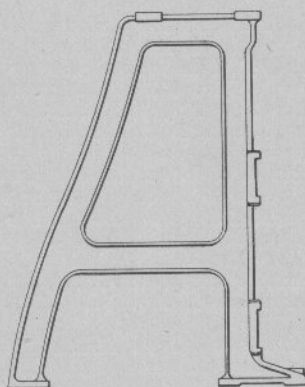
1589 - 40 "

7718 - 44 "

1590 - 48 "

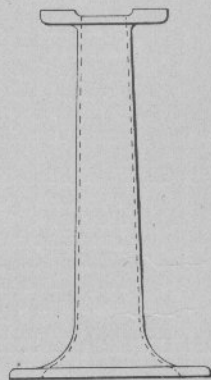


4806

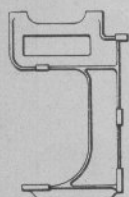


6872 - FOR 1, 2 OR 3 TIER.

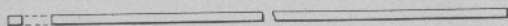
8674 - " 4 TIER.



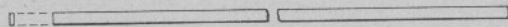
2338



1568



1437



1179



6871



011

012



1104



2453



2462



2474



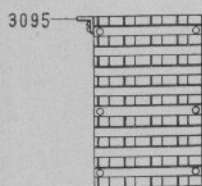
7862



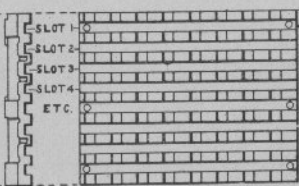
1048



3065



1642



1303

3094

2451

SLOT 1
SLOT 2
SLOT 3
SLOT 4
ETC.

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

INTERLOCKER, MODEL 2.

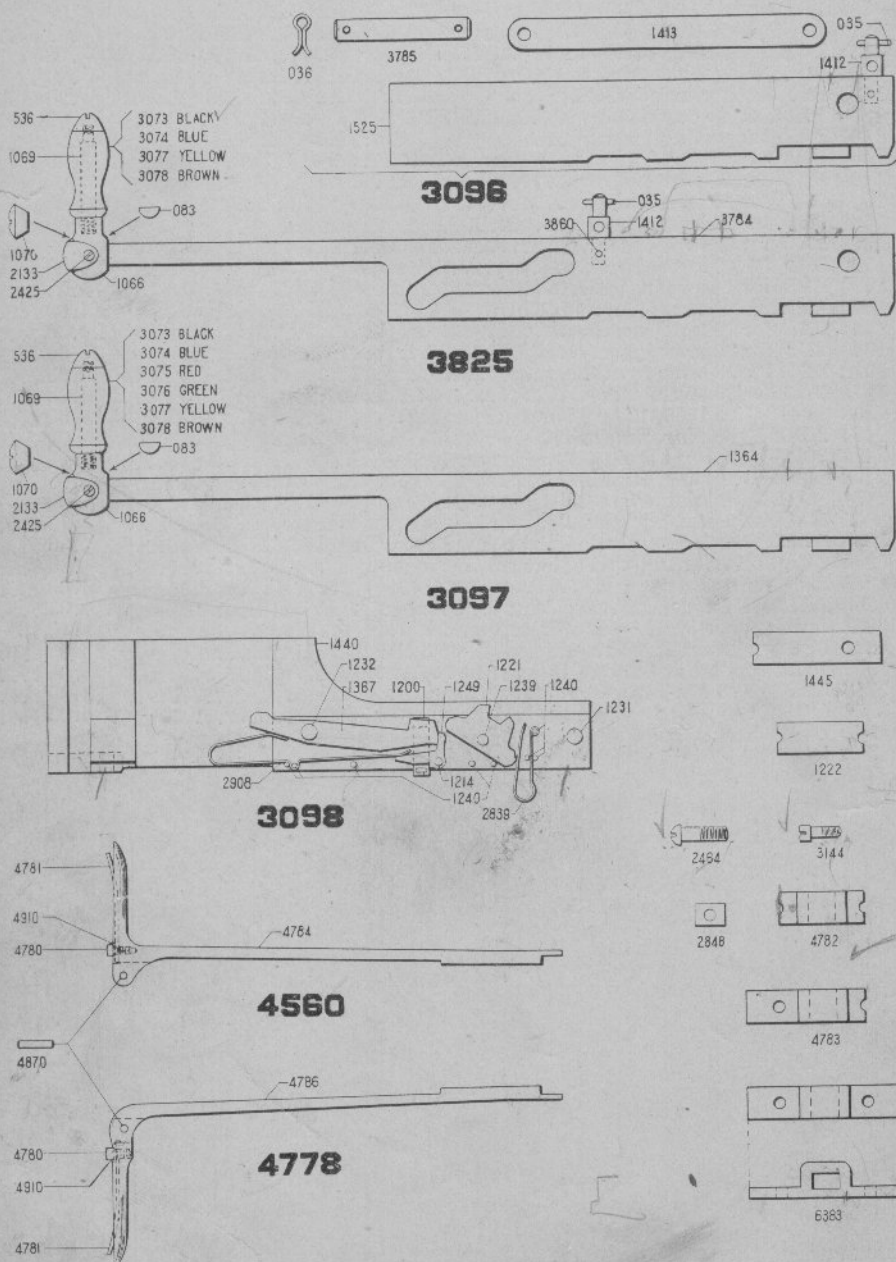
17

Order No.	FRAME.	List Price.
011	BOLT with Nut holding Bed to Leg 6872 .....	.04
012	BOLT with Nut holding Bed to Stand 2338 .....	.04
1048	NUT for Screw 3065 .....	.03
1104	SCREW holding Bracket 1568 and 4806 to Beds .....	.04
1179	BAR supporting Controller, per foot .....	.20
1303	Plate, single bank, (8 lever) LOCKING PLATE	25.00
1437	BAR supporting lever Guides, per foot .....	.50
1568	BRACKET supporting Controllers and 8½" Terminal Board	3.50
1585	BED for 8 lever spaces	18.00
1586	BED for 16 lever spaces	30.00
1587	BED for 24 lever spaces	42.00
1588	BED for 32 lever spaces	54.00
1589	BED for 40 lever spaces	66.00
1590	BED for 48 lever spaces	78.00
1642	Plate, half bank, (4 lever) LOCKING PLATE	15.00
1968	BED for 12 lever spaces	24.00
1969	BED for 20 lever spaces	36.00
1970	BED for 28 lever spaces	48.00
1971	BED for 36 lever spaces	60.00
2338	STAND for 1968, 12 levers and under	15.00
2451	SCREW holding Bracket 3094 or 3095 .....	.02
2453	SCREW holding Bar 1179 to Bracket 1568 or 4806 .....	.02
2462	SCREW holding Bar 1437 to Bracket 1568 or 4806 .....	.03
2474	SCREW holding Plate 1303 or 1642 .....	.06
3065	SCREW used for joining Beds on long Interlockers .....	.10
3094	BRACKET for supporting right end Lever Guides .....	.30
3095	BRACKET for supporting left end Lever Guides .....	.30
3975	BED for 4 lever spaces	15.00
4806	BRACKET for supporting Controllers and 12" Terminal Board	4.00
6871	BAR supporting Locking Plate, per foot	1.10
6872	LEG for Interlockers requiring 1, 2, or 3 tier of locking	20.00
7662	SCREW for Bar 6871 to Leg 6872 .....	.05
7718	BED for 44 lever spaces	72.00
8674	LEG for Interlockers requiring 4 tier of locking	30.00

Order by NUMBER and NAME appearing in Large Type.

INTERLOCKER, MODEL 2.

LEVERS AND LATCHES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

INTERLOCKER, MODEL 2.

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Order
No.

LEVERS AND LATCHES.

List Price.

035	COTTER Pin $\frac{3}{8}$ " x $\frac{5}{8}$ " (per 100)	.80
036	COTTER Pin $\frac{3}{8}$ " x $\frac{3}{4}$ " (per 100)	.80
083	KEY for 3097 and 3825 holding Base 1066	.06
536	GRIP NUT for 3097 and 3825	.30
1066	GRIP BASE for 3097 and 3825	1.00
1069	THREADED ROD for 3097 and 3825	.10
1070	NUT for 3097 and 3825	.20
1200	LATCH for 3098	.40
1214	DOG PIN for 3098	.10
1221	CAM for 3098	1.00
1222	CAP holding Levers to Guides	.15
1231	SPACING PIN for 3098	.15
1232	LATCH PIN for 3098	.20
1239	CAM PIN for 3098	.10
1240	SMALL PIN for 3098	.05
1249	DOG for 3098	1.00
1364	LEVER for 3097	11.00
1367	LATCH for 3098	1.20
1412	STUD for 3096 and 3825	.30
1413	BAR connecting 3096 to 3825	.40
1440	GUIDE for 3098	8.00
1445	CAP holding end Levers to Guides	.20
1525	LEVER for 3096	9.00
2133	NUMBER PLATE for 3097 and 3825	1.20
2425	SCREW for 3097 and 3825	.02
2464	SCREW fastening 3098	.05
2839	CAM SPRING for 3098	.12
2848	LOCK WASHER for 3144	.01
2908	LATCH SPRING for 3098	.20
3073	BLACK GRIP for 3097 and 3825 for Switch	.50
3074	BLUE GRIP for 3097 and 3825 for Derail	.50
3075	RED GRIP for 3097 for Home Signal	.50
3076	GREEN GRIP for 3097 for Distant Signal	.50
3077	YELLOW GRIP for 3097 and 3825 for Movable Point Frog	.50
3078	BROWN GRIP for 3097 and 3825 for Crossing Bar and Lock Levers	.50
3096	SHORT LEVER COMPLETE, used with and moved by 3825	10.00
3097	LONG LEVER COMPLETE, for Switch or Signal, with Grip and Number as specified	13.00
3098	LEVER GUIDE COMPLETE, for 3096, 3097 and 3825	11.00
3144	SCREW holding Caps 1222, etc.	.06
3784	LEVER for 3825	11.00
3785	PIN connecting 3096 and 3825	.30
3825	LONG LEVER COMPLETE, used with 3096 when two switches, etc., are operated together, Grip and Number as specified	13.00
3860	PIN for 3096 and 3825	.03
4560	LEVER LATCH, COMPLETE, for odd number or upturned handles	5.00
4778	LEVER LATCH, COMPLETE, for even numbers or downturned handles	5.00
4780	SCREW for 4560 and 4778	.06
4781	SPRING for 4560 and 4778	.24
4782	CAP holding Levers to Guides when 4560 and 4778 are used	.40
4783	CAP holding end Levers to Guides when 4560 and 4778 are used	.50
4784	LEVER LATCH for 4560	4.60
4786	LEVER LATCH for 4778	4.60
4870	PIN for 4560 and 4778 to Levers 3097 and 3825	.10
4910	LOCK WASHER for 4560 and 4778	.02
6383	CAP holding Levers to Guides with one or more spare spaces, each side, when 4560 and 4778 are used	.60

Order by NUMBER and NAME appearing in Large Type.

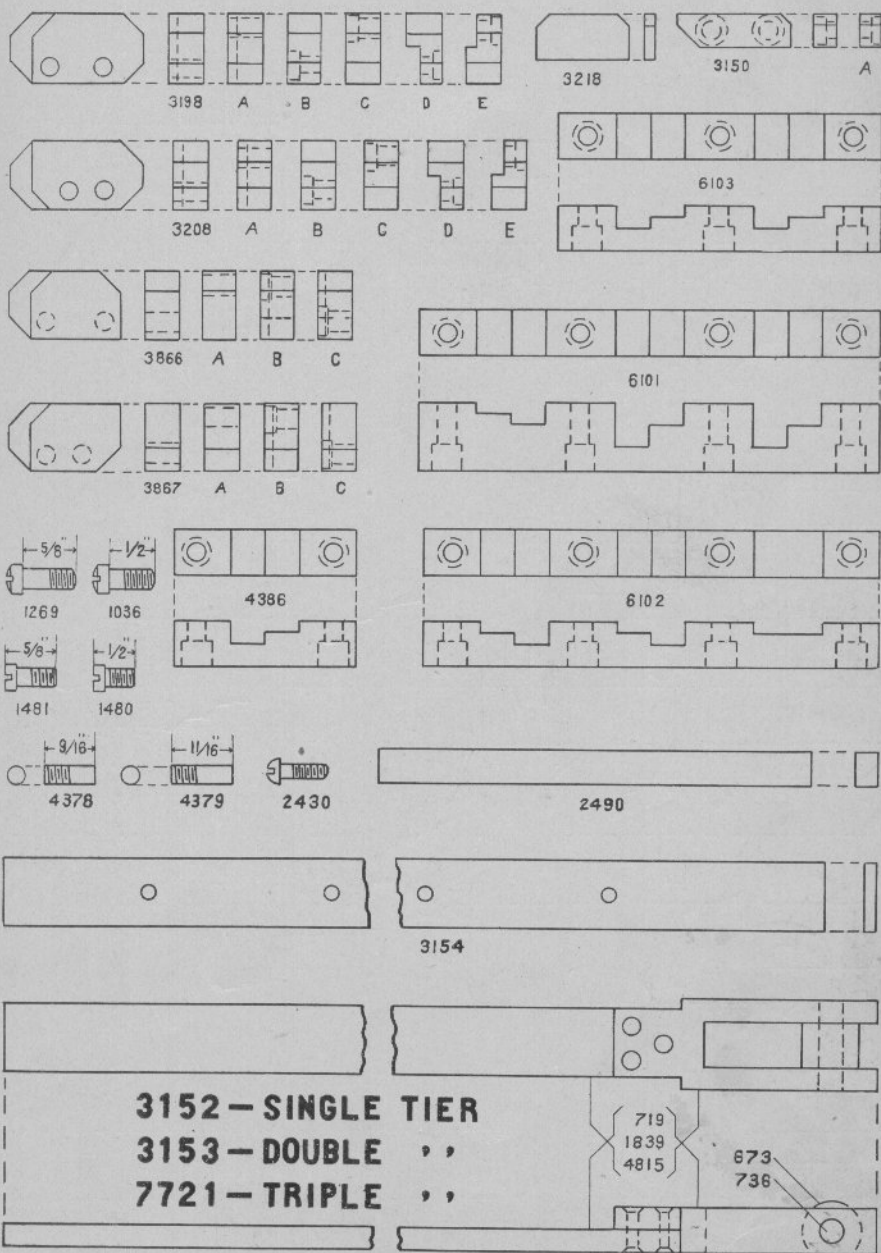
INTERLOCKER, MODEL 2.

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Order No.	MAGNETS, CONTROLLERS, ETC.	List Price.
088	COTTER Pin, $\frac{3}{16} \times \frac{3}{4}$ " (per 100).....	.80
506	BRASS WASHER for $\frac{1}{4}$ " Screw.....	.01
528	BRASS NUT, $\frac{1}{4}$ "—24.....	.02
577	BRASS NUT, No. 10—32.....	.02
736	DOWEL PIN, 2550 to Board.....	.06
1411	SCREW fastening 2550 to Board.....	.08
2550	INDICATION SELECTOR COMPLETE.....	15.00
2561	BOTTOM STRIP for Controllers 2673, etc.....	.40
2562	TOP STRIP for Controllers 2673, etc.....	.40
2565	END BLOCK for Controllers 2673, etc.....	1.00
2566	SPRING for Controllers.....	.40
2567	NUT, SPECIAL, for Controllers 2673, etc.....	.04
2569	ROD for Controllers 2673, etc.....	.30
2570	INSULATING BLOCK, separating Controllers 2673, etc.....	.80
2588	SCREW for Controllers 2673, etc.....	.04
2602	SCREW fastening 2561, 2562 to Controllers 2673, etc.....	.02
2611	JAW for Controllers 2673, etc.....	.20
2673	CONTROLLER, COMPLETE, for Dwarf Signal.....	7.00
2674	SPRING for Controllers.....	.40
2676	CONTROLLER, COMPLETE, for High Signal.....	6.00
2723	CORE for Magnets 6765.....	.40
2724	SCREW for Magnets 6766 and 6767.....	.20
2725	STUD for Magnet 6765.....	.20
2755	SINGLE COIL for Indicating Magnets 6765 and 6767.....	5.00
2756	SINGLE COIL for Safety Magnets 6765.....	5.00
2762	SCREW for Magnets 6765.....	.06
2764	SINGLE COIL for Indicating Magnets 6766.....	5.00
2835	INSULATING GUIDE for Terminal Wires, for 6765.....	.20
2836	INSULATING GUIDE for Terminal Wires, for 6765.....	.20
2848	LOCK WASHER for Screws 2762 and 3144.....	.01
2935	LOCK WASHER for Screw 2762, for Magnets 6765.....	.02
2944	PIN for Locking Screws for Magnets 6766 and 6767.....	.02
3093	SPRING, SPECIAL for Controllers.....	.40
3099	BLOCK, COMPLETE, with Contacts for 2673, 2676 and 7709.....	1.00
3100	MAGNET CORES, rivetted to Plate, for Magnets 6765.....	2.00
3101	ARMATURE with Plunger rivetted in for Magnets 6765.....	1.50
3102	ARMATURE with Plunger rivetted in for 6766 and 6767.....	1.20
3144	SCREW fastening Controllers to Bar.....	.06
3252	CONTROLLER, COMPLETE, for Switch Lever.....	7.00
3253	BLOCK, COMPLETE, with Contacts for Controller 3252.....	1.00
3256	SPRING for Controllers.....	.40
3688	SPRING for Controllers.....	.40
3691	END BLOCK for Controllers with three tiers of contacts.....	2.00
3890	BRASS WASHER for 7767.....	.01
4022	GLASS INSULATOR for separating Controllers.....	.10
4591	SCREW for 7767.....	.03
4931	POLARIZED RELAY, COMPLETE, used for protecting individual functions from crosses.....	15.00
5296	BLOCK, COMPLETE, with Contacts for three tier Controllers.....	2.00
6765	INDICATING and SAFETY MAGNETS, COMPLETE, for Switch Lever.....	14.00
6766	INDICATING MAGNETS, COMPLETE, for Dwarf Signal Lever.....	11.00
6767	INDICATING MAGNETS, COMPLETE, for High Signal Lever.....	11.00
7471	SPECIAL SPRING for Controllers.....	.40
7472	SPECIAL SPRING for Controllers.....	.40
7708	FRAME, COMPLETE, as shown for three tier Controllers.....	8.00
7709	FRAME, COMPLETE, as shown for two tier Controllers.....	5.00
7767	SCREW with Nut and Washer for fastening 4931.....	.06
9080	POLARIZED RELAY, COMPLETE, used for protection against crosses between Interlocker Buss Bars.....	15.00

Order by NUMBER and NAME appearing in Large Type.

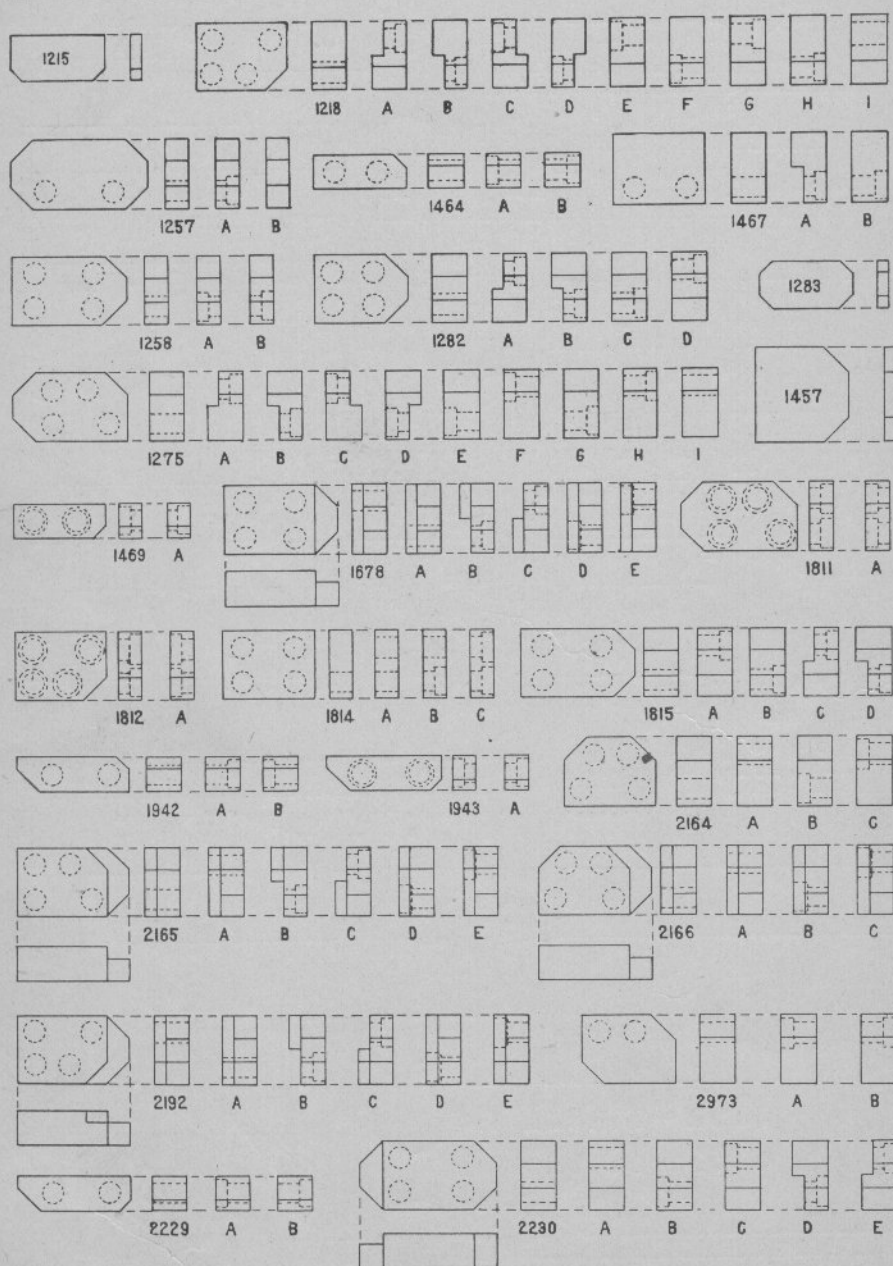
DOGS, GUIDES AND TAPPET BARS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

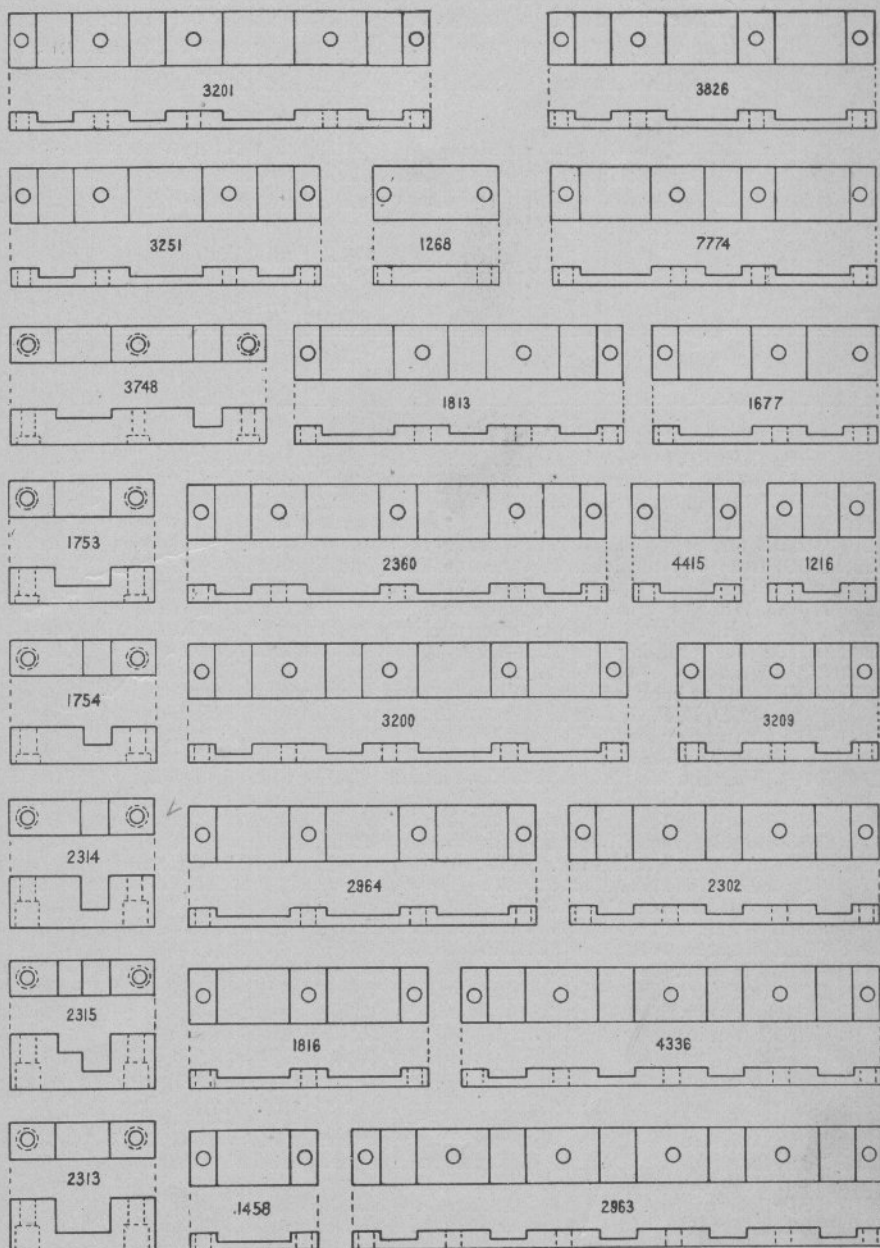
INTERLOCKER, MODEL 2.

DOGS, GUIDES AND TAPPET BARS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DOGS, GUIDES AND TAPPET BARS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DOGS, GUIDES AND TAPPET BARS

1. All Dogs are shown in front and end views and where necessary, in side views. All possible drillings are shown in dotted lines on the front view of each Dog. The end views show only the drilling that goes with each number.

All Dogs and Guides are shown one-half size to facilitate selection in ordering.

2. In ordering Dogs and Guides for repairs, it would be advisable to refer to the proper dog sheet and give, in addition to the catalogue numbers, the lever numbers, between which the Dogs and Guides are used. For example: "1258-A, Levers 16-17, Slot 3."

NOTE.—The slots are numbered from the top downwards as indicated on the Locking Plate, 1303, page 16.

Order No.	List Price.
673 ROLLER for 3152, 3153 and 7721.....	.15.....
719 BAR, TAPPET, for 3152.....	1.40.....
736 PIN for 3152, 3153 and 7721.....	.06.....
1036 SCREW.....	.04.....
1215 DOG, loose Locking.....	.20.....
1216 GUIDE for Dogs.....	.30.....
1218 DOG, front or back locking. When ordering specify whether style A, B, C, D, E, F, G, H or I.....	.50.....
1257 DOG. When ordering specify whether style A or B.....	.40.....
1258 DOG, back locking. When ordering specify whether style A or B.....	.40.....
1268 GUIDE, for retaining Dog 1257-B.....	.20.....
1269 SCREW.....	.05.....
1275 DOG, front or back locking. When ordering specify whether style A, B, C, D, E, F, G, H or I.....	.60.....
1282 DOG for front or back locking. When ordering specify whether style A, B, C or D.....	.50.....
1283 DOG, loose Locking.....	.30.....
1457 DOG, loose Locking.....	.20.....
1458 GUIDE for Dog 1457.....	.30.....
1464 DOG, back locking. When ordering specify whether style A or B.....	.30.....
1467 DOG, front or back locking. When ordering specify whether style A or B.....	.40.....
1469 DOG, front locking. When ordering specify style.....	.30.....
1480 SCREW.....	.04.....
1481 SCREW.....	.04.....
1677 GUIDE.....	.40.....
1678 DOG, front or back locking. When ordering specify style whether A, B, C, D or E.....	.60.....
1753 GUIDE, retaining, for 2 Strips 2490.....	.30.....
1754 GUIDE retaining, for 1 Strip 2490.....	.30.....
1811 DOG, front locking. When ordering specify style.....	.60.....
1812 DOG, front locking. When ordering specify style.....	.40.....
1813 GUIDE, Special.....	.60.....
1814 DOG, Coupling. When ordering specify style whether A, B or C.....	.30.....
1815 DOG, front or back locking. When ordering specify whether style A, B, C or D.....	.50.....
1816 GUIDE, Special.....	.40.....
1839 BAR, TAPPET, for 3153.....	1.90.....

Order by NUMBER and NAME appearing in Large Type.

INTERLOCKER, MODEL 2.

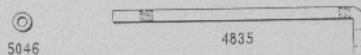
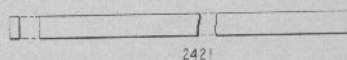
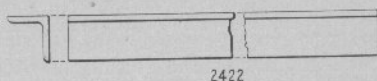
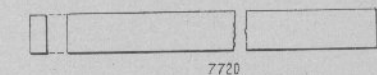
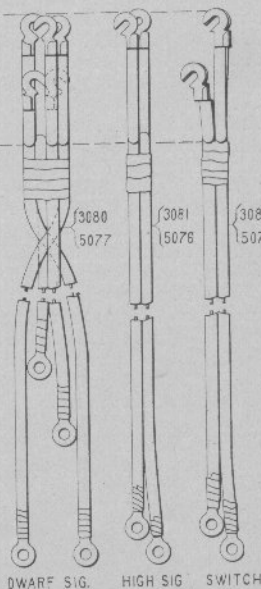
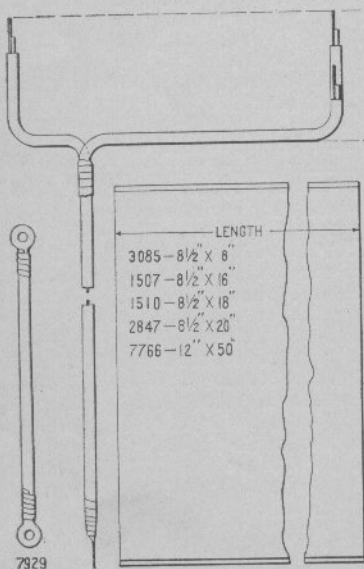
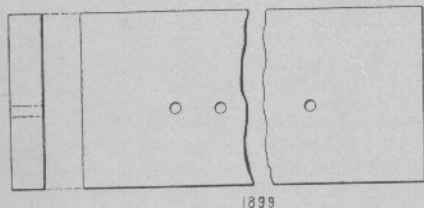
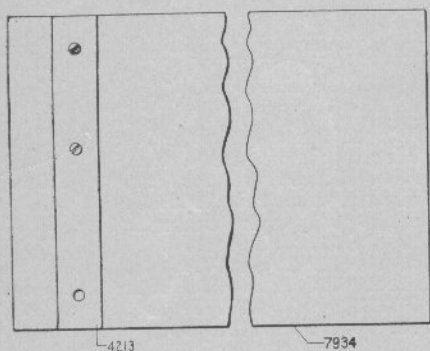
27

Order No.	DOGS, GUIDES AND TAPPET BARS.—CONT.	List Price.
1942	DOG, back locking When ordering specify whether style A or B....	.40
1943	DOG, front locking When ordering specify style.....	.40
2164	DOG, front or back locking When ordering specify whether style A, B or C.....	.50
2165	DOG, front or back locking. When ordering specify whether style A, B, C, D or E.....	.70
2166	DOG, back locking. When ordering specify whether style A, B or C..	.80
2192	DOG, front or back locking. When ordering specify whether style A, B, C, D or E.....	.70
2229	DOG, back locking. When ordering specify style.....	.40
2230	DOG, front or back locking. When ordering specify style whether A, B, C, D or E.....	.70
2302	GUIDE, Special.....	.60
2313	GUIDE, Retaining, 2 Strips 2490.....	.50
2314	GUIDE, Retaining, 1 Strip 2490.....	.40
2315	GUIDE, Retaining, 2 Strips 2490.....	.60
2360	GUIDE, Special.....	.80
2430	SCREW holding Cap 3154 to Locking Plate.....	.01
2490	STRIP, used for connecting the various Dogs or Dog Strips which move together. Per foot.....	.12
2963	GUIDE, Special.....	1.00
2964	GUIDE, Special.....	.60
2973	DOG, front or back locking. When ordering specify style.....	.40
3150	DOG, front locking. When ordering specify style.....	.40
3152	TAPPET BAR, COMPLETE, length 16 inches, for single tier Interlocker	1.50
3153	TAPPET BAR, COMPLETE, length 28 $\frac{3}{4}$ ", for double tier Interlocker..	2.00
3154	CAP, retaining lower ends of Tappet Bars, per foot.....	.06
3198	DOG, front or back locking. When ordering specify whether style A, B, C, D or E.....	.80
3200	GUIDE, Special.....	.80
3201	GUIDE, Special.....	.80
3208	DOG, front or back locking. When ordering specify style whether A, B, C, D or E.....	.80
3209	GUIDE, Special.....	.40
3218	DOG, loose Locking.....	.20
3251	GUIDE, Special.....	.60
3748	GUIDE, Special.....	.60
3826	GUIDE, Special.....	.60
3866	DOG, front or back locking. When ordering specify style whether A, B or C.....	.80
3867	DOG, front or back locking. When ordering specify style whether A, B or C.....	.80
4336	GUIDE, Special.....	.80
4378	SCREW, for use when Dogs are rivetted to Strips.....	.02
4379	SCREW, for use when Dogs are rivetted to Strips.....	.02
4386	GUIDE, used where Front Strips are set into Dog.....	.60
4415	GUIDE, for Retaining Dogs.....	.30
4815	TAPPET BAR for 7721.....	2.40
6101	GUIDE, Special.....	1.50
6102	GUIDE, Special.....	1.20
6103	GUIDE, Special.....	1.00
7721	TAPPET BAR, COMPLETE, length 41 $\frac{1}{2}$ inches for triple tier Interlocker.....	2.50
7774	GUIDE, Special.....	.60

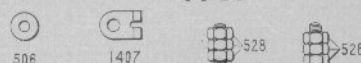
Order by NUMBER and NAME appearing in Large Type.

INTERLOCKER, MODEL 2.

TERMINAL AND FUSE BOARD PARTS.

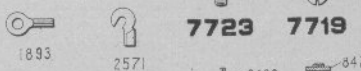


7767



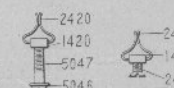
7723

7719



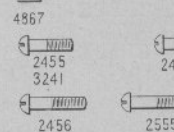
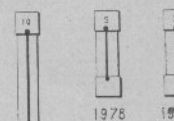
1891

1892



7722

3105



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

INTERLOCKER, MODEL 2.

29

Order
No.

TERMINAL AND FUSE BOARD PARTS.

List Price.

506	BRASS WASHER for $\frac{1}{4}$ " dia. Screw.....	.01	....
528	NUT for $\frac{1}{4}$ "-24 Brass Screw.....	.02	....
577	NUT for No. 10-32 Brass Screw 4591.....	.02	....
845	BASE for Binding Post 1892.....	.08	....
846	THUMB NUT for Binding Post 1892.....	.06	....
847	LOCK NUT for Binding Post 1892.....	.05	....
1407	TERMINAL, used as required for connections to Binding Post, etc...	.05	....
1418	STUD for 7723.....	.08	....
1419	SCREW for Binding Post 1892.....	.08	....
1420	NUT for 1891, 3105 and 7722.....	.02	....
1421	STUD for Fuse Post 1891.....	.10	....
1422	SQUARE WASHER for Fuse Post 1891.....	.05	....
1507	SLATE TERMINAL BOARD, $8\frac{1}{2}$ " x 16".....	1.40	....
1510	SLATE TERMINAL BOARD, $8\frac{1}{2}$ " x 18".....	1.60	....
1891	FUSE POST Complete.....	.28	....
1892	BINDING POST Complete.....	.30	....
1893	TERMINAL, used as required for connections to Binding Post, etc...	.05	....
1899	WOOD STRIP guiding incoming wires to Binding Posts, per foot...	.20	....
1977	FUSE, 3 AMPERE, for 60 deg. Dwarf Signal.....	.05	....
1978	FUSE, 5 AMPERE, for High Signal and 90 deg. Dwarf Signal.....	.05	....
2420	CLIP for 1891, 3105 and 7722.....	.06	....
2421	BUSS BAR, $\frac{1}{4}$ " x $\frac{1}{2}$ ", per foot.....	.40	....
2422	BRACE of Angle Iron, supporting Slate Terminal Board, $8\frac{1}{2}$ " wide, per foot.....	.10	....
2436	SCREW for 3105.....	.01	....
2451	SCREW fastening 4836 to 7720 and 2422 to 1568.....	.02	....
2455	SCREW fastening 7934 to Brace 4835.....	.02	....
2456	SCREW fastening 7934 and $8\frac{1}{2}$ " Slate to 2422.....	.02	....
2555	SCREW fastening 12" Slate to 7720.....	.02	....
2571	TERMINAL, used for connections to Controllers.....	.05	....
2847	SLATE TERMINAL BOARD, $8\frac{1}{2}$ " x 20".....	1.80	....
3080	LEAD WIRES Complete, connecting from $8\frac{1}{2}$ " Terminal Board to Dwarf Signal Controller 2673.....	2.00	....
3081	LEAD WIRES Complete, connecting from $8\frac{1}{2}$ " Terminal Board to High Signal Controller 2673.....	.80	....
3082	LEAD WIRES Complete, connecting from $8\frac{1}{2}$ " Terminal Board to Switch Controller 3252.....	1.00	....
3085	SLATE TERMINAL BOARD, $8\frac{1}{2}$ " x 8".....	.70	....
3105	FUSE CLIP Complete for direct connection to Buss Bar.....	.09	....
3241	SCREW fastening Buss Bar 2421 to Slate Terminal Board.....	.03	....
3890	WASHER for Brass Screw 4591.....	.01	....
3964	SCREW for 7719.....	.10	....
4213	PLATE for Board 7934.....	.20	....
4591	SCREW for 7767.....	.03	....
4835	BRACE supporting Board 7934 to 7720.....	1.00	....
4836	BRACE supporting Board 1899 to 7720.....	.80	....
4851	SCREW fastening Bar 7720 to Bracket 4806.....	.03	....
4867	FUSE, 10 AMPERE (long) for Switch Lever.....	.05	....
5046	WASHER for 7722.....	.01	....
5047	SCREW for 7722.....	.03	....
5075	LEAD WIRES Complete, connecting from 12" Terminal Board to Switch Controller 3252.....	1.20	....
5076	LEAD WIRES Complete, connecting from 12" Terminal Board to High Signal Controller 2676.....	1.00	....

Order by NUMBER and NAME appearing in Large Type.

INTERLOCKER, MODEL 2.

Order
No.

TERMINAL AND FUSE BOARD PARTS.—CONT.

List Price.

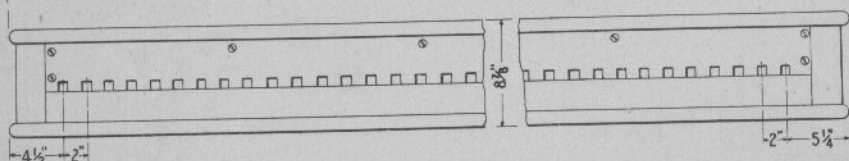
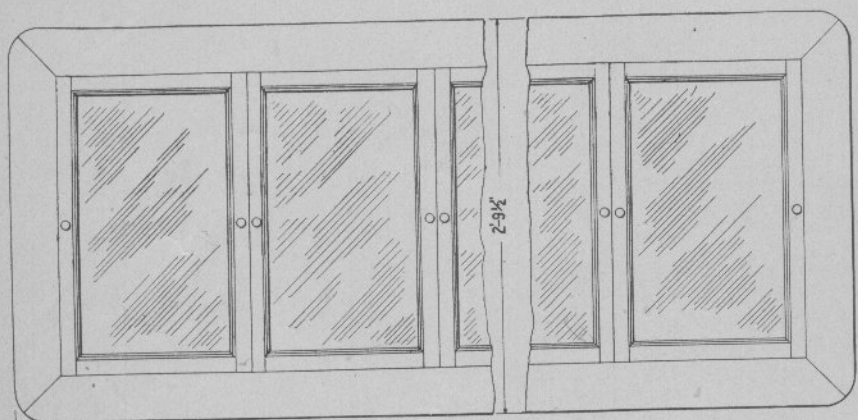
5077 LEAD WIRES Complete, connecting from 12" Terminal Board to Dwarf Signal Controller 2673.....	2.20.....
7719 SCREW COMPLETE, with Nut used on 12" Terminal Board.....	.16.....
7720 BAR supporting 12" Slate Terminal Board, per foot.....	.20.....
7722 FUSE CLIP COMPLETE, for direct connection to Buss Bar on 12" Slate Terminal Board .....	.12.....
7723 STUD with Nuts for connection to Buss Bar.....	.14.....
7766 SLATE TERMINAL BOARD 12" x 50".....	6.00.....
7767 SCREW COMPLETE with Nut and Washer used on 12" Terminal Board.....	.06.....
7929 LEAD WIRE, connecting from Polarized Relay to Binding Post for Dwarf Signal on 12" Terminal Board.....	.20.....
7934 BOARD only, for supporting Indication Selector 2550, per foot.....	.30.....

Order by NUMBER and NAME appearing in Large Type.

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INTERLOCKER, MODEL 2.

CABINET AND FIXTURES.



3967 - 4 LEVERS

5203 - 8 "

4053 - 12 "

3877 - 16 "

4212 - 20 "

3437 - 24 "

4447 - 28 "

3446 - 32 "

3752 - 36 "

3599 - 40 "

7724 - 44 "

4471 - 48 "

6244 - 52 LEVERS

3444 - 56 "

7725 - 60 "

3217 - 64 "

4470 - 68 "

4666 - 72 "

7726 - 76 "

7727 - 80 "

3336 - 84 "

6769 - 88 "

7728 - 92 "

4436 - 96 "

7729 - 100 LEVERS

7730 - 104 "

7731 - 108 "

7732 - 112 "

7733 - 116 "

6516 - 120 "

7734 - 124 "

7735 - 128 "

7736 - 132 "

7737 - 136 "

7738 - 140 "

4309 - 144 "

7739 - 148 LEVERS

7740 - 152 "

7741 - 156 "

7742 - 160 "

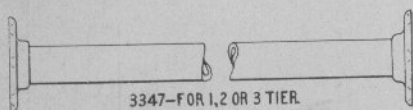
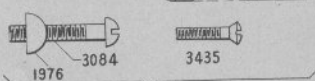
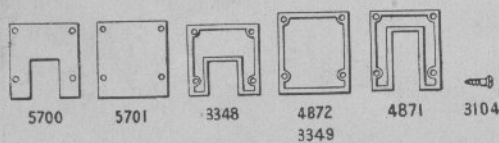
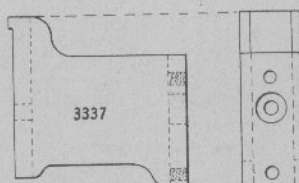
7743 - 168 "

7744 - 176 "

7745 - 184 "

4472 - 192 "

7746 - 200 "

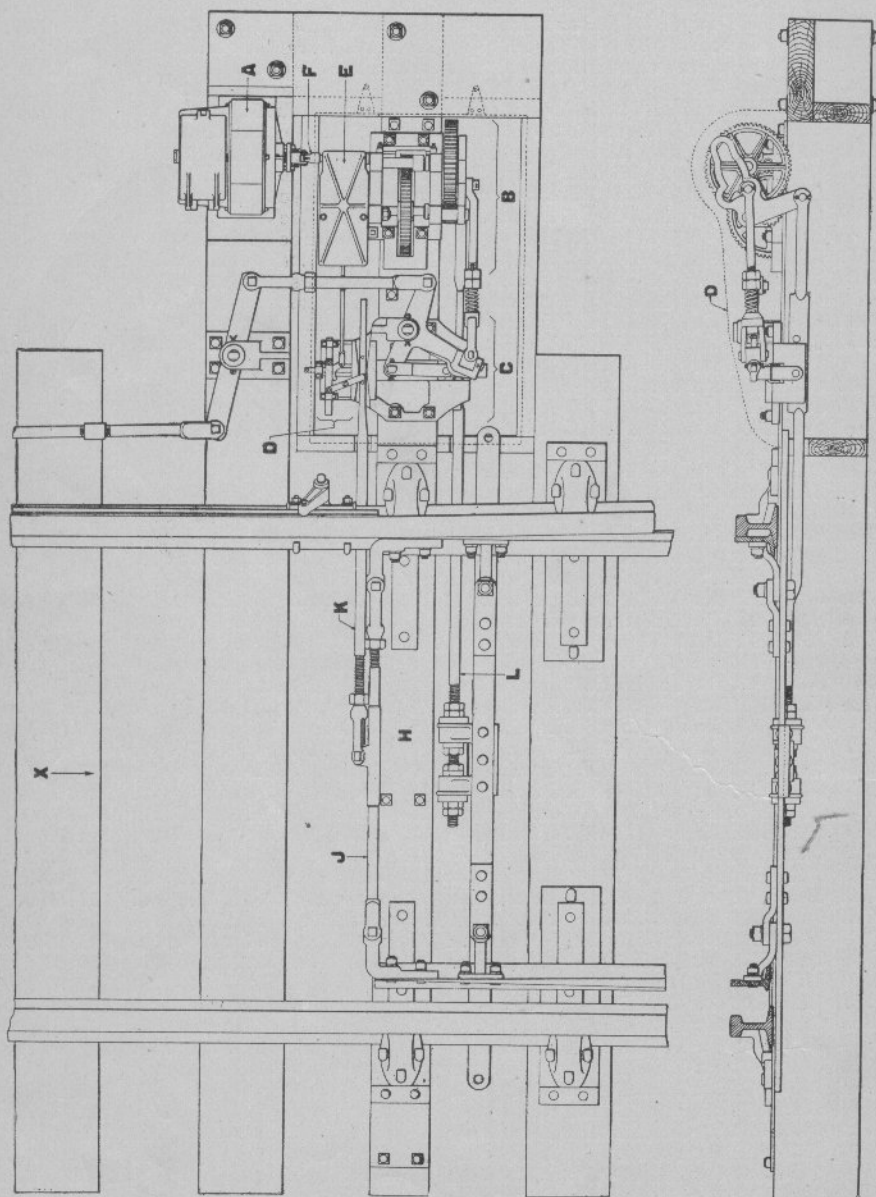
3347-FOR 1, 2 OR 3 TIER.
8917- " 4 TIER.**3448**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

INTERLOCKER, MODEL 2.

33

Order No.	CABINET AND FIXTURES.	List Price.
1976	NUT for Screw 3084.....	.12
3084	SCREW fastening 3337 to Interlocker.....	.06
3104	SCREW fastening Number and Spare Plates to Cabinet.....	.01
3217	CABINET for 64 LEVER Interlocker (8 Bank).....	99.00
3336	CABINET for 84 LEVER Interlocker (10½ Bank).....	126.00
3337	BRACKET between Cabinet and Interlocker.....	.80
3347	LEG supporting Cabinet for 1, 2 or 3 tier Interlocker.....	4.00
3348	NUMBER PLATE (Brass Casting), for Cabinets.....	.30
3349	SPARE PLATE (Brass Casting), for Cabinets.....	.30
3435	SCREW fastening Cabinet to Bracket 3337.....	.04
3437	CABINET for 24 LEVER Interlocker (3 Bank).....	54.00
3444	CABINET for 56 LEVER Interlocker (7 Bank).....	90.00
3446	CABINET for 32 LEVER Interlocker (4 Bank).....	63.00
3448	BRACKET Complete with Screws for Cabinet to Interlocker.....	1 00
3599	CABINET for 40 LEVER Interlocker (5 Bank).....	72.00
3752	CABINET for 36 LEVER Interlocker (4½ Bank).....	67.50
3877	CABINET for 16 LEVER Interlocker (2 Bank).....	45.00
3967	CABINET for 4 LEVER Interlocker (½ Bank).....	31.50
4053	CABINET for 12 LEVER Interlocker (1½ Bank).....	40.50
4212	CABINET for 20 LEVER Interlocker (2½ Bank).....	49.50
4309	CABINET for 144 LEVER Interlocker (18 Bank).....	198.00
4436	CABINET for 96 LEVER Interlocker (12 Bank).....	139.50
4447	CABINET for 28 LEVER Interlocker (3½ Bank).....	58.50
4470	CABINET for 68 LEVER Interlocker (8½ Bank).....	108.00
4471	CABINET for 48 LEVER Interlocker (6 Bank).....	81.00
4472	CABINET for 192 LEVER Interlocker (24 Bank).....	261.00
4666	CABINET for 72 LEVER Interlocker (9 Bank).....	112.50
4871	PLATE, escutcheon, for Cabinet, used when Latches 4560 and 4778 are applied.....	.30
4872	SPARE PLATE, for Cabinets, used same as 4871.....	.30
5203	CABINET for 8 LEVER Interlocker (1 Bank).....	36.00
5700	NUMBER PLATE (Stamped Metal), for Cabinets.....	.30
5701	SPARE PLATE (Stamped Metal), for Cabinets.....	.30
6244	CABINET for 52 LEVER Interlocker (6½ Bank).....	85.50
6516	CABINET for 120 LEVER Interlocker (15 Bank).....	166.50
6769	CABINET for 88 LEVER Interlocker (11 Bank).....	130.50
7724	CABINET for 44 LEVER Interlocker (5½ Bank).....	76.50
7725	CABINET for 60 LEVER Interlocker (7½ Bank).....	94.50
7726	CABINET for 76 LEVER Interlocker (9½ Bank).....	117.00
7727	CABINET for 80 LEVER Interlocker (10 Bank).....	121.50
7728	CABINET for 92 LEVER Interlocker (11½ Bank).....	135.00
7729	CABINET for 100 LEVER Interlocker (12½ Bank).....	144.00
7730	CABINET for 104 LEVER Interlocker (13 Bank).....	148.50
7731	CABINET for 108 LEVER Interlocker (13½ Bank).....	153.00
7732	CABINET for 112 LEVER Interlocker (14 Bank).....	157.50
7733	CABINET for 116 LEVER Interlocker (14½ Bank).....	162.00
7734	CABINET for 124 LEVER Interlocker (15½ Bank).....	175.50
7735	CABINET for 128 LEVER Interlocker (16 Bank).....	180.00
7736	CABINET for 132 LEVER Interlocker (16½ Bank).....	184.50
7737	CABINET for 136 LEVER Interlocker (17 Bank).....	189.00
7738	CABINET for 140 LEVER Interlocker (17½ Bank).....	193.50
7739	CABINET for 148 LEVER Interlocker (18½ Bank).....	202.50
7740	CABINET for 152 LEVER Interlocker (19 Bank).....	207.00
7741	CABINET for 156 LEVER Interlocker (19½ Bank).....	211.50
7742	CABINET for 160 LEVER Interlocker (20 Bank).....	216.00
7743	CABINET for 168 LEVER Interlocker (21 Bank).....	225.00
7744	CABINET for 176 LEVER Interlocker (22 Bank).....	234.00
7745	CABINET for 184 LEVER Interlocker (23 Bank).....	243.00
7746	CABINET for 200 LEVER Interlocker (25 Bank).....	270.00
8917	LEG supporting Cabinet for 4 tier Interlocker.....	5.00



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DESCRIPTION

On the opposite page is shown a plan view of a complete Switch and Lock movement layout for a left-hand Split Switch.

The layout in general consists of (1) Motor, (2) Switch Machine, (3) Switch Connections, and (4) Detector Bar and Connections.

(1) Motor (A) is shown complete and in detail on pages 36 and 39.

(2) Switch Machine consists of the Gear Frame (B); Lock Movement (C); Pole Changer Movement (D); Reversible Pole Changer (E); Connecting Shaft (F), and Cover (G). It is made either right or left hand, as specified. A right or left hand switch is one in which the mechanism is respectively to the right or left of an observer standing between the rails (as at X on opposite page) facing the switch points.

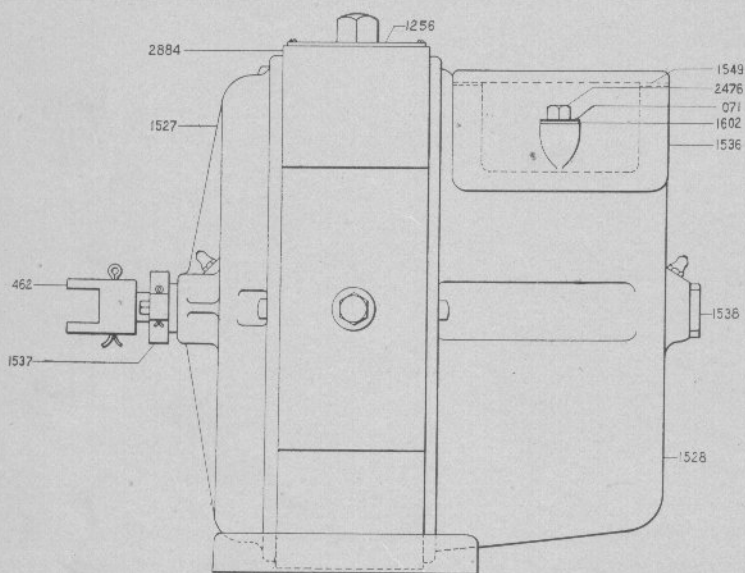
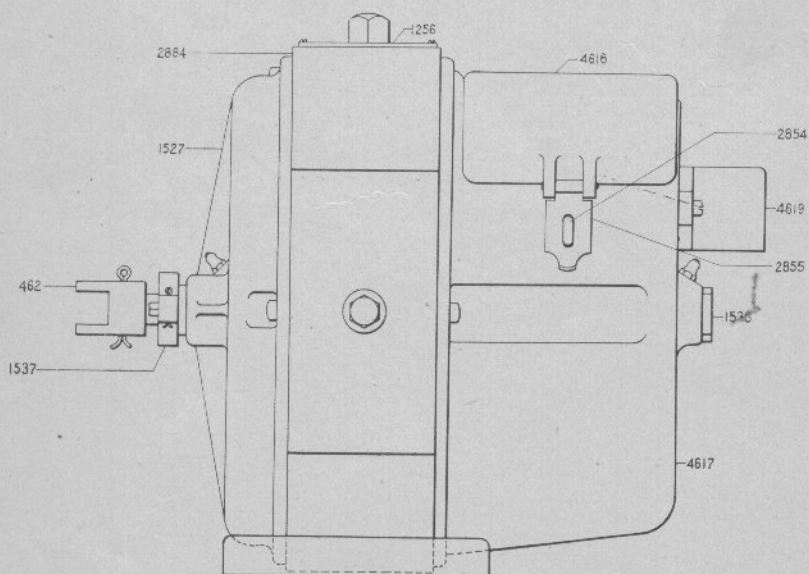
Switch Machines are the same for Derails, Single Switches, Single and Double Slip Switches, Movable Point Frogs, Crossing Bars, Scotch Block, etc. Details of Switch Machine are shown on pages 40 to 47 inclusive.

(3) Switch Connections consist of Tie Plates (H), with Slide Plates, Brace Plates, etc. Front Rod (J), Lock Rod (K), Throw Rod (L), all of which are subject to variation depending upon the kind of device to be operated and the relative location of the Switch Machine. Details of the various styles of Switch Connections are shown on pages 50 to 69, inclusive.

(4) Detector Bars and Connections vary. The style, which depends upon the kind of device to be operated and the relative location of the Switch Machine, is furnished to specifications. Details of Detector Bars and Connections are shown on pages 72 to 97, inclusive.

SWITCH AND LOCK MOVEMENT.

SWITCH MOTOR.

**2892****6057**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

37

Order No.	SWITCH MOTOR.	List Price
026	KEY for Jaw 462.....	.07
041	COTTER Pin for 1537 to 1539 (per 100).....	.80
045	COTTER Pin for Jaw 462 (per 100).....	.80
052	GRAPHITE PACKING for Armature Shaft, (per Pound)	1.00
066	LAG SCREW, Motor to Tie.....	.05
071	WASHER for Cover Screw 2476.....	.01
0236	OIL CUP for Bearing Plates 1527 and 4617.....	.15
462	JAW for 6057, or 2892.....	.80
506	BRASS WASHER for 1/4" Screw.....	.01
528	NUT, 1/4"—24 for Brass Screw.....	.02
566	CARBON BRUSH.....	.30
845	BASE for Binding Post for 1550.....	.08
846	THUMB NUT for 1550.....	.06
847	LOCK NUT for 1550.....	.05
1256	NAME PLATE for 2892 or 6057.....	.80
1389	SCREW for 1550.....	.10
1527	PLATE, Back Bearing, for 2892 or 6057.....	6.50
1528	PLATE, Front Bearing, for 2892.....	10.00
1536	COVER for 2892.....	2.50
1537	CAP for Stuffing Box for Plate 1527.....	1.00
1538	CAP for Bearing Plate 1528 or 4617.....	.50
1539	SCREW for Cap 1537.....	.10
1543	BRUSH HOLDER, Right Hand, for 1550.....	2.00
1544	Supporting STRIP for 1550.....	.50
1547	ARM for 1550.....	.36
1549	GASKET, Rubber, for 2892.....	.50
1550	BRUSH HOLDERS and Binding Post Complete for 2892 or 6057.....	7.00
1551	BRUSH HOLDER, left hand, for 1550.....	2.00
1553	PIN for 1550.....	.02
1572	SCREW for 1550.....	.03
1573	BINDING POST, Complete, for 1550.....	.30
1581	SPRING for 1550.....	.15
1600	BRUSH HOLDER, Right Hand, Complete, for 1550.....	2.70
1601	LOCK WASHER for Screw 2461.....	.01
1602	WASHER, Rubber, for Cover Screw 2476.....	.02
1649	BRUSH HOLDER, Left Hand, Complete for 1550.....	2.70
1767	SCREW, Compression, for 1771.....	.40
1768	INSULATED BUSHING for Lead Wires for 6057.....	.30
1771	PLUG, Rubber, for Lead Wires for 2892.....	.40
1772	WASHER, Insulating, for 1771.....	.10
2102	EYE BOLT for lifting 2892 or 6057.....	.40
2330	ARMATURE, 110 volt, Complete, for 2892 or 6057.....	76.00
2400	WASHER for Screw 2890.....	.10
2426	SCREW fastening 1256 to 2884.....	.01
2441	SCREW fastening 1600 and 1649 to 1544 for 1550.....	.01
2461	SCREW fastening 1550 for 2892 or 6057.....	.04
2471	SCREW fastening 1527, 1528 or 4617.....	.04
2476	CAP SCREW, for 2892.....	.06
2655	FIELD CORE for 2892 or 6057.....	3.00
2762	SCREW fastening 4619 to 4617.....	.06
2854	STAPLE for 6057.....	.08
2855	HASP for 6057.....	.04
2856	PIN fastening 2855 to cover 4618.....	.04
2884	FIELD CASTING for 2892 or 6057.....	20.00
2889	CAP SCREW holding 2655 to Top.....	.80
2890	CAP SCREW, 24", holding 2655, right and left.....	.14
2891	CAP SCREW, 1 1/2", holding 2655 to Bottom.....	.12
2892	MOTOR, 110 VOLT, MODEL 3, Complete.....	160.00

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

Order No.	SWITCH MOTOR.—CONT.	List Price.
2893	SINGLE FIELD COIL, 110 VOLT, for 2892 or 6057. (If a Set of Coils are required, order four Coils).....	7.50
2894	SCREW fastening 1527 and 4617 to 2884 at top.....	.10
2895	WASHER for Screw 2889.....	.10
4450	WASHER, Insulated, between Field Coil 2893 and Field 2884.....	.20
4617	PLATE, Front Bearing, for 6057.....	10.00
4618	Hinged COVER for 6057.....	2.00
4619	CAP for Trunking for 6057.....	.30
4634	PIN, Hinge, Cover 4618 to Plate 4617.....	.05
6057	MOTOR, 110 VOLT, MODEL 4, Complete.....	160.00

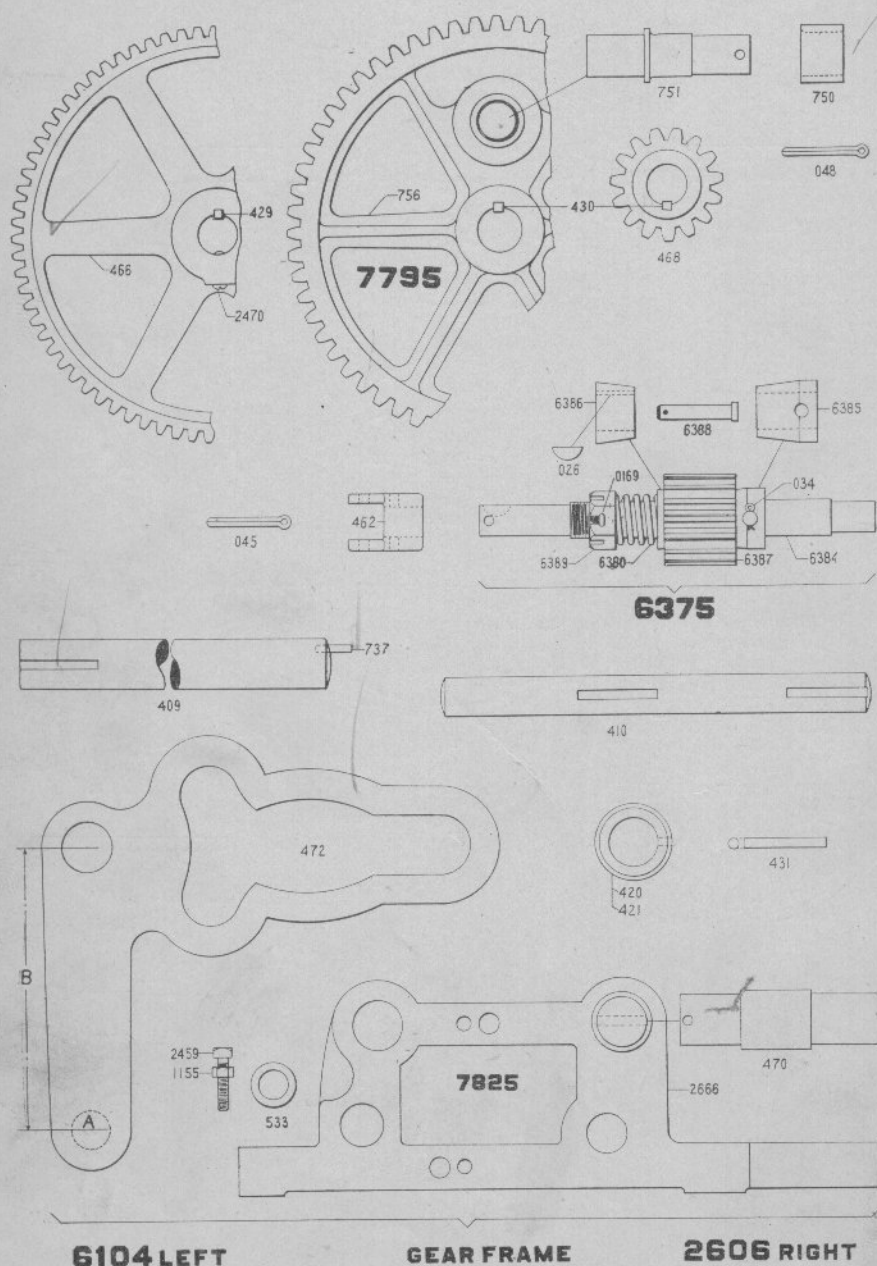
Order by NUMBER and NAME appearing in Large Type.

39

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

SWITCH AND LOCK MOVEMENT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

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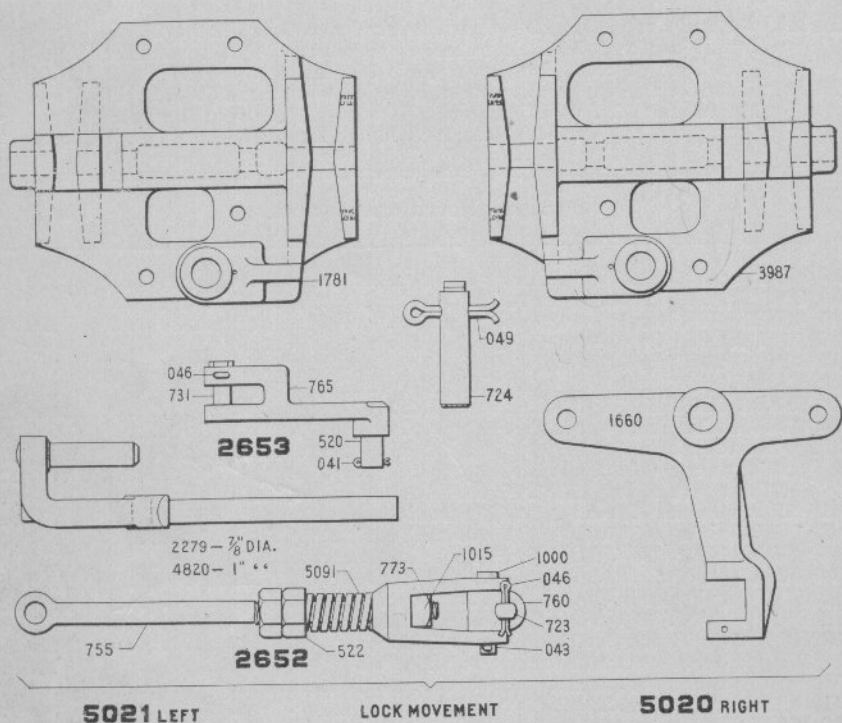
Order No.	SWITCH MACHINE COMPLETE.	List Price.
5018	Right Hand Switch Machine Complete, includes Gear Frame 2606, Lock Movement 5020, Pole Changer Movement 1882, Reversible Pole Changer 6533, Connecting Shaft 2056 and Cover 7817.....	160.00
5019	Left Hand Switch Machine Complete, includes Gear Frame 6104, Lock Movement 5021, Pole Changer Movement 1910, Reversible Pole Changer 6533, Connecting Shaft 2056 and Cover 7818.....	160.00

Order No.	SWITCH MACHINE GEAR FRAME.	List Price.
026	KEY for 6375 and Jaw 462.....	.07
034	COTTER PIN for 6375 (per 100).....	.80
045	COTTER PIN for Jaw 462 (per 100).....	.80
048	COTTER PIN for 470 or 751 (per 100).....	.80
0169	COTTER PIN for 6375 (per 100).....	.80
409	MAIN SHAFT.....	.90
410	INTERMEDIATE SHAFT.....	1.00
420	COLLAR for Shaft 410.....	.40
421	COLLAR for Shaft 409.....	.40
429	KEY for Gear 466.....	.05
430	KEY for Gear 468 or 756.....	.05
431	PIN for Collars 420 and 421 to Shafts 409 and 410.....	.05
462	JAW, Driving, 6375.....	.80
466	INTERMEDIATE GEAR.....	7.00
468	SMALL GEAR.....	2.00
470	STUD for Frame 7825.....	.80
472	CRANK CAM. If drilling "A" is desired, specify distance "B".....	4.00
533	BUSHING, Clutch Shaft, for Frame 2666.....	.60
737	PIN for Shaft 409 for driving Reversible Pole Changer.....	.04
750	ROLLER used for 751.....	.40
751	STUD for 7795.....	.70
756	MAIN GEAR without Stud.....	7.00
1155	NUT for Screw 2459.....	.0
2459	SET SCREW holding Bushing 533.....	.03
2470	SET SCREW holding Gear 466 to Shaft 410.....	.03
2606	GEAR FRAME Complete, WITH FRICTION CLUTCH 6375, for right hand machine.....	50.00
2666	GEAR FRAME, Casting only.....	18.00
6104	GEAR FRAME Complete, WITH FRICTION CLUTCH 6375, for left hand machine.....	50.00
6375	FRICTION CLUTCH Complete.....	8.00
6380	SPRING for 6375.....	.30
6384	SHAFT for 6375.....	1.50
6385	FRICTION CONE, tight, for 6375.....	1.50
6386	FRICTION CONE, loose, for 6375.....	1.50
6387	FRICTION GEAR, for 6375.....	2.50
6388	PIN holding 6385 to 6384, for 6375.....	.20
6389	NUT, Tension Adjusting, for 6375.....	.80
7795	MAIN GEAR 756 WITH STUD 751 riveted in.....	7.70
7825	GEAR FRAME 2666 WITH STUD 470. Specify location of Stud. (Right or left). (Stud located right hand in cut).....	18.80

Order by NUMBER and NAME Appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

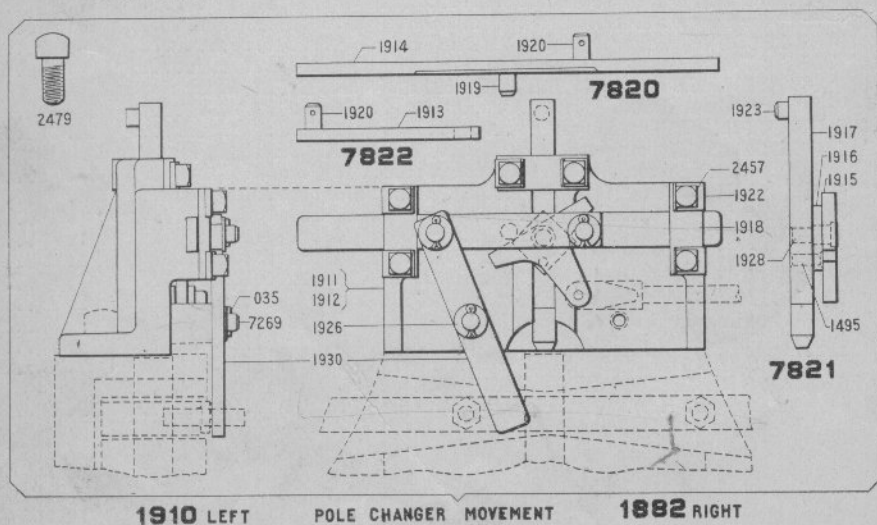
SWITCH MACHINE—LOCK AND POLE CHANGER MOVEMENTS.



5021 LEFT

LOCK MOVEMENT

5020 RIGHT



1910 LEFT

POLE CHANGER MOVEMENT

1882 RIGHT

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

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Order
No.

SWITCH MACHINE—LOCK AND POLE CHANGER MOVEMENTS.

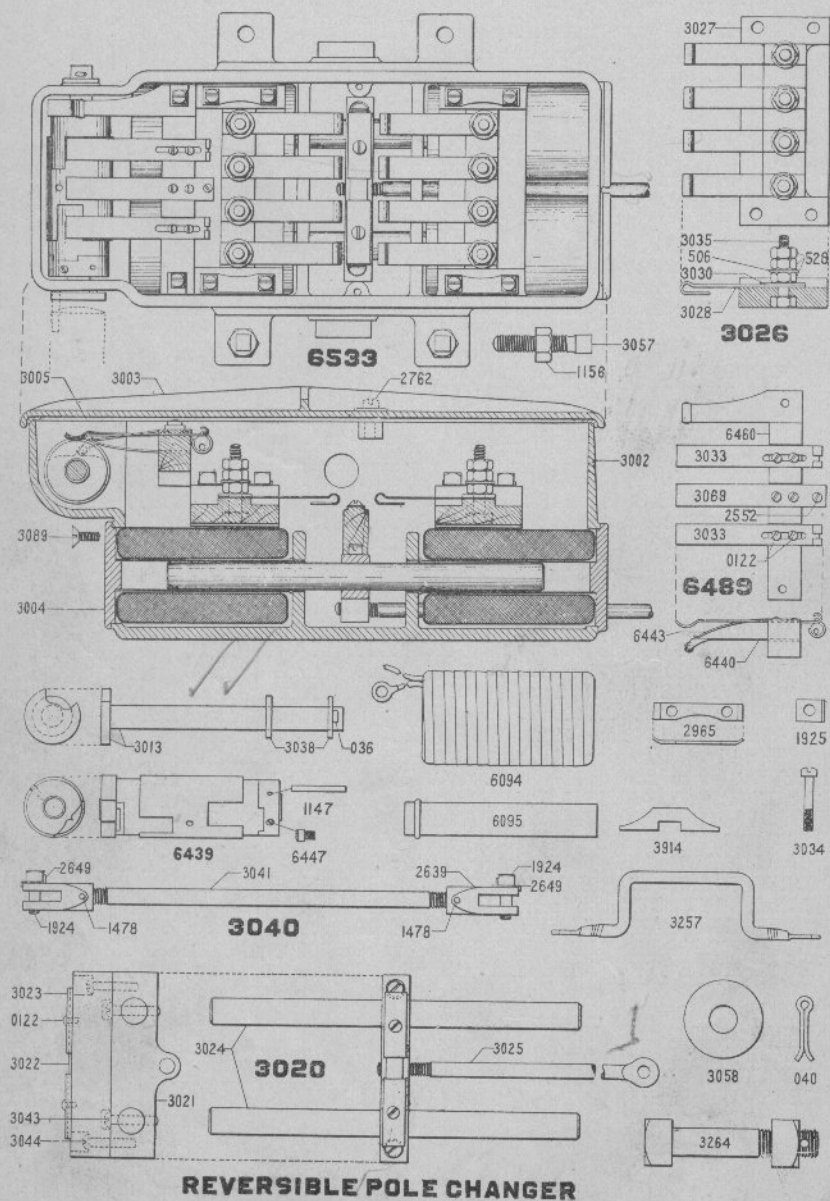
List Price.

035	COTTER Pin, $\frac{3}{8}$ " x $\frac{5}{8}$ " (per 100).....	.80
041	COTTER Pin, $\frac{3}{8}$ " x $1\frac{1}{4}$ " (per 100).....	.80
043	COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (per 100).....	.80
046	COTTER Pin, $\frac{3}{16}$ " x 2" (per 100).....	.80
049	COTTER Pin, $\frac{1}{4}$ " x 3" (per 100).....	.80
520	STUD for 2653.....	.24
522	NUT for 2652.....	.15
723	PIN for 2652.....	.30
724	PIN, Pivot, for 1660.....	.30
731	PIN for 2653.....	.30
755	DRIVING ROD for 2652.....	2.00
760	BLOCK for 2652.....	.50
765	LINK for 2653.....	1.50
773	JAW for 2652.....	1.30
1000	PIN for 2652.....	.30
1015	NUT for 2652.....	.06
1495	PIN fastening 1916 to 1917 for 7821.....	.02
1660	T. CRANK for Lock Movement 5020 and 5021.....	3.00
1781	LOCKING FRAME, Left Hand, for 5021.....	22.00
1882	POLE CHANGER MOVEMENT Complete, for right hand Switch Machine. (Left Hand shown in cut).....	9.00
1910	POLE CHANGER MOVEMENT Complete, for Left Hand Switch Machine.....	9.00
1911	BRACKET with Stud for 1910.....	5.50
1912	BRACKET with Stud for 1882.....	5.50
1913	LINK for 7822.....	.28
1914	SLIDE BAR for 7820.....	.40
1915	CRANK for 7821.....	.60
1916	CAM for 7821.....	.24
1917	PLUNGER for 7821.....	.50
1918	CAP for 1882 and 1910.....	.12
1919	STUD for 7820.....	.08
1920	STUD for 7820 and 7822.....	.12
1922	LOCK WASHER for 1882 and 1910.....	.01
1923	STUD for 7821.....	.08
1926	WASHER for 1882 and 1910.....	.02
1928	STUD, Pivot, fastening 1915 to 1917 for 7821.....	.14
1930	LEVER for 1882 and 1910.....	.40
2279	PLUNGER, COMPLETE, $\frac{1}{8}$ ", for old style lock movement. (Super- seded by 4820).....	4.00
2457	CAP SCREW for 1882 and 1910.....	.04
2479	CAP SCREW holding Pole Changers to Locking Frame.....	.05
2652	DRIVING ROD, COMPLETE, for 5020 and 5021.....	5.00
2653	LINK, COMPLETE, connecting 1660 and 4820.....	2.00
3987	LOCKING FRAME, Right Hand, for 5020.....	22.00
4820	PLUNGER, COMPLETE, 1" Double Locking, for 5020 and 5021.....	5.00
5020	LOCK MOVEMENT, Right Hand Complete.....	37.00
5021	LOCK MOVEMENT, Left Hand Complete.....	37.00
5091	SPRING for 2652.....	.60
7269	STUD for 1882 and 1910.....	.50
7820	SLIDE BAR, Complete for 1882 and 1910.....	.60
7821	PLUNGER, COMPLETE, for 1882 and 1910.....	1.60
7822	LINK Complete for 1882 and 1910.....	.40

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

REVERSIBLE POLE CHANGER.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

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Order
No.

REVERSIBLE POLE CHANGER.

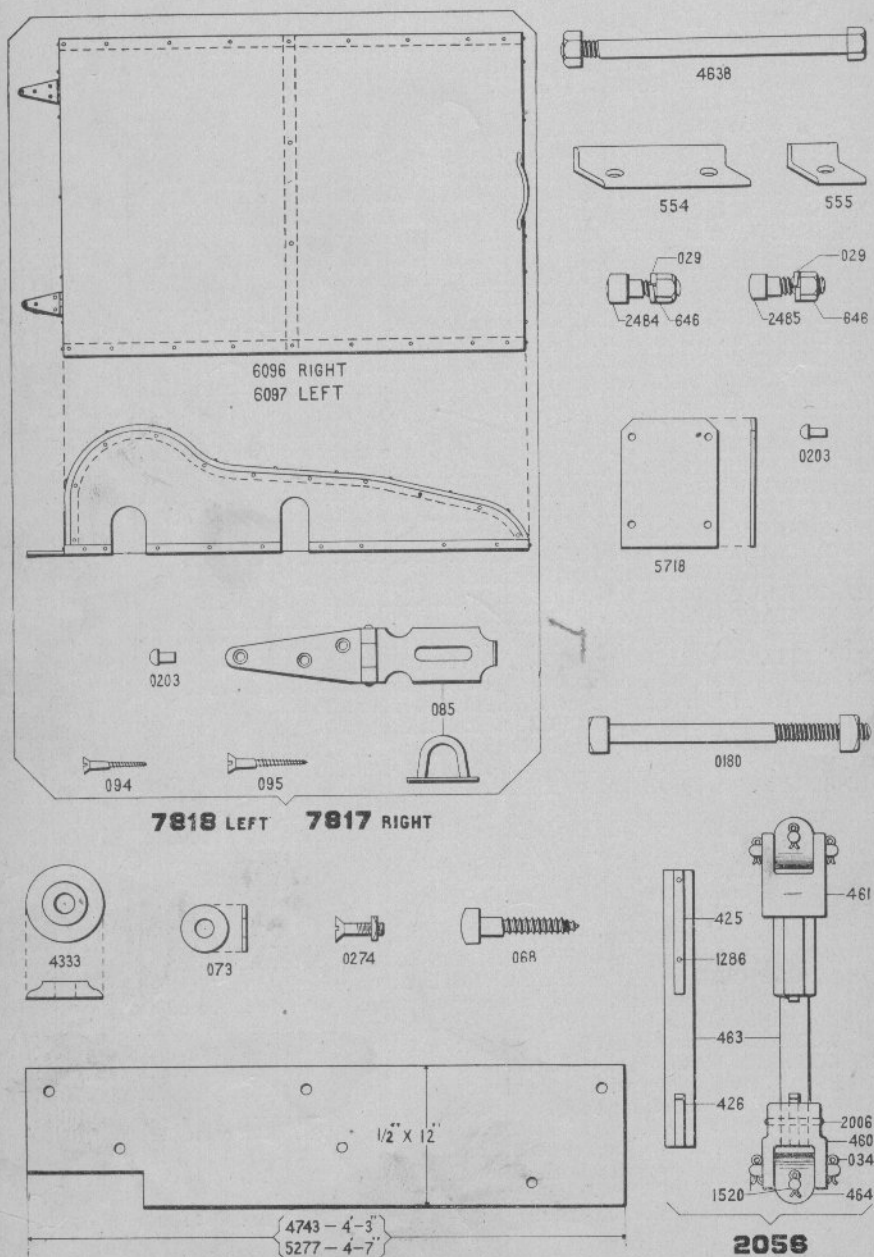
List Price.

036	COTTER Pin $\frac{3}{8}$ " x $\frac{3}{4}$ " (per 100)	.80
040	COTTER Pin $\frac{1}{2}$ " x 1" (per 100)	.80
0122	WOOD SCREW for 3020 and 6489	.01
506	WASHER for 3026	.01
528	NUT for 3026	.02
1147	PIN for 6439	.02
1156	NUT for Screw 3057	.02
1478	PIN for 3040	.02
1924	CAP SCREW for 3040	.06
1925	LOCK WASHER for 3034	.01
2552	SCREW for Spring 3069	.01
2639	JAW for 3040	.50
2649	LOCK WASHER for 3040	.01
2762	CAP SCREW for 6533	.06
2965	LOCK WASHER double, for Screw 3034 when fastening 3026	.02
3002	CASE for 6533	9.00
3003	COVER for 6533	1.50
3004	CAP for 6533	.70
3005	FELT LINING for joint of Case and Cover	.10
3013	SHAFT, Driving, with Disc	1.50
3020	ARMATURE with Cores, Contact and Connecting Rod Complete	3.50
3021	ARMATURE for 3020	1.50
3022	CONTACT BLOCK for 3020	.30
3023	CONTACT for 3020	.20
3024	CORES for 3020	.50
3025	ROD, Connecting, for 3020	.40
3026	CONTACT SPRINGS, Complete	3.00
3027	CONTACT BLOCK for 3026	.60
3028	CONTACT SPRING for 3026	.40
3030	Square WASHER for 3026	.04
3033	CONTACT SPRING for 6489	.40
3034	CAP SCREW, fastening 3026 and 6489 to Case	.06
3035	SCREW, Binding Post, for 3026	.08
3038	WASHER used on Shaft 3013	.06
3040	ROD, Complete, connecting 6533 to 1882 and 1910	1.50
3041	ROD for 3040	.30
3043	SCREW for 3020	.02
3044	SCREW for 3020	.02
3057	SET SCREW for adjusting 6533	.03
3058	WASHER for Bolt 3264	.14
3069	CONTACT SPRING for 6489	.50
3089	SCREW holding Cap 3004 to Case 3002	.02
3257	LEAD WIRES for 6533	.30
3264	BOLT and Nut holding 6533 to Gear Frame	.09
3914	BLOCK supporting Lead Wires 3257	.10
6094	SINGLE COIL for 6533. If a Set of Coils are required order 4 Coils, but when required to replace a spool wound, order a Tube 6095 with each Coil	5.00
6095	TUBE used with Coil 6094	.30
6439	COMMUTATOR Complete for 6533	5.00
6440	SPRING, Complete, with Roller for 6489	.70
6443	SPRING, Top Leaf, for 6489	.30
6447	SET SCREW for 6439	.08
6460	BLOCK, Contact Spring, for 6489	.24
6489	BLOCK, Complete, with Springs for 6533	2.50
6533	REVERSIBLE POLE CHANGER, Complete. In ordering specify whether right or left hand. Right hand shown in cut	50.00

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

COVERS, CONNECTING SHAFT, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

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Order
No.

COVERS, CONNECTING SHAFT, ETC.

List Price.

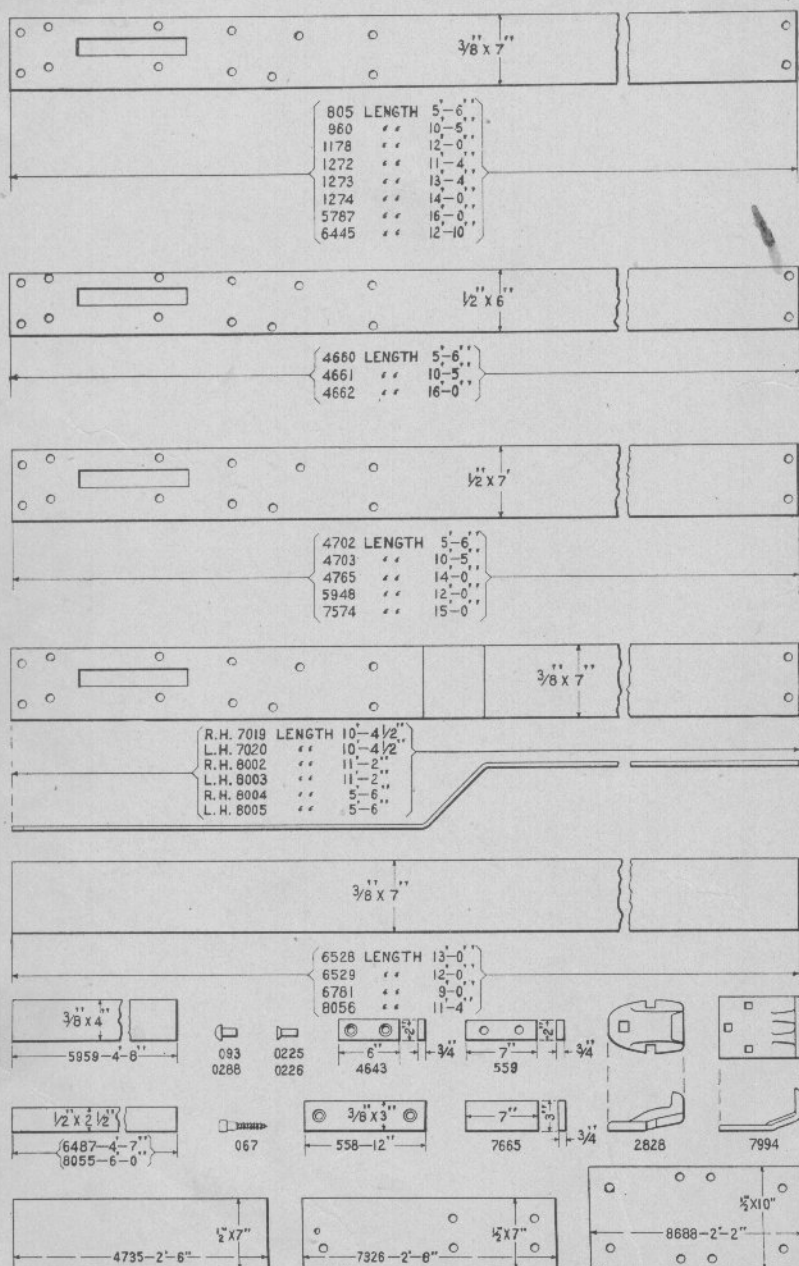
029	NUT LOCK, for $\frac{3}{4}$ " Bolt.....	.02
034	COTTER PIN, $\frac{8}{32}$ " x $\frac{1}{2}$ " (per 100).....	.80	....
068	LAG SCREW, $\frac{3}{4}$ " x 5", fastening Plates 4743 and 5277 to Ties.....	.08	....
073	WASHER for $\frac{3}{4}$ " Bolt.....	.02	....
085	HASP with Staple for 7817 and 7818.....	.10	....
094	WOOD SCREW for 7817 and 7818.....	.01	....
095	WOOD SCREW for 7817 and 7818.....	.01	....
0180	BOLT and Nut, $\frac{3}{4}$ " x 12", fastening Plates 4743 and 5277 to Ties.....	.19	....
0203	RIVET, fastening 085 and 5718 to Covers 6096 and 6097.....	.01	....
0274	BOLT and Nut, fastening Covers 6096 and 6097 when Plates 4743 and 5277 are used.....	.02	....
425	Key for 2056.....	.06	....
426	SHORT KEY for 2056.....	.04	....
460	JAW for 2056.....	.80	....
461	SLIDING JAW for 2056.....	1.20	....
463	SHAFT for 2056.....	1.00	....
464	BLOCK for 2056.....	.50	....
554	NUT LOCK, Double, for Screw 2485, fastening Gear Frame to ties..	.12	....
555	NUT LOCK, Single, for Screws 2484 and 2485.....	.06	....
646	NUT for Screws 2484 and 2485.....	.05	....
1286	PIN for 2056.....	.02	....
1520	PIN for 2056.....	.10	....
2006	PIN, Jaw 460 to Shaft 463 for 2056.....	.02	....
2056	SHAFT, Complete, connecting Motors to Switch Machine.....	4.50	....
2484	CAP SCREW holding Locking Frame to Tie Plates.....	.16	....
2485	CAP SCREW holding Gear Frame to Tie Plates.....	.20	....
4333	CAST WASHER for $\frac{3}{4}$ " Bolt.....	.08	....
4638	BOLT with Nut for fastening Switch Machine to Tie Plate and 10" tie (Special).....	.50	....
4743	PLATE joining Switch Machine ends of ties, for Switches and Derails	7.50	....
5277	PLATE joining Switch Machine ends of ties for Double Slip Switch..	8.00	....
5718	PLATE for covering hole for Detector Bar Rod in Covers 6096 and 6097. (Used only in case of Track Circuit).....	.20	....
6096	COVER, Right Hand for 7817.....	13.50	....
6097	COVER, Left Hand, for 7818.....	13.50	....
7817	COVER with Hasp, etc., Complete for Right Hand Switch Machine..	13.70	....
7818	COVER with Hasp, etc., Complete for Left Hand Switch Machine..	13.70

Order by NUMBER and NAME appearing in Large Type.

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SWITCH AND LOCK MOVEMENT.

TIE PLATES AND RAIL BRACES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

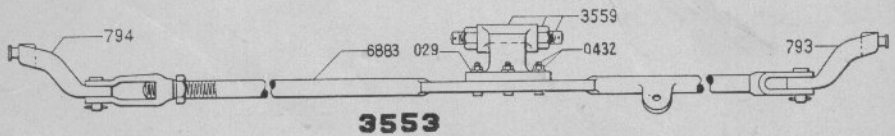
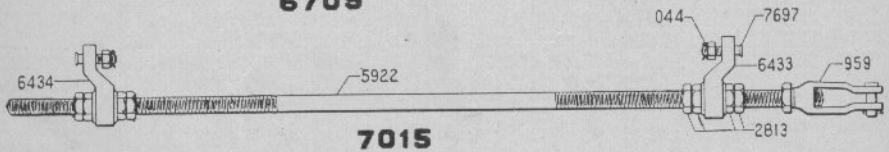
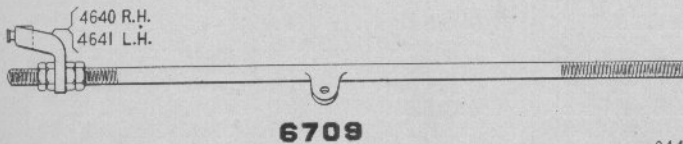
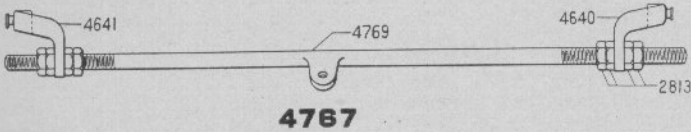
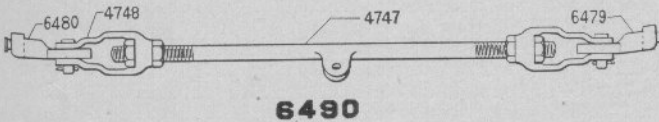
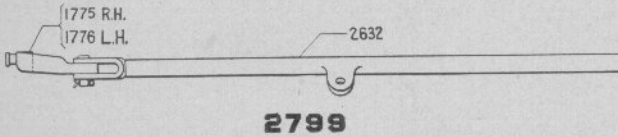
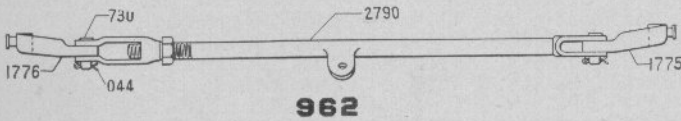
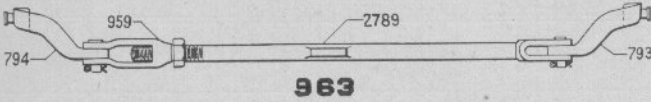
NOTE.—The list of Tie Plates below does not include Rivets, Slide or Rail Brace Plates, which should be ordered separately, if desired.

Order No.	TIE PLATES AND RAIL BRACES.	List Price.
067	LAG SCREW, $\frac{3}{4}$ " x 4" fastening Tie Plates to Ties.....	.07
093	RIVET, $\frac{3}{4}$ " x $1\frac{1}{2}$ ", fastening Rail Brace Plates to a $\frac{3}{4}$ " Tie Plate.....	.03
0225	RIVET, $\frac{3}{4}$ " x $1\frac{1}{2}$ ", for fastening Slide Plates No. 558 to Tie Plates.....	.02
0226	RIVET, $\frac{3}{4}$ " x $1\frac{1}{2}$ ", for fastening Plate 4643 to Tie Plates 4660, etc.....	.03
0288	RIVET, $\frac{3}{4}$ " x $1\frac{1}{2}$ ", fastening Rail Brace Plate No. 559 to a $\frac{1}{2}$ " Tie Plate.....	.03
558	SLIDE PLATE for Tie Plates.....	.40
559	PLATE, Rail Brace.....	.30
805	TIE PLATE, $\frac{3}{4}$ " x 7" x 5' 6". See note above.....	5.00
960	TIE PLATE, $\frac{3}{4}$ " x 7" x 10' 5". See note above.....	8.00
1178	TIE PLATE, $\frac{3}{4}$ " x 7" x 12'. See note above.....	9.00
1272	TIE PLATE, $\frac{3}{4}$ " x 7" x 11' 4". See note above.....	8.60
1273	TIE PLATE, $\frac{3}{4}$ " x 7" x 13' 4". See note above.....	9.80
1274	TIE PLATE, $\frac{3}{4}$ " x 7 x 14'. See note above.....	10.20
2928	RAIL BRACE, (Cast Iron). When ordering send print of rail section.....	.60
4643	PLATE, Rail Brace, for Tie Plate 6" wide.....	.30
4660	TIE PLATE, $\frac{1}{2}$ " x 6" x 5' 6". See note above.....	5.50
4661	TIE PLATE, $\frac{1}{2}$ " x 6" x 10' 5". See note above.....	9.00
4662	TIE PLATE, $\frac{1}{2}$ " x 6" x 16'. See note above.....	13.00
4702	TIE PLATE, $\frac{1}{2}$ " x 7" x 5' 6". See note above.....	6.20
4703	TIE PLATE, $\frac{1}{2}$ " x 7" x 10' 5". See note above.....	10.50
4735	Crank Stand PLATE, $\frac{1}{2}$ " x 7" x 2' 6" Blank.....	2.00
4765	TIE PLATE, $\frac{1}{2}$ " x 7" x 14'. See note above.....	13.50
5787	TIE PLATE, $\frac{1}{2}$ " x 7" x 16'. See note above.....	11.50
5948	TIE PLATE, $\frac{1}{2}$ " x 7" x 12'. See note above.....	12.00
5959	PLATE, SLIDE, $\frac{3}{8}$ " x 4" x 4' 8".....	1.60
6445	TIE PLATE, $\frac{1}{2}$ " x 7" x 12' 10". See note above.....	9.50
6487	TIE STRAP, $\frac{1}{2}$ " x $2\frac{1}{2}$ " x 4' 7".....	1.30
6528	TIE PLATE, (Blank) $\frac{3}{8}$ " x 7" x 13'. See note above.....	8.00
6529	TIE PLATE, (Blank) $\frac{3}{8}$ " x 7" x 12'. See note above.....	7.50
6781	TIE PLATE, (Blank) $\frac{3}{8}$ " x 7" x 9'. See note above.....	6.00
7019	TIE PLATE, R. H. Offset, $\frac{3}{8}$ " x 7" x 10'-4 $\frac{1}{2}$ ".....	9.50
7020	TIE PLATE, L. H. Offset, $\frac{3}{8}$ " x 7" x 10'-4 $\frac{1}{2}$ ".....	9.50
7326	Crank Stand PLATE, $\frac{1}{2}$ " x 7" x 2' 6" punched.....	2.20
7574	TIE PLATE, $\frac{1}{2}$ " x 7" x 15'. See note above.....	14.50
7665	RAIL BRACE PLATE, $\frac{3}{4}$ " x 3" x 7" (Special).....	.24
7994	RAIL BRACE, Wrought Iron. When ordering send print of rail section Prices furnished on application.....	
8002	TIE PLATE, R. H. Offset, $\frac{3}{8}$ " x 7" x 11' 2". See note above.....	10.00
8003	TIE PLATE, L. H. Offset, $\frac{3}{8}$ " x 7" x 11' 2". See note above.....	10.00
8004	TIE PLATE, R. H. Offset, $\frac{3}{8}$ " x 7" x 5' 6". See note above.....	6.50
8005	TIE PLATE, L. H. Offset, $\frac{3}{8}$ " x 7" x 5' 6". See note above.....	6.50
8055	TIE STRAP, $\frac{1}{2}$ " x $2\frac{1}{2}$ " x 6'.....	1.70
8056	TIE PLATE, (Blank) $\frac{3}{8}$ " x 7" x 11' 4".....	7.20
8688	Crank Stand PLATE, $\frac{1}{2}$ " x 10" x 2' 2", punched.....	3.00

Order by NUMBER and NAME appearing in Large Type.

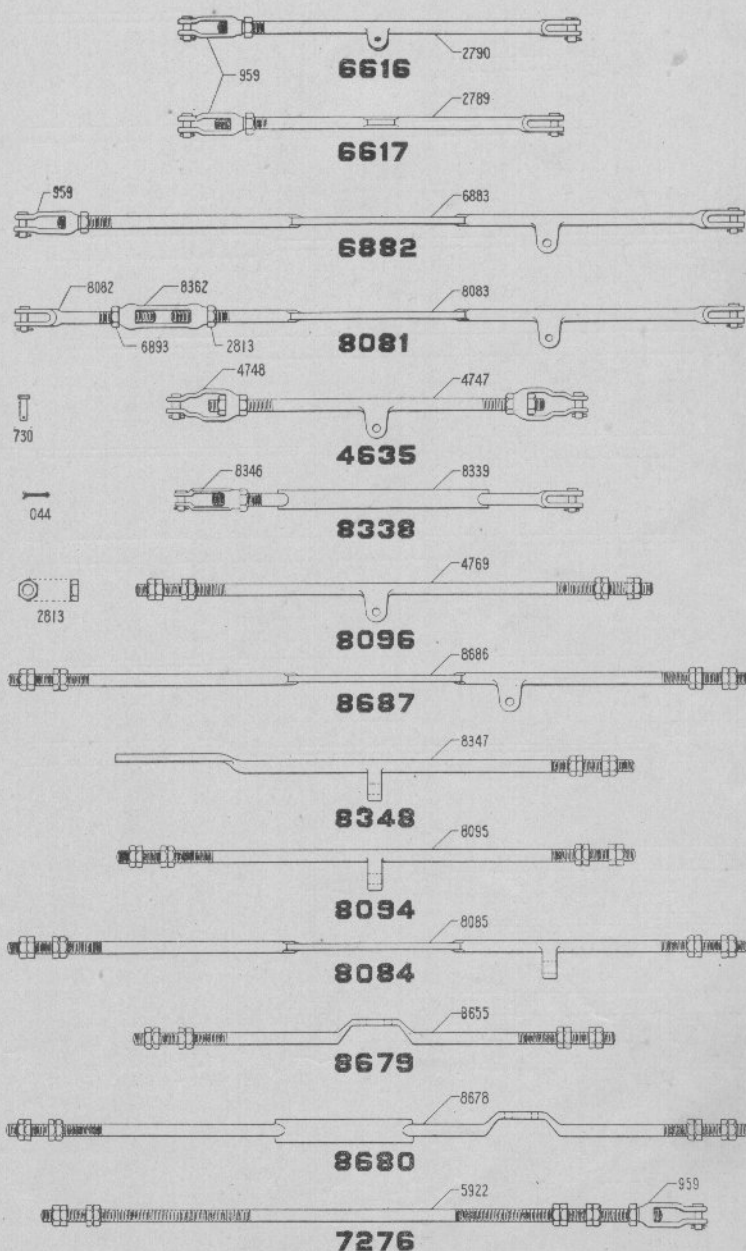
SWITCH AND LOCK MOVEMENT.

FRONT RODS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

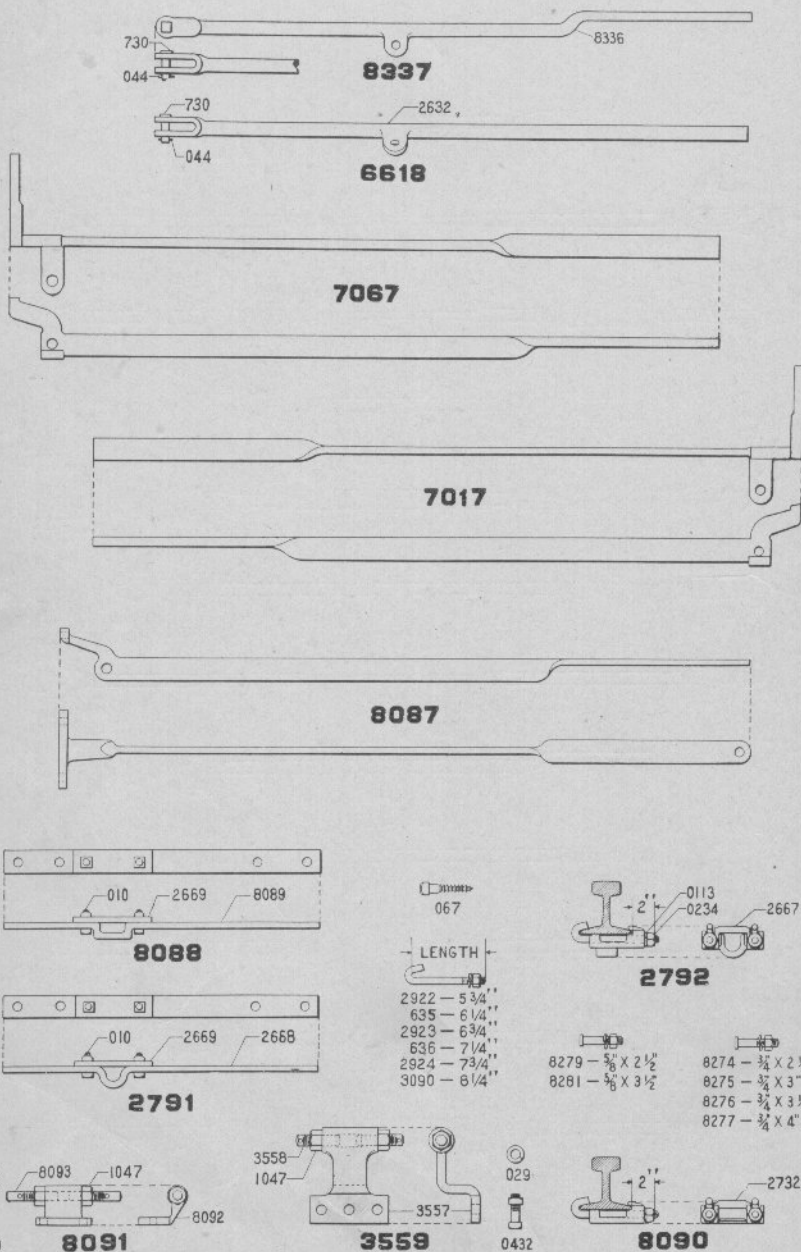
FRONT RODS.—CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

FRONT RODS.—CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

55

Order No.	FRONT RODS.	List Price.
010	BOLT with Nut for 2791 or 8088.....	.04
029	NUT LOCK, $\frac{3}{4}$ ".....	.02
044	COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ ", for Pin 730 (per 100).....	.80
067	LAG SCREW, $\frac{3}{4}$ " x 4", fastening 2791 or 8088 to ties.....	.07
0113	NUT LOCK, $\frac{5}{8}$ " for 0419, 2792 or 8090.....	.02
0234	NUT for Hook Bolts for 2792 or 8090.....	.02
0419	BOLT with Nut, $\frac{5}{8}$ " x $2\frac{1}{4}$ " holding 8091 to Front Rod.....	.07
0432	BOLT with Nut, $\frac{3}{4}$ " x $2\frac{3}{4}$ " holding 3559 to Front Rod.....	.10
635	HOOK BOLT, Complete, $6\frac{1}{4}$ " long.....	.12
636	HOOK BOLT, Complete, $7\frac{1}{4}$ " long.....	.12
730	PIN, $\frac{3}{8}$ " x $2\frac{3}{4}$ " for Front Rods.....	.07
793	SWITCH POINT LUG, Right Hand, for 963.....	1.70
794	SWITCH POINT LUG, Left Hand, for 963.....	1.70
959	WROUGHT SCREW JAW, $1\frac{1}{4}$ ", for various Rods.....	1.10
962	FRONT ROD, Complete, for Switch. When ordering specify whether or not points are reinforced.....	7.70
963	FRONT ROD, Complete, for S. S. or M. P. F. When ordering specify whether or not points are reinforced.....	7.90
1047	NUT for 3559 or 8091.....	.09
1775	SWITCH POINT LUG, Right Hand, for 962 or 2799.....	1.60
1776	SWITCH POINT LUG, Left Hand, for 962 or 2799.....	1.60
2632	ROD with Lug for 2699 or 6618.....	3.00
2667	GUIDE, casting only, for 2792.....	.40
2668	GUIDE for 2791.....	1.30
2669	CAP for 2791 or 8088.....	.40
2732	GUIDE, casting only, for 8090.....	.40
2759	JAW ROD with Lug for 963 or 6617.....	2.70
2790	JAW ROD with Lug for 962 or 6616.....	2.70
2791	GUIDE, Complete, for round end Derail Front Rods.....	1.60
2792	GUIDE, Complete, with Hook Bolts for round end Derail Front Rods. Specify width of rail base.....	.64
2799	FRONT ROD, Complete, for Derail. When ordering specify whether or not points are reinforced.....	4.90
2813	NUT, $1\frac{1}{4}$ ". Used for various Rods.....	.09
2922	HOLT BOOK, Complete, $5\frac{1}{4}$ " long.....	.12
2923	HOOK BOLT, Complete, $6\frac{1}{4}$ " long.....	.12
2924	HOOK BOLT, Complete, $7\frac{3}{4}$ " long.....	.12
3090	HOOK BOLT, Complete, $8\frac{1}{4}$ " long.....	.12
3553	FRONT ROD, Complete, for Double Slip Switch. When ordering specify whether or not points are reinforced.....	12.50
3557	BRACKET casting only, for 3559.....	2.00
3558	SCREW, Adjusting, for 3559.....	.24
3559	BRACKET, Complete. Point separator for Double Slip Switch.....	2.50
4635	FRONT ROD, Complete, for Switch.....	3.70
4640	SWITCH POINT LUG, Right Hand, for 4767 or 6709.....	3.40
4641	SWITCH POINT LUG, Left Hand, for 4767 or 6709.....	3.40
4747	ROD with Lug for 4635 or 6490.....	2.32
4748	JAW, MALLEABLE, for 4635 or 6490.....	.48
4767	FRONT ROD, Complete, for Switch. When ordering, specify whether or not points are reinforced.....	11.30
4769	ROD with Lug for 4767 or 8096.....	3.30
5922	ROD for 7015 or 7276.....	2.00
6433	SWITCH POINT LUG, Right Hand, for 7015.....	1.60
6434	SWITCH POINT LUG, Left Hand, for 7015.....	1.60
6479	SWITCH POINT LUG, Right Hand, for 6490.....	1.08
6480	SWITCH POINT LUG, Left Hand, for 6490.....	1.08
6490	FRONT ROD, Complete, for Switch. When ordering specify whether or not points are reinforced.....	6.25
6616	FRONT ROD, Complete, as shown, for Switch.....	4.00

Order by NUMBER and NAME appearing in Large Type.

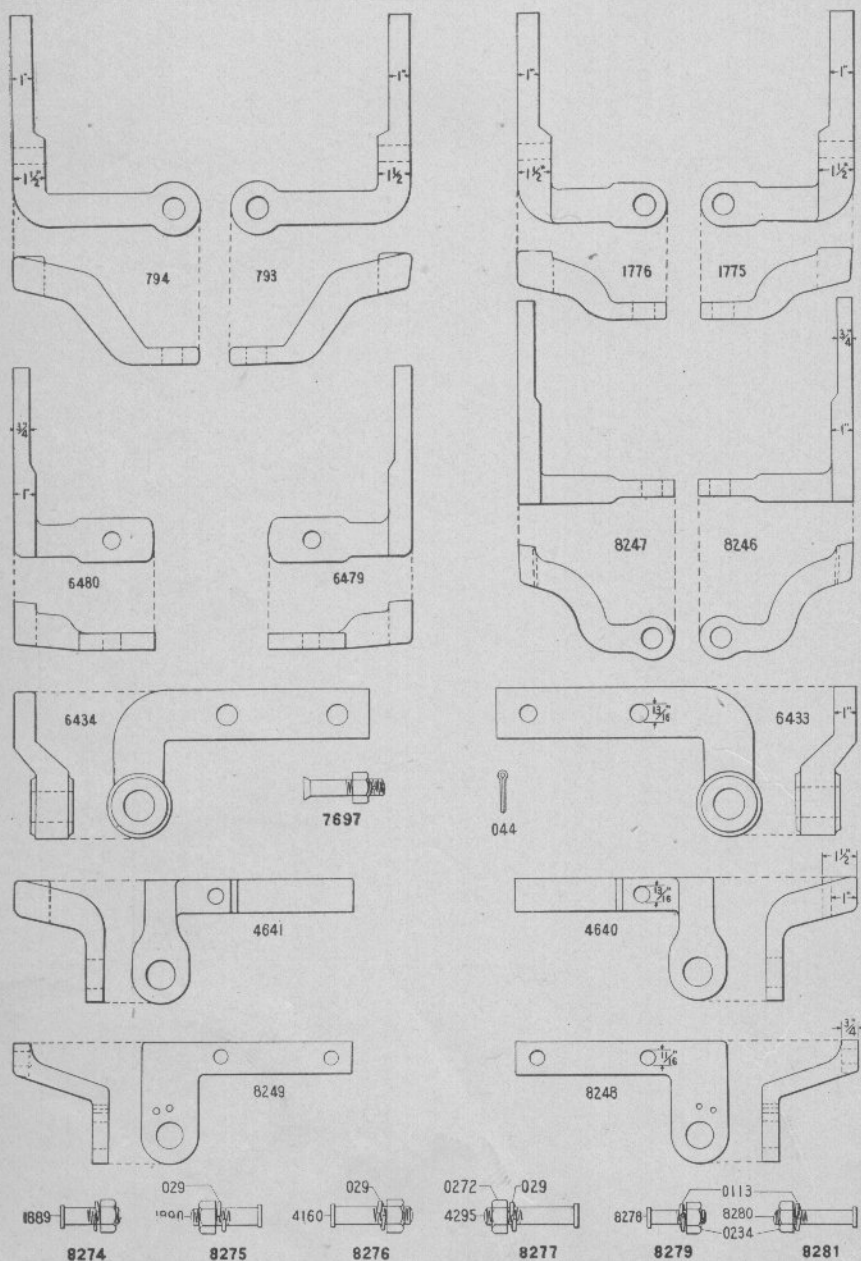
SWITCH AND LOCK MOVEMENT.

Order No.	FRONT RODS.—CONT.	List Price.
6617	FRONT ROD, Complete, as shown, for Slip Switch or Movable Point Frog.....	4.00
6618	FRONT ROD, Complete, as shown, for Derail.....	3.08
6709	FRONT ROD, Complete, for Derail. When ordering specify, whether or not points are reinforced.....	7.30
6882	FRONT ROD, Complete, as shown, for Double Slip Switch.....	6.30
6883	JAW ROD, with Lug, for 3553 or 6882.....	5.00
6893	NUT, $1\frac{1}{4}$ ", left hand thread for 8081.....	.09
7015	FRONT ROD, Complete, for Switch.....	8.00
7017	FRONT ROD and Point Lug combined for Right Hand Derail with independent bolt lock connection.....	10.30
7067	FRONT ROD and Point Lug combined for Left Hand Derail with independent bolt lock connection.....	10.30
7276	FRONT ROD, Complete, as shown, for Switch.....	4.30
7697	Bolt with Nut for 7015.....	.12
8081	FRONT ROD, Complete, as shown, for Double Slip Switch.....	6.40
8082	JAW ROD, with left hand threaded end.....	.90
8083	JAW ROD, with Lug for 8081.....	4.00
8084	FRONT ROD, Complete, as shown, for Double Slip Switch.....	6.84
8085	ROD with Lug for 8084.....	6.20
8087	FRONT ROD, and Point Lug combined for either right or left hand Derail.....	7.75
8088	GUIDE, Complete, for flat end Derail Front Rods.....	2.00
8089	GUIDE for 8088.....	1.70
8090	GUIDE, Complete, for flat end Derail Front Rods. Specify width of rail base.....	.64
8091	BRACKET, Complete, Point Separator for Double Slip Switch....	2.00
8092	BRACKET only for 8091.....	1.40
8093	SCREW, Adjusting, for 8091.....	.24
8094	FRONT ROD, Complete, as shown, for Switch.....	4.50
8095	ROD, with Lug, for 8094.....	3.80
8096	FRONT ROD, Complete, as shown, for Switch.....	4.00
8274	LUG BOLT, $\frac{3}{4}$ " x $2\frac{1}{2}$ ", Complete, for plain points.....	.10
8275	LUG BOLT, $\frac{3}{4}$ " x 3 ", Complete, for plain points.....	.10
8276	LUG BOLT, $\frac{3}{4}$ " x $3\frac{1}{2}$ ", Complete, for reinforced points.....	.10
8277	LUG BOLT, $\frac{3}{4}$ " x 4 ", Complete, for extra reinforced points.....	.12
8279	LUG BOLT, $\frac{3}{4}$ " x $2\frac{1}{2}$ ", Complete, for plain points.....	.09
8281	LUG BOLT, $\frac{3}{4}$ " x $3\frac{1}{2}$ ", Complete, for reinforced points.....	.10
8336	JAW ROD, with Lug and flat end for 8337.....	3.08
8337	FRONT ROD, Complete, as shown, for Derail.....	3.16
8338	FRONT ROD, Complete, as shown, for Switch.....	4.00
8339	JAW ROD for 8338.....	3.35
8346	JAW, Malleable, $1\frac{1}{4}$ ", for 8338.....	.41
8347	ROD with Lug and flat end for 8348.....	3.70
8348	FRONT ROD, Complete, as shown, for Derail.....	3.92
8362	TURNBUCKLE, $1\frac{1}{4}$ " for 8081.....	1.20
8655	ROD for 8679.....	4.80
8678	ROD for 8680.....	7.00
8679	FRONT ROD, Complete as shown for Switch.....	5.50
8680	FRONT ROD, Complete, as shown for Double Slip Switch.....	7.70
8686	ROD for 8687.....	6.00
8687	FRONT ROD, Complete, as shown, for Double Slip Switch.....	6.70

Order by NUMBER and NAME appearing in Large Type.

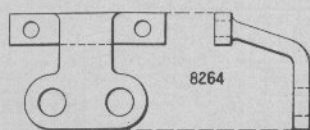
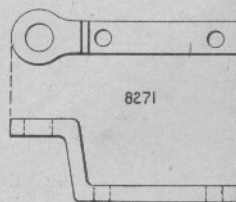
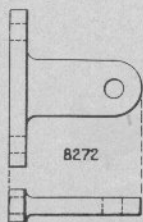
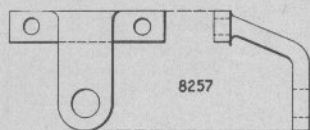
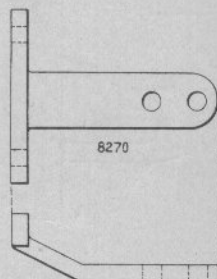
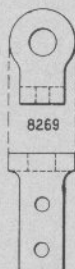
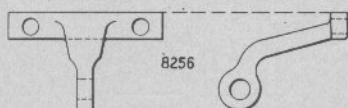
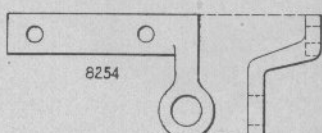
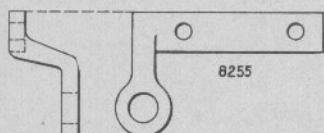
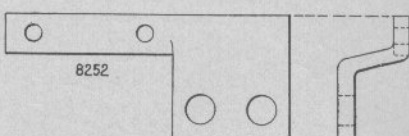
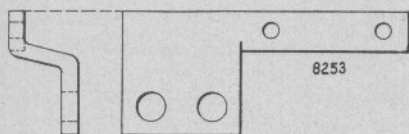
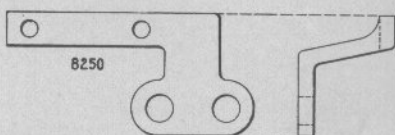
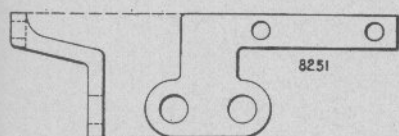
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SWITCH POINT LUGS.



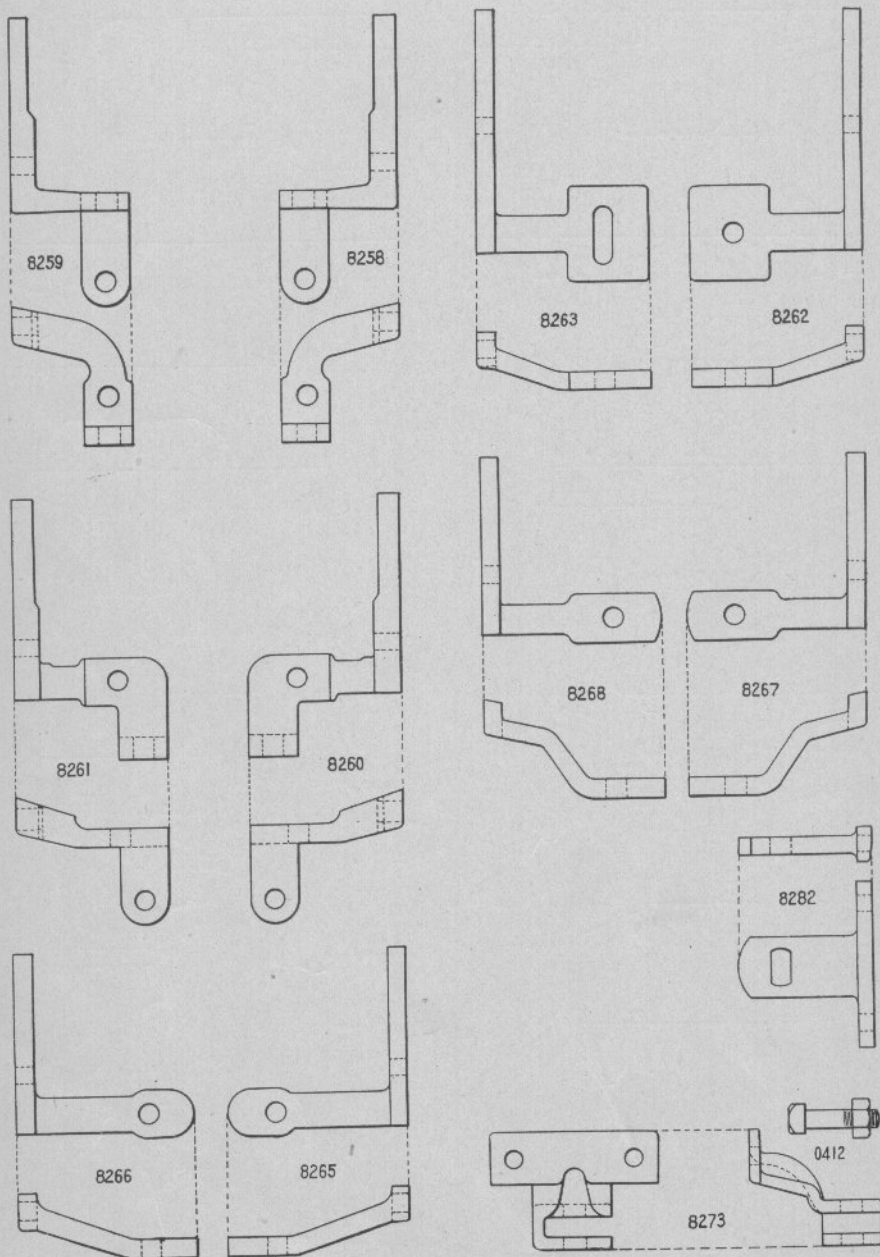
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH POINT LUGS.—CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH POINT LUGS.—CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

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Order No.	SWITCH POINT LUGS.	List Price.
029	NUT LOCK, $\frac{3}{4}$ " for 8274, etc.	.02
044	COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)	.80
0113	NUT LOCK, $\frac{5}{8}$ ", for 8279 or 8281	.02
0234	NUT, $\frac{3}{4}$ ", for 8279 or 8281	.02
0272	NUT, $\frac{3}{4}$ ", for 8274, etc.	.03
0412	BOLT with Hexagon Nut, $\frac{3}{4}$ " x $3\frac{1}{2}$ ", for 8273	.10
793	Switch POINT LUG, Right Hand, for Double Slip or M. P. Frog	1.70
794	Switch POINT LUG, Left Hand, for Double Slip or M. P. Frog	1.70
1775	Switch POINT LUG, Right Hand, for Single Switch or Derail	1.60
1776	Switch POINT LUG, Left Hand, for Single Switch or Derail	1.60
1889	BOLT, $\frac{3}{4}$ " x $2\frac{1}{2}$ " for 8274	.08
1890	BOLT, $\frac{3}{4}$ " x 3 ", for 8275	.08
4160	BOLT, $\frac{3}{4}$ " x $3\frac{1}{2}$ " for 8276	.08
4295	BOLT, $\frac{3}{4}$ " x 4 " for 8277	.10
4640	Switch POINT LUG, Right Hand, for Switch or Derail	3.40
4641	Switch POINT LUG, Left Hand, for Switch or Derail	3.40
6433	Switch POINT LUG, Right Hand, for Switch or Derail	1.60
6434	Switch POINT LUG, Left Hand, for Switch or Derail	1.60
6479	Switch POINT LUG, Right Hand for Switch	1.08
6480	Switch POINT LUG, Left Hand, for Switch	1.08
7697	BOLT, $\frac{3}{4}$ " x $3\frac{1}{2}$ " used for Lugs 6433 or 6434	.12
8246	Switch POINT LUG, Right Hand, for Movable Point Frog	2.12
8247	Switch POINT LUG, Left Hand, for Movable Point Frog	2.12
8248	Switch POINT LUG, Right Hand, for Slip or M. P. F. or Switch	2.64
8249	Switch POINT LUG, Left Hand, for Slip or M. P. F. or Switch	2.64
8250	Double POINT LUG, Right Hand, for Switch or Derail, with independent bolt lock connection	3.80
8251	Double POINT LUG, Left Hand, for Switch or Derail, with independent bolt lock connection	3.80
8252	Double POINT LUG, Right Hand, for Switch or Derail with independent bolt lock connection	3.96
8253	Double POINT LUG, Left Hand, for Switch or Derail, with independent bolt lock connection	3.96
8254	Switch POINT LUG, Right Hand, for Switch or Derail	3.40
8255	Switch POINT LUG, Left Hand, for Switch or Derail	3.40
8256	Switch POINT LUG, for Derail Lock Rod, Right or Left	1.72
8257	Switch POINT LUG, for Derail Lock Rod, Right or Left	1.80
8258	Double Switch POINT LUG, Right Hand, for Derail with independent bolt lock connection	3.60
8259	Double Switch POINT LUG, Left Hand, for Derail, with independent bolt lock connection	3.60
8260	Double Switch POINT LUG, Right Hand, for Switch, with independent bolt lock connection	3.50
8261	Double Switch POINT LUG, Left Hand, for Switch, with independent bolt lock connection	3.50
8262	Switch POINT LUG, Right Hand, for Switch or Derail	3.10
8263	Switch POINT LUG, Left Hand, for Switch or Derail	3.10
8264	Double Switch POINT LUG for Derail, with independent bolt lock connection, right or left	2.30
8265	Switch POINT LUG, R. H. for Switch or Derail	.84
8266	Switch POINT LUG, L. H. for Switch or Derail	.84
8267	Single POINT LUG, Right Hand, for Double Slip or M. P. F.	1.70
8268	Single POINT LUG, Left Hand, for Double Slip or M. P. F.	1.70
8269	LUG for bolt lock connection	1.00
8270	Switch POINT LUG. Special	2.30
8271	Switch POINT LUG, for Front Rod with independent bolt lock connection	2.20

Order by NUMBER and NAME appearing in Large Type.

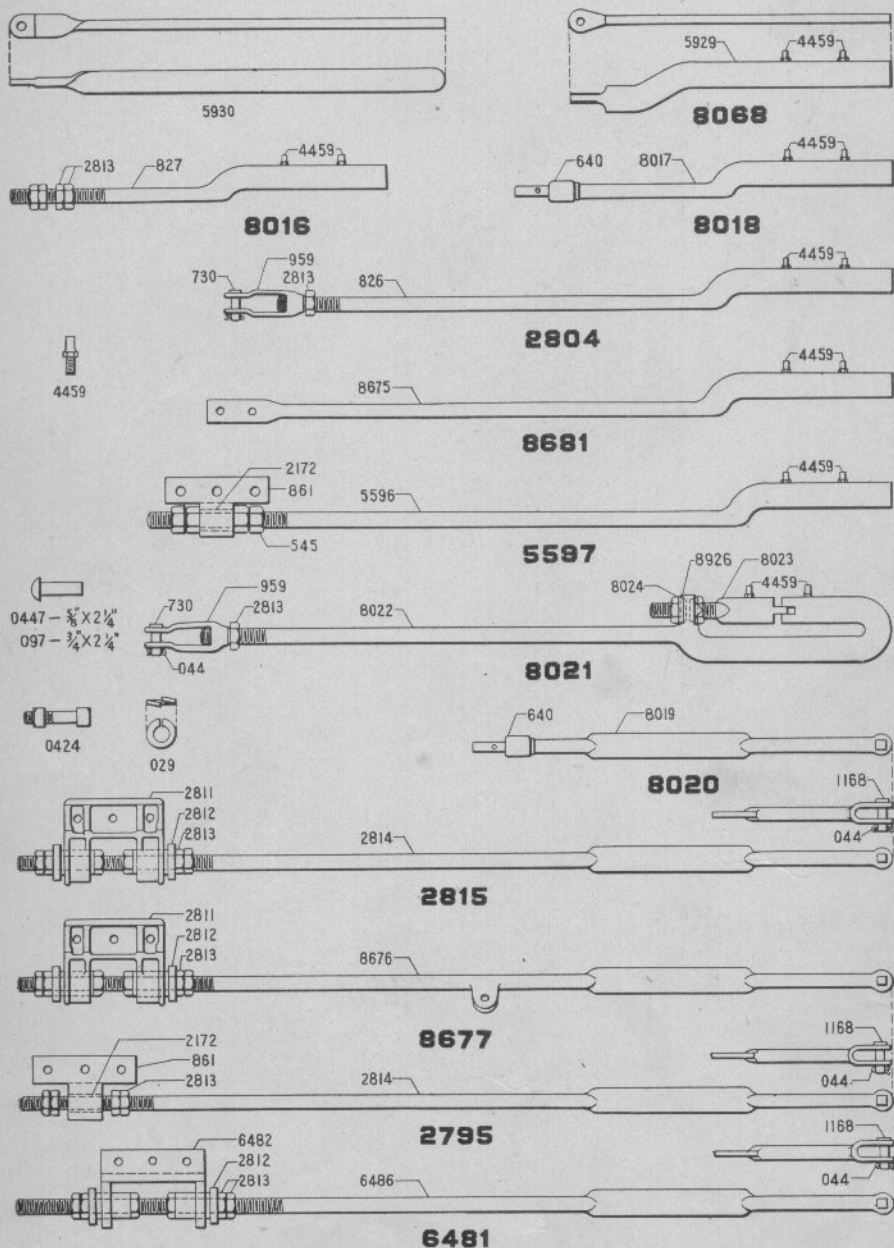
SWITCH AND LOCK MOVEMENT.

Order No.	SWITCH POINT LUGS.—CONT.	List Price.
8272	SWITCH POINT LUG, Right or Left, for Switch.....	.84.....
8273	SWITCH POINT LUG, Special.....	1.50.....
8274	LUG BOLT, $\frac{3}{4}$ " x $2\frac{1}{2}$ ", Complete, for plain switch points.....	.10.....
8275	LUG BOLT, $\frac{3}{4}$ " x 3 ", Complete, for plain switch points.....	.10.....
8276	LUG BOLT, $\frac{3}{4}$ " x $3\frac{1}{2}$ ", Complete, for reinforced switch points.....	.10.....
8277	LUG BOLT, $\frac{3}{4}$ " x 4 ", Complete, for extra reinforced switch points....	.12.....
8278	BOLT, $\frac{5}{8}$ " x $2\frac{1}{2}$ ", for 8279.....	.07.....
8279	LUG BOLT, $\frac{5}{8}$ " x $2\frac{1}{2}$ ", Complete, for plain switch points.....	.09.....
8280	BOLT, $\frac{5}{8}$ " x $3\frac{1}{2}$ ", for 8281.....	.08.....
8281	LUG BOLT, $\frac{5}{8}$ " x $3\frac{1}{2}$ ", Complete, for reinforced switch points.....	.10.....
8282	SWITCH POINT LUG, Right or Left, for Switch.....	1.35.....

Order by NUMBER and NAME appearing in Large Type.

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LOCK AND THROW RODS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

65

Order
No.

LOCK AND THROW RODS.

List Price.

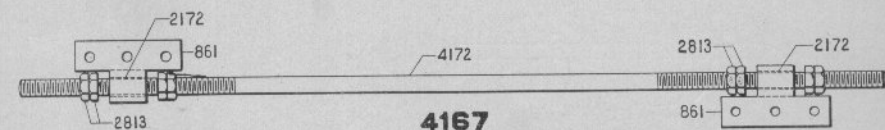
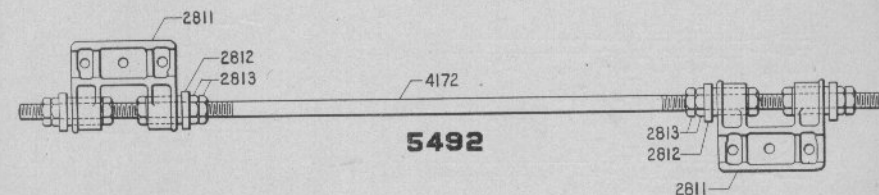
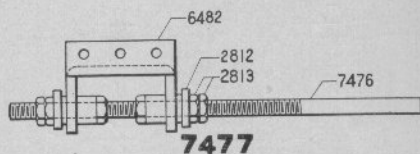
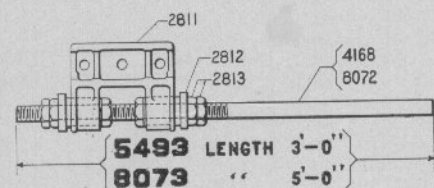
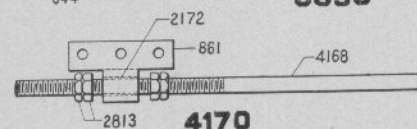
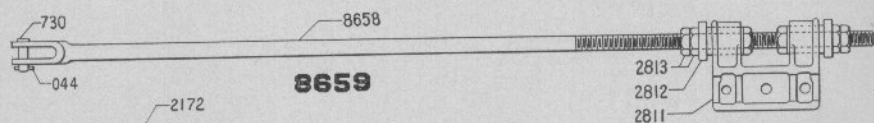
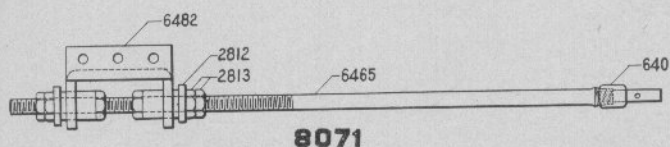
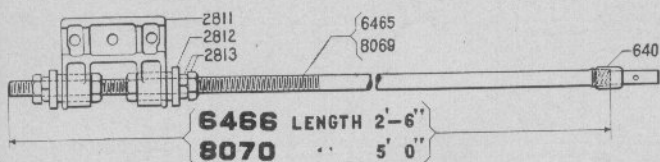
029	NUT Lock for $\frac{3}{4}$ " Bolt.....	.02
044	COTTER Pin, $\frac{3}{16}$ "x $1\frac{1}{2}$ " (per 100).....	.80
097	RIVET, $\frac{3}{4}$ "x $2\frac{1}{4}$ " for 2795, etc.....	.04
0424	BOLT with Nut, $\frac{3}{4}$ "x $2\frac{1}{4}$ ".....	.10
0447	RIVET, $\frac{5}{8}$ "x $2\frac{1}{4}$ " for 8681.....	.03
545	NUT, $1\frac{1}{4}$ " for 5597.....	.19
640	COUPLING, 1", reinforced for Pipe Connections.....	.19
730	PIN, $\frac{7}{8}$ "x $2\frac{3}{8}$ " for Jaw 959 and others.....	.07
826	LOCK ROD for 2804.....	2.50
827	LOCK ROD for 8016.....	2.20
861	BRACKET, Throw Rod, Adjusting, for 2795 or 5597.....	1.30
959	WROUGHT SCREW JAW, $1\frac{1}{4}$ ", for various Rods.....	1.10
1168	PIN, $\frac{7}{8}$ "x $2\frac{3}{8}$ " for Throw Rods 2795, etc.....	.10
2172	SLEEVE, Brass, for Rods 2795 or 5597.....	.30
2795	THROW ROD Complete.....	5.60
2804	LOCK ROD Complete.....	4.10
2811	BRACKET. Throw Rod. Adjusting, for 2815 and 8677.....	1.28
2812	BUSHING for Bracket 2811 and 6482.....	.32
2813	NUT, Thin, $1\frac{1}{4}$ ", for various Rods.....	.09
2814	ROD for 2815.....	3.60
2815	THROW ROD Complete.....	6.10
4167	DOUBLE SWITCH ADJUSTMENT Complete.....	6.10
4168	$1\frac{1}{4}$ " THREADED ROD, 3' long, for 4170 or 5493.....	1.20
4170	SWITCH ADJUSTMENT Complete, 3' long, stub end.....	3.16
4172	ROD, $1\frac{1}{4}$ "x6'-0", threaded each end.....	2.20
4459	SCREW PIN, operating Pole Changer on Lock Rods.....	.20
5492	DOUBLE SWITCH ADJUSTMENT Complete.....	7.00
5493	SWITCH ADJUSTMENT Complete, 3' long, stub end.....	3.60
5596	ROD for 5597.....	2.80
5597	LOCK ROD Complete. (Special).....	5.50
5929	LOCK ROD. (Special).....	2.00
5930	LOCK ROD. (Special).....	2.00
6465	ROD, $1\frac{1}{4}$ "x2'-6", threaded, with tang end.....	1.16
6466	SWITCH ADJUSTMENT, Complete, 2'-6" long, with tang end.....	3.80
6481	THROW ROD Complete with Wrought Bracket.....	7.90
6482	WROUGHT BRACKET for Switch Adjustment.....	2.68
6486	THROW ROD for 6481.....	4.00
7476	$1\frac{1}{4}$ "x3' ROD, threaded 24", for 7477.....	1.04
7477	SWITCH ADJUSTMENT, Complete, with Wrought Bracket, 3'-0" long, stub end.....	4.90
8016	LOCK ROD Complete without Lug, for Derail.....	2.90
8017	LOCK ROD with tang end, for 8018.....	2.20
8018	LOCK ROD Complete with tang end, for Derail.....	2.80
8019	THROW ROD with tang end, for 8020.....	3.00
8020	THROW ROD Complete with tang end.....	3.30
8021	ADJUSTABLE LOCK ROD Complete.....	14.80
8022	LOCK ROD for 8021.....	7.30
8023	ADJUSTING ROD for 8021.....	2.50
8024	NUT, special, for 8021.....	1.50
8068	LOCK ROD Complete. (Special).....	2.40
8069	$1\frac{1}{4}$ "x5' THREADED ROD with tang end, for 8070.....	1.50
8070	SWITCH ADJUSTMENT Complete, 5' long, with tang end.....	4.15
8071	SWITCH ADJUSTMENT Complete, 2' 6" long, tang end, with Wrought Bracket.....	5.20
8072	$1\frac{1}{4}$ "x5' THREADED ROD, stub end, for 8073.....	1.60
8073	SWITCH ADJUSTMENT Complete, 5' long, stub end.....	4.00
8658	JAW ROD, threaded end, for 8659.....	2.80
8659	SWITCH ADJUSTMENT, Complete for Double Slip Switch.....	5.30
8675	LOCK ROD. Special. Used with Front Rod 8679 or 8680.....	2.50

SWITCH AND LOCK MOVEMENT.

Order No.	LOCK AND THROW RODS.—CONT.	List Price.
8676 THROW ROD with Lug, for 8677		4.00
8677 THROW ROD, COMPLETE, with Lug for Double Slip Switch		6.50
8681 LOCK ROD, COMPLETE (Special). Used with Front Rods 8679 and 8680		2.90
8926 LOCKWASHER for Adjustable Lock Rod 8021 .....		.40

Order by NUMBER and NAME appearing in Large Type.

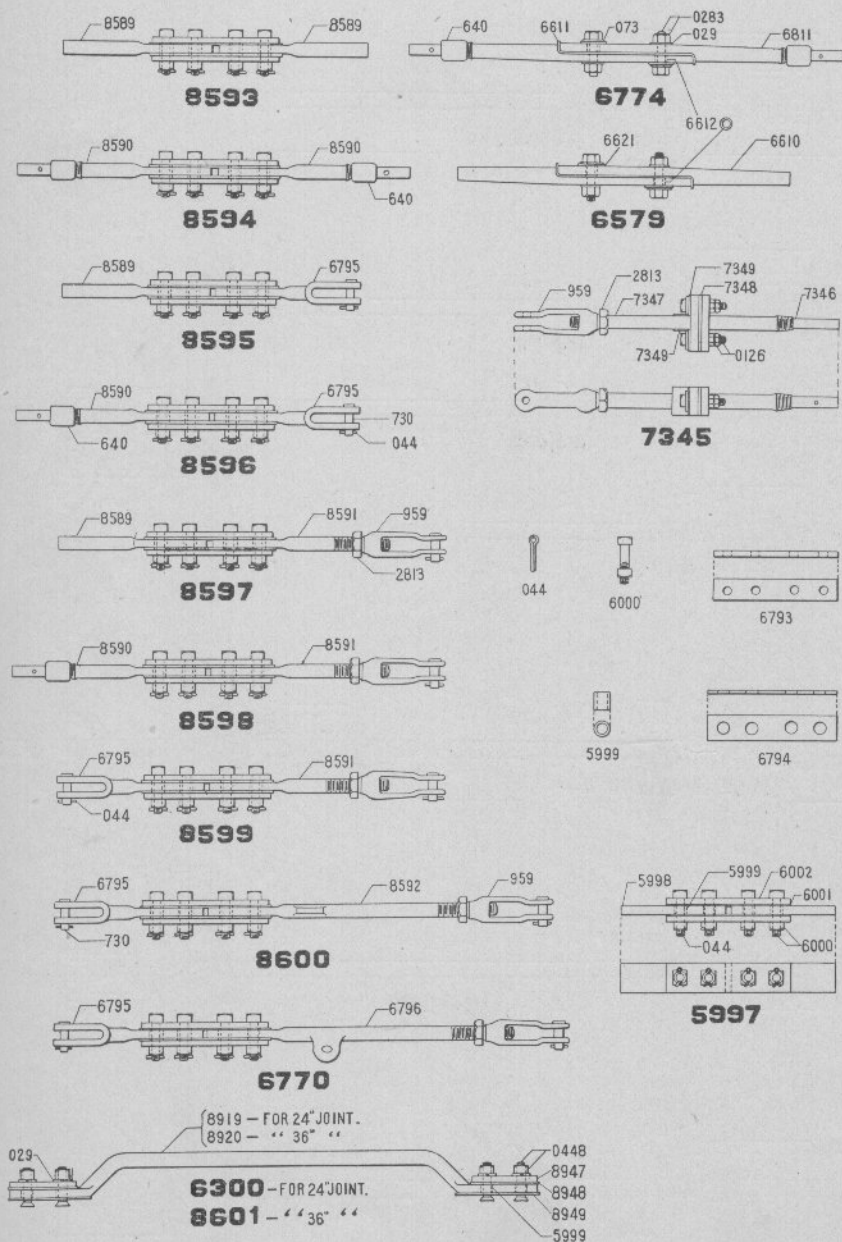
LOCK AND THROW RODS.—CONT.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

INSULATED RODS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

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Order No.	INSULATED RODS.	List Price.
029	NUT LOCK for $\frac{3}{4}$ " Bolt.....	.02
044	COTTER Pin, $\frac{3}{16}$ "x $1\frac{1}{2}$ " (per 100).....	.80
073	WASHER for $\frac{3}{4}$ " Bolt.....	.02
0126	BOLT with Nut, $\frac{5}{8}$ "x $3\frac{1}{2}$ ".....	.07
0283	Hex. Head BOLT with Nut, $\frac{3}{4}$ "x3".....	.10
0448	C. S. Head BOLT with Nut, $\frac{3}{4}$ "x $3\frac{1}{4}$ ".....	.08
640	1" Reinforced Pipe COUPLING.....	.19
730	PIN, $\frac{1}{2}$ "x $2\frac{3}{4}$ ".....	.07
959	WROUGHT SCREW JAW, $1\frac{1}{4}$ ".....	1.10
2813	THIN NUT, $1\frac{1}{4}$ ".....	.09
5997	INSULATED JOINT for Switch Rods. Special.....	
5998	HALF ROD for Insulated Joint 5997.....	
5999	INSULATED BUSHING for various Insulated Joints.....	
6000	BOLT and Nut, $\frac{3}{4}$ "x $3\frac{1}{4}$ ", with Cotter Hole, for various Insulated Rods.....	
6001	INSULATED PLATE for Insulated Joint 5997.....	
6002	CONNECTING PLATE for Insulated Joint 5997.....	
6300	INSULATED JOINT Complete, for connecting ends of Detector Bars when passing around a 24" Weber Joint.....	
6579	INSULATED JOINT with Stub Ends Complete.....	
6610	HALF ROD for Insulated Joint 6579.....	
6611	INSULATOR for Insulated Joint 6579 or 6774.....	
6612	INSULATED BUSHING for Joints 6579 or 6774.....	
6621	INSULATED WASHER for Joints 6579 or 6774.....	
6770	INSULATED FRONT ROD Complete, for Switch.....	
6774	INSULATED JOINT Complete, Tang Ends.....	
6793	CONNECTING PLATE for Insulated Rods 6770, etc.....	
6794	INSULATION PLATE for Insulated Rods 6770, etc.....	
6795	SOLID JAW for Insulated Rods.....	
6796	LUG ROD for Insulated Rod 6770.....	
6811	HALF ROD with Tang End for Insulated Joint 6774.....	
7345	INSULATED SWITCH ROD Complete.....	
7346	HALF ROD with Tang End, for 7345.....	
7347	HALF ROD with Threaded End, for 7345.....	
7348	INSULATOR between Rods, for 7345.....	
7349	INSULATOR under Bolts.....	
8589	HALF ROD with Stub End for Insulated Rods 8593, etc.....	
8590	HALF ROD with Tang End, for Insulated Rods 8594, etc.....	
8591	HALF ROD with Threaded End, for Insulated Rods 8597, etc.....	
8592	LUG ROD for Insulated Rod 8600.....	
8593	INSULATED ROD Complete with Stub Ends.....	
8594	INSULATED ROD Complete with Tang Ends.....	
8595	INSULATED ROD Complete with Solid Jaw and Stub End.....	
8596	INSULATED ROD Complete with Solid Jaw and Tang End.....	
8597	INSULATED ROD Complete with Screw Jaw and Stub End.....	
8598	INSULATED ROD Complete with Screw Jaw and Tang End.....	
8599	INSULATED ROD Complete with One Screw and One Solid Jaw.....	
8600	INSULATED FRONT ROD Complete, for M. P. F.....	
8601	INSULATED JOINT Complete, for connecting ends of Detector Bars when passing around a 36" Weber Joint.....	
8919	ROD for 24" Joint, for 6300.....	
8920	ROD for 36" Joint, for 8601.....	
8947	WROUGHT PLATE for 6300 or 8601.....	
8948	SHORT INSULATOR for 6300 or 8601.....	
8949	LONG INSULATOR for 6300 or 8601.....	

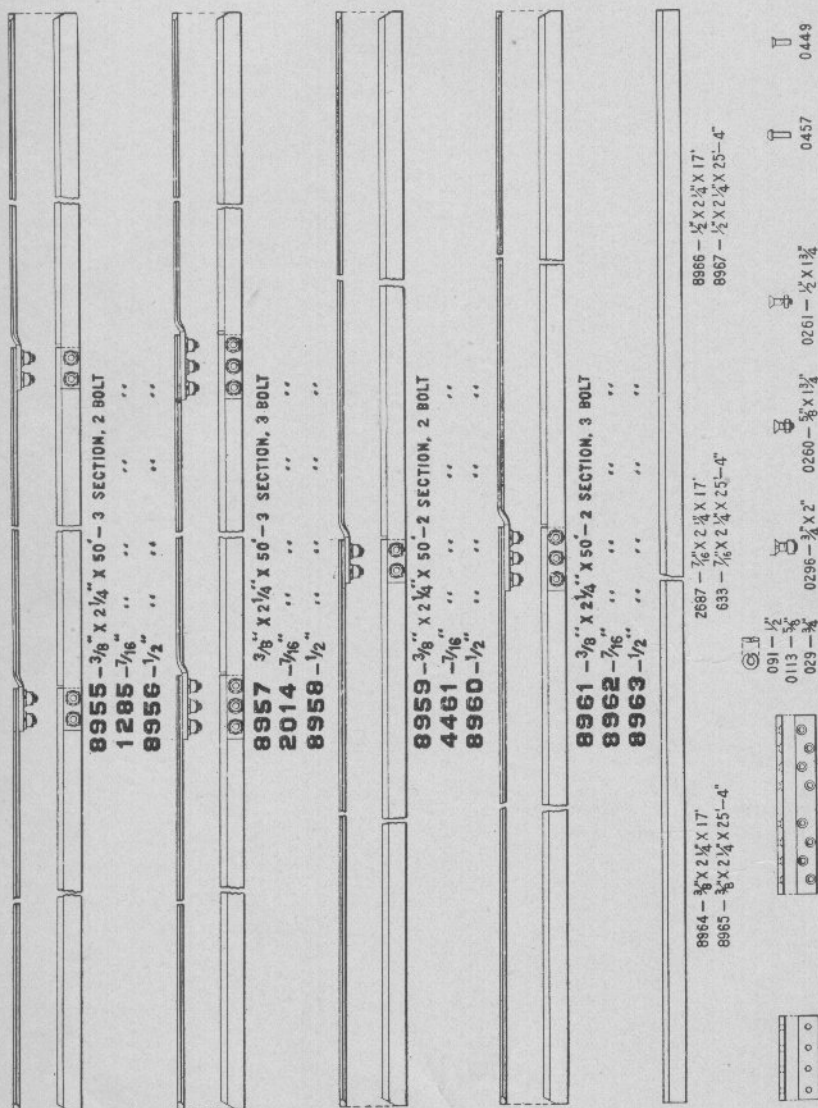
Order by NUMBER and NAME appearing in Large Type.

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SWITCH AND LOCK MOVEMENT.

DETECTOR BARS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

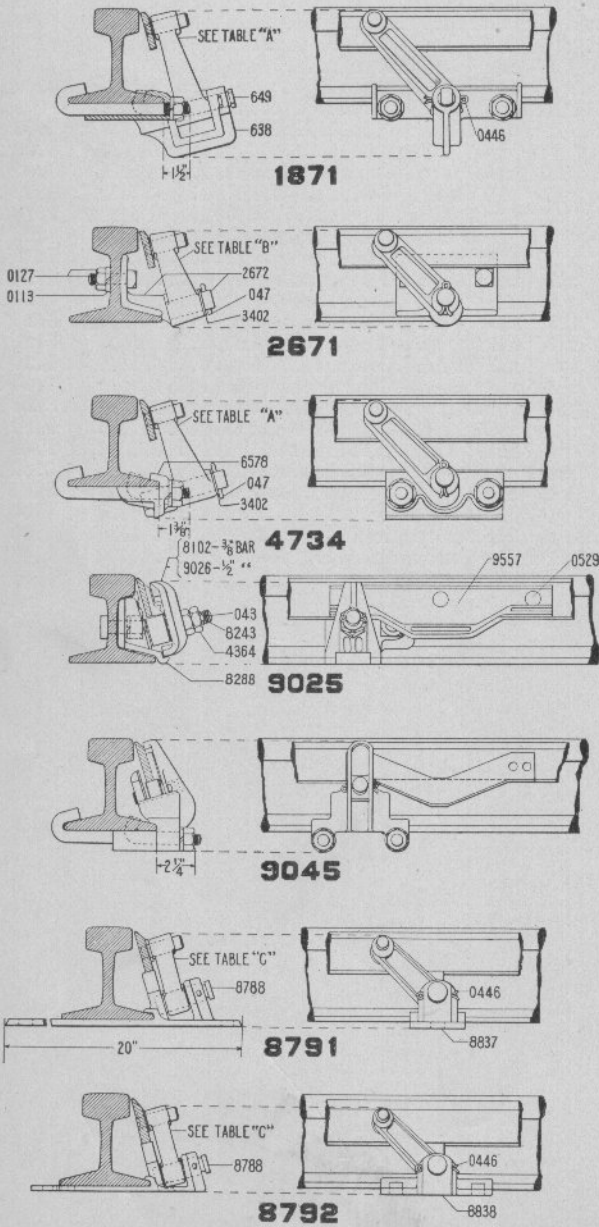
73

Order No.	DETECTOR BARS.	List Price.
029	NUT LOCK for $\frac{3}{4}$ " Bolt.....	.02....
091	NUT LOCK for $\frac{1}{2}$ " Bolt.....	.02....
0113	NUT LOCK for $\frac{5}{8}$ " Bolt.....	.02....
0260	BOLT with Nut, $\frac{5}{8}$ " x $1\frac{3}{4}$ ", C. S. Hd.....	.06....
0261	BOLT with Nut, $\frac{1}{2}$ " x $1\frac{3}{4}$ ", C. S. Hd.....	.04....
0296	BOLT with Nut, $\frac{3}{4}$ " x 2", C. S. Hd.....	.09....
0449	RIVET, $\frac{1}{2}$ " x $1\frac{1}{4}$ ", C. S. Hd.....	.02....
0457	RIVET, $\frac{3}{8}$ " x $1\frac{1}{4}$ ", Rd. Hd.....	.02....
633	DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 25' 4" long.....	4.00....
1285	DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	8.00....
2014	DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	8.00....
2687	DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 17' long.....	2.70....
4461	DETECTOR BAR, $\frac{7}{16}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	8.00....
8955	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	7.20....
8956	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	9.20....
8957	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	7.20....
8958	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	9.20....
8959	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	7.20....
8960	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	9.20....
8961	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	7.20....
8962	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	8.00....
8963	DETECTOR BAR, $\frac{1}{2}$ " x $2\frac{1}{4}$ " x 50' long. Comp. as shown.....	9.20....
8964	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 17' long.....	2.40....
8965	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 25'—4" long.....	3.60....
8966	DETECTOR BAR, $\frac{3}{8}$ " x $2\frac{1}{4}$ " x 17' long.....	3.00....
8967	DETECTOR BAR, $\frac{1}{2}$ " x $2\frac{1}{4}$ " x 25'—4" long.....	4.60....
8969	SPLICE BAR for Detector Bars, as required.....	.36....
8970	SPLICE BAR for Detector Bars, as required.....	.48....

Order by NUMBER and NAME appearing in Large Type.

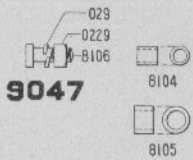
SWITCH AND LOCK MOVEMENT.

DETECTOR BARS. RAIL CLIPS.



LENGTH	SIZE OF RAIL
8978 - 4 1/2"	3 1/2" TO 4 1/2"
2976 - 5"	4 1/2" " 4 3/4"
8979 - 5 1/2"	4 3/4" " 4 1/2"
642 - 5 3/4"	5" " 5 1/2"
8981 - 6"	5 1/4" " 5 1/2"
1230 6 1/4"	5 1/2" " 5 3/4"
8982 6 1/2"	5 3/4" " 6"

LENGTH	SIZE OF RAIL
2974 - 3 3/4"	4 1/2" TO 4 1/2"
2975 - 4 1/4"	4 3/4" " 5"
8954 - 4 3/4"	5 1/4" " 5 1/2"
8989 - 5 1/4"	5 3/4" " 6"



LENGTH	SIZE OF RAIL
8793 - 3 1/2"	4 1/2" TO 4 1/2"
8794 - 4 1/4"	4 3/4" " 5"
8795 - 4 1/2"	5" " 5 1/4"

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

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NOTE.—In ordering Rail Clips, complete information relative to dimensions of rail section, indicated by sketch or by reference to A. S. C. E. or other standard sections, or to plan on file with this company, should accompany the order, also specify centres of links.

Order No.	DETECTOR BARS—RAIL CLIPS.	List Price.
029	NUT LOCK for $\frac{3}{4}$ " Bolt.....	.02
043	COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (per 100).....	.80
047	COTTER Pin, $\frac{1}{4}$ " x $1\frac{1}{2}$ " (per 100).....	.80
0113	NUT LOCK for $\frac{3}{8}$ " Bolt.....	.02
0127	BOLT with Hex. Nut, $\frac{5}{8}$ " x $2\frac{1}{4}$ ".....	.07
0229	NUT, $\frac{3}{4}$ " Square, for 9047.....	.03
0234	NUT, $\frac{3}{8}$ " Hex.....	.02
0446	COTTER Pin, $\frac{1}{4}$ " x 2 " (per 100).....	.80
0451	BOLT with Hex. Nut, $\frac{5}{8}$ " x $2\frac{3}{4}$ ".....	.14
0529	RIVET, $\frac{1}{4}$ " x 1 ", F. H.....	.02
635	HOOK BOLT, $\frac{5}{8}$ " x $6\frac{1}{4}$ ", with Nut and Nut Lock.....	.12
636	HOOK BOLT, $\frac{5}{8}$ " x $7\frac{1}{4}$ ", with Nut and Nut Lock.....	.12
638	RAIL CLIP, casting only, for 1871.....	1.10
642	LINK, $5\frac{3}{4}$ " centers. (See Table A.) For Clip 1871 or 4734.....	.36
649	PIN for 1871 or 8865.....	.12
1230	LINK, $6\frac{1}{4}$ " Centers. (See Table A.) For 1871 or 4734.....	.36
1871	RAIL CLIP Complete with Pin, Link, Hook Bolts and Bar Stud.....	1.86
2671	WROUGHT RAIL CLIP Complete with Stud, Link, Web Bolts and Bar Stud. Used on Bridges, Etc.....	2.52
2672	WROUGHT RAIL CLIP with Stud for 2671.....	1.92
2922	HOOK BOLT, $\frac{5}{8}$ " x $5\frac{3}{4}$ " with Nut and Nut Lock.....	.12
2923	HOOK BOLT, $\frac{5}{8}$ " x $6\frac{3}{4}$ ", with Nut and Nut Lock.....	.12
2924	HOOK BOLT, $\frac{5}{8}$ " x $7\frac{3}{4}$ ", with Nut and Nut Lock.....	.12
2974	LINK, $3\frac{3}{4}$ " Centers. (See Table B.) for Clip 2671.....	.36
2975	LINK, $4\frac{1}{4}$ " Centers. (See Table B.) for Clip 2671.....	.36
2976	LINK, 5 " Centers. (See Table A.) for Clip 1871 or 4734.....	.36
2982	HOOK BOLT, $\frac{5}{8}$ " x $2\frac{1}{2}$ ", with Nut and Nut Lock.....	.12
3090	HOOK BOLT, $\frac{3}{8}$ " x $8\frac{1}{4}$ ", with Nut and Nut Lock.....	.12
3402	WASHER for 1 " Pin for various Clips.....	.02
3469	STUD for 8790.....	.12
4364	NUT, $\frac{3}{4}$ " Hex. for 9025.....	.04
4734	RAIL CLIP Complete with Pin, Hook Bolts and Bar Stud.....	1.32
4804	HOOK BOLT, $\frac{5}{8}$ " x $3\frac{1}{2}$ ", with Nut and Nut Lock.....	.12
6578	CLIP, with Stud for 4734.....	.64
8102	GUIDE CAP for 9025 when $\frac{3}{8}$ " Bar is used.....	
8104	BUSHING used on 9025.....	
8105	ROLLER used on 9025.....	
8106	SPECIAL HEAD BOLT for 9047.....	
8243	CENTER BOLT for 9025.....	
8288	CLIP, casting only, for 9025.....	
8760	HOOK BOLT, $\frac{5}{8}$ " x 9 " with Nut and Nut Lock.....	.12
8761	HOOK BOLT, $\frac{5}{8}$ " x $9\frac{1}{2}$ " with Nut and Nut Lock.....	.12
8762	HOOK BOLT, $\frac{5}{8}$ " x 10 " with Nut and Nut Lock.....	.12
8788	PIN for 8791 or 8792.....	.12
8790	RAIL CLIP Complete with Pin, Link, Hook Bolts and Bar Stud.....	1.56
8791	RAIL CLIP Complete for rear of Switch with 1 " Pin, Link and Bar Stud.....	1.80
8792	RAIL CLIP Complete for front of Switch with 1 " Pin, Link and Bar Stud.....	1.80
8793	LINK, $3\frac{15}{16}$ " Centers (See Table C.) for 8791 or 8792.....	.36
8794	LINK, $4\frac{7}{16}$ " Centers. (See Table C.) for 8791 or 8792.....	.36
8795	LINK, $4\frac{11}{16}$ " Centers. (See Table C.) for 8791 or 8792.....	.36

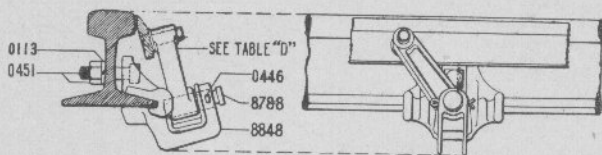
Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

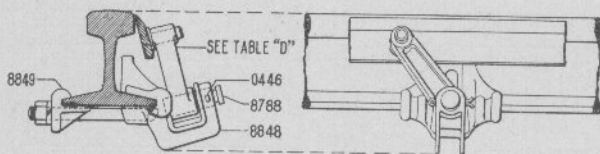
Order No.	DETECTOR BARS—RAIL CLIPS.—CONT.	List Price.
8798	LINK, $6\frac{1}{2}$ " Centers. (See Table E.) for 8865 or 8790.	.40
8799	LINK, $6\frac{3}{4}$ " Centers. (See Table E.) for 8865 or 8790.	.40
8800	LINK, 7" Centers. (See Table E.) for 8865 or 8790.	.40
8801	LINK, $7\frac{1}{4}$ " Centers. (See Table E.) for 8865 or 8790.	.40
8836	RAIL CLIP, casting only, for 8790	.72
8837	CLIP for 8791	1.30
8838	CLIP for 8792	1.30
8847	RAIL CLIP, casting only, for 8865	1.20
8848	RAIL CLIP, casting only, for 8863 or 8864	.70
8849	GIB for inside of rail, for Clip 8864 or 8858	.12
8851	LINK, $4\frac{1}{4}$ " Centers. (See Table D) for Clip 8863 or 8864.	.36
8852	LINK, $4\frac{1}{2}$ " Centers. (See Table D) for Clip 8863 or 8864.	.36
8853	LINK, $4\frac{3}{4}$ " Centers. (See Table D) for Clip 8863 or 8864.	.36
8854	LINK, 5" Centers. (See Table D) for Clip 8863 or 8864.	.36
8855	LINK, $5\frac{1}{4}$ " Centers. (See Table D) for Clip 8863 or 8864.	.36
8856	LINK, 6" Centers. (See Table D) for Clip 8863 or 8864.	.36
8857	LINK, $6\frac{1}{4}$ " Centers. (See Table D) for Clip 8863 or 8864.	.36
8858	RAIL CLIP Complete with Pin, Link, T Bolt, Inside Gib and Bar Stud. (T. Bolt should be 2" longer than width of Rail)	1.75
8859	T. BOLT, $\frac{5}{8}$ " x $5\frac{1}{2}$ ", with Nut and Nut Lock	.12
8860	T. BOLT, $\frac{5}{8}$ " x 6", with Nut and Nut Lock	.12
8861	T. BOLT, $\frac{5}{8}$ " x $6\frac{1}{2}$ ", with Nut and Nut Lock	.12
8862	T. BOLT, $\frac{5}{8}$ " x 7", with Nut and Nut Lock	.12
8863	RAIL CLIP Complete with Pin, Link, Web Bolt and Bar Stud	1.50
8864	RAIL CLIP Complete with Pin, Link, T Bolt, Inside Gib and Bar Stud. (T. Bolt should be $1\frac{1}{4}$ " longer than width of rail)	1.60
8865	RAIL CLIP Complete with Pin, Link, Hook Bolts and Bar Stud	1.96
8866	RAIL CLIP with Stud for 8858 for 5" to 6" rails	1.00
8867	RAIL CLIP with Stud for 8790	.84
8897	LINK, $7\frac{1}{2}$ " Centers. (See Table E) for Clip 8865 or 8790.	.40
8898	LINK, $7\frac{3}{4}$ " Centers. (See Table E) for Clip 8865 or 8790.	.40
8899	LINK, 8" Centers. (See Table E) for Clip 8865 or 8790.	.40
8900	LINK, $8\frac{1}{4}$ " Centers. (See Table E) for Clip 8865 or 8790.	.40
8910	DETECTOR BAR STUD for $\frac{3}{8}$ " Bar (per 100)	6.40
8921	LINK, $8\frac{1}{2}$ " Centers. (See Table E) for Clip 8865 or 8790.	.40
8953	RAIL CLIP, with Stud for 8858, for 4" to $4\frac{1}{4}$ " rails	1.00
8954	LINK, $4\frac{3}{4}$ " Centers. (See Table B) for Clip 2671	.36
8978	LINK, $4\frac{1}{2}$ " Centers. (See Table A) for Clip 1871 or 4734.	.36
8979	LINK, $5\frac{1}{2}$ " Centers. (See Table A) for Clip 1871 or 4734.	.36
8981	LINK, 6" Centers. (See Table A) for Clip 1871 or 4734.	.36
8982	LINK, $6\frac{1}{4}$ " Centers. (See Table A) for Clip 1871 or 4734.	.36
8989	LINK, $5\frac{1}{4}$ " Centers. (See Table B) for Clip 2671	.36
8994	T. BOLT, $\frac{5}{8}$ " x 8", with Nut and Nut Lock	.12
9025	RAIL CLIP Complete with Motion Plate, Rivets, Guide, Center and Web Bolts. Specify thickness of Bar	
9026	GUIDE CAP for 9025 when $\frac{1}{2}$ " Bar is used	
9045	RAIL CLIP Complete with Motion Plate, Rivets and Hook Bolts	1.84
9047	BOLT Complete with Nut and Nut Lock, fastening 9025 to Web of rail	
9557	MOTION PLATE for 9025	
17590	DETECTOR BAR STUD for $\frac{7}{8}$ " Bar (per 100)	6.40
18591	DETECTOR BAR STUD for $\frac{1}{2}$ " Bar (per 100)	6.40

Order by NUMBER and NAME appearing in Large Type.

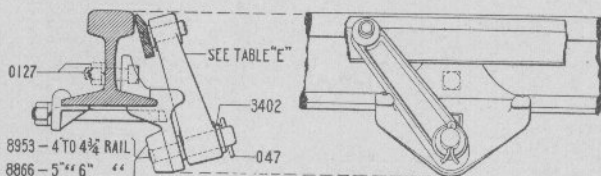
DETECTOR BARS, RAIL CLIPS.—CONT.



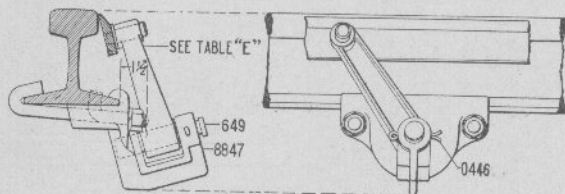
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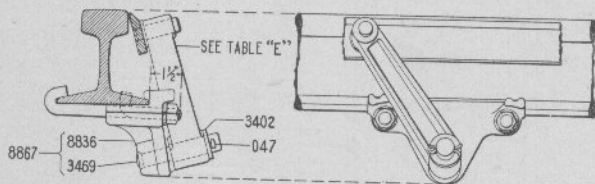
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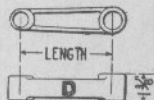


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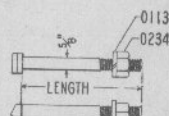


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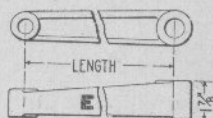
8910—FOR $\frac{3}{8}$ " BAR
17590— " " $\frac{7}{16}$ " " "
17591— " " $\frac{1}{2}$ " " "



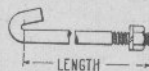
LENGTH	SIZE OF RAIL
8851—4 $\frac{1}{2}$ "	4" TO 4 $\frac{1}{2}$ "
8852—4 $\frac{1}{2}$ "	4 $\frac{1}{4}$ " " 4 $\frac{1}{2}$ "
8853—4 $\frac{1}{2}$ "	4 $\frac{1}{2}$ " " 4 $\frac{3}{4}$ "
8854—5"	4 $\frac{3}{4}$ " " 5"
8855—5 $\frac{1}{2}$ "	5" " 5 $\frac{1}{4}$ "
8856—6"	5 $\frac{1}{4}$ " " 5 $\frac{1}{2}$ "
8857—6 $\frac{1}{2}$ "	5 $\frac{1}{2}$ " " 6"



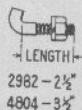
LENGTH	LENGTH
8859—5 $\frac{1}{2}$ "	8862—7"
8860—6"	8994—8"
8861—6 $\frac{1}{2}$ "	



LENGTH
8798—6 $\frac{1}{2}$ "
8799—6 $\frac{3}{4}$ "
8800—7"
8801—7 $\frac{1}{4}$ "
8897—7 $\frac{1}{2}$ "
8898—7 $\frac{3}{4}$ "
8899—8"
8900—8 $\frac{1}{4}$ "
8921—8 $\frac{1}{2}$ "

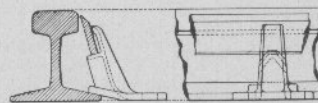
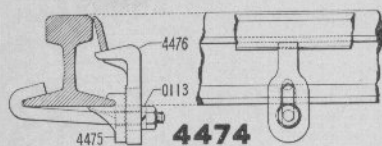
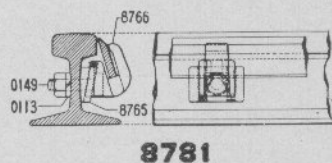
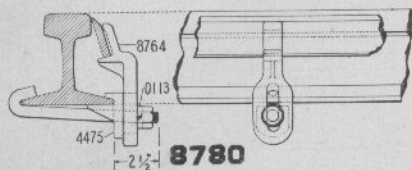
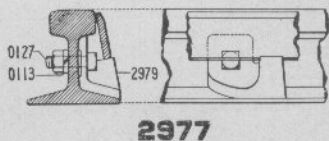
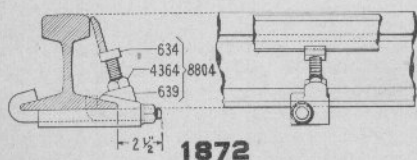


LENGTH
2922—5 $\frac{3}{4}$ "
635—6 $\frac{1}{4}$ "
2923—6 $\frac{3}{4}$ "
636—7 $\frac{1}{4}$ "
2924—7 $\frac{3}{4}$ "
3090—8 $\frac{1}{4}$ "
8760—9"
8761—9 $\frac{1}{2}$ "
8762—10"



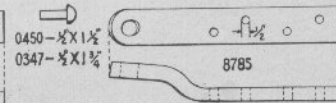
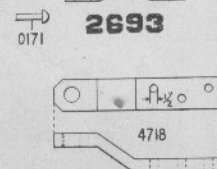
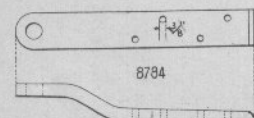
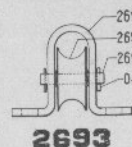
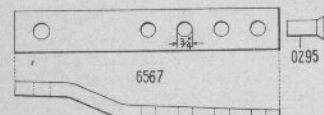
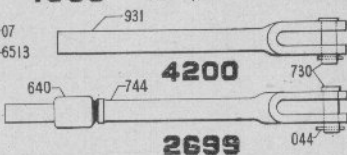
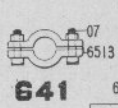
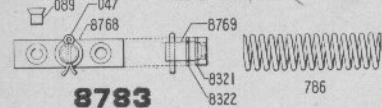
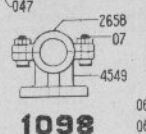
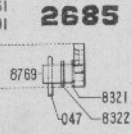
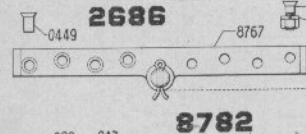
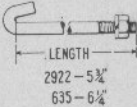
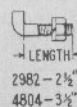
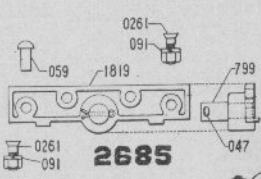
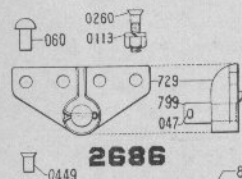
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DETECTOR BARS. STOPS AND DRIVING PLATES.



8770 - FOR 4" RAIL.
8771 - " 4 1/2"
8772 - " 4 1/2"
8773 - " 4 1/2"

8774 - FOR 5" RAIL.
8775 - " 5 1/2"
8776 - " 5 1/2"
8777 - " 5 1/2"



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

79

Order
No.

DETECTOR BARS. STOPS AND DRIVING PLATES.

List Price.

07	BOLT and Nut, $\frac{3}{8}$ " x $1\frac{1}{4}$ "	.02
042	COTTER Pin, $\frac{3}{16}$ " x 1" (per 100)	.80
044	COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)	.80
047	COTTER Pin, $\frac{1}{4}$ " x $1\frac{1}{2}$ " (per 100)	.80
059	RIVET, $\frac{1}{2}$ " x $1\frac{1}{8}$ "	.02
060	RIVET, $\frac{5}{8}$ " x $1\frac{1}{8}$ "	.02
064	LAG SCREW, $\frac{1}{2}$ " x $2\frac{1}{2}$ "	.03
067	LAG SCREW, $\frac{1}{2}$ " x 4"	.07
089	RIVET, C. S. Head, $\frac{5}{8}$ " x 1"	.01
091	NUT LOCK for $\frac{1}{2}$ " Bolt	.02
0113	NUT LOCK for $\frac{5}{8}$ " Bolt	.02
0127	BOLT with Hex. Nut, $\frac{5}{8}$ " x $2\frac{1}{4}$ "	.07
0149	BOLT with Nut, $\frac{5}{8}$ " x $2\frac{1}{4}$ "	.07
0171	RIVET, $\frac{3}{8}$ " x $1\frac{1}{4}$ ". Used with Driving Plate 8784.	.01
0260	COUNTERSUNK BOLT with Nut, $\frac{5}{8}$ " x $1\frac{3}{4}$ "	.06
0261	COUNTERSUNK BOLT with Nut, $\frac{1}{2}$ " x $1\frac{3}{4}$ "	.04
0295	RIVET, $\frac{3}{4}$ " x 2". Used with Driving Piece 6567.	.03
0347	RIVET, $\frac{1}{2}$ " x $1\frac{3}{4}$ ", Round Head.	.02
0449	RIVET, $\frac{1}{2}$ " x $1\frac{1}{4}$ "	.02
0450	RIVET, $\frac{1}{2}$ " x $1\frac{1}{4}$ "	.02
634	ADJUSTING SCREW, special for 1872.	.14
635	HOOK BOLT, $\frac{5}{8}$ " x $6\frac{1}{4}$ ", with Nut and Nut Lock.	.12
636	HOOK BOLT, $\frac{5}{8}$ " x $7\frac{1}{4}$ ", with Nut and Nut Lock.	.12
639	CLIP for Adjustable Detector Bar Stop 1872.	.40
640	PIPE COUPLING, 1" reinforced.	.19
641	CLAMP Complete. Used on Detector Bar Operating Rod for compressing Spring 786.	.24
661	EYE ROD only with Tang End, for 2698.	.72
729	DRIVING BRACKET Casting, for 2686.	.50
730	PIN, $\frac{7}{8}$ " x $2\frac{3}{8}$ ", for Solid Jaws.	.07
744	SOLID JAW, $1\frac{1}{4}$ " with tang end.	.84
786	SPRING, used on Detector Bar Operating Rod	.36
799	STUD, used on Driving Brackets 2685 and 2686.	.12
931	SOLID JAW, $1\frac{1}{4}$ ", stub end.	.74
1098	Cast PIPE GUIDE Complete. Applied only when Spring 786 is used.	.52
1819	DRIVING BRACKET Casting, for 2685.	.50
1872	ADJUSTABLE DETECTOR BAR STOP Complete. In ordering specify width of rail. Hook Bolts should be $2\frac{1}{2}$ inches longer than width of rail.	.70
2658	CAP for 1098.	.12
2685	Detector Bar DRIVING PIECE Complete.	.64
2686	Detector Bar DRIVING PIECE Complete.	.64
2693	Single Roller WROUGHT PIPE CARRIER Complete. For other Pipe Carriers see page 94.	.31
2694	STAND for Pipe Carrier 2693.	.21
2695	ROLLER for Pipe Carrier 2693.	.09
2696	PIN for Pipe Carrier 2693.	.05
2698	EYE ROD Complete, $1\frac{1}{4}$ ", with tang end.	.92
2699	SOLID JAW, Complete, $1\frac{1}{4}$ " with tang end.	1.08
2922	HOOK BOLT, $\frac{5}{8}$ " x $5\frac{1}{4}$ ", with Nut and Nut Lock.	.12
2923	HOOK BOLT, $\frac{5}{8}$ " x $6\frac{1}{4}$ ", with Nut and Nut Lock.	.12
2924	HOOK BOLT, $\frac{5}{8}$ " x $7\frac{1}{4}$ ", with Nut and Nut Lock.	.12
2977	WROUGHT DETECTOR BAR STOP Complete. Used with Detector Bar Clip 2671. In ordering send print of rail section.	.70
2979	WROUGHT CLIP only for 2977. In ordering send print of rail section.	.64
2982	SHORT HOOK BOLT, $\frac{5}{8}$ " x $2\frac{1}{2}$ ", with Nut and Nut Lock. Required when long Hook Bolts cannot be used.	.12

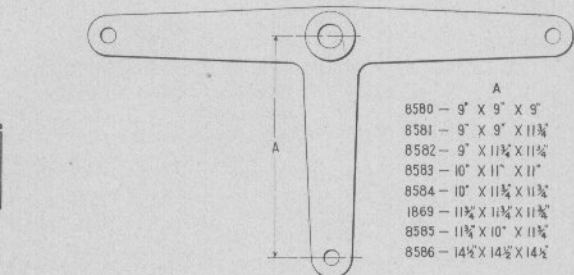
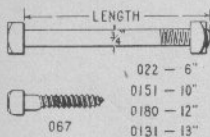
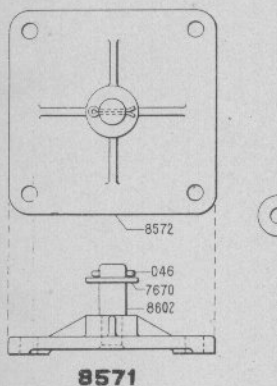
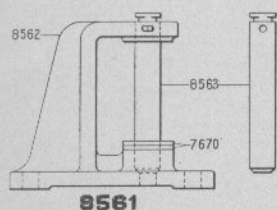
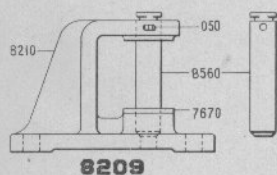
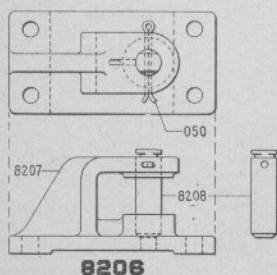
Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

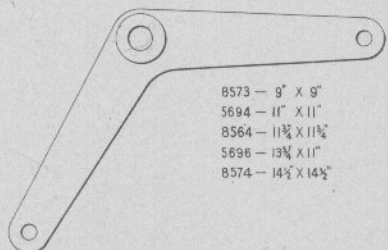
Order No.	DETECTION BARS. STOPS AND DRIVING PLATES.—CONT.	List Price.
3090	HOOK BOLT, $\frac{5}{8}$ " x $8\frac{1}{4}$ ", with Nut and Nut Lock.....	.12
4196	Detector Bar EYE ROD, with Stub End.....	.72
4200	SOLID JAW, Complete, $1\frac{1}{4}$ ", with stub end.....	.80
4364	NUT, Thin $\frac{3}{4}$ ".....	.04
4474	ADJUSTABLE Detector BAR STOP Complete. When ordering specify width of rail. Hook Bolts should be $2\frac{1}{2}$ inches longer than width of rail.....	.76
4475	CLIP half of ADJUSTABLE Detector BAR STOP, for 4474 or 8780.....	.28
4476	ADJUSTABLE STOP Casting for 4474.....	.36
4549	BASE Casting for 1098.....	.28
4718	WROUGHT Detector Bar DRIVING PIECE, using three $\frac{1}{2}$ " Rivets.....	.80
4804	SHORT HOOK BOLT, $\frac{5}{8}$ " x $3\frac{1}{2}$ ", with Nut and Nut Lock.....	.12
6513	HALF CLAMP for Clamp 641.....	.12
6567	WROUGHT Detector Bar DRIVING PIECE, using four $\frac{3}{4}$ " Rivets.....	.80
8321	WASHER for 8782 or 8783.....	.02
8322	WASHER for 8782 or 8783.....	.02
8760	HOOK BOLT, $\frac{5}{8}$ " x 9", with Nut and Nut Lock.....	.12
8761	HOOK BOLT, $\frac{5}{8}$ " x $9\frac{1}{2}$ ", with Nut and Nut Lock.....	.12
8762	HOOK BOLT, $\frac{5}{8}$ " x 10", with Nut and Nut Lock.....	.12
8764	Detector Bar STOP AND GUIDE, for 8780.....	.36
8765	ADJUSTABLE Detector Bar STOP, RAIL HALF, for 8781.....	.08
8766	ADJUSTABLE Detector Bar STOP AND GUIDE, for 8781.....	.16
8767	WROUGHT Detector Bar DRIVING and SPLICE PLATE.....	1.20
8768	PLATE for Detector Bar Driving Piece 8783.....	.40
8769	STUD for 8782 and 8783.....	.12
8770	Detector Bar STOP AND GUIDE for 4" Rail.....	.22
8771	Detector Bar STOP AND GUIDE for $4\frac{1}{4}$ " Rail.....	.22
8772	Detector Bar STOP AND GUIDE for $4\frac{1}{2}$ " Rail.....	.22
8773	Detector Bar STOP AND GUIDE for $4\frac{3}{4}$ " Rail.....	.22
8774	Detector Bar STOP AND GUIDE for 5" Rail.....	.22
8775	Detector Bar STOP AND GUIDE for $5\frac{1}{4}$ " Rail.....	.22
8776	Detector Bar STOP AND GUIDE for $5\frac{1}{2}$ " Rail.....	.22
8777	Detector Bar STOP AND GUIDE for $5\frac{3}{4}$ " Rail.....	.22
8780	ADJUSTABLE Detector Bar STOP AND GUIDE Complete. When ordering specify width of rail. Hook Bolts should be $2\frac{1}{2}$ inches longer than width of rail.....	.76
8781	ADJUSTABLE Detector Bar STOP AND GUIDE for fastening to web of rail.....	.16
8782	WROUGHT DRIVING and SPLICE PLATE Complete.....	1.36
8783	WROUGHT DRIVING PLATE Complete for Two Rivets.....	.54
8784	WROUGHT Detector Bar DRIVING PIECE using Four $\frac{3}{8}$ " Rivets.....	.80
8785	WROUGHT Detector Bar DRIVING PIECE using Four $\frac{1}{2}$ " Rivets.....	.80
8804	ADJUSTABLE Detector Bar STOP without Hook Bolt.....	.56

Order by NUMBER and NAME appearing in Large Type.

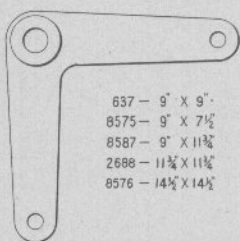
CRANKS, STANDS AND COMPENSATORS.



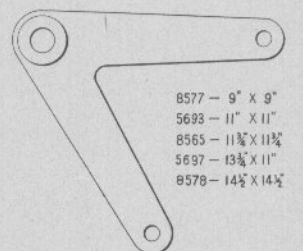
8580 — 9" X 9" X 9"
 8581 — 9" X 9" X 11½"
 8582 — 9" X 11½" X 11½"
 8583 — 10" X 11" X 11"
 8584 — 10" X 11½" X 11½"
 1069 — 11½" X 11½" X 11½"
 8585 — 11½" X 10" X 11½"
 8586 — 14½" X 14½" X 14½"



8573 — 9" X 9"
 5694 — 11" X 11"
 8564 — 11½" X 11½"
 5696 — 13½" X 11"
 8574 — 14½" X 14½"



637 — 9" X 9"
 8575 — 9" X 7½"
 8587 — 9" X 11½"
 2688 — 11½" X 11½"
 8576 — 14½" X 14½"



8577 — 9" X 9"
 5693 — 11" X 11"
 8565 — 11½" X 11½"
 5697 — 13½" X 11"
 8578 — 14½" X 14½"



743 — 9" X 9"
 2300 — 11½" X 11½"
 8579 — 14½" X 14½"
 3649 — 16½" X 16½"
 7856 — 17½" X 17½"
 8588 — 18" X 18"
 6686 — 20½" X 20½"
 6685 — 24" X 24"
 7212 — 31" X 31"



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

83

Order
No.

CRANKS, STANDS AND COMPENSATORS.

List Price.

022	BOLT with Nut, $\frac{3}{4}$ " x 6"	14
041	COTTER Pin, $\frac{1}{8}$ " x $1\frac{1}{4}$ " for 6270 (per 100)	80
046	COTTER Pin, $\frac{3}{16}$ " x 2" for 8571 (per 100)	80
050	COTTER Pin, $\frac{1}{4}$ " x 4", for Crank Stands (per 100)	80
066	LAG SCREW, $\frac{5}{8}$ " x 3"	05
067	LAG SCREW, $\frac{1}{4}$ " x 4"	07
073	WASHER for $\frac{1}{4}$ " Bolt	02
0131	BOLT with Nut, $\frac{3}{4}$ " x 13"	19
0151	BOLT with Nut, $\frac{1}{4}$ " x 10"	16
0180	BOLT with Nut, $\frac{3}{4}$ " x 12"	19
0195	BOLT with Nut, $\frac{5}{8}$ " x 3"	07
637	Right Angle CRANK, 9" x 9"	1.12
743	Straight Arm COMPENSATOR, 9" x 9"	1.12
1869	T. CRANK, $11\frac{1}{4}$ " x $11\frac{1}{4}$ " x $11\frac{1}{4}$ "	3.02
2300	Straight Arm COMPENSATOR, $11\frac{1}{4}$ " x $11\frac{1}{4}$ "	1.36
2688	Right Angle CRANK, $11\frac{1}{4}$ " x $11\frac{1}{4}$ "	1.36
3264	BOLT and Nut with Cotter Hole, for 6270	09
3649	Straight Arm COMPENSATOR, $16\frac{1}{2}$ " x $16\frac{1}{2}$ "	3.50
4063	GUIDE Complete. Used when one Detector Bar is operated from two machines	2.00
4064	STRAP for 4063	40
4065	GUIDE Casting for 4063	1.45
4066	LEVER, Special, Used when one Detector Bar is operated from two Machines	2.00
4067	Straight Arm COMPENSATOR, Special, $11\frac{1}{4}$ " x $11\frac{1}{4}$ "	1.00
4333	CAST WASHER for $\frac{1}{4}$ " Bolt	08
5693	ACUTE Angle CRANK, 11" x 11"	1.28
5694	OBTUSE Angle CRANK, 11" x 11"	1.28
5696	OBTUSE Angle CRANK, 11" x $13\frac{1}{4}$ "	1.96
5697	ACUTE Angle CRANK, 11" x $13\frac{1}{4}$ "	1.96
6270	GUIDE Complete for Compensator 4067. Used when one Detector Bar is operated from two Machines	3.80
6271	GUIDE Casting for 6270	2.60
6685	Straight Arm COMPENSATOR, 24" x 24"	5.50
6686	Straight Arm COMPENSATOR, $20\frac{1}{2}$ " x $20\frac{1}{2}$ "	5.00
7212	Straight Arm COMPENSATOR, 31" x 31"	7.00
7670	WASHER, special	02
7856	Straight Arm COMPENSATOR, $17\frac{1}{2}$ " x $17\frac{1}{2}$ "	4.40
8206	ONE-WAY CRANK STAND with Pin and Cotter	1.44
8207	ONE-WAY CRANK STAND. Casting Only	1.20
8208	PIN for One-way Crank Stand	22
8209	TWO-WAY CRANK STAND with Pin and Cotter	1.80
8210	TWO-WAY CRANK STAND. Casting only	1.48
8560	PIN for Two-way Crank Stand	27
8561	THREE-WAY CRANK STAND with Pin and Cotter	2.00
8562	THREE-WAY CRANK STAND. Casting only	1.60
8563	PIN for Three-way Crank Stand	34
8564	OBTUSE Angle CRANK, $11\frac{3}{4}$ " x $11\frac{3}{4}$ "	1.36
8565	ACUTE Angle CRANK, $11\frac{3}{4}$ " x $11\frac{3}{4}$ "	1.36
8566	ONE-WAY CRANK STAND Complete with T. Crank, $11\frac{3}{4}$ " x $11\frac{3}{4}$ " x $11\frac{3}{4}$ "	4.50
8567	ONE-WAY CRANK STAND Complete with a Right Angle Crank, $11\frac{3}{4}$ " x $11\frac{3}{4}$ "	2.84
8568	ONE-WAY CRANK STAND Complete with Compensator, $11\frac{3}{4}$ " x $11\frac{3}{4}$ "	2.84
8569	ONE-WAY CRANK STAND Complete with Obtuse Angle Crank, $11\frac{3}{4}$ " x $11\frac{3}{4}$ "	2.84
8570	ONE-WAY CRANK STAND Complete, with Acute Angle Crank, $11\frac{3}{4}$ " x $11\frac{3}{4}$ "	2.84

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

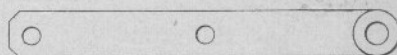
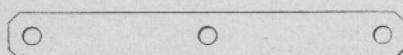
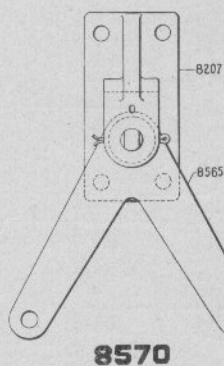
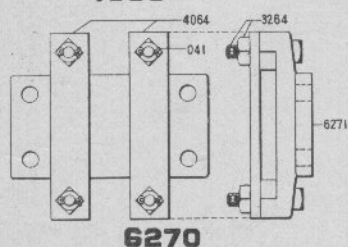
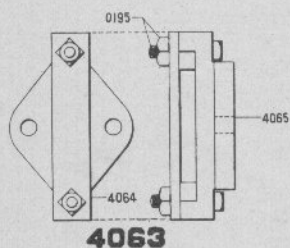
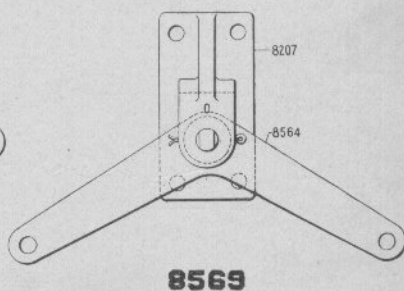
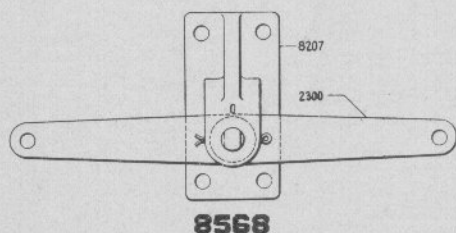
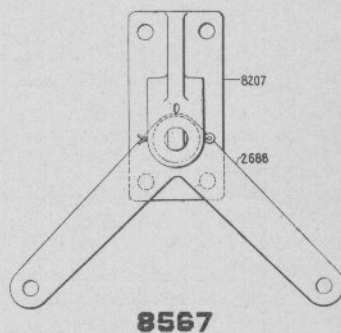
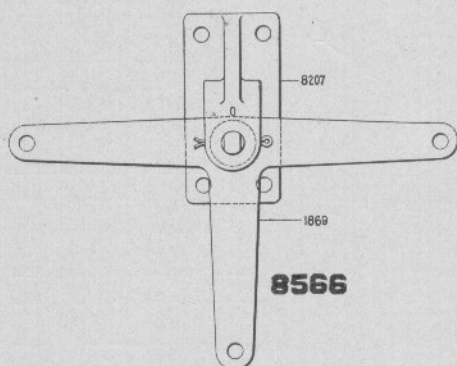
Order
No.

CRANKS, STANDS AND COMPENSATORS.—CONT.

List Price.

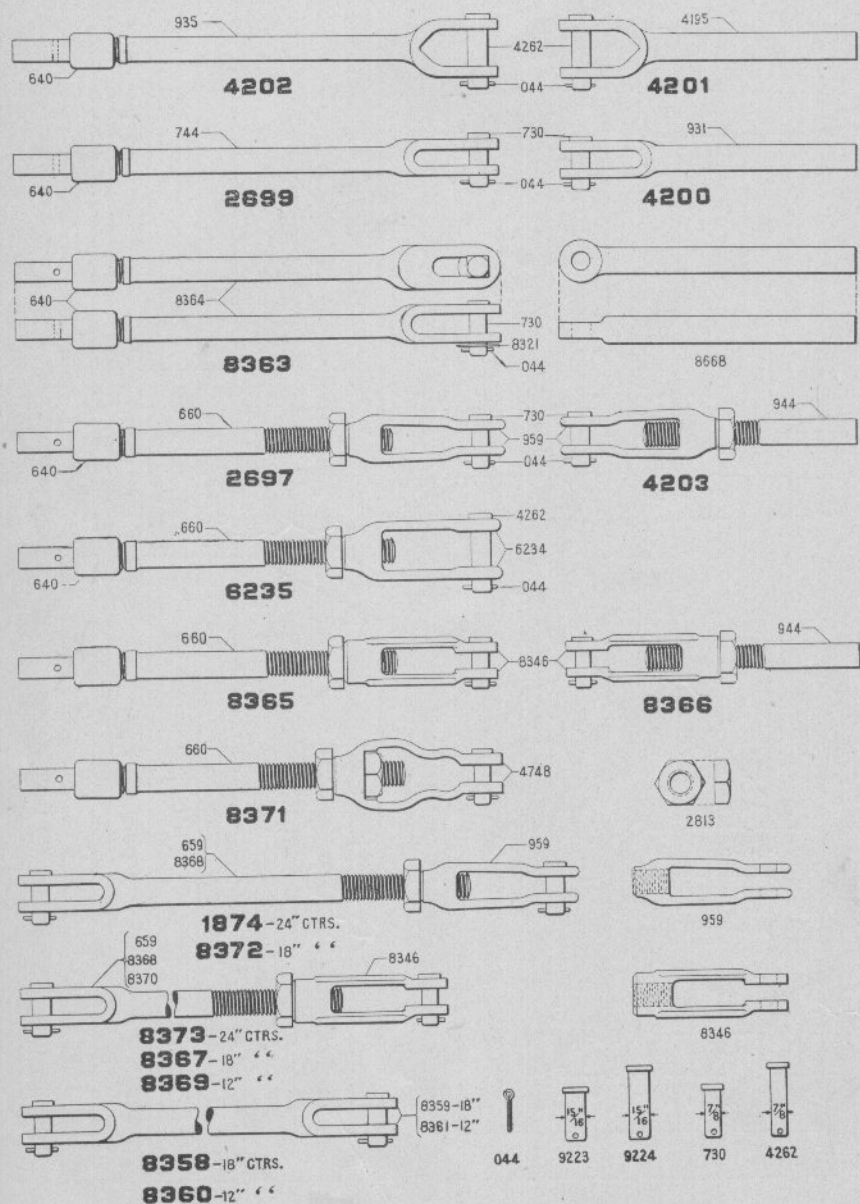
8571	ONE-WAY Plate CRANK STAND Complete with Pin and Cotter.....	1.50	....
8572	ONE-WAY Plate CRANK STAND, Casting only.....	1.20	....
8573	OBTUSE Angle CRANK, 9" x 9".....	1.12	....
8574	OBTUSE Angle CRANK, 14 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ ".....	2.56	....
8575	Right Angle CRANK, 9" x 7 $\frac{1}{2}$ ".....	1.24	....
8576	Right Angle CRANK, 14 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ ".....	2.56	....
8577	ACUTE Angle CRANK, 9" x 9".....	1.12	....
8578	ACUTE Angle CRANK, 14 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ ".....	2.56	....
8579	Straight Arm COMPENSATOR, 14 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ ".....	2.56	....
8580	T. CRANK, 9" x 9" x 9".....	1.53	....
8581	T. CRANK, 9" x 9" x 11 $\frac{3}{4}$ ".....	2.30	....
8582	T. CRANK, 9" x 11 $\frac{3}{4}$ " x 11 $\frac{3}{4}$ ".....	3.58	....
8583	T. CRANK, 10" x 11" x 11".....	2.08	....
8584	T. CRANK, 10" x 11 $\frac{3}{4}$ " x 11 $\frac{3}{4}$ ".....	2.58	....
8585	T. CRANK, 11 $\frac{3}{4}$ " x 10" x 11 $\frac{3}{4}$ ".....	2.58	....
8586	T. CRANK, 14 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ " x 14 $\frac{1}{2}$ ".....	3.90	....
8587	Right Angle CRANK, 9" x 11 $\frac{3}{4}$ ".....	1.48	....
8588	Straight Arm COMPENSATOR, 18" x 18".....	4.50	....
8602	STUD for One-Way Plate Crank Stand.....	.22	....

Order by NUMBER and NAME appearing in Large Type.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

RODS, LUGS, JAWS, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

87

Order
No.

RODS, LUGS, JAWS, ETC.

List Price.

044	COTTER PIN, $\frac{3}{16}$ " x $\frac{1}{4}$ " (per 100).....	.80
0114	RIVET, $\frac{1}{4}$ " x $\frac{1}{4}$ ", Rd. Hd. ....	.01
640	PIPE COUPLING, 1", reinforced. ....	.19
653	1" BLACK PIPE, per foot.	
659	SOLID JAW, $\frac{1}{4}$ ", with threaded end, for 1874, or 8373.	1.34
660	SCREW ROD, $\frac{1}{4}$ ", with tang end for 2697, etc. ....	.50
730	PIN, $\frac{7}{8}$ " x $2\frac{3}{8}$ ".....	.07
744	SOLID JAW, $\frac{1}{4}$ ", with tang end. ....	.84
931	SOLID JAW, $\frac{1}{4}$ ", stub end. ....	.74
933	DOUBLE JAW, $\frac{1}{4}$ ", for 4205.	2.00
935	WIDE SOLID JAW, $\frac{1}{4}$ ", with tang end.	1.14
944	SCREW ROD, $\frac{1}{4}$ ", stub end. ....	.44
959	WROUGHT SCREW JAW, $\frac{1}{4}$ ".....	1.10
1361	LUG, $\frac{1}{4}$ ", with tanged ends for 4374.	1.12
1874	ADJUSTABLE LINK COMPLETE, $\frac{1}{4}$ ", 24" centers, with Solid Jaw one end and Wrought Screw Jaw at the other end.	2.60
2697	WROUGHT SCREW JAW COMPLETE, $\frac{1}{4}$ ", with tang end.	1.90
2699	SOLID JAW COMPLETE, $\frac{1}{4}$ ".	1.08
2813	THIN NUT, $\frac{1}{4}$". ....	.09
2933	PLUG, 1" x 6", two holes. ....	.07
4195	WIDE SOLID JAW, $\frac{1}{4}$ ", stub end.	1.10
4197	DOUBLE JAW, $\frac{1}{4}$ ", for 4204.	1.90
4198	DOUBLE JAW, $\frac{1}{4}$ ", for 4206.	2.00
4199	LUG, $\frac{1}{4}$ ", for 4375.	1.12
4200	SOLID JAW COMPLETE, $\frac{1}{4}$ ", with stub end. ....	.80
4201	WIDE SOLID JAW COMPLETE, $\frac{1}{4}$ ", with stub end.	1.20
4202	WIDE SOLID JAW COMPLETE, $\frac{1}{4}$ ", with tang end.	1.44
4203	WROUGHT SCREW JAW COMPLETE, $\frac{1}{4}$ ", with stub end.	1.70
4204	DOUBLE JAW COMPLETE, $\frac{1}{4}$ ", with two stub ends.	2.00
4205	DOUBLE JAW COMPLETE, $\frac{1}{4}$ ", with two tang ends.	2.46
4206	DOUBLE JAW COMPLETE, $\frac{1}{4}$ ", with one tang and one stub end.	2.26
4207	WROUGHT LUG, $\frac{1}{4}$ ", with stub ends.	1.10
4262	PIN, $\frac{7}{8}$ " x $3\frac{3}{8}$ ", for Wide Jaw. ....	.11
4374	WROUGHT LUG COMPLETE, $\frac{1}{4}$ ", with tanged ends.	1.50
4375	WROUGHT LUG COMPLETE, $\frac{1}{4}$ ", with one tang and one stub end.	1.32
4748	MALLEABLE JAW, for 8371. (Special). ....	.48
6234	WIDE WROUGHT SCREW JAW, $\frac{1}{4}$ ", for 6235.	1.70
6235	WIDE WROUGHT SCREW JAW COMPLETE, $\frac{1}{4}$ ", with tang end.	2.50
6663	1" Black Pipe with 6" Plug, Coupling and Rivet, per foot.	
6891	SCREW ROD, $\frac{1}{4}$ ", with left hand thread and tang end. ....	.50
6892	WROUGHT TURNBUCKLE COMPLETE, $\frac{1}{4}$ ", with tang ends.	2.80
6893	THIN NUT, $\frac{1}{4}$ ", Left Hand Thread. ....	.09
7426	WROUGHT TURNBUCKLE COMPLETE, $\frac{1}{4}$ ", with stub ends.	2.30
7428	SCREW ROD, $\frac{1}{4}$ ", with left hand thread and stub end. ....	.44
8321	IRON WASHER for 8363. ....	.02
8346	MALLEABLE SCREW JAW, $\frac{1}{4}$". ....	.41
8349	DOUBLE JAW COMPLETE, $\frac{1}{4}$ ", with eye at one end and tang at the other.	2.76
8350	DOUBLE JAW for 8349.	2.50
8351	SCREW ROD COMPLETE, $\frac{1}{4}$ ", with tang end. ....	.68
8352	CLAMPED PIPE LUG COMPLETE for 1" Pipe.	1.00
8355	PLUG, 1" x 10", four holes. ....	.14
8356	WROUGHT TURNBUCKLE COMPLETE, $\frac{1}{4}$ ", with one stub and one tang end.	2.50
8357	1" BLACK PIPE, with 10" Plug, Coupling and Rivets, per foot.	
8358	SOLID LINK COMPLETE, $\frac{1}{4}$ ", 18" centers.	2.00

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

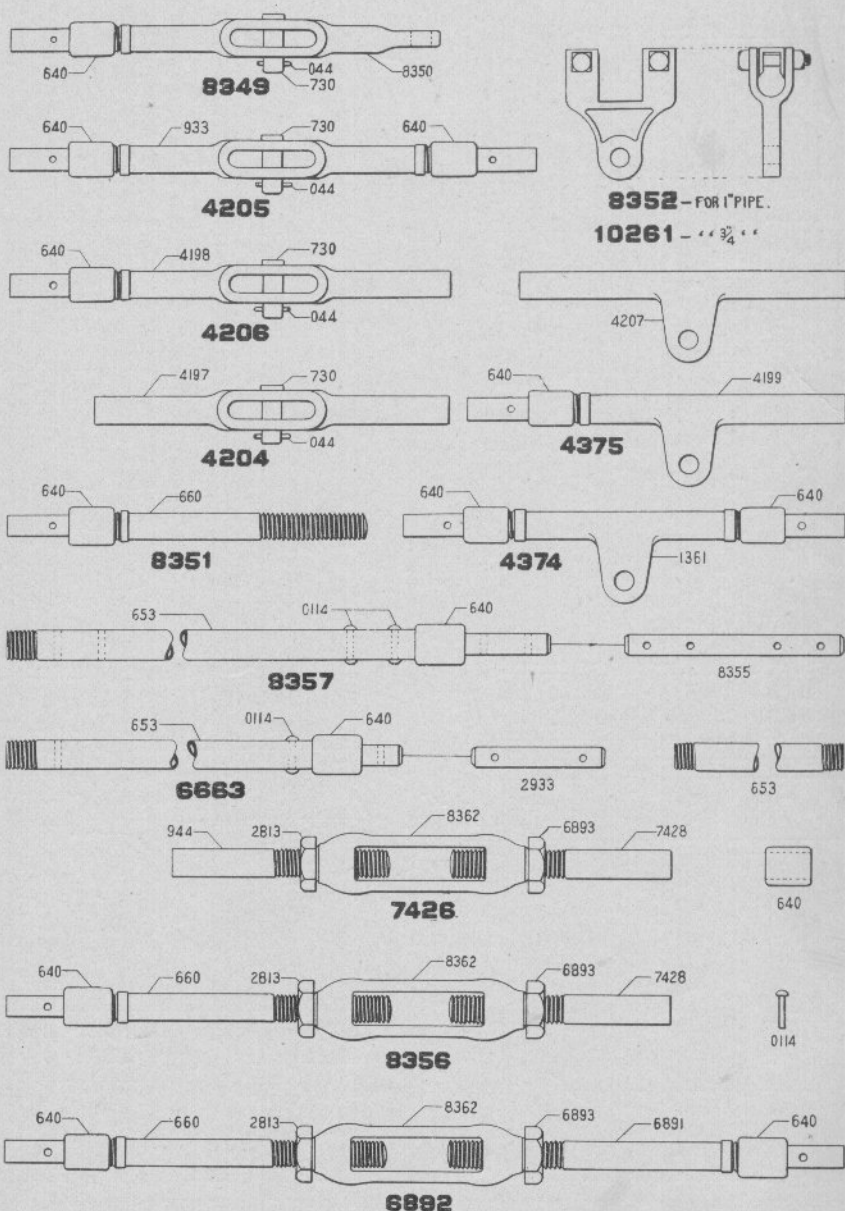
Order No.	RODS, LUGS, JAWS, ETC.—CONT.	List Price.
8359	LINK for 8358.....	1.90
8360	SOLID LINK COMPLETE, 1 $\frac{1}{4}$ ", 12" centers.....	1.90
8361	LINK for 8360.....	1.80
8362	WROUGHT TURNBUCKLE, 1 $\frac{1}{4}$ ", for 6892, etc.....	1.20
8363	SLOTTED JAW COMPLETE, 1 $\frac{1}{4}$ ", with tang end.....	1.94
8364	SLOTTED JAW for 8363.....	1.66
8365	MALLEABLE SCREW JAW COMPLETE, 1 $\frac{1}{4}$ ", with tang end.....	1.28
8366	MALLEABLE SCREW JAW COMPLETE, 1 $\frac{1}{4}$ ", with stub end.....	1.04
8367	ADJUSTABLE LINK COMPLETE, 1 $\frac{1}{4}$ ", 18" centers, with Solid Jaw at one end, and Malleable Screw Jaw at the other.....	1.90
8368	SOLID JAW, 1 $\frac{1}{4}$ ", with threaded end, for 8367 or 8372.....	1.26
8369	ADJUSTABLE LINK COMPLETE, 1 $\frac{1}{4}$ ", 12" centers, with Solid Jaw at one end and Malleable Screw Jaw at the other.....	1.84
8370	SOLID JAW, 1 $\frac{1}{4}$ ", with threaded end, for 8369.....	1.20
8371	SCREW JAW COMPLETE, 1 $\frac{1}{4}$ ", with tang end. (Special).....	1.44
8372	ADJUSTABLE LINK COMPLETE, 1 $\frac{1}{4}$ ", 18" centers, with Solid Jaw at one end, and Wrought Screw Jaw at the other.....	2.50
8373	ADJUSTABLE LINK COMPLETE, 1 $\frac{1}{4}$ ", 24" centers, with Solid Jaw at one end, and Malleable Screw Jaw at the other.....	2.00
8668	EYE ROD, 1 $\frac{1}{4}$ ", stub end. (Special for use with Jaws).....	.70
9223	PIN, $\frac{15}{16}$ " x 2 $\frac{3}{8}$ ".....	.09
9224	PIN, $\frac{15}{16}$ " x 3 $\frac{3}{8}$ ".....	.12
10261	CLAMPED PIPE LUG COMPLETE, for $\frac{3}{4}$ " Pipe.....	1.00

NOTE:

Where prices are not extended same will be furnished on application.

Order by NUMBER and NAME appearing in Large Type.

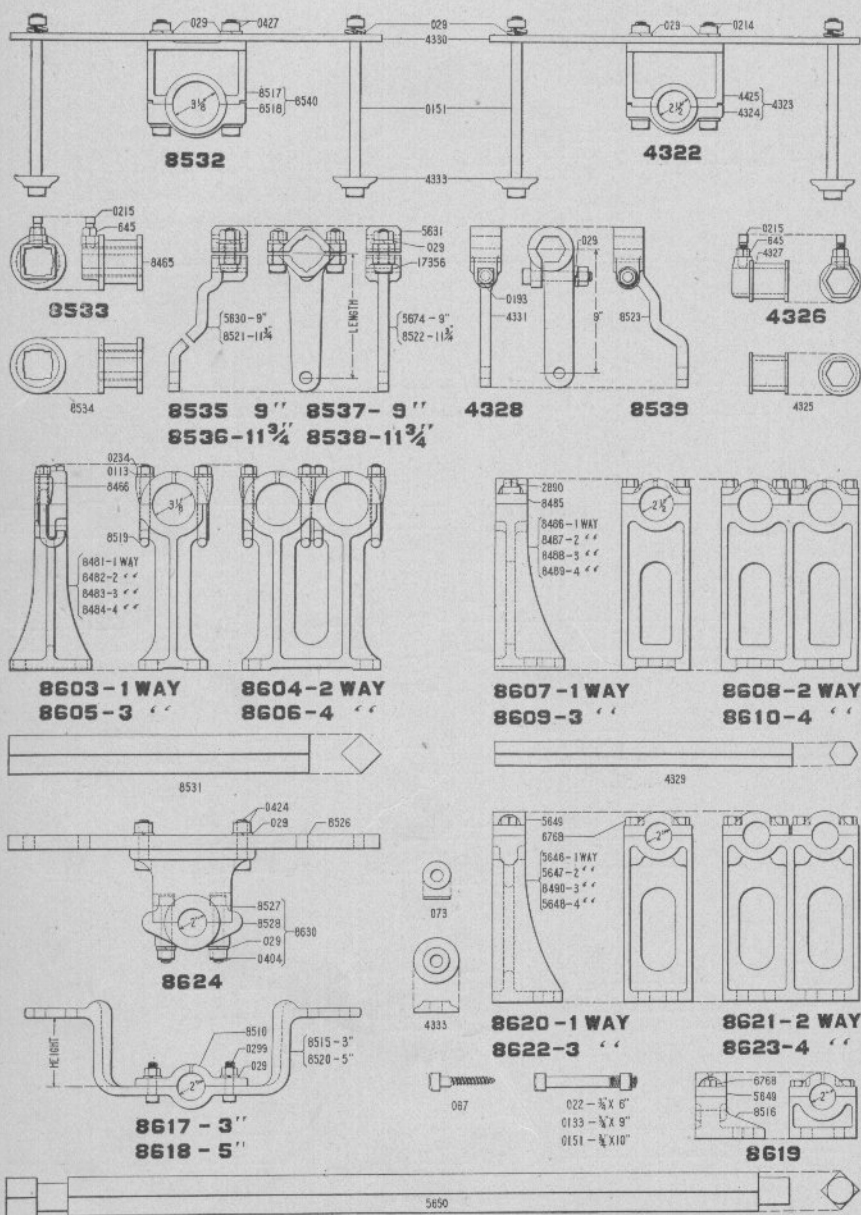
RODS, LUGS, JAWS, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

ROCKER SHAFT MATERIAL.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

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Order
No.

ROCKER SHAFT MATERIAL.

List Price.

022	BOLT with Nut, $\frac{3}{4}$ " x 6"	14
029	NUT LOCK for $\frac{3}{4}$ " Bolt.	.02
067	LAG SCREW, $\frac{3}{4}$ " x 4"	.07
073	WASHER for $\frac{3}{4}$ " Bolt.	.02
0113	NUT LOCK for $\frac{5}{8}$ " Bolt.	.02
0133	BOLT with Nut, $\frac{3}{4}$ " x 9"	.16
0151	BOLT with Nut, $\frac{3}{4}$ " x 10"	.16
0193	BOLT with Nut, $\frac{3}{4}$ " x 4 $\frac{1}{2}$ "	.12
0214	BOLT with Nut, $\frac{3}{4}$ " x 7 $\frac{1}{2}$ "	.14
0215	SET SCREW, $\frac{5}{8}$ " x 1 $\frac{3}{4}$ "	.04
0234	NUT for $\frac{5}{8}$ " Bolt.	.02
0299	BOLT with Nut, $\frac{3}{4}$ " x 2 $\frac{1}{2}$ "	.10
0404	BOLT with Nut, $\frac{3}{4}$ " x 4"	.12
0424	BOLT with Nut, $\frac{3}{4}$ " x 2 $\frac{3}{4}$ "	.10
0427	BOLT with Nut, $\frac{3}{4}$ " x 8"	.16
645	NUT, $\frac{5}{8}$ "	.04
2890	CAP SCREW, $\frac{5}{8}$ " x 2 $\frac{1}{4}$ "	.14
4322	Rocker Shaft BEARING Complete for 1 $\frac{5}{8}$ " Hexagon Shaft Journal, for use between ties.	5.50
4323	CAP AND BASE for 4322.	2.80
4324	CAP for 4323.	1.30
4325	INTERMEDIATE JOURNAL for Hex. Shaft.	.50
4326	END JOURNAL Complete, for Hex. Shaft.	.72
4327	END JOURNAL Casting, for 4326.	.62
4328	STRAIGHT ARM Complete for Hexagon Shaft.	1.48
4329	ROCKER SHAFT, 1 $\frac{5}{8}$ " Hex. (per foot)	1.40
4330	PLATE, $\frac{1}{2}$ " x 6" x 2' 6", supporting Rocker Shaft Bearings between ties, for 4322 or 8532.	2.00
4331	STRAIGHT ARM only, for Hex. Rocker Shaft, for 4328.	1.36
4333	CAST WASHER, for $\frac{3}{4}$ " Bolt.	.08
4425	BASE for 4323.	1.70
5630	OFFSET ARM, only, for 8535.	1.74
5631	CAP for Arm, for Square Rocker Shaft.	.80
5646	BASE for 8620.	1.32
5647	BASE for 8621.	2.80
5648	BASE for 8623.	5.30
5649	CAP for turned Rocker Shaft Bearing.	.40
5650	SQUARE ROCKER SHAFT, with turned Journals. Specify length of shaft and number of journals. Shaft per foot.	1.60
	For each turned Journal, add.	.84
5674	STRAIGHT ARM, only, for 8537.	1.46
6768	CAP SCREW, $\frac{5}{8}$ " x 1 $\frac{3}{4}$ " for 8619, etc.	.12
8465	END JOURNAL Casting, for 8533.	1.44
8466	CAP for Rocker Shaft Bearings 8603, etc.	.90
8481	BASE for 8603.	1.80
8482	BASE for 8604.	3.40
8483	BASE for 8605.	4.80
8484	BASE for 8606.	6.00
8485	CAP for Bearing 8607, etc.	.40
8486	BASE for 8607.	1.32
8487	BASE for 8608.	2.80
8488	BASE for 8609.	4.10
8489	BASE for 8610.	5.30
8490	BASE for 8622.	4.10
8510	CAP for 8617 or 8618.	.60
8515	BEARING, casting only, for 8617.	1.90
8516	BASE for 8619.	.92
8517	BASE for 8540.	1.70

Order by NUMBER and NAME appearing in Large Type.

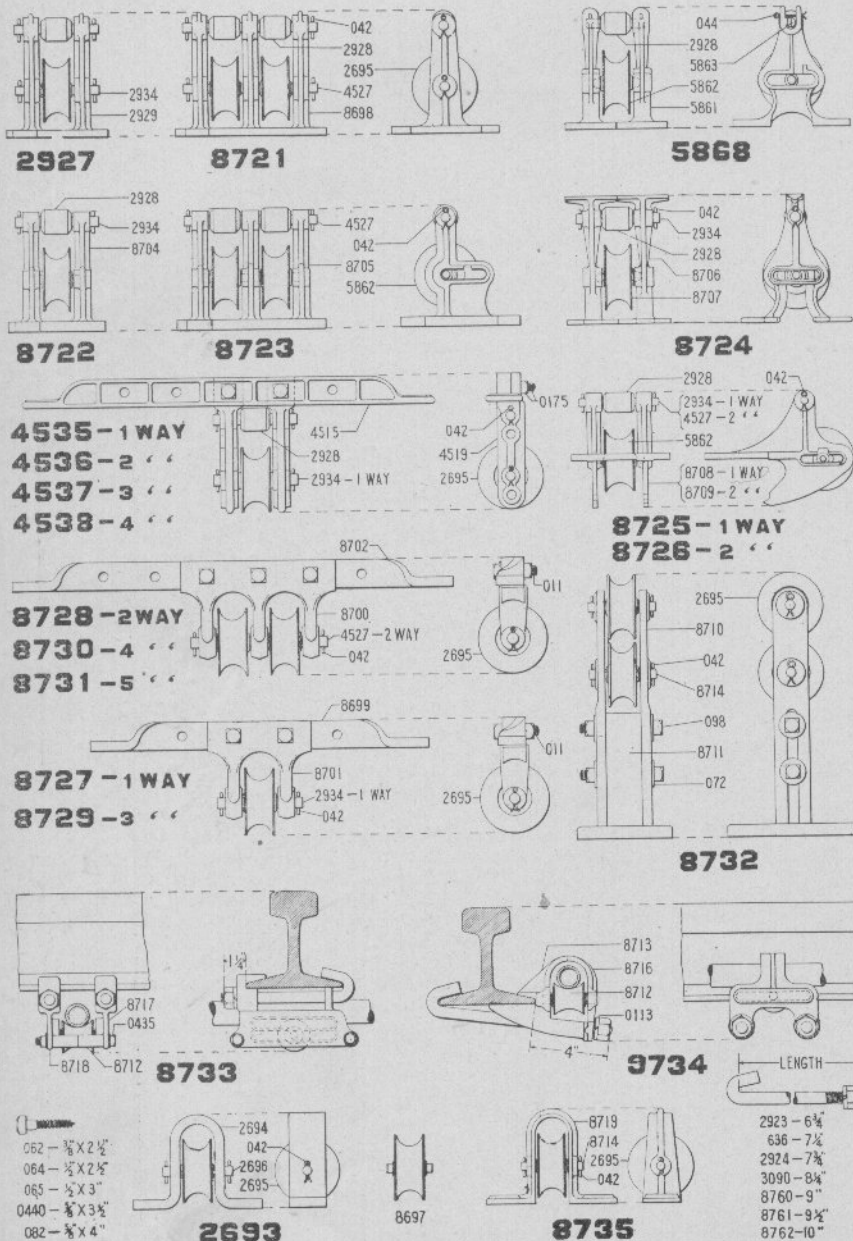
SWITCH AND LOCK MOVEMENT.

Order No.	ROCKER SHAFT MATERIAL.—CONT.	List Price.
8518	CAP for 8540.....	1.30
8519	HOOK BOLT only for 8603, etc.....	.10
8520	BEARING, Casting Only, for 8618.....	2.00
8521	OFFSET ARM, only, for 8536.....	2.50
8522	STRAIGHT ARM, only, for 8538.....	1.90
8523	OFFSET ARM, only, for 8539.....	1.44
8526	PLATE, 1" x 3½" x 2' 6", for 8624.....	2.28
8527	BASE for 8630.....	1.60
8528	CAP for 8630.....	1.05
8531	ROCKER SHAFT, 2" Square (per foot).....	1.60
8532	Rocker Shaft BEARING Complete for 2" Square Shaft Journal, for use between ties.....	5.50
8533	END JOURNAL, Complete, for 2" Square Rocker Shaft.....	1.50
8534	INTERMEDIATE JOURNAL for 2" Square Rocker Shaft.....	1.20
8535	OFFSET ARM Complete, 9", for 2" Square Rocker Shaft.....	2.80
8536	OFFSET ARM Complete, 12" for 2" Square Rocker Shaft.....	3.56
8537	STRAIGHT ARM Complete, 9" for 2" Square Rocker Shaft.....	2.50
8538	STRAIGHT ARM Complete, 12" for 2" Square Rocker Shaft.....	2.94
8539	OFFSET ARM, Complete, for Hex. Rocker Shaft.....	1.56
8540	CAP AND BASE for 8532.....	2.80
8603	HIGH, ONE-WAY, Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft Journal.....	2.80
8604	HIGH, TWO-WAY Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft Journal.....	5.40
8605	HIGH, THREE-WAY, Rocker Shaft BEARING Complete for 2" Square Rocker Shaft Journal.....	7.80
8606	HIGH, FOUR-WAY, Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft Journal.....	10.00
8607	HIGH, ONE-WAY, Rocker Shaft BEARING Complete, for Hexagon Rocker Shaft Journal.....	1.80
8608	HIGH, TWO-WAY, Rocker Shaft BEARING Complete, for Hexagon Rocker Shaft Journal.....	3.70
8609	HIGH, THREE-WAY, Rocker Shaft BEARING Complete, for Hexagon Rocker Shaft Journal.....	5.50
8610	HIGH, FOUR-WAY, Rocker Shaft BEARING Complete, for Hexagon Rocker Shaft Journal.....	7.14
8617	Rocker Shaft BEARING Complete, for use between ties, 3" drop.....	2.60
8618	Rocker Shaft BEARING, Complete, for use between ties, 5" drop.....	2.70
8619	ONE-WAY LOW Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft, with turned Journal.....	1.50
8620	HIGH, ONE-WAY Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft with turned Journals.....	1.80
8621	HIGH, TWO-WAY, Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft, with turned Journals.....	3.70
8622	HIGH, THREE-WAY, Rocker Shaft BEARING Complete, for 2" Square Rocker Shaft, with turned Journals.....	5.50
8623	HIGH, FOUR-WAY, Rocker Shaft BEARING Complete, for 2" SQUARE ROCKER SHAFT, with turned Journals.....	7.14
8624	Rocker Shaft BEARING Complete for Square Rocker Shaft with 2" turned Journals. For use between ties.....	5.00
8630	CAP AND BEARING Complete for 8624.....	2.80
17356	Bolt with Hex. Nut, ¾" x 2½". (Special).....	.12

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

PIPE CARRIERS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

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Order No.	PIPE CARRIERS.	List Price.
011	BOLT with Nut, $\frac{1}{4}$ " x 2" for 8727, etc.	.04
042	COTTER Pin, $\frac{3}{16}$ " x 1" (per 100)	.80
044	COTTER Pin, $\frac{3}{16}$ " x 1 $\frac{1}{2}$ " (per 100)	.80
062	LAG SCREW, $\frac{1}{8}$ " x 2 $\frac{1}{2}$ "	.02
064	LAG SCREW, $\frac{1}{8}$ " x 2 $\frac{1}{2}$ "	.03
065	LAG SCREW, $\frac{1}{2}$ " x 3"	.03
072	WASHER for $\frac{1}{2}$ " Bolt, for 8732	.01
082	LAG SCREW, $\frac{5}{8}$ " x 4"	.06
098	BOLT with Nut, $\frac{1}{2}$ " x 3 $\frac{1}{4}$ "	.05
0113	NUT LOCK for $\frac{3}{8}$ " Bolt	.02
0175	BOLT and Nut, $\frac{3}{8}$ " x 1 $\frac{1}{2}$ "	.03
0435	BOLT with Nut, $\frac{3}{8}$ " x 4"	.04
0440	LAG SCREW, $\frac{3}{8}$ " x 3 $\frac{1}{2}$ "	.05
636	HOOK BOLT, $\frac{3}{8}$ " x 7 $\frac{1}{4}$ ", with Nut and Nut Lock	.12
2693	WROUGHT PIPE CARRIER with Single Roller. Complete	.31
2694	STAND for 2693	.21
2695	BOTTOM ROLLER with Pin Hole for 2693, etc.	.09
2696	PIN for 2693	.05
2923	HOOK BOLT, $\frac{3}{8}$ " x 6 $\frac{3}{4}$ ", with Nut and Nut Lock	.12
2924	HOOK BOLT, $\frac{3}{8}$ " x 7 $\frac{3}{4}$ ", with Nut and Nut Lock	.12
2927	ONE-WAY PLAIN PIPE CARRIER. For prices see page 97	2.40
2928	TOP ROLLER for 2927, etc. (per 100)	.31
2929	STAND for One-way Pipe Carrier 2927	.05
2934	PIN for One-way Pipe Carrier, 2927, etc.	.12
3090	HOOK BOLT, $\frac{5}{8}$ " x 8 $\frac{1}{2}$ ", with Nut and Nut Lock	.48
4515	Malleable BEARING PLATE for Pipe Carriers 4535, etc.	.16
4519	SIDE PLATE for Transverse Pipe Carrier 4535, etc.	.05
4527	PIN for Two-way Pipe Carrier, 8721, etc.	
4535	ONE-WAY Transverse PIPE CARRIER, Complete. For prices see page 97	
4536	TWO-WAY Transverse PIPE CARRIER Complete. For prices see page 97	
4537	THREE-WAY Transverse PIPE CARRIER Complete. For prices see page 97	
4538	FOUR-WAY Transverse PIPE CARRIER Complete. For prices see page 97	
5861	STAND for Universal E. Z. Pipe Carrier	.15
5862	BOTTOM ROLLER with Cast Trunnions	.09
5863	PIN for Top Roller, E. Z. Pipe Carrier	.03
5868	ONE-WAY Universal E. Z. PIPE CARRIER Complete. For price see page 97	
8697	BOTTOM ROLLER with Steel Pin. (Special)	.14
8698	STAND for Two-way plain Pipe Carrier 8721	.45
8699	Wrought BEARING PLATE for Transverse Pipe Carriers 8727 or 8729	.96
8700	BEARING for Two-way Transverse Pipe Carrier. (Special)	.45
8701	BEARING for One-way Transverse Pipe Carrier. (Special)	.45
8702	Wrought BEARING PLATE for Transverse Pipe Carriers 8728, etc.	1.02
8704	STAND for One-way Anti-friction Pipe Carrier 8722	.31
8705	STAND for Two-way Anti-friction Pipe Carrier 8723	.45
8706	STAND for Universal Pipe Carrier. (Malleable)	.19
8707	BOTTOM ROLLER with Cast Trunnions. (Malleable)	.14
8708	STAND for special One-way Anti-friction Pipe Carrier 8725	.31
8709	STAND for special Two-way Anti-friction Pipe Carrier 8726	.45
8710	ADJUSTABLE SIDE PLATE for Vertical Pipe Guide	.31
8711	BASE for Adjustable Pipe Guide 8732	.86
8712	SMALL ROLLER with Cast Trunnions, for 4733 or 4734	.05
8713	CLIP for Anti-friction Rail Clip Pipe Carrier. (Rail Half)	.26
8714	PIN for One-way Pipe Carrier 8735	.05
8716	CLIP for Anti-friction Rail Clip Pipe Carrier. (Outside Half)	.24

Order by NUMBER and NAME appearing in Large Type.

SWITCH AND LOCK MOVEMENT.

Order
No.

PIPE CARRIERS,—CONT.

List Price.

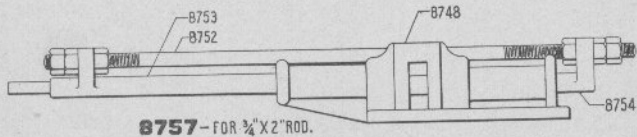
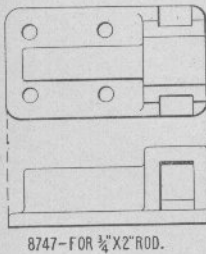
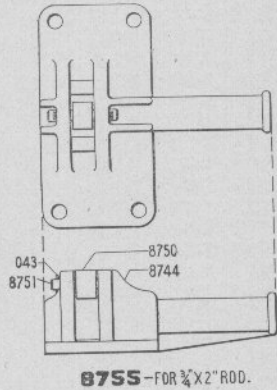
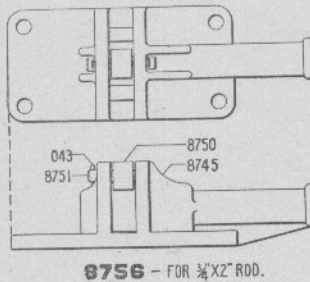
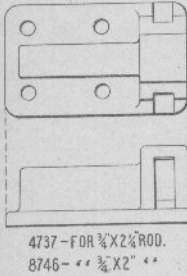
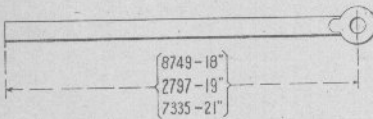
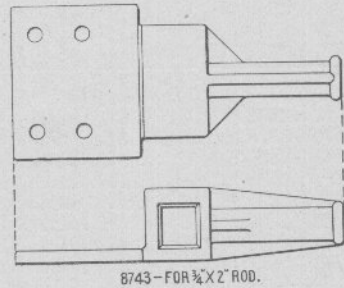
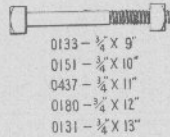
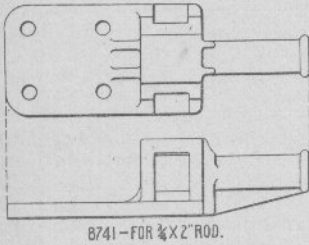
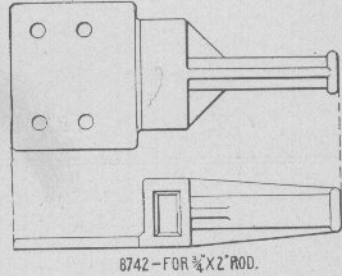
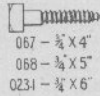
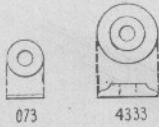
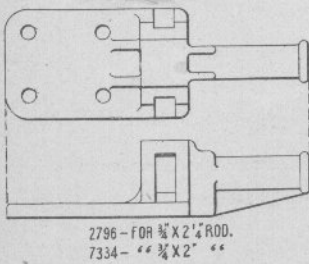
8717	RIGHT HAND CLIP for Transverse Pipe Carrier, 8733.....	.29	....
8718	LEFT HAND CLIP for Transverse Pipe Carrier, 8733.....	.29	....
8719	STAND for 8735.....	.21	....
8721	TWO-WAY Plain PIPE CARRIER Complete. For price see page 97.....		....
8722	ONE-WAY Anti-friction PIPE CARRIER Complete. For price see page 97.....		....
8723	TWO-WAY Anti-friction PIPE CARRIER Complete. For price see page 97.....		....
8724	ONE-WAY Universal PIPE CARRIER Comp. (Mall.) For price see page 97.....		....
8725	ONE-WAY Anti-friction PIPE CARRIER Complete. (Special) for fastening to Ties.....	.57	....
8726	TWO-WAY Anti-friction PIPE CARRIER Complete. (Special) for fastening to Ties.....	.91	....
8727	ONE-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....		....
8728	TWO-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....		....
8729	THREE-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....		....
8730	FOUR-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....		....
8731	FIVE-WAY Transverse PIPE CARRIER Complete with Wrought Bearing Plate. For price see page 97.....		....
8732	ADJUSTABLE PIPE GUIDE Complete.....	1.82	....
8733	ONE-WAY Transverse PIPE CARRIER Complete with Hook Bolts for clamping to rail. When ordering give width of rail.....	1.10	....
8734	RAIL CLIP PIPE CARRIER Complete with Hook Bolts. When ordering give width of rail.....	.64	....
8735	Cast PIPE CARRIER with Single Roller Complete.....	.34	....
8760	HOOK BOLT, $\frac{5}{8}$ " x 9", with Nut and Nut Lock.....	.12	....
8761	HOOK BOLT, $\frac{5}{8}$ " x 9½", with Nut and Nut Lock.....	.12	....
8762	HOOK BOLT, $\frac{5}{8}$ " x 10", with Nut and Nut Lock.....	.12	....

Order by NUMBER and NAME appearing in Large Type.

PRICE LIST OF PIPE CARRIERS.

Number of Ways.	2927 or 8721		4535 1-Way. 4536 2-Way. 4537 3-Way. 4538 3-Way.		5868		8722 or 8723		8724		8727 1-Way. 8728 2-Way. 8729 3-Way. 8730 4-Way. 8731 5-Way.	
	Without Screws.	With Screws.	Without Screws.	With Screws.	Without Screws.	With Screws.	Without Screws.	With Screws.	Without Screws.	With Screws.	Without Screws.	With Screws.
1	.53	.60	1.10	1.20	.44	.52	.52	.60	.58	.64	1.48	1.58
2	.82	.91	1.38	1.48	.76	.91	.82	.91	.94	1.04	1.78	1.88
3	1.13	1.27	1.66	1.76	1.10	1.30	1.12	1.28	1.30	1.42	2.04	2.14
4	1.39	1.58	1.94	2.04	1.44	1.68	1.40	1.58	1.66	1.82	2.40	2.50
5	1.70	1.90	....	....	1.78	2.06	1.70	1.90	2.02	2.20	2.66	2.76
6	1.99	2.23	....	....	2.11	2.45	2.00	2.24	2.38	2.60	....	....
7	2.28	2.57	....	....	2.45	2.83	2.28	2.56	2.74	3.00	....	....
8	2.59	2.88	....	....	2.78	3.22	2.60	2.88	3.10	3.38	....	....
9	2.88	3.22	....	....	3.12	3.60	2.88	3.22	3.46	3.78	....	....
10	3.17	3.55	....	....	3.46	3.98	3.17	3.55	3.80	4.16	....	....
11	3.45	3.86	....	....	3.79	4.37	3.46	3.86	4.18	4.58	....	....
12	3.77	4.20	....	....	4.13	4.75	3.76	4.20	4.54	4.96	....	....
13	4.05	4.54	....	....	4.46	5.14	4.06	4.54	4.90	5.34	....	....
14	4.34	4.85	....	....	4.80	5.52	4.34	4.84	5.26	5.74	....	....
15	4.65	5.18	....	....	5.14	5.90	4.66	5.18	5.62	6.12	....	....
16	4.94	5.52	....	....	5.48	6.28	4.94	5.52	5.99	6.52	....	....
17	5.23	5.83	....	....	5.80	6.68	5.23	5.83	6.34	6.92	....	....
18	5.52	6.16	....	....	6.14	7.06	5.52	6.16	6.68	7.30	....	....
19	5.83	6.50	....	....	6.48	7.44	5.84	6.50	7.06	7.70	....	....
20	6.12	6.84	....	....	6.82	7.82	6.12	6.84	7.42	8.08	....	....
21	6.40	7.15	....	....	7.16	8.20	6.40	7.15	7.78	8.48	....	....
22	6.70	7.49	....	....	7.48	8.60	6.70	7.49	8.13	8.86	....	....
23	7.00	7.82	....	....	7.82	8.98	7.00	7.82	8.49	9.26	....	....
24	7.30	8.14	....	....	8.16	9.36	7.30	8.14	8.85	9.66	....	....
25	7.58	8.47	....	....	8.50	9.74	7.60	8.47	9.20	10.04	....	....
26	7.87	8.80	....	....	8.84	10.12	7.87	8.80	9.57	10.44	....	....
27	8.18	9.12	....	....	9.16	10.52	8.18	9.12	9.94	10.84	....	....
28	8.47	9.44	....	....	9.50	10.90	8.48	9.44	10.30	11.22	....	....
29	8.76	9.80	....	....	9.84	11.28	8.76	9.80	10.66	11.62	....	....
30	9.04	10.10	....	....	10.16	11.66	9.04	10.10	11.00	12.00	....	....

FACING POINT LOCKS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.

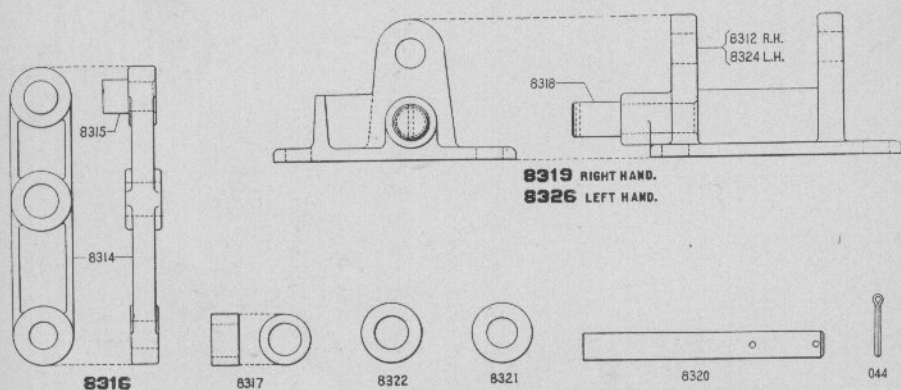
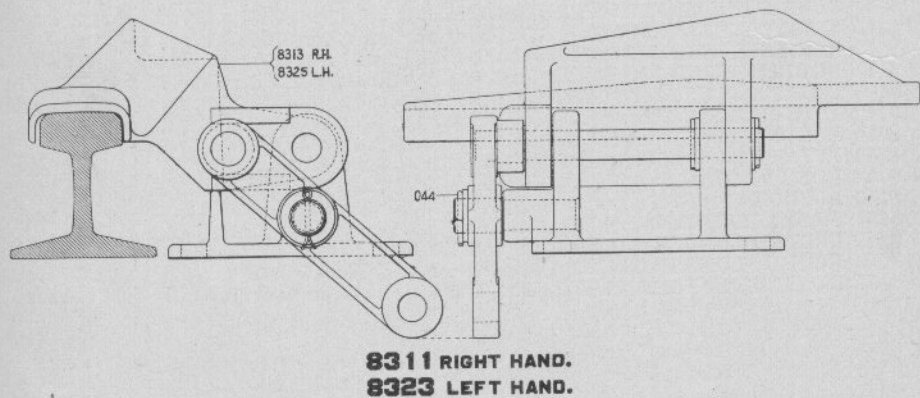
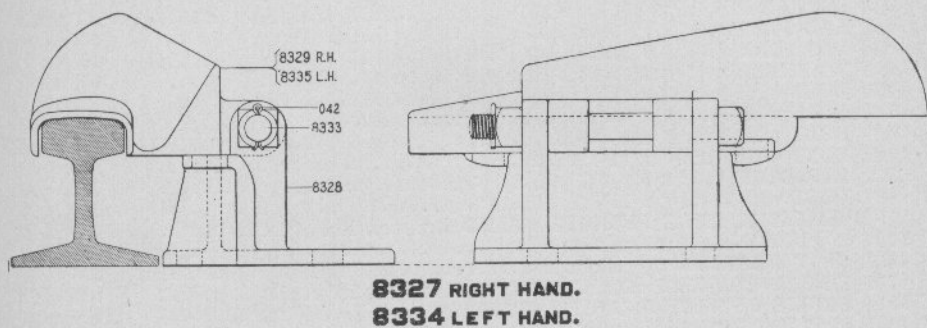
99

Order No.	FACING POINT LOCKS.	List Price.
043	COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (per 100).....	.80
067	LAG SCREW, $\frac{3}{4}$ " x 4".....	.07
068	LAG SCREW, $\frac{3}{4}$ " x 5".....	.08
073	WASHER for $\frac{3}{4}$ " Bolt.....	.02
0131	BOLT with Nut, $\frac{3}{4}$ " x 13".....	.19
0133	BOLT with Nut, $\frac{3}{4}$ " x 9".....	.16
0151	BOLT with Nut, $\frac{3}{4}$ " x 10".....	.16
0180	BOLT with Nut, $\frac{3}{4}$ " x 12".....	.19
0231	LAG SCREW, $\frac{3}{4}$ " x 6".....	.09
0437	BOLT with Nut, $\frac{3}{4}$ " x 11".....	.19
2796	SINGLE OUTSIDE PLUNGER STAND for Lock Rod, $\frac{3}{4}$ " x $2\frac{1}{4}$ ".....	2.20
2797	1" PLUNGER, 19 inches long.....	.64
4333	CAST WASHER for $\frac{3}{4}$ " Bolt.....	.08
4737	SINGLE PLUNGER STAND, for Lock Rod, $\frac{3}{4}$ " x $2\frac{1}{2}$ ".....	1.80
7334	SINGLE OUTSIDE PLUNGER STAND for Lock Rod, $\frac{3}{4}$ " x 2".....	2.04
7335	1" PLUNGER, 21 inches long.....	.70
8741	DOUBLE OUTSIDE PLUNGER STAND for Two Lock Rods $\frac{3}{4}$ " x 2".....	2.04
8742	SINGLE OUTSIDE PLUNGER STAND for Lock Rod, $\frac{3}{4}$ " x 2".....	2.10
8743	DOUBLE OUTSIDE PLUNGER STAND for Two Lock Rods, $\frac{3}{4}$ " x 2".....	2.22
8744	SINGLE INSIDE PLUNGER STAND, casting only, for 8755.....	2.28
8745	SINGLE INSIDE PLUNGER STAND, casting only, for 8756.....	2.04
8746	SINGLE PLUNGER STAND for Lock Rod, $\frac{3}{4}$ " x 2".....	1.64
8747	DOUBLE PLUNGER STAND for Two Lock Rods, $\frac{3}{4}$ " x 2".....	2.10
8748	DUPLEX PLUNGER STAND for 8757.....	2.22
8749	1" PLUNGER, 18 " long.....	.60
8750	ROLLER, for 8755 or 8756.....	.17
8751	PIN for 8755 or 8756.....	.08
8752	ROD for 8757.....	.68
8753	PLUNGER for 8757.....	3.80
8754	SHORT PLUNGER for 8757.....	2.60
8755	INSIDE PLUNGER STAND, Complete for Lock Rod, $\frac{3}{4}$ " x 2".....	2.50
8756	INSIDE PLUNGER STAND, Complete for Lock Rod, $\frac{3}{4}$ " x 2".....	2.30
8757	DUPLEX PLUNGER STAND, Complete with Plungers.....	7.10

Order by NUMBER and NAME appearing in Large Type.

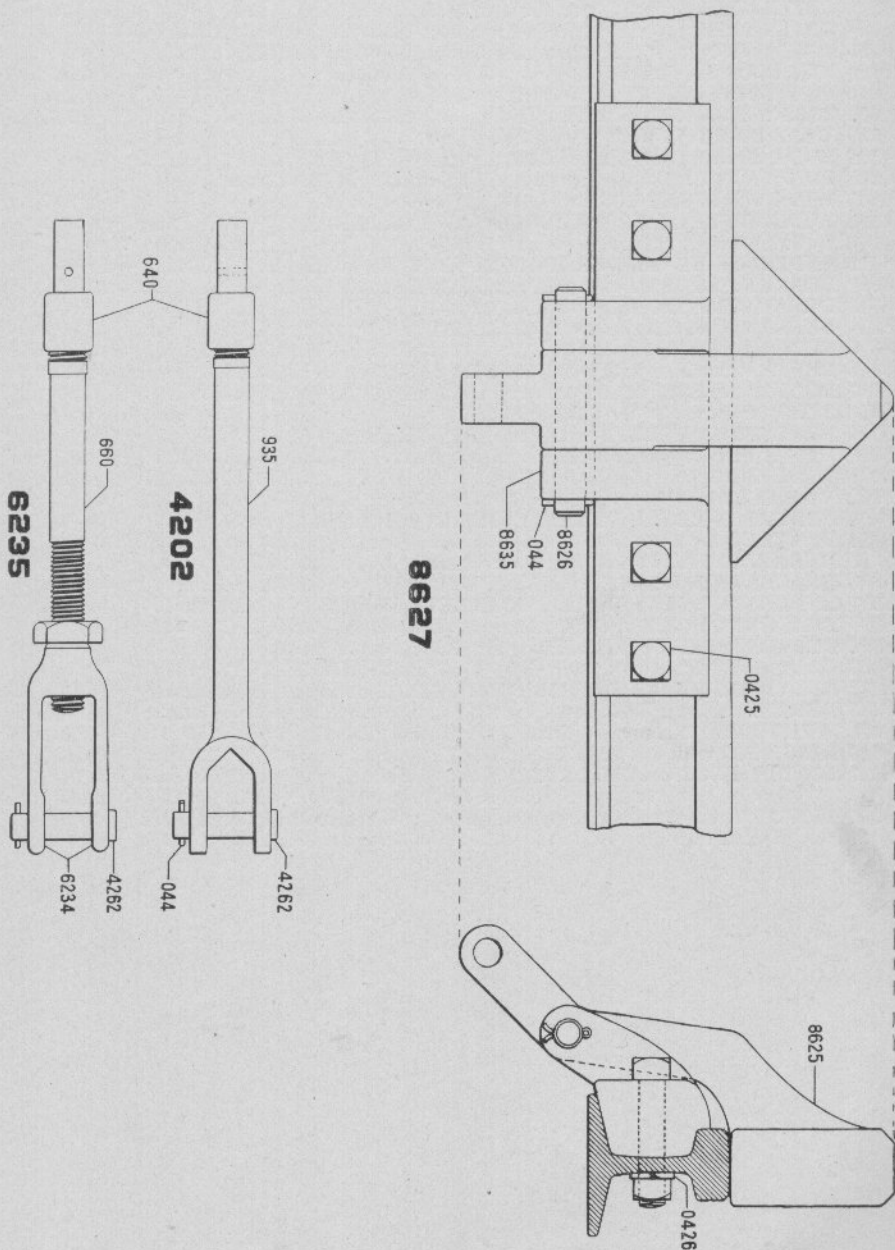
SWITCH AND LOCK MOVEMENT.

ANDERSON-BEVAN DERAIL.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SCOTCH BLOCK.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH AND LOCK MOVEMENT.


Order No.	ANDERSON-BEVAN DERAIL AND SCOTCH BLOCK.	List Price.
042	COTTER PIN, $\frac{3}{16}$ " x 1" (per 100).....	.80
044	COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100).....	.80
0425	BOLT with Nut, $\frac{1}{2}$ " x 5", fastening Scotch Block to Rail.....	.16
0426	NUT LOCK for $\frac{1}{2}$ " Bolt.....	.02
640	PIPE COUPLING, 1" reinforced.....	.19
660	SCREW ROD, $1\frac{1}{4}$ ", with Tang End.....	.50
935	WIDE SOLID JAW, $1\frac{1}{4}$ ", with Tang End.....	1.14
4202	WIDE SOLID JAW COMPLETE, $1\frac{1}{4}$ ", with Tang End.....	1.44
4262	PIN, $\frac{7}{8}$ " x $3\frac{3}{8}$ ", for Wide Jaws.....	.11
6234	WIDE WROUGHT SCREW JAW, $1\frac{1}{4}$ ".....	1.70
6235	WIDE ADJUSTABLE WROUGHT JAW COMPLETE, $1\frac{1}{4}$ ", with Tang End.....	2.50
8311	ANDERSON-BEVAN DERAIL COMPLETE, Right Hand.....	24.00
8312	BRACKET for 8319.....	7.80
8313	DERAIL CASTING, Right Hand, for 8311.....	12.00
8314	LEVER for 8316.....	3.80
8315	STUD for 8316.....	.30
8316	LEVER, Complete with Stud, for 8311 or 8323.....	4.00
8317	ROLLER for 8311 or 8323.....	.30
8318	STUD for Brackets for 8319 or 8326.....	.30
8319	BRACKET COMPLETE with Stud, Right Hand, for 8311.....	8.00
8320	HINGE PIN for 8311 or 8323.....	.20
8321	WASHER, Special, for 8320.....	.02
8322	WASHER for 8318.....	.02
8323	ANDERSON-BEVAN DERAIL COMPLETE, Left Hand.....	24.00
8324	BRACKET for 8326.....	7.80
8325	DERAIL CASTING, Left Hand for 8323.....	12.00
8326	BRACKET COMPLETE with Stud, Left Hand, for 8323.....	8.00
8327	ANDERSON-BEVAN DERAIL COMPLETE, Right Hand (hand throw).....	14.00
8328	BRACKET for 8327 or 8334.....	6.00
8329	DERAIL CASTING, Right Hand, for 8327.....	8.00
8333	BOLT with Nut, with Cotter Hole, $\frac{3}{4}$ " x 7".....	.18
8334	ANDERSON-BEVAN DERAIL COMPLETE, Left Hand (hand throw).....	14.00
8335	DERAIL Casting, Left Hand, for 8327.....	8.00
8625	WEDGE BLOCK only, for 8627 (steel casting).....	14.10
8626	HINGE PIN with Cotter Holes for 8627.....	.17
8627	SCOTCH BLOCK COMPLETE. When ordering send print of Rail Section.....	28.80
8635	BRACKET, Casting only, for Scotch Block. When ordering, send print of Rail Section.....	13.70

Order by NUMBER and NAME appearing in Large Type.

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HIGH SIGNALS.

N THE following pages are illustrated a number of the various styles of High Signal of both enclosed and outside connected types, which are shown in diagram on pages 107 and 118 respectively. By reference to these diagrams, signals can be ordered in complete form, exclusive of Lamps, Glass, Roundels and Foundations.

On other pages some of the styles of signals in general use have been illustrated, together with a great variety of signal fittings, such as Spectacle Castings, Lamps, Glass, Roundels, Locks, Slots, Selectors, Circuit Breakers, Etc., all of which are listed in detail.

Other styles of signals not shown in this catalogue will be furnished on specifications.

DIRECTIONS FOR ORDERING COMPLETE SIGNALS.

Lamps, Glass, Roundels and Foundations are not included with complete signal and should be ordered separately. For Lamps, see page 212. For Glass or Roundels, see page 210.

GROUND SIGNALS.

In ordering specify as follows:

- (1) Style number (see page opposite.)
- (2) Distance between arms.
- (3) Home or Distant.
- (4) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (5) Slotted if required.
- (6) Three position if required.

BRIDGE SIGNALS.

In ordering specify as follows:

- (1) Style number (see page opposite.)
- (2) Depth of Bridge Truss.
- (3) Distance from Top Chord of Truss to First Arm.
- (4) Distance between Arms.
- (5) Home or Distant.
- (6) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (7) Slotted if required.
- (8) Three position if required.

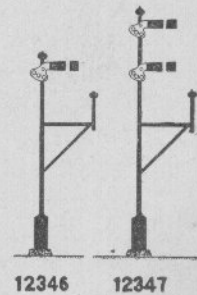
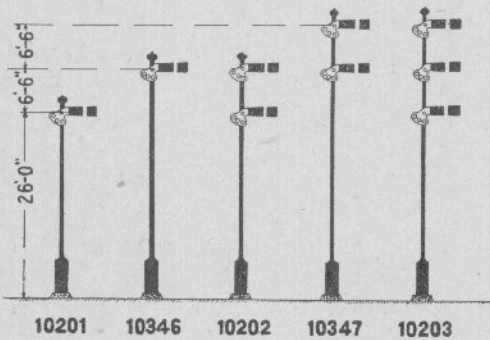
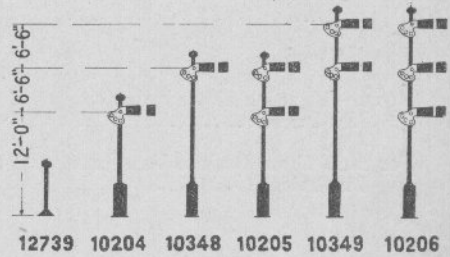
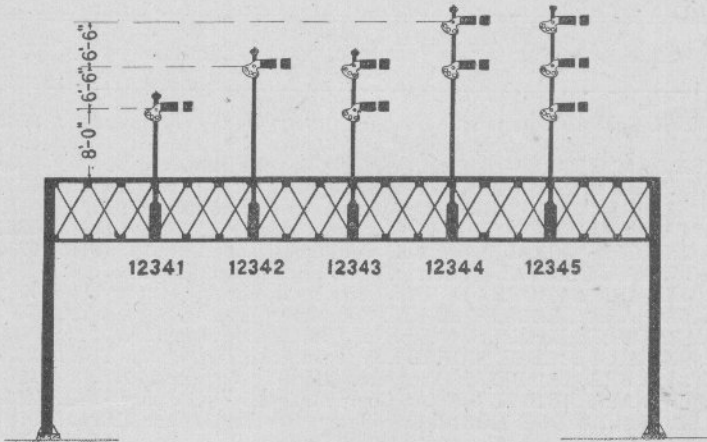
BRACKET SIGNALS.

In ordering specify as follows:

- (1) Style number of Main Post (see page opposite.)
- (2) Style number of Dolls (see page opposite.)
- (3) Distance from Platform to First Arm.
- (4) Distance between Arms.
- (5) Distance between Dolls, center to center.
- (6) Home or Distant.
- (7) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (8) Slotted if required.
- (9) Three position if required.

NOTE:—Unless otherwise specified, signals will be furnished in accordance with cuts shown on pages 109, 110 and 111.

DIAGRAMS OF VARIOUS STYLES OF SIGNALS. ENCLOSED TYPE.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

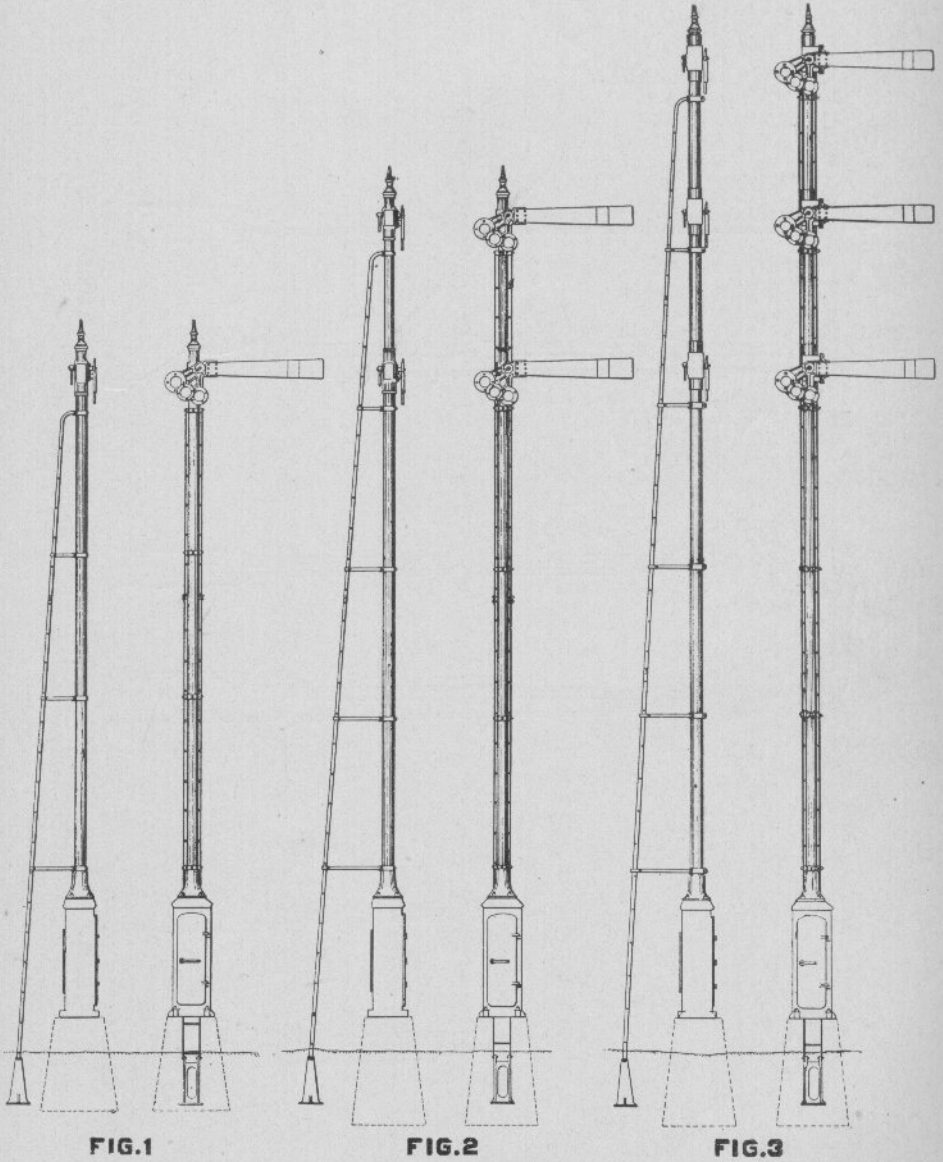
HIGH SIGNALS.

NOTE:—When ordering the following signals see directions on preceding page.

Order No.	DIAGRAMS OF VARIOUS STYLES OF SIGNALS.—ENCLOSED TYPE.	List Price.
10201	ONE ARM SIGNAL Complete. See Fig. 1, page 109.....	370.00
10202	TWO ARM SIGNAL Complete. See Fig. 2, page 109.....	490.00
10203	THREE ARM SIGNAL Complete. See Fig. 3, page 109	600.00
10204	ONE ARM BRACKET SIGNAL Complete. See Fig. 4, page 110	355.00
10205	TWO ARM BRACKET SIGNAL Complete. See Fig. 5, page 110.....	475.00
10206	THREE ARM BRACKET SIGNAL Complete. See Fig. 6, page 110..	585.00
10346	High ONE ARM SIGNAL Complete. See Fig. 1, page 109.....	375.00
10347	High TWO ARM SIGNAL Complete. See Fig. 2, page 109.....	495.00
10348	High ONE ARM BRACKET SIGNAL Complete. See Fig. 4, page 110	360.00
10349	High TWO ARM BRACKET SIGNAL Complete. See Fig. 5, page 110	480.00
12341	ONE ARM BRIDGE SIGNAL Complete. See Fig. 4, page 110.....	360.00
12342	High ONE ARM BRIDGE SIGNAL Complete. See Fig. 4, page 110..	365.00
12343	TWO ARM BRIDGE SIGNAL Complete. See Fig. 5, page 110.....	480.00
12344	High TWO ARM BRIDGE SIGNAL Complete. See Fig. 5, page 110..	485.00
12345	THREE ARM BRIDGE SIGNAL Complete. See Fig. 6, page 110....	595.00
12346	ONE ARM SIGNAL Complete with Offset Bracket.....	395.00
12347	TWO ARM SIGNAL Complete with Offset Bracket.....	515.00
12722	Lattice BRACKET POST Complete for Two Signals. See page 107...	310.00
12723	Lattice BRACKET POST Complete for Three Signals. See page 107.	350.00
12739	Blank BRACKET DOLL with Iron Base for fastening to top of Bracket Post.....	20.00
NOTE.—For each Slotted Arm on any of the foregoing signals, add to List Price.....		20.00
For each Three Position Arm on any of the foregoing signals, add to List Price		80.00

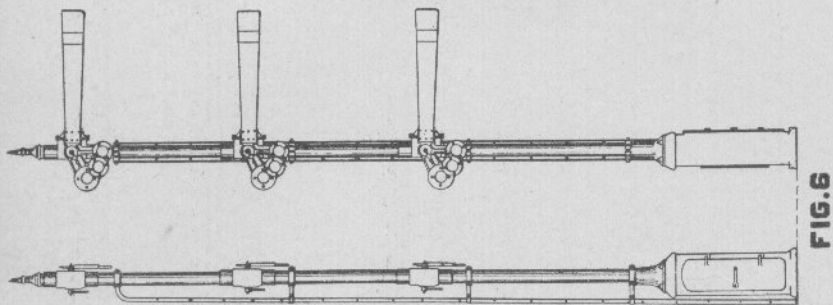
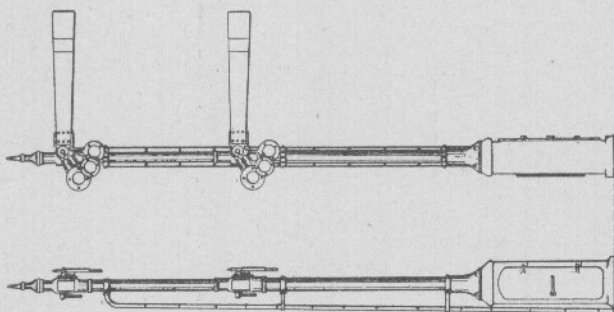
Order by NUMBER and NAME appearing in Large Type.

ONE, TWO AND THREE ARM ENCLOSED SIGNALS.

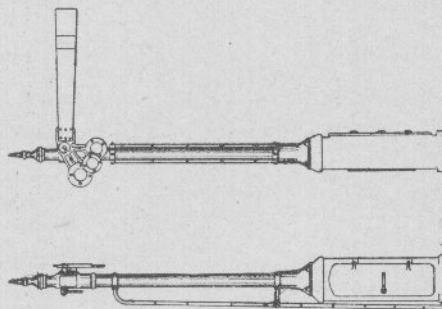


Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

ONE, TWO AND THREE ARM ENCLOSED BRIDGE OR BRACKET SIGNALS.

**FIG. 6****FIG. 5**

BRIDGE OR BRACKET SIGNALS

**FIG. 4**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

ENCLOSED BRACKET SIGNAL—LATTICE POST.

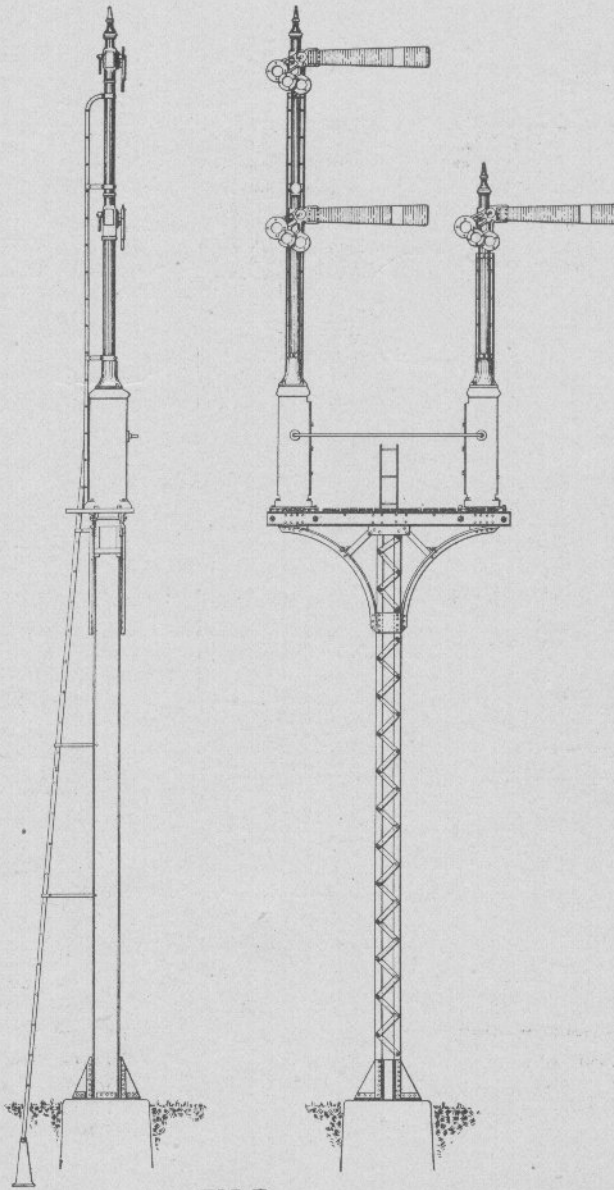
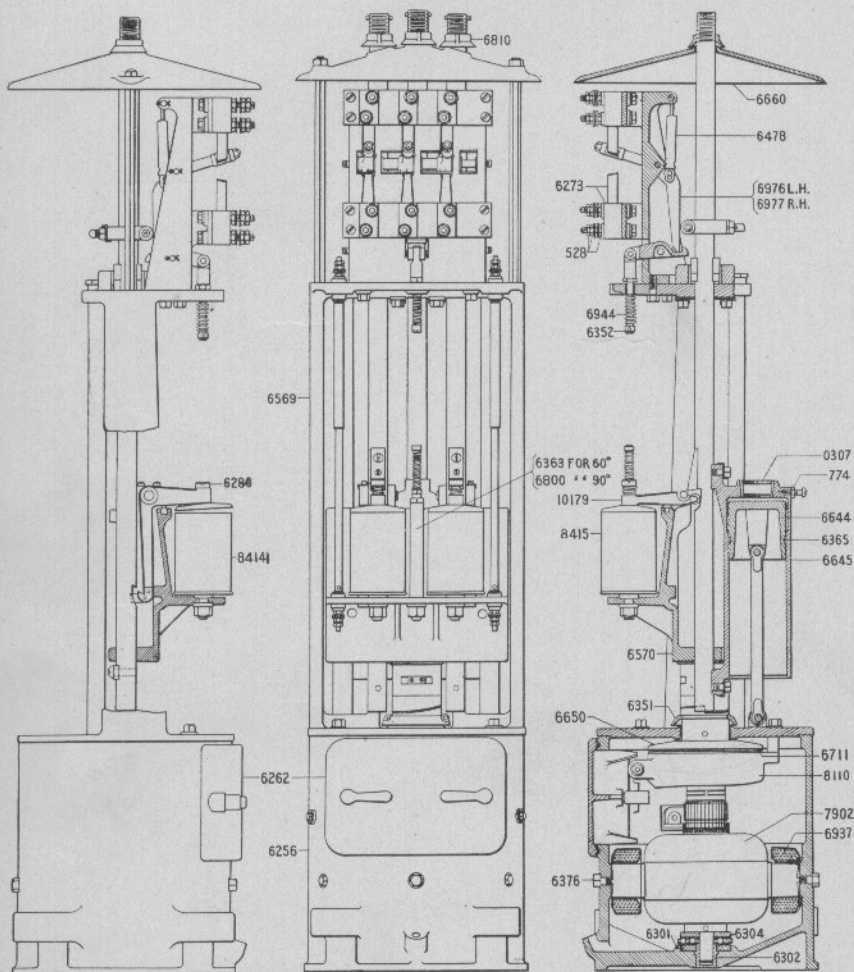


FIG. 7

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

ENCLOSED SIGNAL MACHINE.



ARRANGEMENT FOR 2 ARM SELECTED

7557-2 ARM-60°**9127**-2 " -75°**7558**-2 " -90°

ARRANGEMENT FOR 1 OR 2 ARM SLOTTED

7563-1 ARM-60°**7564**-1 " -90°**7559**-2 " -60°**7560**-2 " -90°

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

113

Order
No.

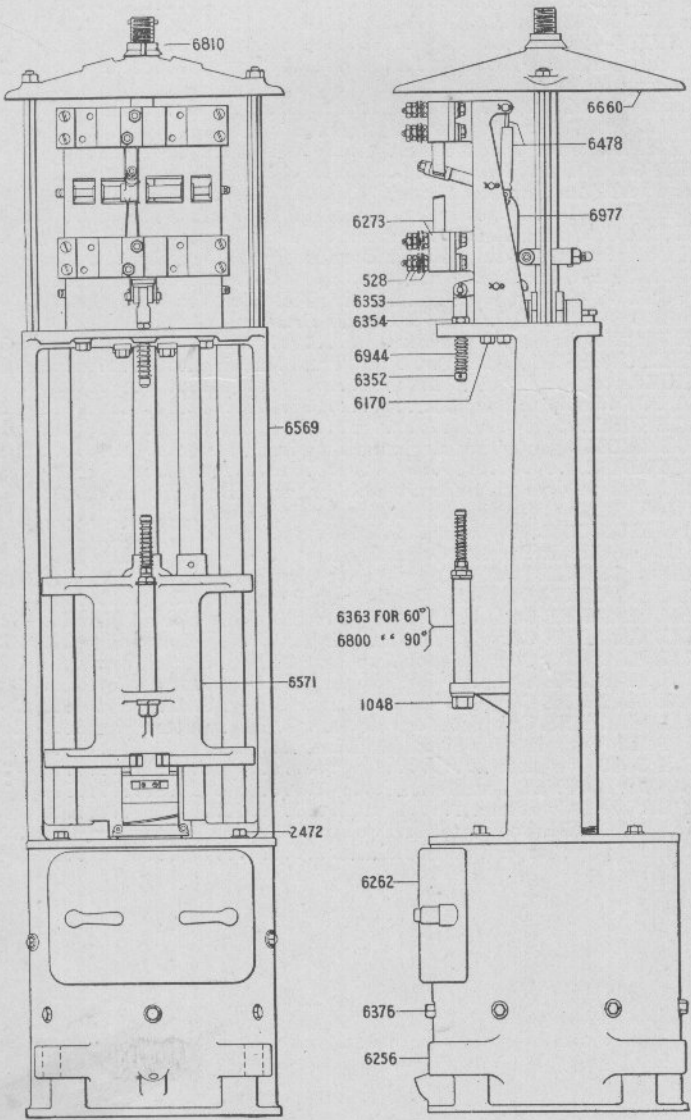
ENCLOSED SIGNAL MACHINE.

List Price.

0307	1 1/2" Socket PLUG.....	.12	....
528	Brass NUT for 1/4" Screw.....	.02	....
774	Iron NUT, 1/4—24.....	.03	....
6256	CASE only for Motor.....	28.00	....
6262	DOOR only for Motor Case.....	1.00	....
6273	Stationary CONTRACT BLOCK.....	2.00	....
6280	SPECIAL SCREW for Magnet Armature.....	.12	....
6301	LOWER PLATE for Thrust Bearing.....	3.00	....
6302	BUSHING for Thrust Bearing.....	1.80	....
6304	Upper PLATE for Thrust Bearing.....	3.00	....
6351	OIL SHIELD.....	.80	....
6352	PLUNGER Operating Circuit Breaker.....	.40	....
6363	POST Complete, Operating Circuit Breaker for 60 Deg. Signal.....	3.00	....
6365	PLUNGER RING for Dash Pot.....	2.00	....
6376	CAP SCREW, 3/8" x 1 1/2", Hex. Hd., holding Field Cores to Motor Case..	.05	....
6478	ENCASED SPRING Complete for Circuit Breaker.....	1.00	....
6569	MAIN FRAME for Signal Machine.....	30.00	....
6570	DOUBLE CROSSHEAD for Two Arm Signal Machine.....	10.00	....
6644	PLUNGER for Dash Pot.....	6.50	....
6645	DASH POT for Slotted Signals.....	13.00	....
6650	BRAKE DISC.....	5.00	....
6660	LARGE SHIELD protecting mechanism against water.....	2.00	....
6711	BRONZE DISC.....	1.00	....
6800	POST Complete, operating Circuit Breaker for 90 Deg. Signal.....	3.00	....
6810	SMALL SHIELD protecting mechanism against water.....	.60	....
6937	Single FIELD COIL.....	3.00	....
6944	SPRING for Circuit Breaker Operating Rod.....	.10	....
6976	Left Hand CONTACT ARM Complete for Circuit Breaker.....	3.00	....
6977	Right Hand CONTACT ARM Complete for Circuit Breaker.....	3.00	....
7557	SIGNAL MACHINE Complete for Two Arm 60 Deg. Selected Signal..	320.00	....
7558	SIGNAL MACHINE Complete for Two Arm 90 Deg. Selected Signal..	320.00	....
7559	SIGNAL MACHINE Complete for Two Arm 60 Deg. Slotted Signal..	360.00	....
7560	SIGNAL MACHINE Complete for Two Arm 90 Deg. Slotted Signal..	360.00	....
7563	SIGNAL MACHINE Complete for One Arm 60 Deg. Slotted Signal..	260.00	....
7564	SIGNAL MACHINE Complete for One Arm 90 Deg. Slotted Signal..	260.00	....
7902	ARMATURE Complete for Signal Machine.....	80.00	....
8110	BRAKE COIL Complete.....	20.00	....
8414	SELECTOR MAGNET Complete.....	14.00	....
8415	SLOT MAGNET Complete.....	15.00	....
9127	SIGNAL MACHINE Complete for Two Arm 75 Deg. Selected Signal..	320.00	....
10179	LATCH Complete for Slotted Signal.....	2.00	....

HIGH SIGNALS.

ENCLOSED SIGNAL MACHINE.



ARRANGEMENT FOR 1 ARM SIGNAL.

- 7561 - 1 ARM - 60°
- 3126 - 1 " - 75°
- 7562 - 1 " - 90°

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

115

Order
No.

ENCLOSED SIGNAL MACHINE.—CONT.

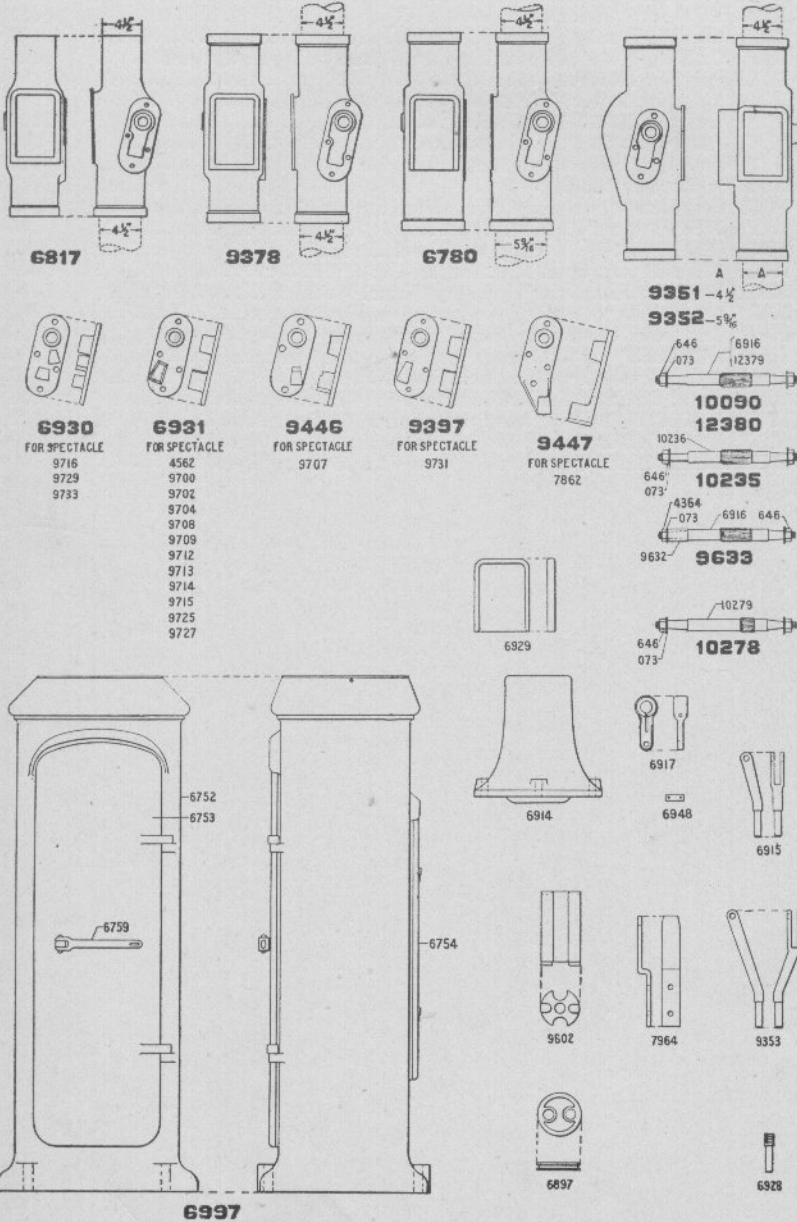
List Price.

528	BRASS NUT for $\frac{1}{4}$ " Screw.....	.02	....
1048	HEX. NUT for $\frac{1}{4}$ " Screw.....	.03	....
2472	CAP SCREW, $\frac{3}{8}$ " x $1\frac{1}{2}$ ", Hex. Hd. ....	.05	....
6170	CAP SCREW, $\frac{3}{8}$ " x 1", Circuit Breaker Frame to Main Frame.....	.05	....
6256	CASE only for Motor.....	28.00	....
6262	DOOR only for Motor Case.....	1.00	....
6273	Stationary CONTACT BLOCK.....	2.00	....
6352	PLUNGER, operating Circuit Breaker.....	.40	....
6353	EYE, operating Circuit Breaker.....	.60	....
6354	NUT for Plunger 6352.....	.10	....
6363	POST Complete, operating Circuit Breaker for 60 Deg Signals.....	3.00	....
6376	CAP SCREW, $\frac{3}{8}$ " x $1\frac{1}{2}$ ", Hex. Hd. ....	.05	....
6478	ENCASED SPRING Complete for Circuit Breaker	1.00	....
6569	MAIN FRAME for Signal Machine.....	30.00	....
6571	SINGLE CROSSHEAD for One Arm Signal Machine	7.00	....
6660	LARGE SHIELD protecting mechanism against water.....	2.00	....
6800	POST Complete, operating Circuit Breaker for 90 Deg. Signals.....	3.00	....
6810	SMALL SHIELD, protecting mechanism against water.....	.60	....
6944	SPRING for Circuit Breaker operating Rod. ....	.10	....
6977	Right Hand CONTACT ARM Complete for Circuit Breaker.....	3.00	....
7561	SIGNAL MACHINE Complete for One Arm 60 Deg. Signal.....	240.00	....
7562	SIGNAL MACHINE Complete for One Arm 90 Deg. Signal.....	240.00	....
9126	SIGNAL MACHINE Complete for One Arm 75 Deg. Signal.....	240.00	....

Order by NUMBER and NAME Appearing in Large Type.

HIGH SIGNALS.

PARTS FOR ENCLOSED SIGNAL POLES.



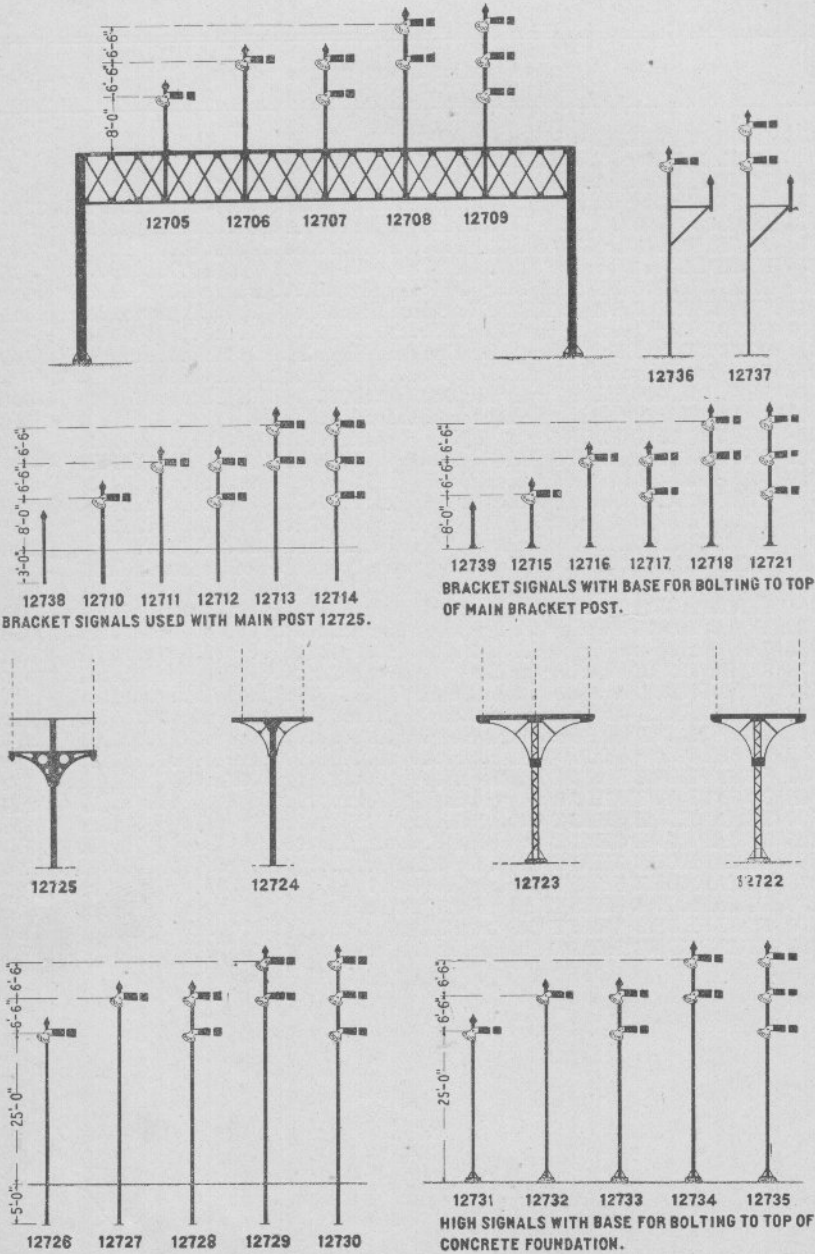
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

When ordering Stop Plates or Shafts, be governed by Table of Front and Back Spectacles as enumerated on page 149.

Order No.	PARTS FOR ENCLOSED SIGNAL POLES.	List Price.
073	IRON WASHER for $\frac{3}{4}$ " Bolt.....	.02
646	HEX. NUT for $\frac{3}{4}$ " Bolt.....	.05
4364	$\frac{3}{4}$ " NUT, Thin.....	.04
6752	CASE, Casting only for 6997.....	37.00
6753	DOOR for 6997.....	5.50
6754	BACK DOOR for 6997.....	4.00
6759	HANDLE for Door for 6997.....	.80
6780	SEMAPHORE BEARING for Enclosed Signal.....	6.00
6817	SEMAPHORE BEARING for Enclosed Signal.....	5.50
6897	GUIDE for Up and Down Rod.....	.40
6914	SOCKET for Base to Post, for Enclosed Signals.....	7.50
6915	JAW for Operating Rod.....	.80
6916	SEMAPHORE SHAFT only for 9633 or 10090.....	5.40
6917	CRANK for operating Semaphore Shaft.....	1.40
6928	CONNECTING PLUG for operating Rods.....	.30
6929	COVER for Semaphore Bearing.....	.40
6930	STOP PLATE for Semaphore Bearing.....	2.50
6931	STOP PLATE for Semaphore Bearing.....	2.50
6948	PIN connecting Operating Rod to Crank 6917.....	.12
6997	CASE COMPLETE for Enclosed Signal Machine.....	60.00
7964	LAMP BRACKET. When ordering, specify number of Spectacle Casting and style of Lamp used.....	.50
9351	SEMAPHORE Bearing for Enclosed Signal.....	5.70
9352	SEMAPHORE Bearing for Enclosed Signal.....	6.00
9353	JAW for Operating Rod.....	1.20
9378	SEMAPHORE Bearing for Enclosed Signal.....	5.70
9397	STOP PLATE for Semaphore Bearing.....	2.50
9446	STOP PLATE for Semaphore Bearing.....	2.50
9447	STOP PLATE for Semaphore Bearing.....	2.50
9632	BUSHING for Shaft 9633.....	.50
9633	SEMAPHORE Shaft Complete.....	6.00
9802	COUNTERWEIGHT for Operating Rod.....	2.00
10090	SEMAPHORE SHAFT Complete.....	5.50
10235	SEMAPHORE SHAFT Complete.....	5.50
10236	SEMAPHORE SHAFT Only, for 10235.....	5.40
10278	SEMAPHORE SHAFT Complete.....	5.50
10279	SEMAPHORE SHAFT Only, for 10278.....	5.40
12379	SEMAPHORE SHAFT Only, for 12380.....	5.40
12380	SEMAPHORE SHAFT Complete.....	5.50

Order by NUMBER and NAME Appearing in Large Type.

DIAGRAMS OF VARIOUS STYLES OF SIGNALS. OUTSIDE CONNECTED TYPE.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DIRECTIONS FOR ORDERING COMPLETE SIGNALS.

Lamp, Glass, Roundels, Slots and Foundations are not included with Complete Signal, and should be ordered separately. For Lamps, see page 212, for Glass or Roundels, see page 210, for Slots, see pages 170 to 173 inclusive.

GROUND SIGNALS.

In ordering specify as follows:

- (1) Style number (see page opposite.)
- (2) Distance between Arms.
- (3) Home or Distant.
- (4) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (5) Slotted if required.

BRIDGE SIGNALS.

In ordering specify as follows:

- (1) Style number (see page opposite.)
- (2) Depth of Bridge Truss.
- (3) Distance from Top Chord of Truss to First Arm.
- (4) Distance between Arms.
- (5) Home or Distant.
- (6) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (7) Slotted if required.

BRACKET SIGNALS.

In ordering specify as follows:

- (1) Style of Main Post (see page opposite.)
- (2) Style number of Doll (see page opposite.)
- (3) Distance from Platform to First Arm.
- (4) Distance between Arms.
- (5) Distance between Dolls, center to center.
- (6) Home or Distant.
- (7) Spectacle Castings (see pages 136 to 144 Inclusive.)
- (8) Slotted if required.

NOTE:—Unless otherwise specified, Signal will be furnished in accordance with cuts shown on pages 122 to 127 inclusive.

HIGH SIGNALS.

NOTE:—When ordering the following signals see directions on page 119 and diagrams on page 118.

Order No.	DIAGRAMS OF VARIOUS STYLES OF SIGNALS—OUTSIDE CONNECTED TYPE.		List Price.
12705	One ARM BRIDGE SIGNAL Complete.....	260.00	....
12706	High One ARM BRIDGE SIGNAL Complete.....	270.00	....
12707	Two ARM BRIDGE SIGNAL Complete.....	350.00	....
12708	High Two ARM BRIDGE SIGNAL Complete.....	370.00	....
12709	Three ARM BRIDGE SIGNAL Complete.....	480.00	....
12710	One ARM BRACKET SIGNAL Complete.....	250.00	....
12711	High One ARM BRACKET SIGNAL Complete.....	260.00	....
12712	Two ARM BRACKET SIGNAL Complete.....	340.00	....
12713	High Two ARM BRACKET SIGNAL Complete.....	360.00	....
12714	Three ARM BRACKET SIGNAL Complete.....	470.00	....
12715	One ARM BRACKET SIGNAL Complete with Base.....	250.00	....
12716	High One ARM BRACKET SIGNAL Complete with Base.....	260.00	....
12717	Two ARM BRACKET SIGNAL Complete with Base.....	340.00	....
12718	High Two ARM BRACKET SIGNAL Complete with Base.....	360.00	....
12721	Three ARM BRACKET SIGNAL Complete with Base.....	470.00	....
12722	LATTICE BRACKET POST Complete for Two Signals.....	310.00	....
12723	LATTICE BRACKET POST Complete for Three Signals.....	350.00	....
12724	PIPE BRACKET POST Complete for Two Signals having Iron Base..	250.00	....
12725	PIPE BRACKET POST Complete for Two Signals 12710, etc.....	170.00	....
12726	One ARM SIGNAL Complete.....	300.00	....
12727	High One ARM SIGNAL Complete.....	310.00	....
12728	Two ARM SIGNAL Complete.....	400.00	....
12729	High Two ARM SIGNAL Complete.....	420.00	....
12730	Three ARM SIGNAL Complete.....	540.00	....
12731	One ARM SIGNAL Complete with Iron Base for fastening to Concrete Foundation.....	300.00	....
12732	High One ARM SIGNAL Complete with Iron Base for fastening to Con- crete Foundation.....	310.00	....
12733	Two ARM SIGNAL Complete with Iron Base for fastening to Concrete Foundation.....	400.00	....
12734	High Two ARM SIGNAL Complete with Iron Base for fastening to Concrete Foundation.....	420.00	....
12735	Three ARM SIGNAL Complete with Iron Base for fastening to Con- crete Foundation.....	540.00	....
12736	One ARM OFFSET BRACKET Signal Complete.....	330.00	....
12737	Two ARM OFFSET BRACKET Signal Complete.....	430.00	....
12738	BLANK BRACKET DOLL with Pinnacle Complete. Used with Post 12725.....	15.00	....
12739	BLANK BRACKET DOLL with Iron Base for fastening to top of Bracket Post.....	20.00	....

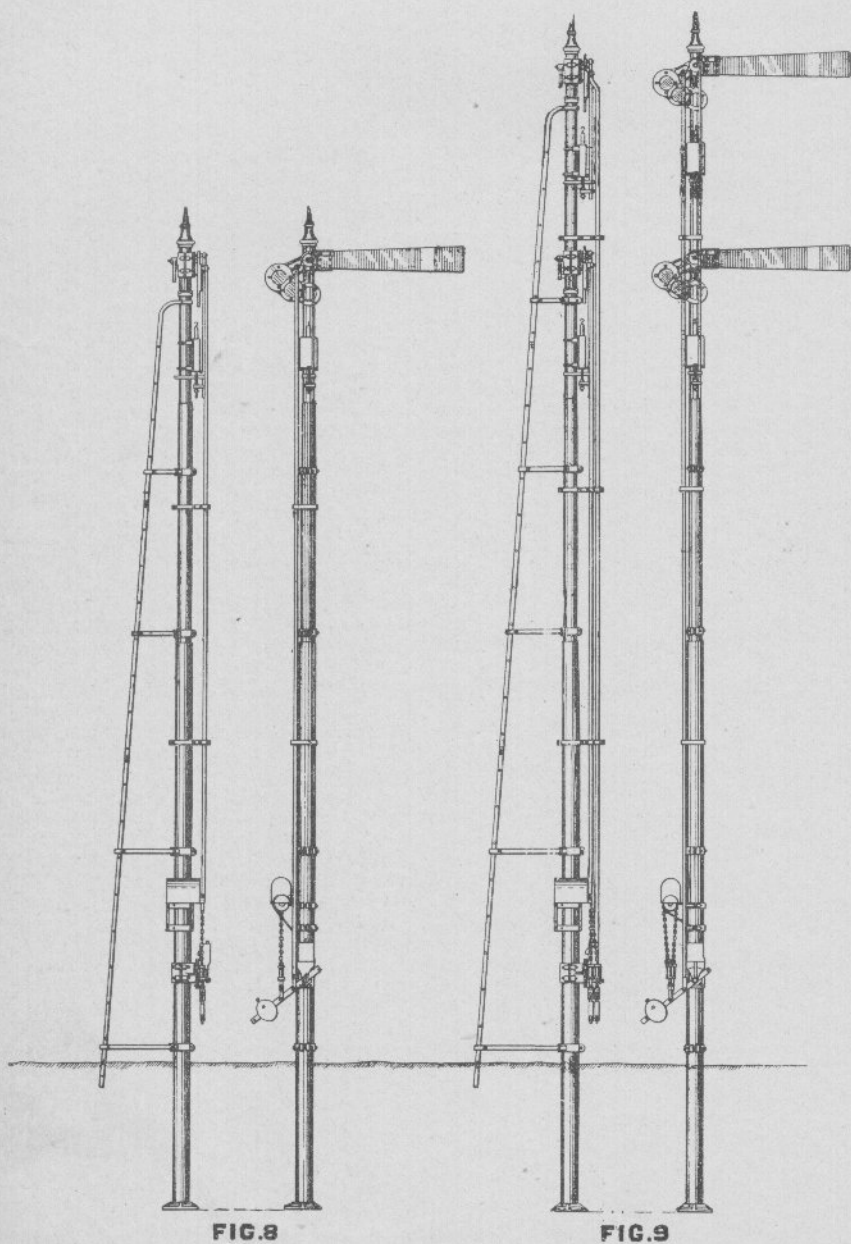
NOTE.—For each Slotted Arm on any of the foregoing Signals, add to
List Price..... 80.00

Order by NUMBER and NAME Appearing in Large Type.

DIAGRAMS OF VARIOUS STYLES OF SIGNALS. OUTSIDE CONNECTED TYPE.

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ONE AND TWO ARM OUTSIDE CONNECTED SIGNALS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

THREE ARM OUTSIDE CONNECTED SIGNAL.

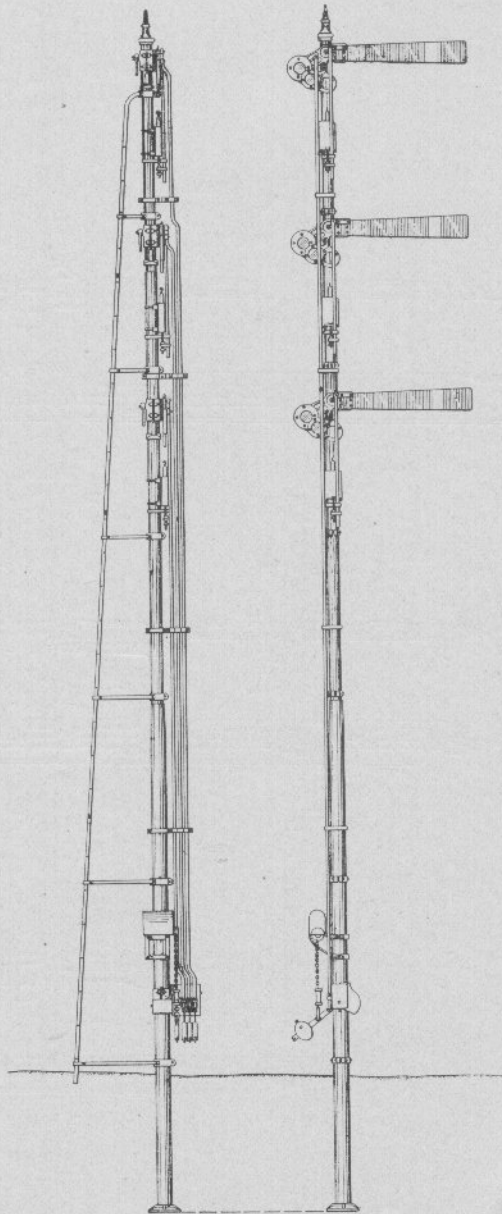


FIG.10

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

ONE, TWO AND THREE ARM BRIDGE OR BRACKET SIGNALS.

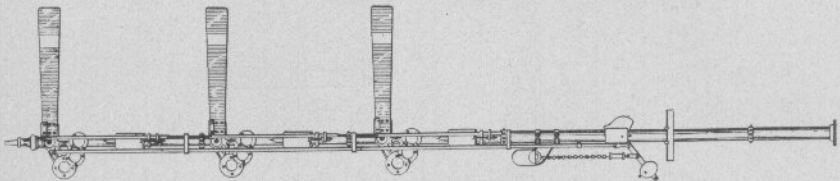


FIG. 13

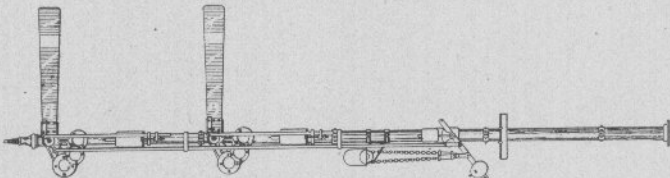
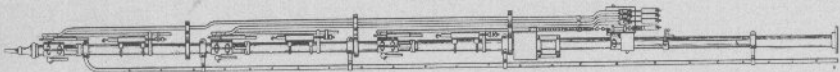


FIG. 12

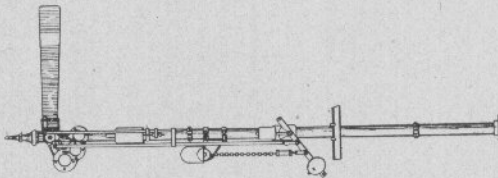
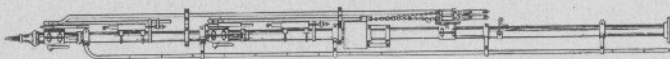
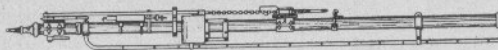


FIG. 11



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

BRACKET SIGNAL—PIPE POST WITH CAST BRACKET.

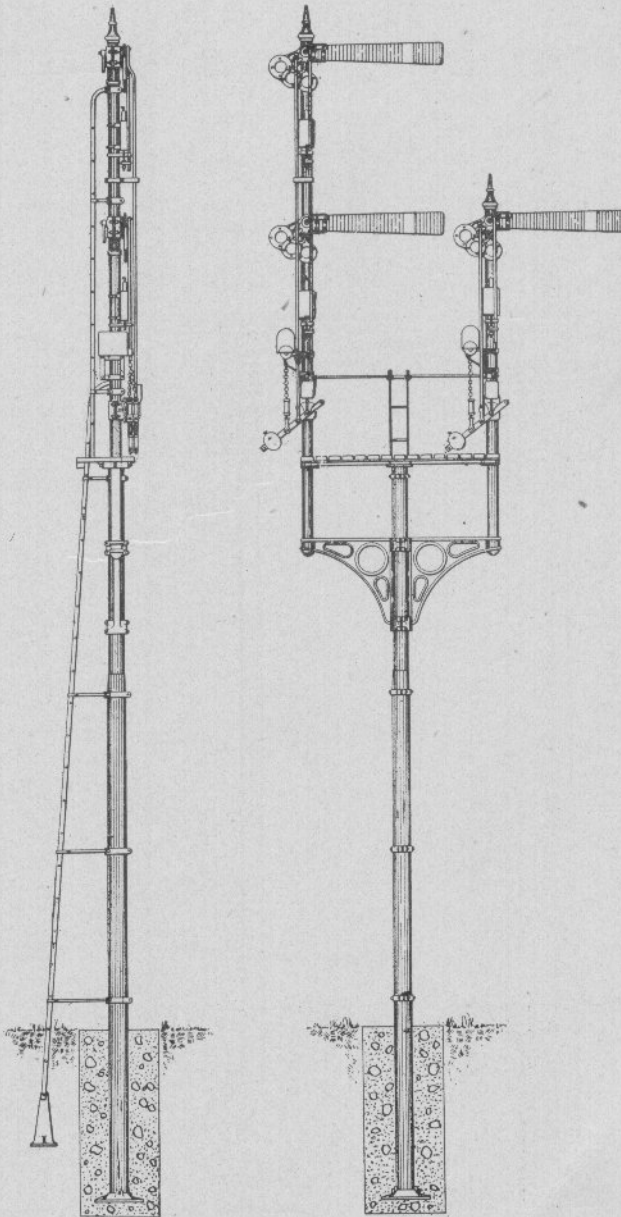


FIG.14

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

BRACKET SIGNAL—PIPE POST WITH WROUGHT BRACKET.

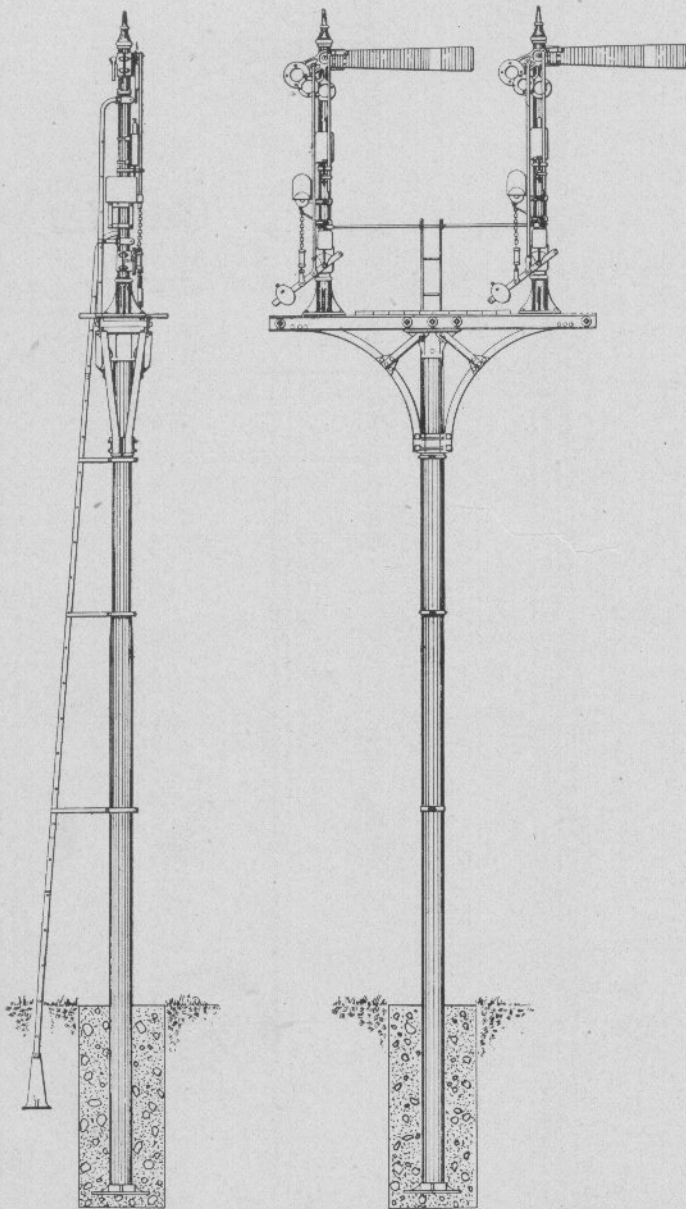


FIG.15

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

OUTSIDE CONNECTED BRACKET SIGNAL—LATTICE POST.

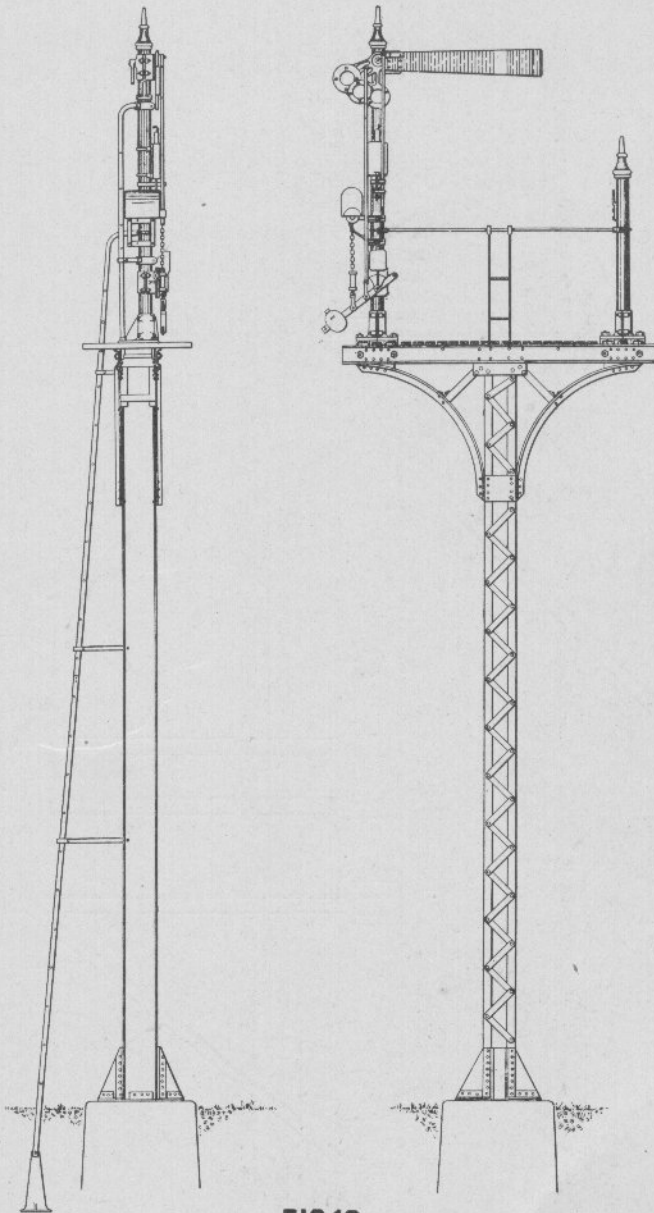
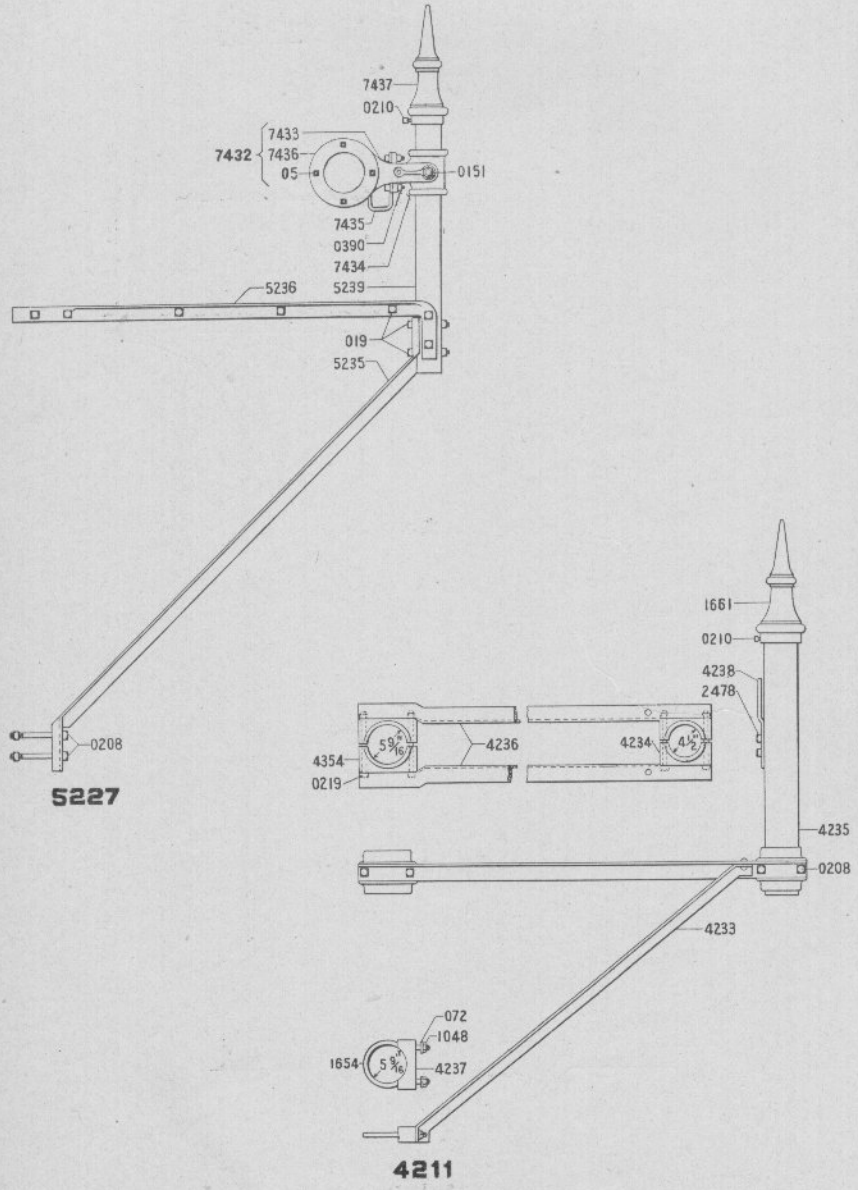


FIG. 16

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

OFFSET BRACKET.



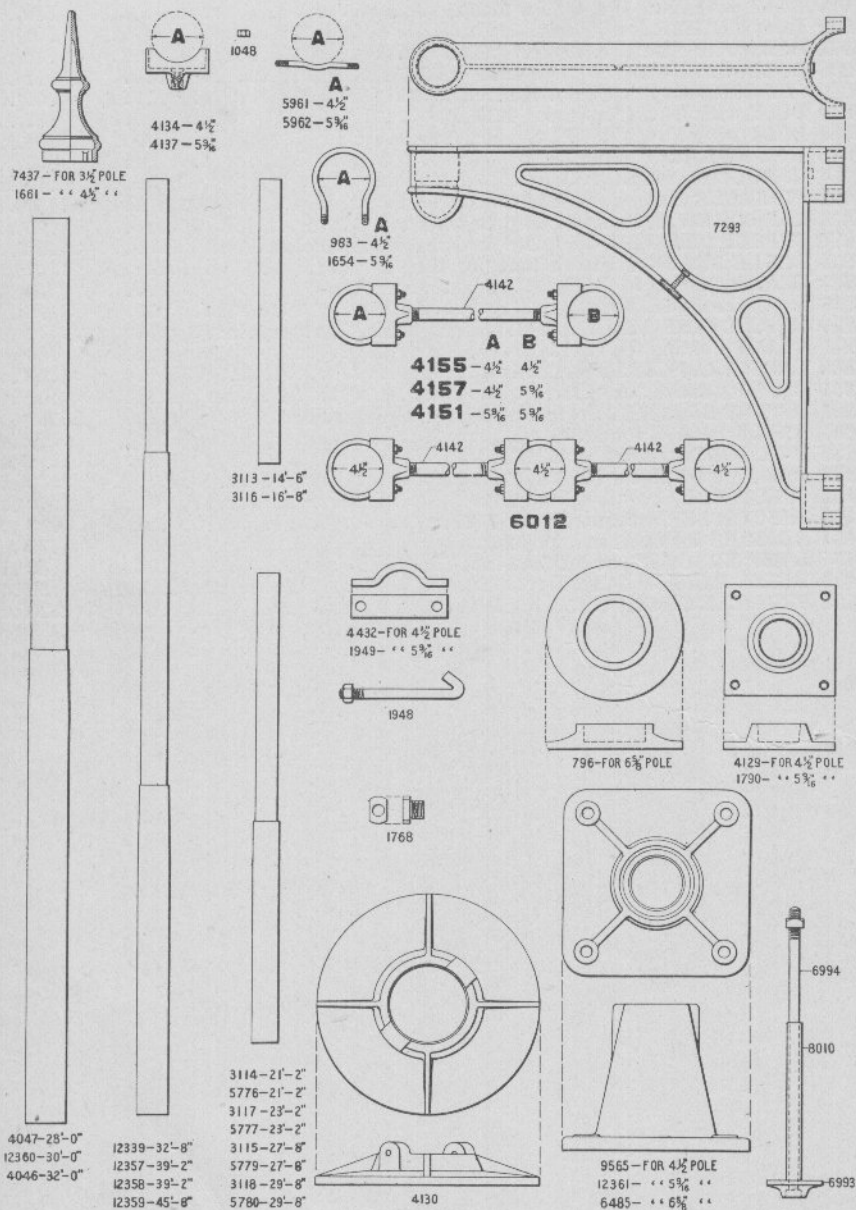
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

129

Order No.	OFFSET BRACKETS.	List Price.
005	BOLT with Nut $\frac{1}{4}$ " x $1\frac{1}{4}$ ".....	.02....
019	BOLT with Nut, $\frac{5}{8}$ " x $4\frac{1}{2}$ " for 5227.....	.09....
072	Iron WASHER for $\frac{1}{2}$ " Bolt.....	.01....
0151	BOLT with Nut, $\frac{3}{4}$ " x 10" for 5227.....	.16....
0208	BOLT with Nut, $\frac{5}{8}$ " x 7" for 4211 or 5227.....	.12....
0210	SET SCREW, $\frac{1}{2}$ " x 1" Sq. Hd.....	.04....
0219	BOLT with Nut, $\frac{5}{8}$ " x 8" for 4211.....	.12....
0390	BOLT with Nut, $\frac{1}{2}$ " x $1\frac{3}{4}$ " Sq. Hd.....	.04....
1048	Hex. NUT, for $\frac{1}{2}$ " Bolt.....	.03....
1654	U. BOLT for 4211.....	.40....
1661	PINNACLE Casting for 4211.....	1.50....
2478	CAP SCREW, fastening Lamp Bracket to Doll, for 4211.....	.05....
4211	OFFSET BRACKET Complete for Iron Ground Poles.....	24.50....
4233	ANGLE BRACE, Right or Left, for 4211.....	.....
4234	CLAMP Casting for 4211.....	.70....
4235	Iron Pipe DOLL, for 4211.....	3.70....
4236	HORIZONTAL ARM for 4211. Right or Left, as specified.....	.....
4237	CLAMP Casting for 4211.....	.36....
4238	LAMP BRACKET for 4211.....	.50....
4354	CLAMP Casting for 4211.....	.90....
5227	OFFSET BRACKET Complete for Iron Ground Poles.....	25.00....
5235	ANGLE BRACE for 5227.....	.....
5236	HORIZONTAL ARM for 5227.....	.....
5239	Iron Pipe DOLL for 5227.....	3.70....
7432	SPECTACLE Complete for 5227.....	1.40....
7433	SPECTACLE Casting only, for 7432.....	.90....
7434	BEARING for Spectacle for 5227.....	1.70....
7435	LAMP BRACKET for 5227.....	.50....
7436	BEZEL RING for 7432.....	.50....
7437	PINNACLE Casting for 5227.....	1.20....

PARTS FOR OUTSIDE CONNECTED SIGNAL POLES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

131

Order
No.

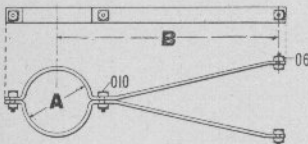
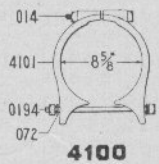
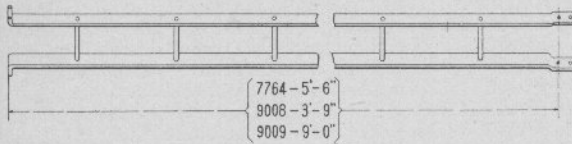
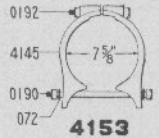
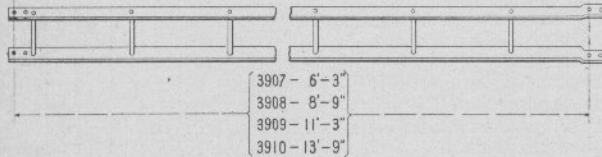
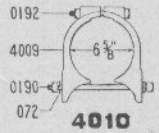
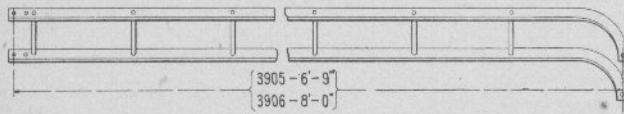
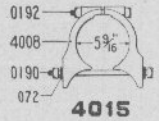
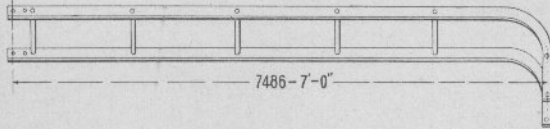
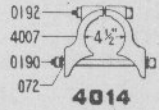
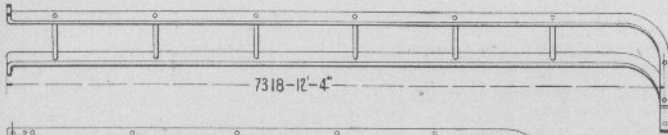
PARTS FOR OUTSIDE CONNECTED SIGNAL POLES.

List Price.

796	BASE for Ground Poles	4.00	....
983	U BOLT for Hand Rails 4155, etc. ....	.40	....
1048	$\frac{1}{2}$ " HEX. NUT.....	.03	....
1654	U BOLT for Hand Rails 4151, etc. ....	.40	....
1661	PINNACLE CASTING for $4\frac{1}{2}$ " O. D Pole	1.50	....
1768	BUSHING for Inlet Wires to Iron Poles.....	.30	....
1790	BASE for Bridge Poles	3.00	....
1948	HOOK BOLT with Nut, for holding Iron Bridge Poles.....	.32	....
1949	CLAMP holding Iron Bridge Poles .....	.80	....
3113	1 ARM IRON BRIDGE POLE, 14' 8" }	13.00	....
3114	2 ARM IRON BRIDGE POLE, 21' 2" } For Bridges with Truss 6' deep	30.00	....
3115	3 ARM IRON BRIDGE POLE, 27' 8" }	40.00	....
3116	1 ARM IRON BRIDGE POLE, 16' 8" }	14.50	....
3117	2 ARM IRON BRIDGE POLE, 23' 2" } For Bridges with Truss 8' deep	34.00	....
3118	3 ARM IRON BRIDGE POLE, 29' 8" }	43.00	....
4046	IRON BRACKET POST, 32' long, made in 2 sections of extra heavy 7 and 8" Pipe	136.00	....
4047	IRON BRACKET POST, 28' long, made in 2 sections of 7 and 8" Pipe	80.00	....
4129	BASE for Bridge Poles.....	3.00	....
4130	BASE for Main Post to Bracket Poles.....	10.00	....
4134	CLAMP CASTING for Hand Rails 4155, etc.....	.90	....
4137	CLAMP CASTING for Hand Rails 4151, etc.....	.90	....
4142	HAND RAIL for 4151, etc.	1.20	....
4151	HAND RAIL Complete for Bracket Pole with Two Dolls.....	4.00	....
4155	HAND RAIL Complete for Bracket Pole with Two Dolls.....	4.00	....
4157	HAND RAIL Complete for Bracket Pole with Two Dolls.....	4.00	....
4432	CLAMP holding Iron Bridge Poles.....	.80	....
5776	HIGH 1 ARM BRIDGE POLE, 21' 2". For Bridges with Truss 6' deep	28.00	....
5777	HIGH 1 ARM BRIDGE POLE, 23' 2". For Bridges with Truss 8' deep	32.00	....
5779	HIGH 2 ARM BRIDGE POLE, 27' 8". For Bridges with Truss 6' deep	38.00	....
5780	HIGH 2 ARM BRIDGE POLE, 29' 8". For Bridges with Truss 8' deep	42.00	....
5961	CLAMP BOLT, Special for Hand Rails for Three Dolls.....	.20	....
5962	CLAMP BOLT, Special for Hand Rails for Three Dolls.....	.20	....
6012	HAND RAIL Complete for Bracket Pole with Three Dolls.....	7.50	....
6485	BASE for Ground Poles for fastening to top of Concrete Foundation.	18.00	....
6993	CAST WASHER for Anchor Bolt.....	.50	....
6994	ANCHOR BOLT only for fastening Ground Poles to top of Concrete Foundation.....	.90	....
7293	BRACKET CASTING for Bracket Poles	18.00	....
7437	PINNACLE CASTING for $3\frac{1}{2}$ " O. D Pole.....	1.20	....
8010	IRON PIPE SOCKET for Anchor Bolts.....	.40	....
9565	BASE for Bracket Poles for fastening to top of Lattice Post.....	9.00	....
12339	1 ARM IRON GROUND POLE, 32' 8".....	60.00	....
12357	HIGH 1 ARM IRON GROUND POLE, 39' 2".....	68.00	....
12358	2 ARM IRON GROUND POLE, 39' 2".....	70.00	....
12359	3 ARM IRON GROUND POLE, 45' 8".....	92.00	....
12360	IRON BRACKET POST 30' long, made in 2 sections of 7 & 8" pipe..	84.00	....
12361	BASE for Bracket Poles for fastening to top of Lattice Post.....	17.00	....

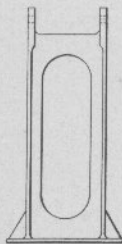
Order by NUMBER and NAME Appearing in Large Type.

LADDERS AND FITTINGS.

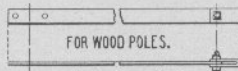


A B

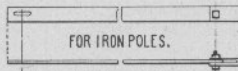
2064	- 4 1/2"	- 11"
9341	- "	- 12 3/8"
2236	- "	- 14 "
9342	- 5 1/8"	- 15 1/8"
2243	- "	- 16 3/8"
2065	- "	- 17 "
2237	- "	- 19 1/8"
9343	- 6 5/8"	- 18 1/8"
9344	- "	- 21 3/8"
2244	- "	- 21 3/8"
2066	- "	- 23 1/8"
2238	- "	- 24 1/8"
2239	- "	- 29 3/8"
2067	- "	- 29 1/8"
9345	- 7 3/8"	- 31 1/8"
9346	- 8 3/8"	- 45 3/8"



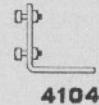
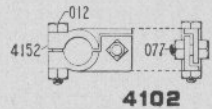
6919



4098	- 6 1/2"
4055	- 13 "
4056	- 18 "
4057	- 23 "
4058	- 28 "
4121	- 33 "
5472	- 37 "



4096	- 5 "
4123	- 7 3/4"
4018	- 10 "
4019	- 14 "
4020	- 18 3/4"
4021	- 24 1/2"
4122	- 29 "
5470	- 33 1/4"



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order
No.

LADDERS AND FITTINGS

List Price.

06	BOLT with Nut, $\frac{3}{8}$ " x 1"	.02
010	BOLT with Nut, $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "	.04
012	BOLT with Nut, $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	.04
014	BOLT with Nut, $\frac{1}{2}$ " x 6 $\frac{1}{2}$ "	.07
064	LAG SCREW, $\frac{1}{2}$ " x 2 $\frac{1}{2}$ "	.03
072	Iron WASHER for $\frac{1}{2}$ " Bolt	.01
077	BOLT with Nut, $\frac{1}{2}$ " x 1 $\frac{1}{2}$ "	.04
0190	BOLT with Nut, $\frac{1}{2}$ " x 9 $\frac{1}{2}$ "	.09
0192	BOLT with Nut, $\frac{1}{2}$ " x 5 $\frac{1}{2}$ "	.06
0194	BOLT with Nut, $\frac{1}{2}$ " x 10"	.09
2064	LADDER BRACE Complete, 11" Centers, for 4 $\frac{1}{2}$ " O. D. Pole	1.28
2065	LADDER BRACE Complete, 17" Centers, for 5 $\frac{9}{16}$ " O. D. Pole	1.40
2066	LADDER BRACE Complete, 23 $\frac{1}{4}$ " Centers, for 6 $\frac{3}{8}$ " O. D. Pole	1.50
2067	LADDER BRACE Complete, 29 $\frac{1}{2}$ " Centers, for 6 $\frac{5}{8}$ " O. D. Pole	1.56
2236	LADDER BRACE Complete, 14" Centers, for 4 $\frac{1}{2}$ " O. D. Pole	1.32
2237	LADDER BRACE Complete, 19 $\frac{1}{8}$ " Centers, for 5 $\frac{9}{16}$ " O. D. Pole	1.40
2238	LADDER BRACE Complete, 24 $\frac{1}{4}$ " Centers, for 6 $\frac{5}{8}$ " O. D. Pole	1.50
2239	LADDER BRACE Complete, 29 $\frac{3}{8}$ " Centers, for 6 $\frac{3}{4}$ " O. D. Pole	1.56
2243	LADDER BRACE Complete, 16 $\frac{5}{8}$ " Centers, for 5 $\frac{9}{16}$ " O. D. Pole	1.40
2244	LADDER BRACE Complete, 21 $\frac{3}{4}$ " Centers, for 6 $\frac{3}{8}$ " O. D. Pole	1.44
3905	Top LADDER SECTION 6' 9" long	2.60
3906	Top LADDER SECTION 8' long	3.10
3907	Straight LADDER SECTION 6' 3" long	2.20
3908	Straight LADDER SECTION 8' 9" long	3.00
3909	Straight LADDER SECTION 11' 3" long	4.00
3910	Straight LADDER SECTION 13' 9" long	4.90
4007	CLAMP Casting for 4014	.28
4008	CLAMP Casting for 4015	.32
4009	CLAMP Casting for 4016	.38
4014	CLAMP Complete, Ladder Brace to 4 $\frac{1}{2}$ " O. D. Iron Pole	.70
4015	CLAMP Complete, Ladder Brace to 5 $\frac{9}{16}$ " O. D. Iron Pole	.80
4016	CLAMP Complete, Ladder Brace to 6 $\frac{3}{8}$ " O. D. Iron Pole	.90
4018	LADDER BRACE, 10" Centers, for Iron Poles	.24
4019	LADDER BRACE, 14" Centers, for Iron Poles	.28
4020	LADDER BRACE, 18 $\frac{3}{4}$ " Centers, for Iron Poles	.30
4021	LADDER BRACE, 24 $\frac{3}{8}$ " Centers, for Iron Poles	.36
4023	LADDER, 26' 9", Complete with Braces, Clamps and Bolts	17.50
4024	LADDER, 33' 0", Complete with Braces, Clamps and Bolts	19.50
4025	LADDER, 26' 9", Complete with Braces and Bolts	15.00
4026	LADDER, 33' 0", Complete with Braces and Bolts	17.00
4055	LADDER BRACE, 13" Centers, for Wood Poles	.28
4056	LADDER BRACE, 18" Centers, for Wood Poles	.30
4057	LADDER BRACE, 23" Centers, for Wood Poles	.34
4058	LADDER BRACE, 28" Centers, for Wood Poles	.38
4068	LADDER, 38' 0", Complete with Braces and Bolts	19.50
4069	LADDER, 38' 0", Complete with Braces, Clamps and Bolts	22.00
4070	LADDER, 13' 0", Complete with Braces, Clamps and Bolts	7.50
4071	LADDER, 19' 3", Complete with Braces, Clamps and Bolts	11.00
4072	LADDER, 24' 3", Complete with Braces, Clamps and Bolts	14.00
4073	LADDER, 13' 0", Complete with Braces and Bolts	5.90
4074	LADDER, 19' 3", Complete with Braces and Bolts	8.70
4075	LADDER, 24' 3", Complete with Braces and Bolts	11.00
4076	LADDER, 14' 3", Complete with Braces, Clamps and Bolts	8.00

Order by NUMBER and NAME Appearing in Large Type.

Order
No.

LADDERS AND FITTINGS.—CONT.

List Price.

4077	LADDER, 20' 6", Complete with Braces, Clamps and Bolts.....	11.50	....
4078	LADDER, 28' 9", Complete with Braces, Clamps and Bolts.....	14.90	....
4079	LADDER, 14' 3", Complete with Braces and Bolts.....	6.50	....
4080	LADDER, 20' 6", Complete with Braces and Bolts.....	9.20	....
4081	LADDER, 26' 9", Complete with Braces and Bolts.....	12.00	....
4082	LADDER, 6' 9", Complete with Braces, Clamps and Bolts.....	4.00	....
4083	LADDER, 13' 0", Complete with Braces, Clamps and Bolts.....	7.50	....
4084	LADDER, 19' 3", Complete with Braces, Clamps and Bolts.....	11.00	....
4085	LADDER, 6' 9", Complete with Braces and Bolts.....	3.10	....
4086	LADDER, 13' 0", Complete with Braces and Bolts.....	5.90	....
4087	LADDER, 19' 3", Complete with Braces and Bolts.....	8.80	....
4088	LADDER, 26' 9", Complete with Braces and Bolts.....	13.00	....
4089	LADDER, 30' 6", Complete with Braces and Bolts.....	15.00	....
4096	LADDER BRACE, 5" Centers, for Iron Poles.....	.18	....
4098	LADDER BRACE, 6½" Centers, for Wood Poles.....	.20	....
4100	CLAMP Complete, Ladder Brace to 8½" O. D. Iron Pole.....	1.10	....
4101	CLAMP, Casting only, for 4100.....	.46	....
4102	CLAMP Complete, holding top of ladder to Hand Rail, for Bracket Poles.....	.30	....
4104	FOOT Complete. Used with Bottom Section of Ladder.....	.20	....
4121	LADDER BRACE, 33" Centers, for Wood Poles.....	.42	....
4122	LADDER BRACE, 29" Centers, for Iron Poles.....	.38	....
4123	LADDER BRACE, 7¾" Centers, for Iron Poles.....	.22	....
4145	CLAMP Casting, for 4153.....	.42	....
4152	CLAMP Casting, for 4102.....	.10	....
4153	CLAMP Complete, for 7½" O. D. Iron Poles.....	1.00	....
5470	LADDER BRACE, 33½" Centers, for Iron Poles.....	.42	....
5472	LADDER BRACE, 37" Centers, for Wood Poles.....	.44	....
6919	ANCHOR for Ground End of Ladders.....	3.00	....
7196	LADDER, 28' 0", Complete with Braces, Clamps and Bolts.....	16.50	....
7318	LADDER, 12' 4" long.....	4.80	....
7486	Top LADDER SECTION, Special, 7' long.....	2.80	....
7764	Bottom LADDER SECTION, 5' 6" long.....	2.00	....
8310	LADDER, 27' 6", Complete with Braces, Clamps and Bolts.....	11.20	....
9008	Bottom LADDER SECTION, 3' 9" long.....	1.40	....
9009	Bottom LADDER SECTION, 9' long.....	3.30	....
9341	LADDER BRACE Complete, 12¾" Centers, for 4½" O. D. Pole.....	1.30	....
9342	LADDER BRACE Complete, 15⅞" Centers, for 5⅞" O. D. Pole.....	1.36	....
9343	LADDER BRACE Complete, 18⅞" Centers, for 6⅞" O. D. Pole.....	1.44	....
9344	LADDER BRACE Complete, 21⅞" Centers, for 6⅞" O. D. Pole.....	1.50	....
9345	LADDER BRACE Complete, 31¾" Centers, for 7⅞" O. D. Pole.....	2.10	....
9346	LADDER BRACE Complete, 45¾" Centers, for 8⅞" O. D. Pole.....	2.40	....

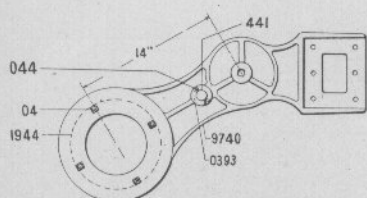
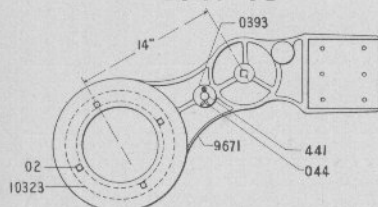
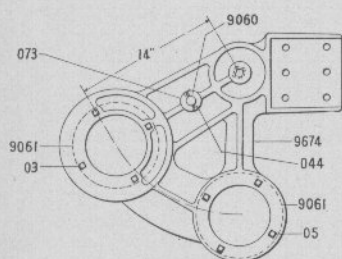
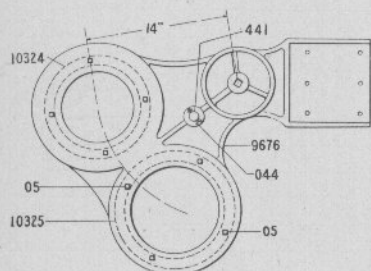
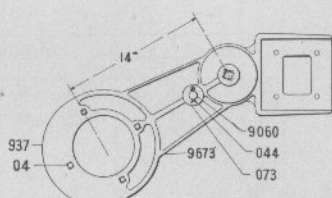
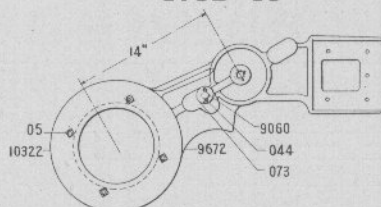
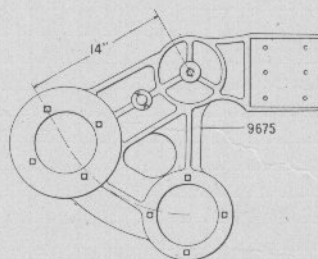
Order by NUMBER and NAME Appearing in Large Type.

LADDERS AND FITTINGS.

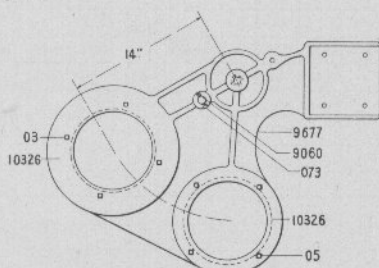
BRIDGE SIGNALS				BRACKET SIGNALS				GROUND SIGNALS				LADDER SECTIONS				BRACES COMPLETE				CLAMP COMPLETE			
6 TRUSS		6 TRUSS		MAIN POST		BOLLS		SIGNALS		SIGNALS		LADDER		LADDER		FOR IRON POLE		FOR WOOD POLE		CLAMP COMPLETE			
HIGH		HIGH		SINGLE CROSS WOOD		LATICE PIPE		HIGH		HIGH		LADDER		LADDER									
1	ARM IRON	4023	26-9	1		4082	6-9	1		4082	13-0	1		3905-6-9	3905-6-9	1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
2	"	4024	33-0	1		4083	13-0	1		4083	13-0	1		3906-8-0	3906-8-0	1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
3	"	4025	38-0	1		4084	19-3	1		4084	19-3	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
4	"	4026	42-9	1		4085	6-9	1		4085	6-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
5	"	4027	48-0	1		4086	13-0	1		4086	13-0	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
6	"	4028	53-0	1		4087	19-3	1		4087	19-3	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
7	"	4029	58-0	1		4088	26-9	1		4088	26-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
8	"	4030	63-0	1		4089	30-6	1		4089	30-6	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
9	"	4031	68-0	1		4090	35-9	1		4090	35-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
10	"	4032	73-0	1		4091	40-9	1		4091	40-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
11	"	4033	78-0	1		4092	45-9	1		4092	45-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
12	"	4034	83-0	1		4093	50-9	1		4093	50-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
13	"	4035	88-0	1		4094	55-9	1		4094	55-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
14	"	4036	93-0	1		4095	60-9	1		4095	60-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
15	"	4037	98-0	1		4096	65-9	1		4096	65-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
16	"	4038	103-0	1		4097	70-9	1		4097	70-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
17	"	4039	108-0	1		4098	75-9	1		4098	75-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
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19	"	4041	118-0	1		4100	85-9	1		4100	85-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
20	"	4042	123-0	1		4101	90-9	1		4101	90-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
21	"	4043	128-0	1		4102	95-9	1		4102	95-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
22	"	4044	133-0	1		4103	100-9	1		4103	100-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
23	"	4045	138-0	1		4104	105-9	1		4104	105-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
24	"	4046	143-0	1		4105	110-9	1		4105	110-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
25	"	4047	148-0	1		4106	115-9	1		4106	115-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
26	"	4048	153-0	1		4107	120-9	1		4107	120-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
27	"	4049	158-0	1		4108	125-9	1		4108	125-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
28	"	4050	163-0	1		4109	130-9	1		4109	130-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
29	"	4051	168-0	1		4110	135-9	1		4110	135-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
30	"	4052	173-0	1		4111	140-9	1		4111	140-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
31	"	4053	178-0	1		4112	145-9	1		4112	145-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
32	"	4054	183-0	1		4113	150-9	1		4113	150-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
33	"	4055	188-0	1		4114	155-9	1		4114	155-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
34	"	4056	193-0	1		4115	160-9	1		4115	160-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
35	"	4057	198-0	1		4116	165-9	1		4116	165-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
36	"	4058	203-0	1		4117	170-9	1		4117	170-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
37	"	4059	208-0	1		4118	175-9	1		4118	175-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
38	"	4060	213-0	1		4119	180-9	1		4119	180-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
39	"	4061	218-0	1		4120	185-9	1		4120	185-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
40	"	4062	223-0	1		4121	190-9	1		4121	190-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
41	"	4063	228-0	1		4122	195-9	1		4122	195-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
42	"	4064	233-0	1		4123	200-9	1		4123	200-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
43	"	4065	238-0	1		4124	205-9	1		4124	205-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
44	"	4066	243-0	1		4125	210-9	1		4125	210-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
45	"	4067	248-0	1		4126	215-9	1		4126	215-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
46	"	4068	253-0	1		4127	220-9	1		4127	220-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
47	"	4069	258-0	1		4128	225-9	1		4128	225-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
48	"	4070	263-0	1		4129	230-9	1		4129	230-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
49	"	4071	268-0	1		4130	235-9	1		4130	235-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
50	"	4072	273-0	1		4131	240-9	1		4131	240-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
51	"	4073	278-0	1		4132	245-9	1		4132	245-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
52	"	4074	283-0	1		4133	250-9	1		4133	250-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
53	"	4075	288-0	1		4134	255-9	1		4134	255-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
54	"	4076	293-0	1		4135	260-9	1		4135	260-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
55	"	4077	298-0	1		4136	265-9	1		4136	265-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
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57	"	4079	308-0	1		4138	275-9	1		4138	275-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
58	"	4080	313-0	1		4139	280-9	1		4139	280-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
59	"	4081	318-0	1		4140	285-9	1		4140	285-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
60	"	4082	323-0	1		4141	290-9	1		4141	290-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
61	"	4083	328-0	1		4142	295-9	1		4142	295-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
62	"	4084	333-0	1		4143	300-9	1		4143	300-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
63	"	4085	338-0	1		4144	305-9	1		4144	305-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
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65	"	4087	348-0	1		4146	315-9	1		4146	315-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
66	"	4088	353-0	1		4147	320-9	1		4147	320-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
67	"	4089	358-0	1		4148	325-9	1		4148	325-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
68	"	4090	363-0	1		4149	330-9	1		4149	330-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
69	"	4091	368-0	1		4150	335-9	1		4150	335-9	1				1		3907-6-3	3908-6-9	3909-11-3	3910-13-9		
70	"	4092	373																				

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

FRONT SPECTACLES.

**9741-75°****9703-75°****9700-60°****9706-55°****9702-60°****9704-60°****9705-60°**

044

073 - FOR $\frac{3}{8}$ " STUD
0393 - $\frac{1}{8}$ " $\frac{1}{8}$ "**9707-55°**

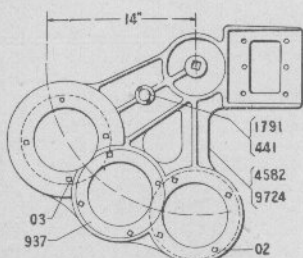
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Back Spectacle, Bearing, Shaft, Etc., see table, page 149.

Order No.	FRONT SPECTACLES.	List Price.
02	BOLT with Nut, $\frac{1}{4}$ " x 1".....	.02
03	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ ".....	.02
04	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{3}{4}$ ".....	.02
05	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ ".....	.02
044	COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100).....	.80
073	Iron WASHER for $\frac{3}{4}$ " Studs.....	.02
0393	Iron WASHER for $\frac{3}{8}$ " Studs.....	.02
441	STUD, $\frac{3}{8}$ " dia. for various Spectacles.....	.12
937	BEZEL RING for 9702.....	.16
1944	BEZEL RING for 9741.....	.16
9060	STUD, $\frac{3}{8}$ " dia. for various Spectacles.....	.12
9061	BEZEL RING for 9700.....	.20
9671	SPECTACLE, Casting only, for 9703.....	4.10
9672	SPECTACLE, Casting only, for 9704.....	4.10
9673	SPECTACLE, Casting only, for 9702.....	3.70
9674	SPECTACLE, Casting only, for 9700.....	4.80
9675	SPECTACLE, Casting only, for 9705.....	4.80
9676	SPECTACLE, Casting only, for 9706.....	5.80
9677	SPECTACLE, Casting only, for 9707.....	5.80
9700	2 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....	5.40
9702	1 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....	4.10
9703	1 Light, 75 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass).....	4.50
9704	1 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass).....	4.50
9705	2 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....	5.40
9706	2 Light, 55 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $8\frac{3}{8}$ " and $9\frac{1}{8}$ " Glasses).....	6.50
9707	2 Light, 55 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass).....	6.60
9740	SPECTACLE, Casting only, for 9741.....	3.70
9741	1 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....	4.10
10322	BEZEL RING for Spectacle 9704.....	.20
10323	BEZEL RING for Spectacle 9703.....	.20
10324	BEZEL RING for Spectacle 9706.....	.20
10325	Large BEZEL RING for Spectacle 9706.....	.20
10326	BEZEL RING for Spectacle 9707.....	.30

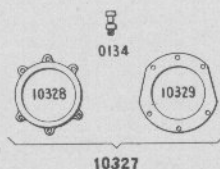
Order by NUMBER and NAME Appearing in Large Type.

FRONT SPECTACLES.

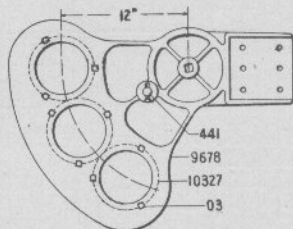


4562-60°
9725-60°

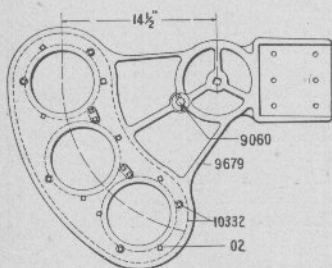
044
073 - FOR $\frac{3}{8}$ " STUD
0393 - " $\frac{3}{8}$ " "
074 - " 1" "



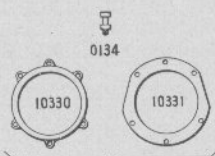
10327



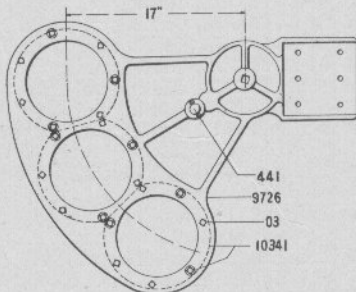
9708-60°



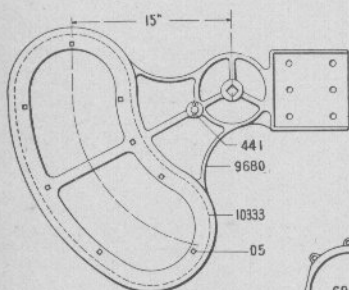
9709-60°



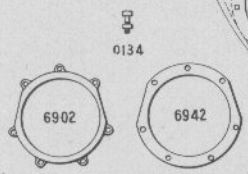
10332



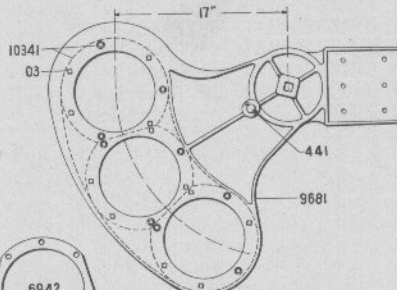
9727-60°



9710-60°



10341



9711-60°

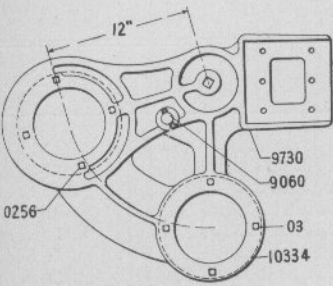
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately if required. For Back Spectacles, Bearing, Shaft, Etc., see table, page 149.

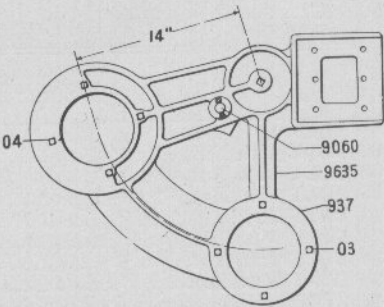
Order No.	FRONT SPECTACLES.—CONT.	List Price.
002	BOLT with Nut, $\frac{3}{4}$ " x 1".....	.02
003	BOLT with Nut, $\frac{1}{4}$ " x 1 $\frac{1}{2}$ ".....	.02
005	BOLT with Nut, $\frac{1}{4}$ " x 1 $\frac{1}{2}$ ".....	.02
044	COTTER Pin, $\frac{3}{16}$ " x 1 $\frac{1}{2}$ " (per 100).....	.80
073	IRON WASHER for $\frac{3}{4}$ " Studs.....	.02
0134	BOLT with Nut, $\frac{1}{4}$ " x $\frac{3}{8}$ ".....	.02
0393	IRON WASHER for $\frac{7}{8}$ " Studs.....	.02
441	STUD, $\frac{7}{8}$ " Dia., for various Spectacles.....	.12
937	BEZEL RING used with Spectacles 4562 or 9725.....	.16
1791	STUD, 1" for Spectacle 4562.....	.12
4562	3 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete with 1" Stud. (Takes 6 $\frac{1}{2}$ " Glass).....	5.40
4582	SPECTACLE Casting for 4562.....	4.80
6902	RING Casting for 10341.....	.16
6942	Sheet Metal BEZEL RING for 10341.....	.30
9060	STUD, $\frac{3}{4}$ ", for 9709.....	.12
9678	SPECTACLE, Casting only, for 9708.....	4.40
9679	SPECTACLE, Casting only, for 9709.....	4.40
9680	SPECTACLE, Casting only, for 9710.....	6.60
9681	SPECTACLE, Casting only, for 9711.....	4.20
9708	3 Light, 60 Deg. Throw, 12" Ctrs. SPECTACLE Complete. (Takes 5 $\frac{3}{8}$ " Glass).....	6.40
9709	3 Light, 60 Deg. Throw, 14 $\frac{1}{2}$ " Ctrs. SPECTACLE Complete. (Takes 6 $\frac{1}{2}$ " Glass).....	6.40
9710	Continuous Two Light, 60 Deg. Throw, 15" Ctrs. SPECTACLE Complete. (Takes Special Formed Glass).....	7.60
9711	3 Light, 60 Deg. Throw, 17" Ctrs. SPECTACLE Complete. (Takes 8 $\frac{3}{8}$ " Glass).....	6.20
9724	SPECTACLE, Casting only, for 9725.....	4.20
9725	3 Light, 60 Deg. Throw, 14" Ctrs. SPECTACLE Complete. (Takes 6 $\frac{1}{2}$ " Glass).....	6.40
9726	SPECTACLE, Casting only, for 9727.....	4.00
9727	3 Light, 60 Deg. Throw, 17" Ctrs. SPECTACLE Complete. (Takes 8 $\frac{3}{8}$ " Glass).....	6.00
10327	BEZEL RING Complete for 9708.....	.60
10328	RING Casting for 10327.....	.16
10329	Sheet Metal BEZEL RING for 10327.....	.30
10330	RING Casting for 10332.....	.16
10331	Sheet Metal BEZEL RING for 10332.....	.30
10332	BEZEL RING Complete for 9709.....	.60
10333	BEZEL RING Casting for 9710.....	1.00
10341	BEZEL RING Complete for 9711 or 9727.....	.60

Order by NUMBER and NAME Appearing in Large Type.

FRONT SPECTACLES.



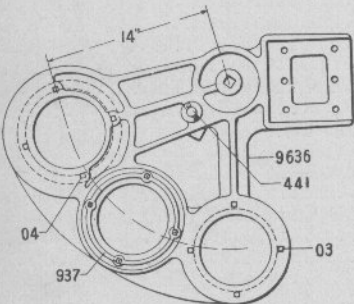
9731-75°



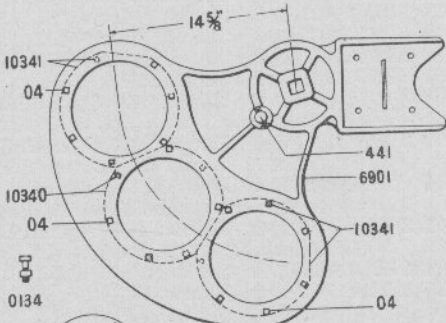
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044

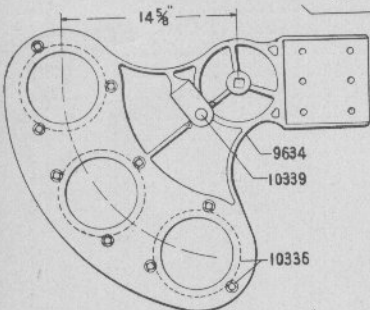
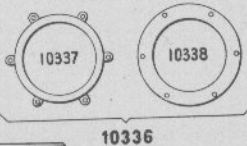
073 - FOR 3/4" STUD
0393 - " 7/8 "



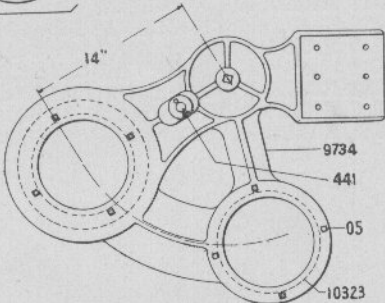
9714-75°



7862-75°



9712-75°



9735-75°

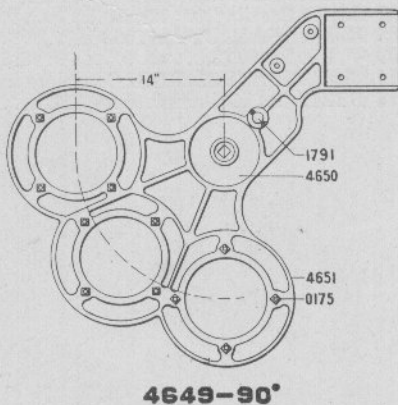
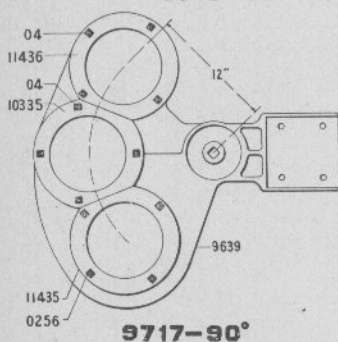
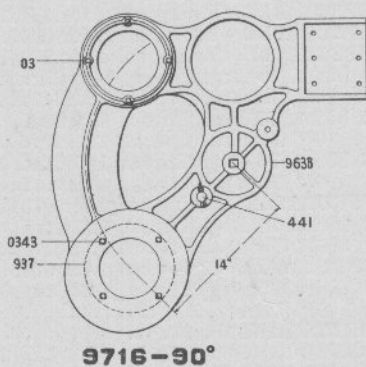
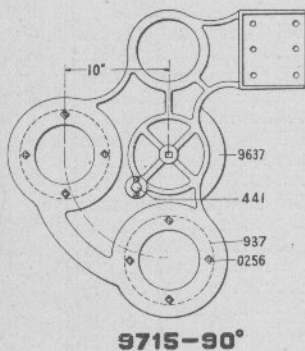
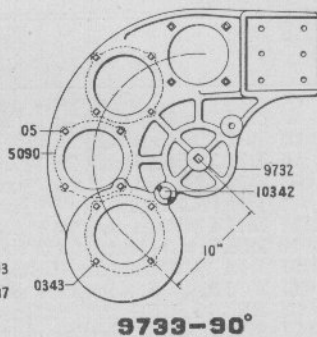
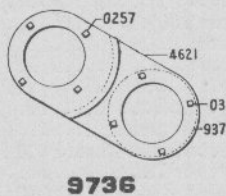
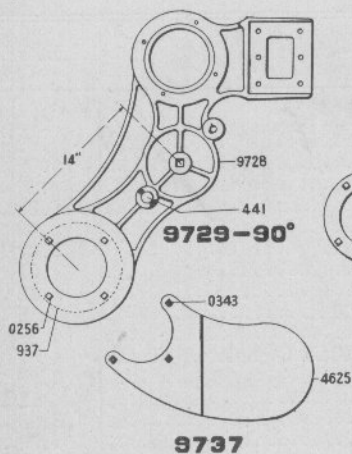
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Back Spectacle, Bearing, Shaft, Etc., see table, page 149.

Order No.	FRONT SPECTACLES.—CONT.	List Price.
003	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ "	.02
004	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{3}{4}$ "	.02
005	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{4}$ "	.02
044	COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)	.80
073	Iron WASHER, for $\frac{1}{4}$ " Studs	.02
0134	BOLT with Nut, $\frac{1}{4}$ " x $\frac{3}{4}$ "	.02
0256	BOLT with Nut, $\frac{1}{4}$ " x 2"	.02
0393	Iron WASHER for $\frac{7}{8}$ " Studs	.02
441	STUD, $\frac{7}{8}$ " dia., for various Spectacles	.12
937	BEZEL RING used on Spectacles 9713 and 9714	.16
6901	SPECTACLE, Casting only, for 7862	4.80
7862	3 Light, 75 Deg. Throw, $14\frac{3}{8}$ " Ctrs., SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass)	6.80
9060	STUD, $\frac{3}{4}$ " dia., for various Spectacles	.12
9634	SPECTACLE, Casting only, for 9712	5.00
9635	SPECTACLE, Casting only, for 9713	4.80
9636	SPECTACLE, Casting only, for 9714	4.80
9712	3 Light, 75 Deg. Throw, $14\frac{3}{8}$ " Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass)	8.00
9713	2 Light, 75 Deg. Throw, 14" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass)	5.40
9714	3 Light, 75 Deg. Throw, 14" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass)	5.40
9730	SPECTACLE, Casting only, for 9731	4.80
9731	2 Light, 75 Deg. Throw, 12" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass)	5.40
9734	SPECTACLE, Casting only, for 9735	4.80
9735	2 Light, 75 Deg. Throw, 14" Ctrs., SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass)	6.00
10323	BEZEL RING for 9735	.20
10334	BEZEL RING for 9731	.24
10336	BEZEL RING Complete for 9712	1.00
10337	RING, Casting, for 10336	.30
10338	Rubber GASKET for 10336	.70
10339	$\frac{7}{8}$ " Pin for 9712	.14
10340	CENTER BEZEL RING Complete for 7862	.80
10341	BEZEL RING Complete for 7862	.60

Order by NUMBER and NAME Appearing in Large Type.

FRONT SPECTACLES.



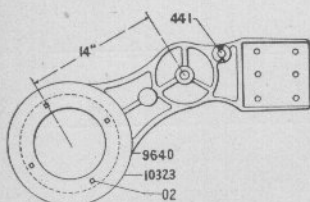
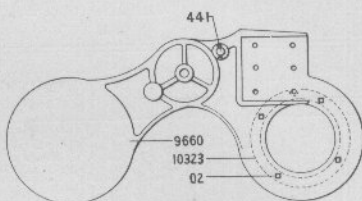
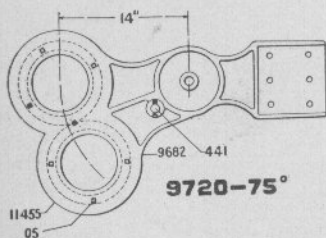
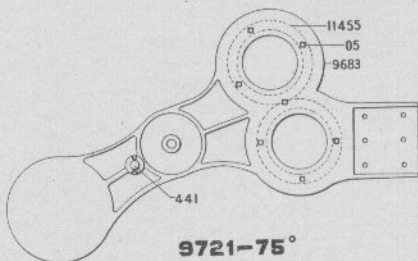
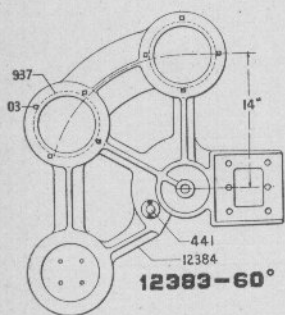
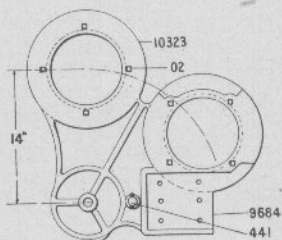
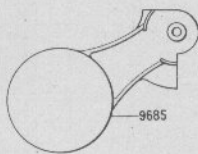
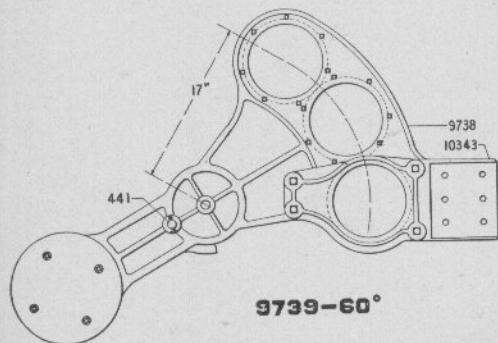
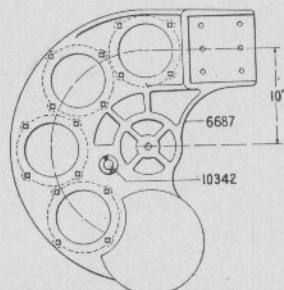
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Back Spectacle, Bearing, Shaft, Etc., see table, page 149.

Order No.	FRONT SPECTACLES.—CONT.	List Price.
03	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ "	.02
04	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{3}{4}$ "	.02
05	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{4}$ "	.02
0175	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ " for 4649	.03
0256	BOLT with Nut, $\frac{1}{4}$ " x 2"	.02
0257	BOLT with Nut, $\frac{1}{4}$ " x $2\frac{3}{4}$ " for 9736	.02
0343	BOLT with Nut, $\frac{1}{4}$ " x $2\frac{1}{2}$ "	.02
441	STUD, $\frac{3}{8}$ " dia., for various Spectacles	.12
937	BEZEL RING for various Spectacles	.16
4621	FRAME Casting for 9736	1.80
4625	SHIELD only for 9729	1.25
4649	3 Light, 90 Deg. Throw, 14" Ctrs., SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass)	8.68
4650	SPECTACLE, Casting only, for 4649	7.50
4651	BEZEL RING for 4649	.30
5090	BEZEL RING for 9733	.12
9637	SPECTACLE, Casting only, for 9715	8.40
9638	SPECTACLE, Casting only, for 9716	7.80
9639	SPECTACLE, Casting only, for 9717	5.60
9715	2 Light, 90 Deg. Throw, 10" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass)	9.00
9716	2 Light, 90 Deg. Throw, 14" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass)	8.60
9717	3 Light, 90 Deg. Throw, 12" Ctrs., SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass)	6.60
9728	SPECTACLE, Casting only, for 9729	5.60
9729	1 Light, 90 Deg. Throw, 14" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass)	6.15
9732	SPECTACLE, Casting only, for 9733	6.60
9733	3 Light, 90 Deg. Throw, 10" Ctrs., SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass)	7.50
9736	SPECTACLE Frame Complete, for use with 9729, to make Two Light	2.00
9737	SHIELD Complete with Bolts, for use with 9729	1.28
10335	Center BEZEL RING, for 9717	.30
10342	STUD, $\frac{3}{8}$ ", for 9733	.16
11435	BEZEL RING for 9717	.30
11436	BEZEL RING for 9717	.30

Order by NUMBER and NAME Appearing in Large Type.

BLOCK STATION SPECTACLES.

**9718-75°****9719-75°****9720-75°****9721-75°****12383-60°****9722-60°****9739-60°****6675-135°**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

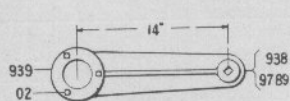
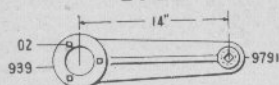
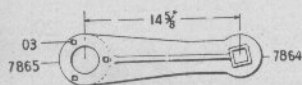
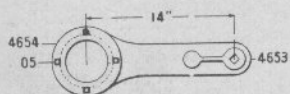
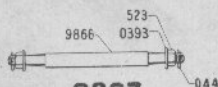
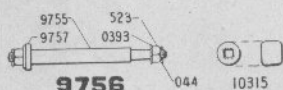
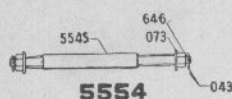
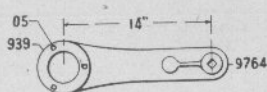
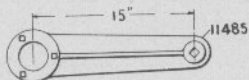
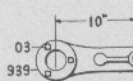
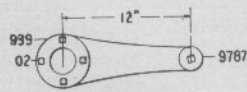
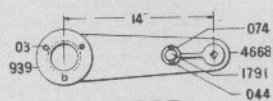
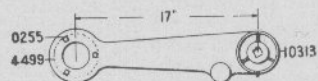
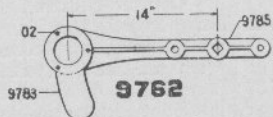
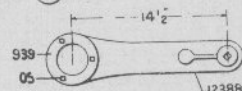
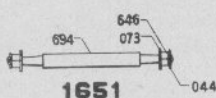
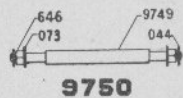
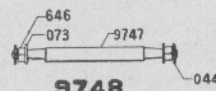
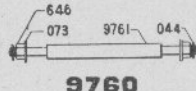
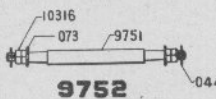
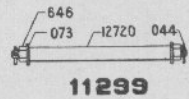
HIGH SIGNALS.

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Complete Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Back Spectacle, Bearing, Shaft, Etc., see table, page 149.

Order No.	BLOCK STATION SPECTACLES.	List Price.
03	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$" .....	.02
441	$\frac{7}{8}$ " STUD for various Spectacles.....	.12
937	BEZEL RING for 12383.....	.16
6675	4 Light, 135 Degree Throw, 10" Centers, SPECTACLE Complete....	
	(Takes $6\frac{1}{2}$ " Glass)	9.00
6687	SPECTACLE, Casting only, for 6675	8.00
9640	SPECTACLE, Casting only, for 9718.....	4.80
9660	SPECTACLE, Casting only, for 9719.....	6.00
9682	SPECTACLE, Casting only, for 9720.....	4.60
9683	SPECTACLE, Casting only, for 9721.....	8.00
9684	SPECTACLE, Casting only, for 9722.....	4.80
9685	SEMAPHORE COUNTER WEIGHT Casting.....	5.60
9718	Two Position, 1 Light, 75 Degree Throw, 14" Centers, SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass).....	5.20
9719	Two Position, 1 Light, 75 Degree Throw, 14" Centers, SPECTACLE Complete with Counterweight. (Takes $8\frac{3}{8}$ " Glass).....	6.70
9720	Three Position, 2 Light, 75 Degree Throw, 14" Centers, SPECTACLE Complete. (Takes $6\frac{1}{4}$ " Glass)	5.00
9721	Three Position, 2 Light, 75 Degree Throw, 14" Centers, SPECTACLE Complete with Counterweight. (Takes $6\frac{1}{2}$ " or $6\frac{7}{8}$ " Glass)	8.50
9722	Three Position, 2 Light, 60 Degree Throw, 14" Centers, SPECTACLE Complete. (Takes $8\frac{3}{8}$ " Glass).....	5.40
9738	Spectacle Casting with Counterweight for 9739.....	10.50
9739	Three Light, 60 Degree Throw, 17" Centers, SPECTACLE Complete. Special for Double Arm Signals (Takes $8\frac{3}{8}$ " Glass).....	14.00
10342	$\frac{7}{8}$ " STUD for 6675.....	.16
10343	BLADE HOLDER for Spectacle Casting 9739.....	2.00
12383	Two Light, 60 Degree Throw, 14" Centers, SPECTACLE Complete. (Takes $6\frac{1}{2}$ " Glass).....	6.00
12384	SPECTACLE, Casting only, for 12383.....	5.40

BACK SPECTACLES AND SHAFTS

**1941****9790****9792****7863****4652****9867****9756****9754****5554****9765****12719****10312****9788****4667****10314****9762****12389****1651****9750****9748****9760****9752****11299**

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

NOTE:—Complete Back Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Front Spectacles, Bearings, Shaft, Etc., see table, page 149.

NOTE:—When ordering Shafts be governed by Table of Front and Back Spectacles, as given on page 149.

Order No.	BACK SPECTACLES AND SHAFTS	List Price.
02	BOLT with Nut, $\frac{1}{4}$ " x 1", Sq Hd.....	.02
03	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ ", Sq Hd.....	.02
05	BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{4}$ ", Sq. Hd.....	.02
043	COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (per 100).....	.80
044	COTTER Pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ ", for various Shafts (per 100).....	.80
073	IRON WASHER for $\frac{3}{4}$ " Bolt.....	.02
074	IRON WASHER for 4667.....	.02
0255	BOLT with Nut, $\frac{1}{4}$ " x $\frac{3}{4}$ ", C. S. Hd.....	.02
0393	IRON WASHER for $\frac{7}{8}$ " Screw.....	.02
523	$\frac{7}{8}$ " Hex NUT.....	.07
646	$\frac{3}{4}$ " Hex. NUT for various Shafts.....	.05
694	SHAFT only for 1651.....	1.60
939	BEZEL RING for various Back Spectacles.....	.10
1651	SEMAPHORE SHAFT Complete. (See note above).....	1.68
1791	1" STUD for 4667.....	.12
1941	BACK SPECTACLE Complete, 14" Ctrs. (Takes 3" Glass.) See note above.....	1.16
4499	BEZEL RING for 10314.....	.08
4652	BACK SPECTACLE Complete, 14" Ctrs. (Takes $4\frac{1}{4}$ " Glass) See note above.....	1.16
4653	SPECTACLE Casting for 4652.....	1.00
4654	BEZEL RING for 4652.....	.16
4656	HALF CRANK. Used for operating Shafts 5554 or 9754.....	.70
4667	Back SPECTACLE Complete with Stud, 14" Ctrs. (Takes 3" Glass.) Used in place of 1941 when Circuit Breaker is operated from Back Spectacle.....	1.40
4668	SPECTACLE Casting for 4667.....	1.10
5545	SHAFT only for 5554.....	1.60
5554	SEMAPHORE SHAFT Complete. See note above.....	1.68
7863	Back SPECTACLE Complete, 14 $\frac{1}{2}$ " Ctrs. (Takes 3" Glass.) See note above.....	1.20
7864	SPECTACLE Casting for 7863.....	1.10
7865	BEZEL RING for 7863.....	.10
9747	SHAFT only for 9748.....	1.60
9748	SEMAPHORE SHAFT Complete. See note above.....	1.68
9749	SHAFT only for 9750.....	1.60
9750	SEMAPHORE SHAFT Complete See note above.....	1.68
9751	SHAFT only for 9752.....	1.60
9752	SEMAPHORE SHAFT Complete See note above.....	1.70
9753	SHAFT only for 9754.....	1.30
9754	SEMAPHORE SHAFT Complete. See note above.....	1.40
9755	SHAFT only for 9756.....	1.40
9756	SEMAPHORE SHAFT Complete See note above.....	1.68
9757	WASHER for 9756.....	.20
9760	SEMAPHORE SHAFT Complete. See note above.....	1.68

Order by NUMBER and NAME Appearing in Large Type.

HIGH SIGNALS.

NOTE:—Complete Back Spectacles as enumerated below, do not include Glass or Roundels, which should be ordered separately, if required. For Front Spectacles, Bearings, Shaft, Etc., see table, page 149.

NOTE:—When ordering Shafts be governed by Table of Front and Back Spectacles, as given on page 149.

Order No.	BACK SPECTACLES AND SHAFTS.—CONT.	List Price.
9761	SHAFT only for 9760.....	1.60....
9764	SPECTACLE Casting for 9765.....	1.00....
9765	Back SPECTACLE Complete, 14" Ctrs (Takes 3" Glass.) See note above.....	1.16....
9782	Back SPECTACLE Complete, 14" Ctrs. (Takes 3" Glass) See note above.....	1.32....
9783	SHIELD for 9782.....	.....
9784	BLANK SHIELD used with 9782 when required.....	.....
9785	SPECTACLE Casting for 9782.....	.....
9787	SPECTACLE Casting for 9788.....	1.00....
9788	Back SPECTACLE Complete, 12" Ctrs. (Takes 3" Glass.) See note above.....	1.16....
9789	SPECTACLE Casting for 9790.....	1.00....
9790	Back SPECTACLE Complete 14" Ctrs. (Takes 3" Glass.) See note above.....	1.16....
9791	SPECTACLE Casting for 9792.....	1.00....
9792	Back SPECTACLE Complete, with Special Hub, 14" Ctrs. (Takes 3" Glass) See note above.....	1.16....
9866	SHAFT only for 9867.....	1.60....
9867	Semaphore SHAFT Complete See note above.....	1.68....
10311	SPECTACLE Casting for 10312.....	1.00....
10312	Back SPECTACLE Complete, 10" Ctrs. (Takes 3" Glass.) See note above.....	1.16....
10313	SPECTACLE Casting for 10314.....	1.30....
10314	Back SPECTACLE Complete, 17" Ctrs. (Takes 3" Glass.) See note above.....	1.44....
10315	COLLAR for Semaphore Shafts when Back Spectacle is not required.....	.20....
10316	Hex. NUT for 9752.....	.06....
11299	Semaphore SHAFT Complete. See note above.....	1.60....
11485	SPECTACLE Casting for 12719.....	1.00....
12388	SPECTACLE Casting for 12389.....	1.00....
12389	Back SPECTACLE Complete, 14½" Ctrs. (Takes 3" Glass.) See note above.....	1.16....
12719	Back SPECTACLE Complete, 15" Ctrs.....	1.16....
12720	SHAFT only for 11299.....	1.50....

Order by NUMBER and NAME Appearing in Large Type.

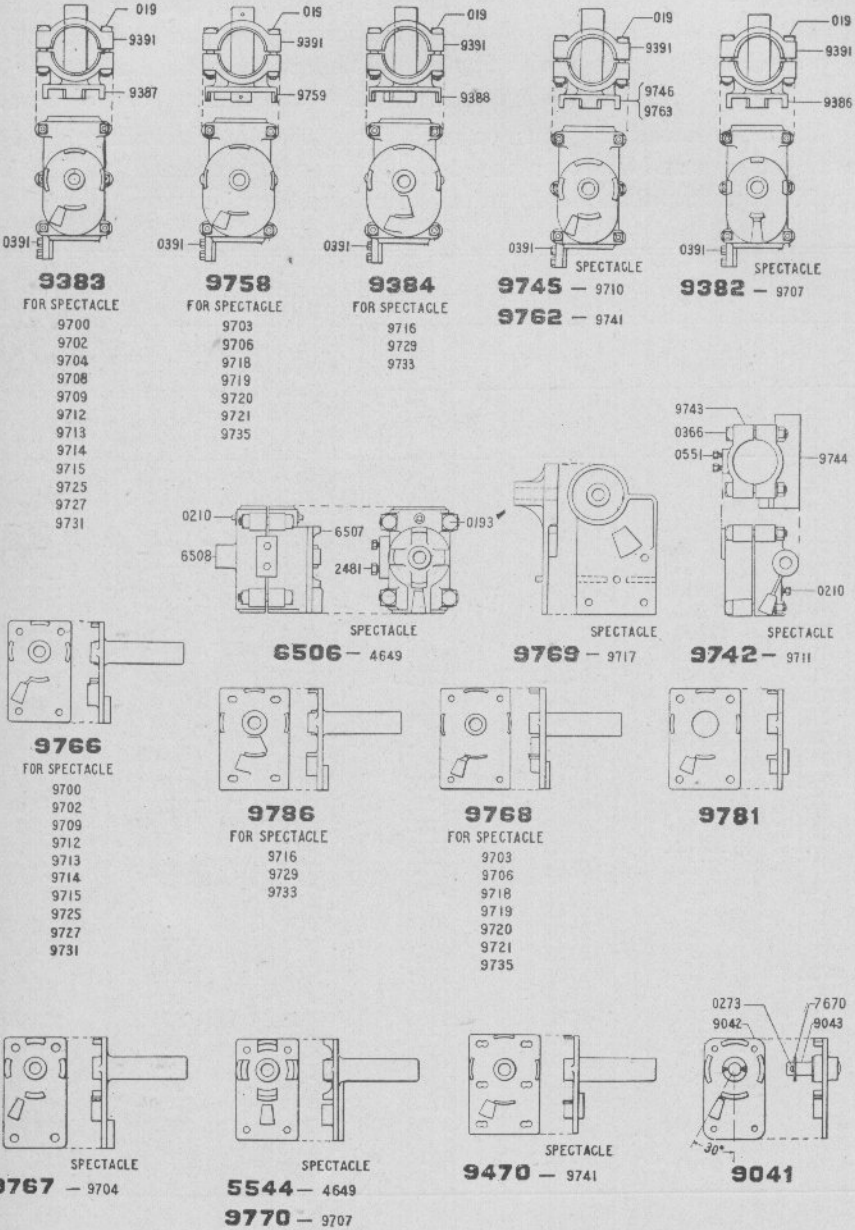
NOTE:—The following list of Standard Spectacles, Bearings and Shafts for Enclosed and Outside Connected Signals, showing the various combinations of Spectacles and Bearings with Shafts, will be found beneficial when it is desired to order a Spectacle which is used with a certain Bearing, or vice versa.

Front Spectacles are shown on pages from 136 to and including page 144; Back Spectacles and Shafts on page 146; Bearings for Wood and Iron Poles on page 150, and Stop Plates and Shafts for Enclosed Signal on page 116.

LIST OF SPECTACLES, SHAFTS AND BEARINGS.

SPECTACLES.		BEARINGS.		Shaft.	ENCLOSED SIGNAL.	
Front.	Back.	Iron Pole.	Wood Pole.		Stop Plate.	Shaft.
4562	1941	9383	9766	1651	6931	10090
4649	4652	6506	5544	5554	9446	10235
7862	7863	8330	8331	8332	9447	9633
9700	9765	9383	9766	9748	6931	12380
9702	9765	9383	9766	9748	6931	12380
9703	9790	9758	9768	9750	6931	12380
9704	9765	9383	9767	9748	6931	12380
9705	9790	....	....	9748	6931	12380
9706	9792	9758	9768	9760	....	....
9707	9782	9382	9770	9752	9446	12380
9708	....	9383	....	9748	6931	12380
9709	12389	3383	9766	9748	6931	12380
9710	12719	9745	....	9756	....	....
9711	....	9742	....	9756	....	....
9712	....	9383	9766	9748	6931	12380
9713	9765	9383	9766	9748	6931	12380
9714	9765	9383	9766	9748	....	12380
9715	10312	9383	9766	9748	....	12380
9716	9765	9384	9786	9748	6930	12380
9717	....	....	9769	9754	....	....
9718	....	9758	9768	....	....	....
9719	....	9758	9781	....	....	....
9720	....	9758	9781	....	....	....
9721	....	9758	9781	....	....	....
9722	....	....	11304	....	....	....
9725	9765	9383	9766	9748	6931	12380
9727	10314	9383	9766	9748	6931	12380
9729	9765	9384	9786	9748	6930	12380
9731	9788	9383	9766	9748	9397	12380
9733	10312	9384	9786	9748	6930	10278
9735	9790	9758	9768	9750	9397	12380
9739	....	....	....	....	....	....
9741	9790	9762	9470	9750	....	12380

SEMAPHORE BEARINGS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order
No.

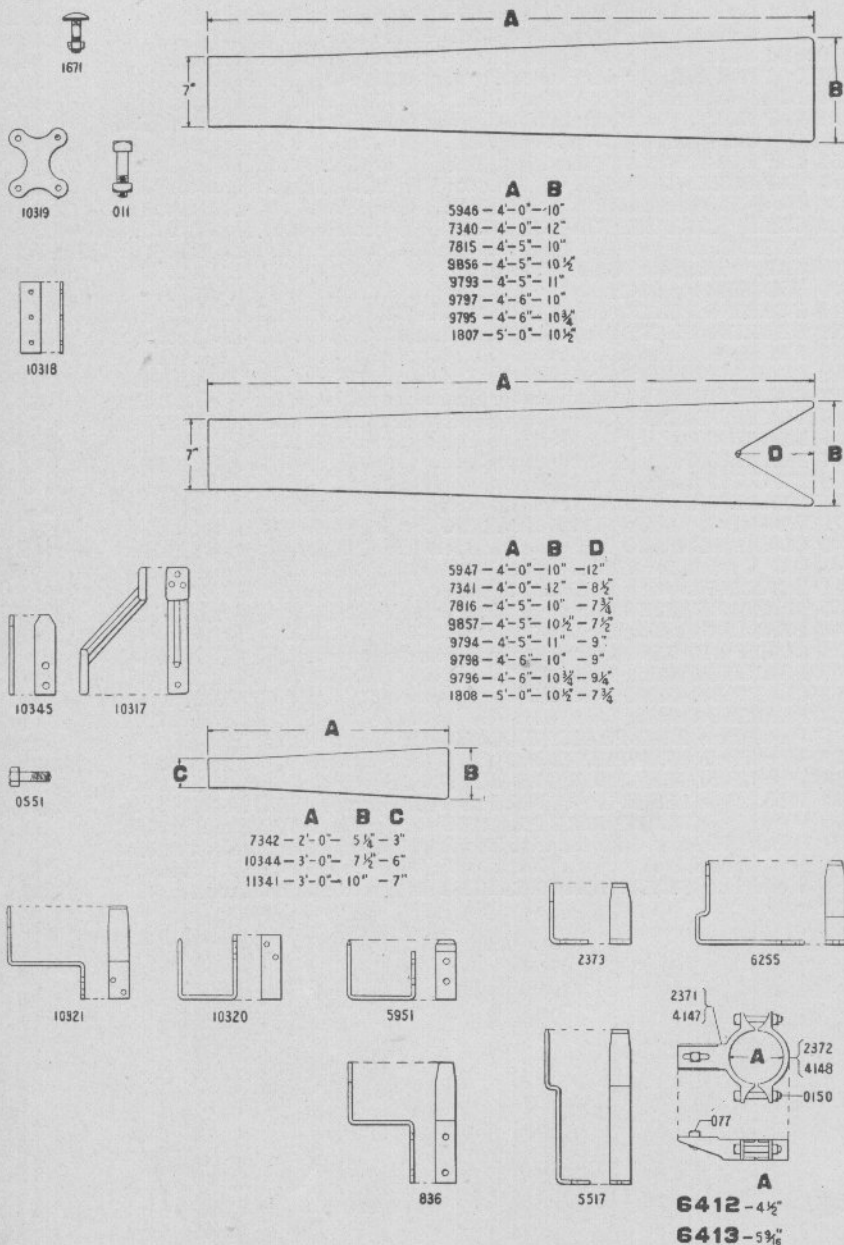
SEMAPHORE BEARINGS.

List Price.

0119	BOLT with Nut, $\frac{3}{8}$ " x $4\frac{1}{2}$ ", for various Semaphore Bearing Clamps...	.09	....
0193	BOLT with Nut, $\frac{3}{4}$ " x $4\frac{1}{2}$ ", for 6506.....	.12	....
0210	SET SCREW, $\frac{1}{2}$ " x 1", Sq. Hd.....	.04	....
0273	COTTER PIN, $\frac{5}{16}$ " x 2", for 9041 (per 100).....	.80	....
0366	BOLT with Nut, $\frac{3}{8}$ " x 5", for 9742.....	.10	....
0391	TAP BOLT, $\frac{1}{2}$ " x 1", Hex. Hd., for fastening Lamp Bracket to various Clamps.....	.02	....
0551	TAP BOLT, $\frac{1}{2}$ " x $1\frac{1}{2}$ ", Hex. Hd., Special for 9742.....	.03	....
2481	CAP SCREW, $\frac{1}{2}$ " x $1\frac{1}{2}$ ", Sq. Hd., for 6506.....	.05	....
5544	Wood Pole SEMAPHORE BEARING for Spectacle 4649.....	1.60	....
6506	SEMAPHORE BEARING Complete for Spectacle 4649.....	4.00	....
6507	BASE, Casting for 6506.....	1.80	....
6508	CAP, Casting for 6506.....	1.52	....
7670	WASHER for 9041.....	.02	....
9041	BEARING PLATE, Complete with Side Stop.....	1.08	....
9042	BEARING PLATE for 9041.....	.96	....
9043	PIN for 9041.....	.12	....
9382	CLAMP BEARING Complete for Spectacle 9707 for $4\frac{1}{2}$ " O. D. Pole...	4.00	....
9383	CLAMP BEARING Complete for Spectacles as listed, for $4\frac{1}{2}$ " O. D. Pole	4.00	....
9384	CLAMP BEARING Complete for Spectacles as listed, for $4\frac{1}{2}$ " O. D. Pole	4.00	....
9386	BEARING Casting for 9382.....	2.60	....
9387	BEARING Casting for 9383.....	2.60	....
9388	BEARING Casting for 9384.....	2.60	....
9391	BEARING Back Half for 9382, etc.....	1.00	....
9470	Wood Pole SEMAPHORE BEARING for Spectacle 9741.....	1.30	....
9742	CLAMP BEARING Complete for Spectacle 9711 for $4\frac{1}{2}$ " O. D. Pole...	4.40	....
9743	CAP Casting for 9742.....	1.50	....
9744	BEARING Casting for 9742.....	2.40	....
9745	CLAMP BEARING Complete for Spectacle 9710, for $4\frac{1}{2}$ " O. D. Pole..	4.00	....
9746	BEARING Casting for 9745.....	2.60	....
9758	CLAMP BEARING Complete for Spectacles as listed, for $4\frac{1}{2}$ " O. D. Pole	4.00	....
9759	BEARING Casting for 9758.....	2.60	....
9762	CLAMP BEARING Complete for Spectacle 9741, for $4\frac{1}{2}$ " O. D. Pole..	4.00	....
9763	BEARING Casting for 9762.....	2.60	....
9766	Wood Pole SEMAPHORE BEARING for Spectacles as listed.....	1.20	....
9767	Wood Pole SEMAPHORE BEARING for Spectacle 9704.....	1.40	....
9768	Wood Pole SEMAPHORE BEARING for Spectacles as listed.....	1.20	....
9769	Wood Pole SEMAPHORE BEARING for Spectacle 9717.....	3.00	....
9770	Wood Pole SEMAPHORE BEARING for Spectacle 9707 (malleable)..	1.50	....
9781	BEARING PLATE for use with Bearing 9768, when required on Station Signals.....	.70	....
9786	Wood Pole SEMAPHORE BEARING for Spectacles as listed.....	1.30	....

Order by NUMBER and NAME Appearing in Large Type.

LAMP BRACKETS AND BLADES



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order
No.

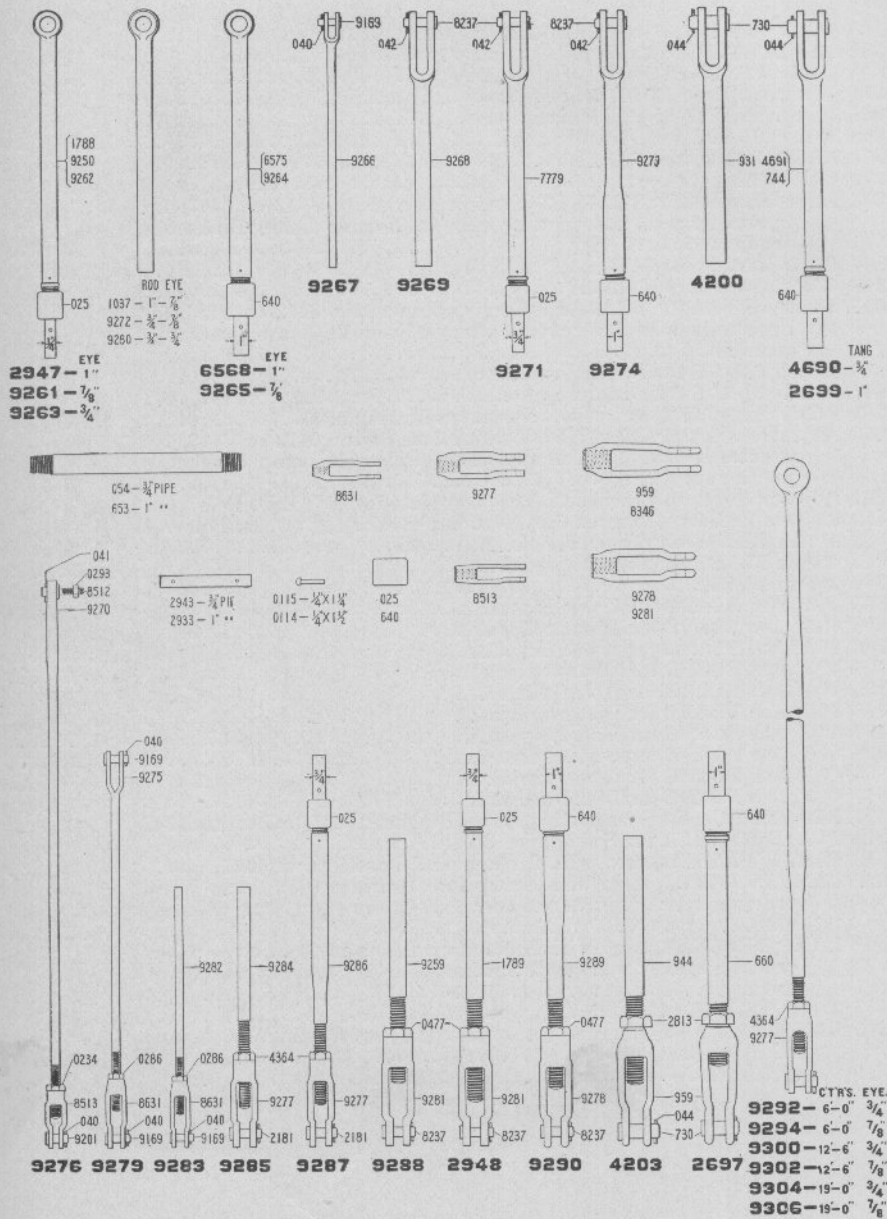
LAMP BRACKETS AND BLADES.

List Price.

011	BOLT with Nut, $\frac{1}{2}$ " x 2", Sq. Hd.....	.04	.....
077	BOLT with Nut, $\frac{1}{2}$ " x $1\frac{1}{4}$ ", Sq. Hd.....	.04	.....
0150	BOLT with Nut, $\frac{1}{2}$ " x 4", for 6412 or 6413.....	.06	.....
0551	TAP BOLT, $\frac{1}{2}$ " x $1\frac{1}{4}$ ", Hex. Hd.....	.03	.....
836	LAMP BRACKET for Wood Pole.....	.50	.....
1671	Mushroom Head BOLT holding Blade to Spectacle Casting.....	.05	.....
1807	5' Ash BLADE for Home Signal.....	1.76	.....
1808	5' Ash BLADE for Distant Signal.....	1.76	.....
2371	BASE Casting for 6412.....	.60	.....
2372	CAP Casting for 6412.....	.24	.....
2373	Adjustable LAMP BRACKET Forging, used with 6412 or 6413, for Spectacles with 14" centers, when adjustable Lamp Bracket is required.....	.40	.....
4147	BASE Casting for 6413.....	.60	.....
4148	CAP Casting for 6413.....	.24	.....
5517	Adjustable LAMP BRACKET Forging, used with 6412 or 6413, for Spectacles with 10" centers, when adjustable Lamp Bracket is required.....	.60	.....
5946	4' Ash BLADE for Home Signal.....	1.76	.....
5947	4' Ash BLADE for Distant Signal.....	1.76	.....
5951	LAMP BRACKET used with Semaphore Bearing 6506.....	.50	.....
6255	Adjustable LAMP BRACKET Forging, used with 6412 or 6413, for Spectacles with 17" centers, when adjustable Lamp Bracket is required.....	.70	.....
6412	Adjustable Lamp Bracket CLAMP Complete for $4\frac{1}{4}$ " O. D. Pole.....	1.00	.....
6413	Adjustable Lamp Bracket CLAMP Complete for $5\frac{9}{16}$ " O. D. Pole....	1.00	.....
7340	4' Ash BLADE for Home Signal.....	1.76	.....
7341	4' Ash BLADE for Distant Signal.....	1.76	.....
7342	2' Ash BLADE.....	1.00	.....
7815	4' 5" Ash BLADE for Home Signal.....	1.76	.....
7816	4' 5" Ash BLADE for Distant Signal.....	1.76	.....
9793	4' 5" Ash BLADE for Home Signal.....	1.76	.....
9794	4' 5" Ash BLADE for Distant Signal.....	1.76	.....
9795	4' 6" Ash BLADE for Home Signal.....	1.76	.....
9796	4' 6" Ash BLADE for Distant Signal.....	1.76	.....
9797	4' 6" Ash BLADE for Home Signal.....	1.76	.....
9798	4' 6" Ash BLADE for Distant Signal.....	1.76	.....
9856	4' 5" Ash BLADE for Home Signal.....	1.76	.....
9857	4' 5" Ash BLADE for Distant Signal.....	1.76	.....
10317	BRACKET Casting, supporting Lamp Bracket 10345 to Bearing 9742	1.00	.....
10318	PLATE WASHER for Semaphore Blade.....	.12	.....
10319	PLATE WASHER, used with Semaphore Blades 5946 or 5947.....	.30	.....
10320	LAMP BRACKET, used with Semaphore Bearings 9382, etc. When ordering specify number of Spectacle Casting and Style of Lamp used.....	.50	.....
10321	LAMP BRACKET, used with Semaphore Bearings 9382, etc. When ordering specify number of Spectacle Casting and style of Lamp used.....	.50	.....
10344	3' Ash BLADE.....	1.50	.....
10345	LAMP BRACKET Forging, used with Bracket Casting 10317, and with Spectacle Casting 9711.....	.32	.....
11341	3' Ash BLADE.....	1.60	.....

Order by NUMBER and NAME Appearing in Large Type.

OPERATING RODS AND GUIDES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

155

Order
No.

OPERATING RODS AND GUIDES.

List Price.

06	BOLT with Nut, $\frac{3}{8}$ " x 1", for various Guides.....	.02
010	BOLT with Nut, $\frac{1}{2}$ " x $1\frac{1}{2}$ ", for various Guides.....	.04
025	Pipe COUPLING, $\frac{3}{4}$ ", reinforced.....	.14
040	COTTER PIN, $\frac{1}{8}$ " x 1" (per 100).....	.80
041	COTTER PIN, $\frac{1}{8}$ " x $1\frac{1}{2}$ " (per 100).....	.80
042	COTTER PIN, $\frac{3}{16}$ " x 1" (per 100).....	.80
044	COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100).....	.80
054	$\frac{3}{4}$ " Black PIPE, $\frac{1}{2}$ " x $2\frac{1}{2}$ ", fastening Guides to Wood Pole.....	.03
064	LAG SCREW, $\frac{1}{4}$ " x $1\frac{1}{2}$ ", for 1" Pipe Connection.....	.01
0114	RIVET, $\frac{1}{4}$ " x $1\frac{1}{2}$ ", for $\frac{3}{4}$ " Pipe Connection.....	.01
0115	RIVET, $\frac{1}{4}$ " x $1\frac{1}{2}$ ", for $\frac{3}{4}$ " Pipe Connection.....	.01
0234	$\frac{5}{8}$ " Hex. NUT.....	.02
0286	$\frac{1}{2}$ " Hex. NUT.....	.02
0293	$\frac{3}{8}$ " Hex. NUT, for 9276.....	.02
0477	1" Hex. NUT.....	.06
640	Pipe COUPLING, 1", reinforced.....	.19
653	1" Black PIPE, (per foot).....	
660	$1\frac{1}{2}$ " SCREW ROD, for 2697.....	.50
709	1-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $4\frac{1}{2}$ " O. D. Pole.....	1.30
710	2-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $5\frac{9}{16}$ " O. D. Pole.....	1.40
730	PIN, $\frac{1}{2}$ " x $2\frac{3}{8}$ ".....	.07
744	$1\frac{1}{4}$ " SOLID JAW for 2699.....	.84
771	1-Way GUIDE, $\frac{3}{4}$ " Pipe, $10\frac{1}{2}$ " long, for $4\frac{1}{2}$ " O. D. Pole.....	1.30
775	2-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $6\frac{3}{8}$ " O. D. Pole.....	1.40
776	1-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $5\frac{9}{16}$ " O. D. Pole.....	1.34
890	1-Way GUIDE, $\frac{3}{4}$ " Pipe, for Wood Pole.....	.28
891	2-Way GUIDE, $\frac{3}{4}$ " Pipe, for Wood Pole.....	.33
931	$1\frac{1}{4}$ " SOLID JAW for 4200.....	.74
944	$1\frac{1}{4}$ " SCREW ROD for 4203.....	.44
959	$1\frac{1}{2}$ " WROUGHT SCREW JAW.....	1.10
1037	1" EYE ROD with Stub End, $\frac{3}{8}$ " Eye.....	.60
1788	EYE ROD for 2947.....	.70
1789	1" SCREW ROD for 2948.....	.68
2181	$\frac{5}{8}$ " PIN for Rods 9285 or 9287.....	.07
2697	$1\frac{1}{4}$ " Wrought SCREW JAW Complete with Tang End for 1" Pipe.....	1.90
2699	$1\frac{1}{2}$ " Solid JAW Complete with Tang End, for 1" Pipe.....	1.08
2813	$1\frac{1}{2}$ " Thin NUT. Used on various Rods.....	.09
2933	PLUG for 1" Pipe Connection.....	.07
2938	3-Way GUIDE, $\frac{3}{4}$ " Pipe, for Wood Pole.....	.38
2939	3-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $5\frac{9}{16}$ " O. D. Pole.....	1.44
2940	3-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $6\frac{3}{8}$ " O. D. Pole.....	1.48
2941	2-Way GUIDE, $\frac{3}{4}$ " Pipe, $10\frac{1}{2}$ " long for $4\frac{1}{2}$ " O. D. Pole.....	1.40
2943	PLUG for $\frac{3}{4}$ " Pipe Connection.....	.07
2947	EYE ROD with Tang End Complete, 1" Eye, for $\frac{3}{4}$ " Pipe.....	.90
2948	1" Malleable SCREW JAW Complete, with Tang End for $\frac{3}{4}$ " Pipe.....	1.08
3966	1-Way GUIDE, $\frac{3}{4}$ " Pipe, $8\frac{3}{4}$ " long, for $6\frac{3}{8}$ " O. D. Pole.....	1.36
4200	$1\frac{1}{4}$ " SOLID JAW Complete with Stub End.....	.80
4203	$1\frac{1}{2}$ " Wrought SCREW JAW Complete with Stub End.....	1.70
4247	2-Way GUIDE, $\frac{3}{4}$ " Pipe $10\frac{1}{2}$ " long, for $5\frac{9}{16}$ " O. D. Pole.....	1.40
4364	$\frac{3}{4}$ " Thin NUT.....	.04
4690	$1\frac{1}{4}$ " SOLID JAW Complete with Tang End for $\frac{3}{4}$ " Pipe.....	1.48
4691	$1\frac{1}{2}$ " SOLID JAW for 4690.....	1.20
5923	1-Way GUIDE, 1" Pipe for Wood Pole.....	.28
5924	2-Way GUIDE, 1" Pipe, for Wood Pole.....	.33
5925	1-Way GUIDE, 1" Pipe $8\frac{3}{4}$ " long, for $4\frac{1}{2}$ " O. D. Pole.....	1.30
5926	1-Way GUIDE, 1" Pipe, $10\frac{1}{2}$ " long, for $4\frac{1}{2}$ " O. D. Pole.....	1.30
5927	1-Way GUIDE, 1" Pipe, $8\frac{3}{4}$ " long, for $5\frac{9}{16}$ " O. D. Pole.....	1.34

Order by NUMBER and NAME Appearing in Large Type.

Order
No.

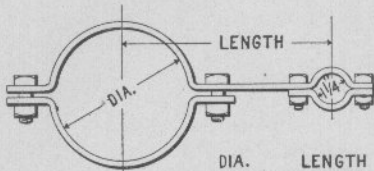
OPERATING RODS AND GUIDES — CONT.

List Price

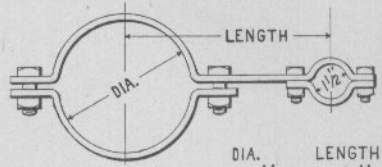
5928	2-Way GUIDE, 1" Pipe, $8\frac{3}{4}$ " long, for $5\frac{9}{16}$ " O. D. Pole.....	1.40
6298	1-Way GUIDE, 1" Pipe, $8\frac{3}{4}$ " long, for $6\frac{3}{8}$ " O. D. Pole.....	1.36
6299	2-Way GUIDE, 1" Pipe, $8\frac{3}{4}$ " long, for $6\frac{3}{8}$ " O. D. Pole.....	1.40
6568	Eye ROD Complete with Tang End. 1" Eye, for 1" Pipe.....	1.20
6575	Eye ROD, for 6568.....	1.04
6801	3-Way GUIDE, 1" Pipe, $8\frac{3}{4}$ " long, for $6\frac{3}{8}$ " O. D. Pole.....	1.48
7779	1" SOLID JAW for 9271.....	.60
8237	PIN, $\frac{5}{8}$ " x $2\frac{3}{8}$ ".....	.07
8346	1 $\frac{1}{2}$ " Malleable SCREW JAW.....	.41
8512	STUD, Special, for 9276.....	.40
8513	SCREW JAW for 9276.....	.24
8631	$\frac{1}{2}$ " SCREW JAW for 9279 or 9283.....	.22
9169	PIN, $\frac{1}{2}$ " x $1\frac{3}{16}$ ".....	.07
9201	$\frac{3}{4}$ " PIN for 9276.....	.07
9250	Eye ROD for 9261.....	.70
9259	1" Screw ROD for 9288.....	.36
9261	Eye ROD with Tang End Complete, $\frac{7}{8}$ " Eye.....	.90
9262	Eye ROD for 9263.....	.70
9263	Eye ROD with Tang End Complete, $\frac{3}{4}$ " Eye.....	.90
9264	Eye ROD for 9265.....	1.04
9265	Eye ROD Complete with Tang End, $\frac{7}{8}$ " Eye, for 1" Pipe.....	1.20
9266	SOLID JAW ROD for 9267.....	.64
9267	SOLID JAW ROD Complete, $\frac{1}{2}$ ", with Stub End.....	.72
9268	1" SOLID JAW for 9269.....	.48
9269	1" SOLID JAW, Complete with Stub End.....	.55
9270	EYE ROD for 9276.....	.50
9271	1" SOLID JAW Complete with Tang End, for $\frac{3}{4}$ " Pipe.....	.77
9272	$\frac{3}{4}$ " EYE ROD, Stub End, $\frac{7}{8}$ " Eye.....	.60
9273	1" SOLID JAW for 9274.....	1.24
9274	1" SOLID JAW Complete with Tang End, for 1" Pipe.....	1.50
9275	JAW ROD with Threaded End for 9279.....	.70
9276	Signal Commutator OPERATING ROD Complete.....	1.20
9277	$\frac{3}{4}$ " Malleable SCREW JAW, for various Rods.....	.26
9278	1" Wrought SCREW JAW for 9290.....	1.50
9279	$\frac{1}{2}$ " ADJUSTABLE CONNECTION COMPLETE, average $24\frac{1}{2}$ " centers..	1.08
9280	$\frac{3}{4}$ " Eye ROD, Stub End, $\frac{3}{8}$ " Eye.....	.60
9281	1" Malleable SCREW JAW, for various Rods.....	.33
9282	$\frac{1}{2}$ " Screw ROD for 9283.....	.16
9283	$\frac{1}{2}$ " Malleable SCREW JAW with Stub End.....	.42
9284	$\frac{1}{2}$ " SCREW ROD for 9285.....	.16
9285	$\frac{1}{2}$ " Malleable SCREW JAW Complete, with Stub End.....	.48
9286	SCREW ROD for 9287.....	.64
9287	$\frac{3}{4}$ " SCREW JAW Complete with Tang End, for $\frac{3}{4}$ " Pipe.....	1.04
9288	1" Malleable SCREW JAW Complete, with Stub End.....	.76
9289	1" SCREW ROD for 9290.....	1.04
9290	1" Wrought SCREW JAW Complete, with Tang End for 1" Pipe.....	2.80
9292	UP AND DOWN ROD Complete, 6' Centers, $\frac{3}{4}$ " Eye.....	2.40
9294	UP AND DOWN ROD Complete, 6' Centers, $\frac{1}{2}$ " Eye.....	2.40
9300	UP AND DOWN ROD Complete, 12' 6" Centers, $\frac{3}{4}$ " Eye.....	2.90
9302	UP AND DOWN ROD Complete, 12' 6" Centers, $\frac{1}{2}$ " Eye.....	2.90
9304	UP AND DOWN ROD Complete, 19' Centers, $\frac{3}{4}$ " Eye.....	3.48
9306	UP AND DOWN ROD Complete, 19' Centers, $\frac{1}{2}$ " Eye.....	3.48

Order by NUMBER and NAME Appearing in Large Type.

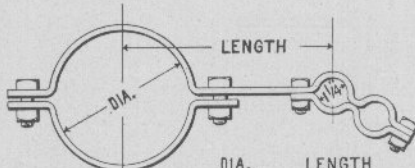
OPERATING RODS AND GUIDES.—CONT.



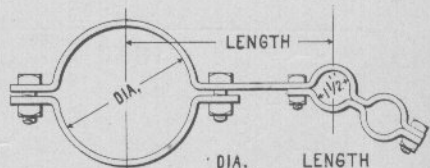
	DIA.	LENGTH
709	4 1/2"	8 3/4"
771	4 1/2"	10 1/2"
776	5 9/16"	8 3/4"
3968	6 5/8"	8 3/4"



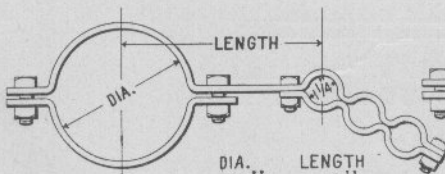
	DIA.	LENGTH
5925	4 1/2"	8 3/4"
5926	4 1/2"	10 1/2"
5927	5 9/16"	8 3/4"
6298	6 5/8"	8 3/4"



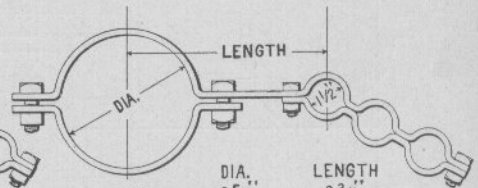
	DIA.	LENGTH
2941	4 1/2"	10 1/2"
710	5 9/16"	8 3/4"
4247	5 9/16"	10 1/2"
775	6 5/8"	8 3/4"



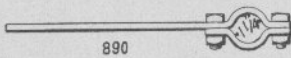
	DIA.	LENGTH
5928	5 9/16"	8 3/4"
6299	6 5/8"	8 3/4"



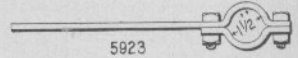
	DIA.	LENGTH
2939	5 9/16"	8 3/4"
2940	6 5/8"	8 3/4"



	DIA.	LENGTH
6801	6 5/8"	8 3/4"



890



5923



891



5924



2938



064



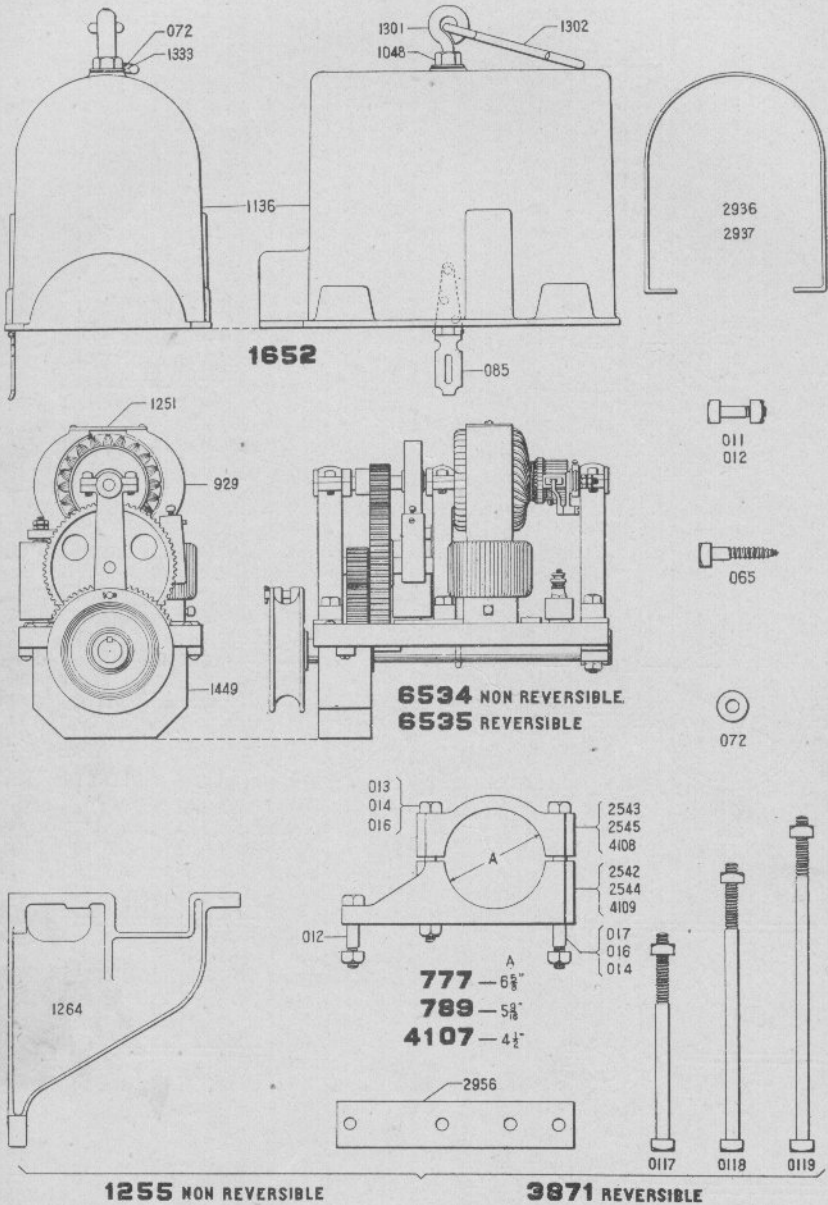
010



06

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SIGNAL MACHINE.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

159

Order No.	SIGNAL MACHINE.	List Price.
011	BOLT with Nut holding 1471 and 2956 to 1264.....	.04
012	BOLT with Nut for 777, 789 or 4107; also holding 1471 to 1264.....	.04
013	BOLT with Nut for 4107.....	.07
014	BOLT with Nut for 789 or 4107.....	.07
016	BOLT with Nut for 777 or 789.....	.07
017	BOLT with Nut for 777.....	.07
034	COTTER PIN for 1714 or 1715 (per hundred).....	.80
065	LAG SCREW holding 2956 to Wood Pole.....	.03
072	WASHER, $\frac{1}{2}$ ", for 1652, 0117 and others.....	.01
085	HASP for 1652.....	.10
0117	BOLT with Nut holding 1264 to 7" Wood Pole.....	.09
0118	BOLT with Nut holding 1264 to 10" Wood Pole.....	.10
0119	BOLT with Nut holding 1264 to 12" Wood Pole.....	.10
506	WASHER for 1687.....	.01
528	Brass NUT for $\frac{1}{4}$ " Screw.....	.02
774	NUT for 1714.....	.02
777	CLAMP holding Signal Machine to Iron Pole, $6\frac{3}{8}$ " O. D.....	1.20
789	CLAMP holding Signal Machine to Iron Pole, $5\frac{7}{16}$ " O. D.....	1.20
845	BASE Binding Post, for 1713 or 3874.....	.08
846	THUMB NUT for 1713 or 3874.....	.06
847	LOCK NUT for 1713 or 3874.....	.05
929	MAGNET CORE for 6534 or 6535.....	3.00
1038	Main GEAR for 1715 or 3982.....	3.30
1048	NUT for 1652.....	.03
1099	Chain SHEAVE for 1715, non-reversible.....	1.00
1112	SINGLE BRAKE MAGNET COMPLETE.....	8.00
1113	SINGLE BRAKE MAGNET COMPLETE.....	8.00
1117	Small GEAR for 1716.....	1.00
1118	PIN for Sheave 1099 for 1715.....	.10
1119	STUD for 1113.....	.12
1128	ARM for 1687.....	1.00
1136	COVER for 1652.....	5.00
1137	SHAFT, for 1716.....	1.00
1138	SHAFT for 1715 or 3982.....	1.00
1139	BRAKE LEVER for 1714.....	1.50
1140	SCREW for 1714.....	.10
1141	PIN for 1714.....	.06
1142	STUD for 1714 supporting Lever 1139.....	.12
1147	PIN for 1714 holding 1142 to center upright of 1471.....	.02
1148	WASHER for 1113.....	.02
1150	CARBON BRUSH for 6534 or 6535.....	.30
1156	NUT for 1471.....	.02
1158	Insulating WASHER for 1687.....	.30
1159	Insulating BUSHING for 1687.....	.24
1161	Large GEAR for 1716.....	3.10
1251	PLATE for 6534 or 6535.....	.36
1255	SIGNAL MACHINE COMPLETE, non-reversible, with Cover and Fastenings. In ordering specify voltage, 60 or 110; also style and size of Pole Fastenings.....	150.00
1264	BRACKET supporting 6534 or 6535.....	1.00
1301	EYE BOLT for 1652.....	.20
1302	HOOK for 1652.....	.20
1333	WASHER, Rubber, for 1652.....	.06
1391	COUNTERWEIGHT for 1714.....	.36
1411	SCREW for 1713 or 3874.....	.08

Order by NUMBER and NAME Appearing in Large Type.

Order
No.

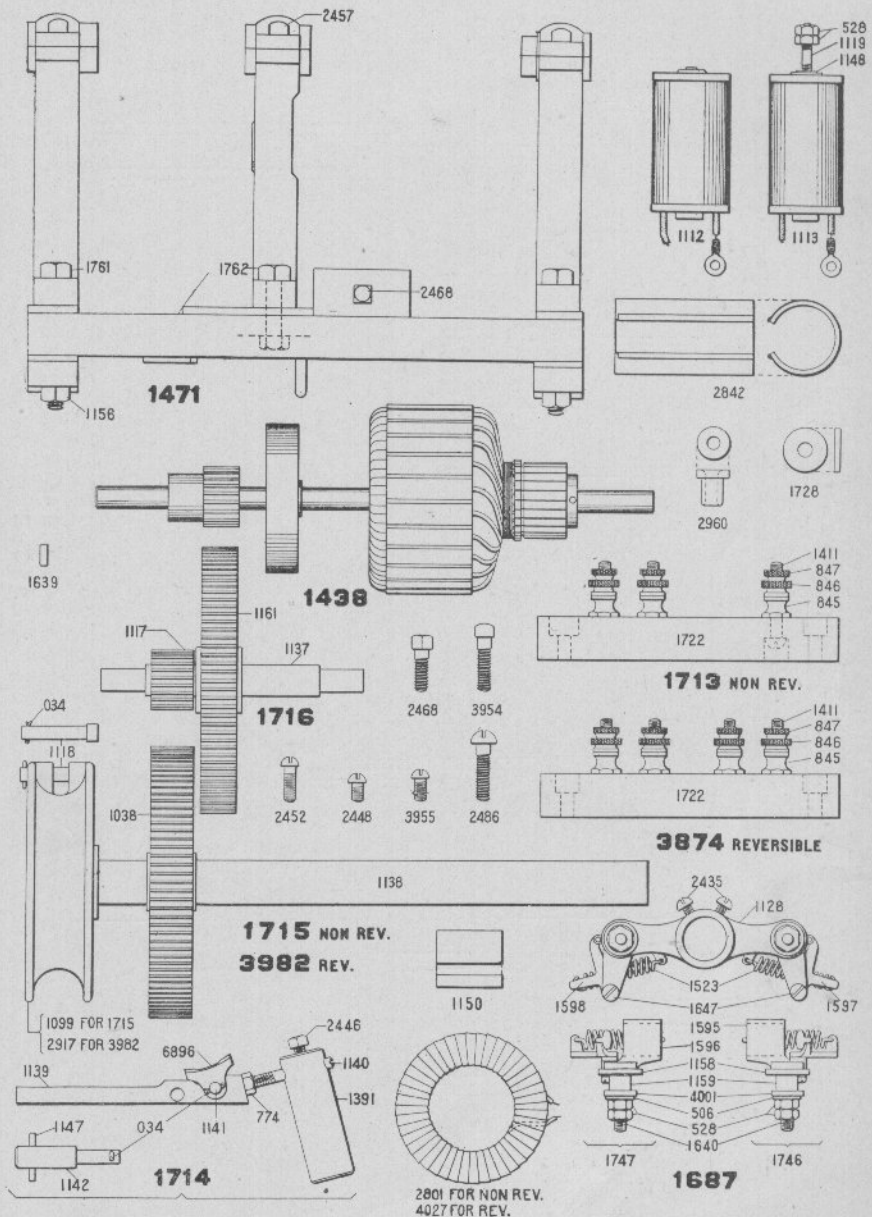
SIGNAL MACHINE.—CONT.

List Price.

1438	ARMATURE with Gear and Brake Disc Complete 60 or 110 volts as specified.....	40.00	....
1449	Gear COVER, for 6534 or 6535 .....	.80	....
1471	FRAME COMPLETE.....	30.00	....
1523	SPRING for 1687.....	.20	....
1595	BRUSH HOLDER, Right Hand, for 1687.....	.90	....
1596	BRUSH HOLDER, Left Hand, for 1687.....	.90	....
1597	ARM, Right Hand, for 1687.....	.30	....
1598	ARM, Left Hand, for 1687.....	.30	....
1639	PIN, holding Plate 1251 to Core 929.....	.02	....
1640	SCREW for 1687.....	.04	....
1647	STUD for 1687.....	.10	....
1652	COVER COMPLETE.....	6.00	....
1687	BRUSH HOLDER, Mounted, Complete.....	6.00	....
1713	BINDING POSTS Complete, with Slate Base for 6534.....	1.80	....
1714	BRAKE LEVER Complete for 6534 or 6535.....	3.40	....
1715	SHAFT Complete, Main, for 6534.....	5.50	....
1716	SHAFT Complete, Intermediate, for 6534 or 6535.....	5.20	....
1722	Slate BASE for 1713 or 3874 .....	.90	....
1728	Asbestos WASHER, used under 1713 or 3874.....	.03	....
1746	BRUSH HOLDER, Right Hand, Complete, for 1687.....	2.50	....
1747	BRUSH HOLDER, Left Hand, Complete, for 1687.....	2.50	....
1761	CAP SCREW for 1471.....	.08	....
1762	CAP SCREW for 1471.....	.05	....
2435	SCREW for 1687.....	.01	....
2446	SET SCREW for 1714.....	.02	....
2448	SCREW holding 1251 to 929, for 6534 or 6535.....	.02	....
2452	SCREW holding Gear Cover 1449 to 1471.....	.02	....
2457	CAP SCREW for 1471.....	.04	....
2468	SET SCREW for 1471 holding Field Cores 929.....	.03	....
2486	SCREW holding 1713 or 3874 to 1471.....	.04	....
2542	BASE for Clamp 777.....	.60	....
2543	CAP for Clamp 777.....	.40	....
2544	BASE for Clamp 789.....	.60	....
2545	CAP for Clamp 789.....	.40	....
2801	Single FIELD COIL COMPLETE for 6534.....	8.00	....
2842	Brass GUARD protecting Magnet 1113.....	.50	....
2917	SHEAVE, $\frac{1}{4}$ " Pitch Chain, for 3982.....	1.00	....
2936	GUARD, Spacing Cover 1652, for 6534 or 6535. (Gear End).....	.24	....
2937	GUARD, Spacing Cover 1652, for 6534 or 6535. (Commutator End).....	.24	....
2956	STRIP holding Signal Machine to Wood Pole.....	.40	....
2960	Insulated BUSHING for Inlet Wires.....	.12	....
3871	SIGNAL MACHINE COMPLETE, Reversible, with Cover and Pole Fastenings. (Used for Two-Arm Semaphore). In ordering, specify voltage 60 or 110; also style and size of Pole Fastenings..	150.00	....
3874	BINDING POSTS COMPLETE, with Slate Base for 6535.....	2.00	....
3954	SCREW holding Brake Magnets 1112 and 1113 to 1471.....	.04	....
3955	SCREW holding 2936 to 6534 or 6535.....	.01	....
3982	SHAFT COMPLETE Main for 5535.....	5.50	....
4001	Insulating WASHER for 1687.....	.24	....
4027	Single FIELD COIL COMPLETE for 6535.....	8.00	....
4107	CLAMP holding Signal Machine to Iron Pole, $4\frac{1}{2}$ " O. D.....	1.20	....
4108	CAP for Clamp 4107.....	.40	....
4109	BASE for Clamp 4107.....	.60	....
6534	SIGNAL MACHINE, non-reversible.....	140.00	....
6535	SIGNAL MACHINE, reversible.....	140.00	....
6896	BRAKE SHOE for 1714.....	1.20	....

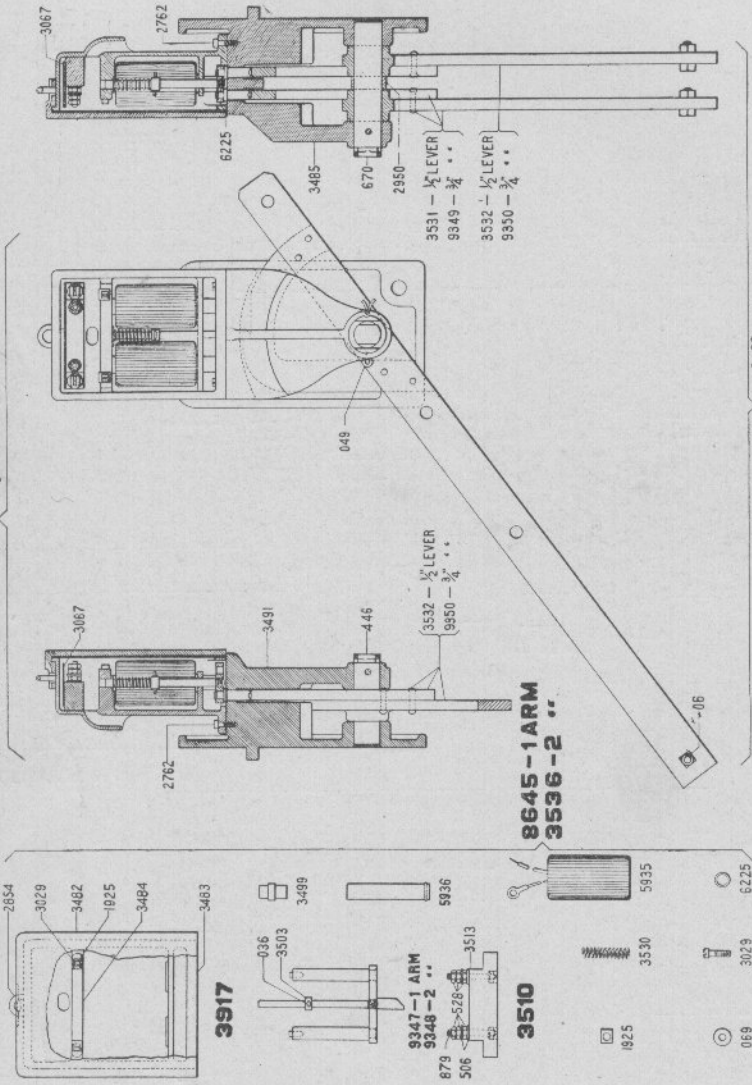
Order by NUMBER and NAME Appearing in Large Type.

SIGNAL MACHINE.



ONE AND TWO-ARM LOCKS.

3533-1 ARM 1/2" LEVER
8388-1 " 3/4" "



3480-2 ARM 1/2" LEVER
8389-2 " 3/4" "

HIGH SIGNALS.

163

Order
No.

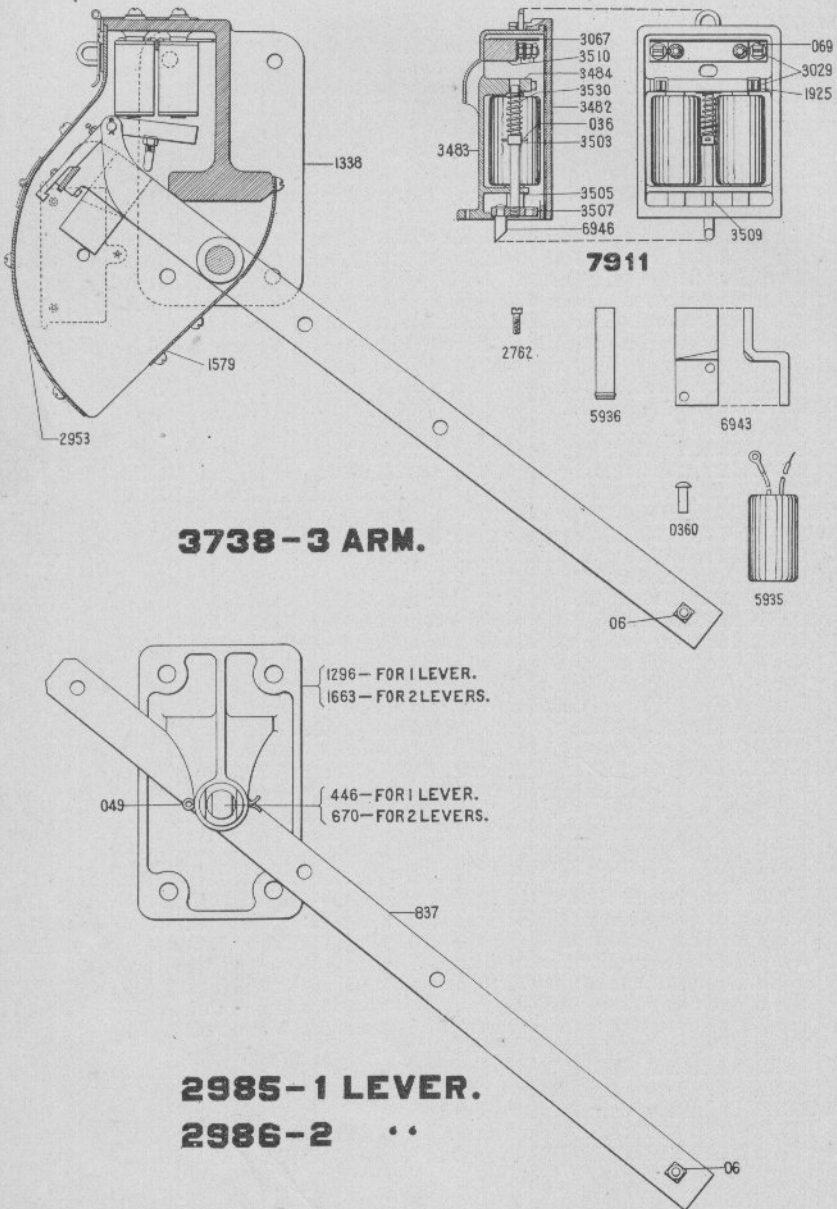
ONE AND TWO-ARM LOCKS.

List Price.

06	BOLT with Nut, $\frac{3}{8}$ " x 1"	.02
036	COTTER PIN, $\frac{3}{16}$ " x $\frac{3}{4}$ " (per 100)	.80
049	COTTER PIN, $\frac{1}{8}$ " x 3" (per 100)	.80
069	WASHER for Screw 3029, holding 3510 to 3917	.01
446	PIN for 3533 or 8388	.24
506	BRASS WASHER for $\frac{1}{4}$ " Screw	.01
528	BRASS NUT for $\frac{1}{4}$ " Screw	.02
670	PIN for 3480 or 8389	.30
879	SCREW for 3510	.08
1925	LOCK WASHER for 3917	.01
2762	CAP SCREW holding Magnet Case 3536 to Brackets 3485 or 3491	.06
2854	STAPLE for 3917	.08
2950	WASHER between Levers, for 3480 or 8389	.20
3029	CAP SCREW holding 3484 and 3510 to 3917	.06
3067	INSULATOR for 3480 or 3533	.20
3480	LOCK Complete as shown with $\frac{1}{2}$ " Lever for Two-Arm Signal	45.00
	The above complete with Weights and Fittings for Iron Pole	50.00
	The above complete with Weights and Fittings for Wood Pole	48.00
	When ordering, specify size and kind of Pole.	
3482	DOOR for 3917	1.00
3483	CASE for 3917	5.00
3484	CAP for 3917	.90
3485	BRACKET, Casting only, for 3480 or 8389	6.50
3491	BRACKET, Casting only, for 3533 or 8388	5.00
3499	TOP CORE for 3536	.50
3503	COLLAR for Rod 3509	.10
3510	TERMINAL BLOCK Complete for 3536	.50
3513	BLOCK for 3510	.20
3530	SPRING for 3536	.20
3531	COUNTERWEIGHT LEVER Complete for 3480	5.00
3532	COUNTERWEIGHT LEVER Complete for 3480 or 3533	5.00
3533	LOCK Complete as shown with $\frac{1}{2}$ " Lever for One-Arm Signal	40.00
	The above complete with Weights and Fittings for Iron Pole	45.00
	The above complete with Weights and Fittings for Wood Pole	42.00
	When ordering, specify size and kind of Pole.	
3536	CASE WITH MAGNETS Complete, for 3480 or 8389	30.00
3917	CASE Complete as shown, for 3536	7.00
5935	SINGLE COIL for 3536. If a pair of Coils are required, order two Coils, but when required to replace a Spool Wound, order Tube 5936 with each Coil	7.50
5936	TUBE used with Coil 5935	.50
6225	STOP WASHER for 3536 limiting downward movement of Pin 3508 on 3480 or 3533	.06
8388	LOCK Complete as shown with $\frac{3}{4}$ " Lever for One-Arm Signal	41.00
	The above complete with Weights and Fittings for Iron Pole	46.00
	The above complete with Weights and Fittings for Wood Pole	43.00
	When ordering, specify size and kind of Pole.	
8389	LOCK Complete as shown with $\frac{3}{4}$ " Lever, for Two-Arm Signal	47.00
	The above complete with Weights and Fittings for Iron Pole	52.00
	The above complete with Weights and Fittings for Wood Pole	50.00
	When ordering, specify size and kind of Pole.	
8645	CASE WITH MAGNETS Complete, for 3533 or 8388	30.00
9347	YOKE Complete with Magnet Cores and Stop, for 8645	4.00
9348	YOKE Complete with Magnet Cores and Stop, for 3536	4.00
9349	COUNTERWEIGHT LEVER Complete for 8389	6.00
9350	COUNTERWEIGHT LEVER Complete for 8388 or 8389	6.00

Order by NUMBER and NAME Appearing in Large Type.

HOOK SELECTORS AND COUNTERWEIGHTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order
No.

HOOK SELECTORS AND COUNTERWEIGHTS.

List Price.

006 BOLT with Nut, $\frac{3}{8}$ " x 1"	.02
034 COTTER PIN, $\frac{3}{32}$ " x $\frac{1}{2}$ " (per 100)	.80
036 COTTER PIN, $\frac{3}{32}$ " x $\frac{3}{4}$ " for 7911 (per 100)	.80
040 COTTER PIN, $\frac{1}{4}$ " x 1" (per 100)	.80
049 COTTER PIN, $\frac{1}{4}$ " x 3" (per 100)	.80
069 WASHER for $\frac{1}{4}$ " Screw	.01
070 WASHER for 7913	.01
0360 RIVET, $\frac{3}{8}$ " x $1\frac{1}{8}$ "	.01
446 PIN for One-Way Lever 2985	.24
506 BRASS WASHER for $\frac{1}{4}$ " Screw	.01
528 BRASS NUT for $\frac{1}{4}$ " Screw	.02
670 PIN for Two-Way Lever 2986	.30
774 IRON NUT for $\frac{1}{4}$ " Screw 1702	.02
837 LEVER for 2985 or 2986	1.70
1155 $\frac{3}{16}$ " NUT for 2597	.02
1156 $\frac{3}{8}$ " NUT for 2 597	.02
1296 BRACKET for One-Way Lever 2985	1.52
1338 BRACKET for Selector 3738	18.00
1352 SHAFT for Selector 3738	1.60
1368 COUNTERWEIGHT LEVER for Hook Selectors	4.00
1369 LONG OPERATING LEVER for 3738	4.00
1370 SHORT OPERATING LEVER for 3738	3.00
1371 LATCH for 2597	3.00
1374 LATCH BAR for 3738	.80
1381 BUSHING for 3738	.20
1382 SET SCREW for 3738	.16
1387 PIN for 2597	.12
1410 SCREW holding 1576 to Bracket, for 3738	.02
1411 SCREW for 1576	.08
1576 TERMINAL BLOCK Complete for 3738	.90
1579 BOTTOM COVER for 3738	.80
1584 SCREW for 7913	.08
1663 DOUBLE BRACKET for 2986	1.65
1702 SCREW holding Latch Bars, for 3738	.20
1593 WIRE TERMINAL for 7913	.05
1925 LOCK WASHER for 7911	.01
1953 KEY for 1369 or 1370	.06
2144 SPECIAL SCREW for 2597	.12
2145 NUT LOCK for 2597	.01
2163 INSULATING BLOCK for 1576	.40
2181 PIN for 3079	.07
2187 SINGLE MAGNET COIL with Iron Core for 7913	5.50
2434 SCREW for Hook Selector Cover	.01
2460 SCREW for 2597	.03
2597 LATCH Complete for 3738	3.30
2762 CAP SCREW, $\frac{1}{4}$ " x $\frac{1}{4}$ ", Sq. Hd.	.06
2953 HINGE Complete for 3738	
2985 COUNTERWEIGHT, Single Lever, without Weight. Specify Weight separately if required. For Weights see page 168.	3.60
2986 COUNTERWEIGHT, Double Lever, without Weight. Specify Weight separately if required. For Weights see page 168.	5.10
3029 CAP SCREW for 7911	.06
3067 INSULATOR for 7911	.20
3072 WROUGHT SHACKLE for 3079	.30
3079 WROUGHT SHACKLE with $\frac{3}{8}$ " Pin Complete	.40
3482 DOOR for 7911	1.00
3483 CASE for 7911	5.00
3484 CAP for 7911	.90
3503 COLLAR for 7911	.10

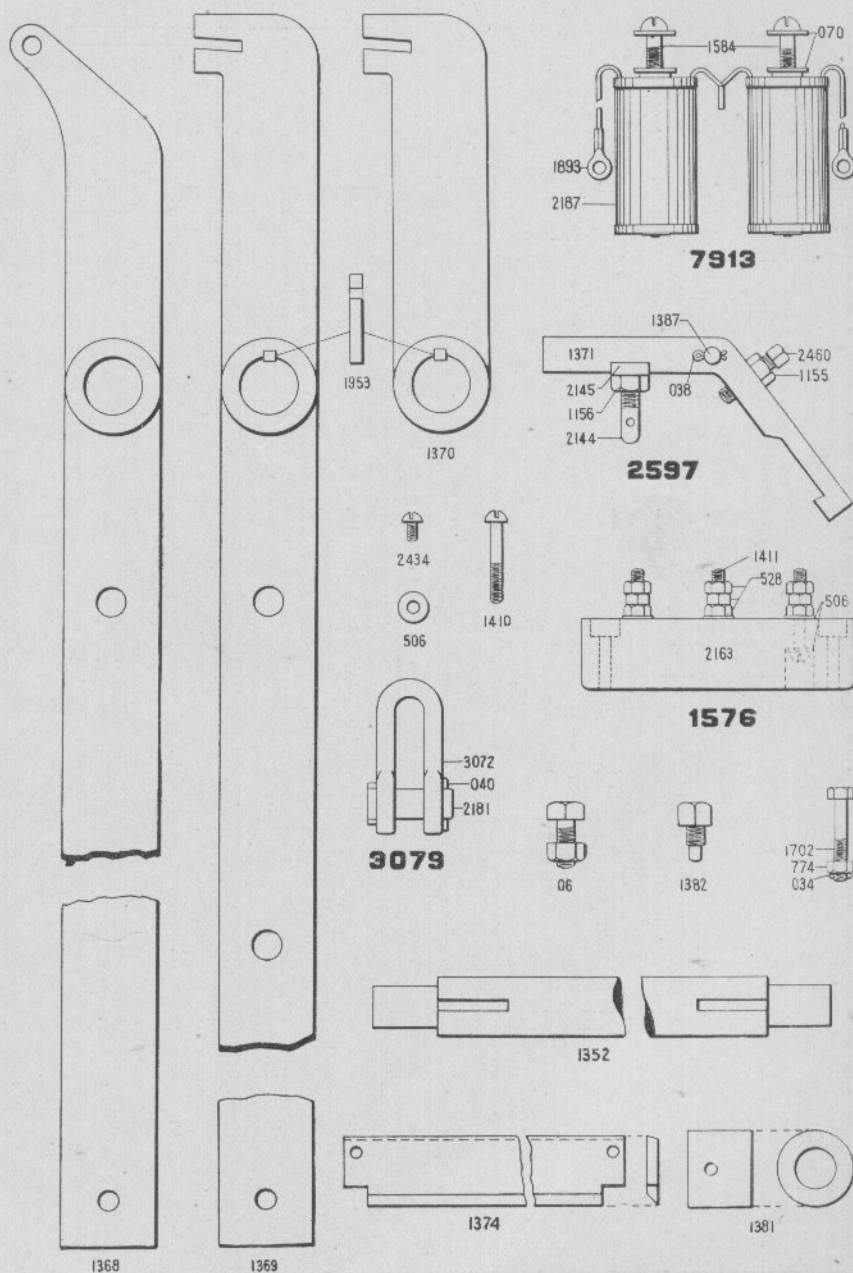
Order by NUMBER and NAME Appearing in Large Type.

HIGH SIGNALS.

Order No.	HOOK SELECTORS AND COUNTERWEIGHTS.—CONT.	List Price.
3505	BOTTOM CORE for 7911.....	1.60
3507	YOKE for 7911.....	1.00
3509	ROD for 7911.....	.20
3510	TERMINAL BLOCK Complete for 7911.....	.50
3530	SPRING for 7911.....	.20
3738	HOOK SELECTOR as shown, for Three-Arm Signal. Specify Weight separately if required. For Weights see page 168.....	130.00
5935	SINGLE COIL for 7911. If a pair of Coils are required, order two Coils, but when required to replace a Spool Wound, order Tube 5936 with each Coil.....	7.50
5936	TUBE used with Coil 5935.....	.50
6943	WROUGHT BRACKET for long Operating Lever, for 3738.....	.20
6946	PIN for 7911.....	.20
7911	CASE WITH MAGNETS Complete for 3738.....	30.00
7913	PAIR OF MAGNETS Complete, for 3738.....	11.00

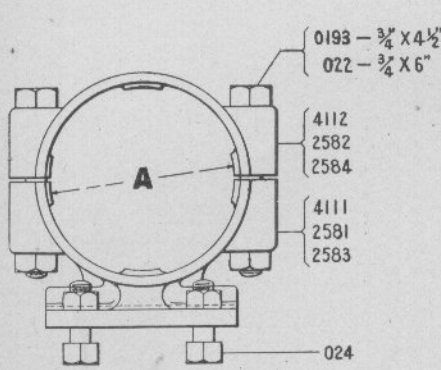
Order by NUMBER and NAME Appearing in Large Type.

HOOK SELECTORS AND COUNTERWEIGHTS.

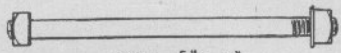


Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

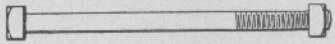
WEIGHTS AND FITTINGS FOR LOCKS, SLOTS, ETC.



A
4110 - $4\frac{1}{2}$ "
798 - $5\frac{9}{16}$ "
797 - $6\frac{5}{8}$ "



5583 - $\frac{5}{8}$ " X 9"
5598 - $\frac{5}{8}$ " X 12"
5599 - $\frac{5}{8}$ " X 14"



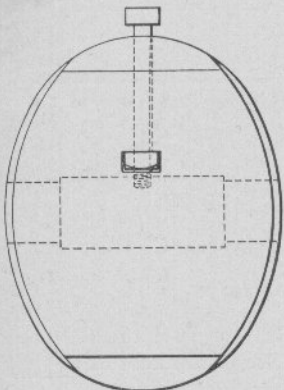
0135 - $\frac{5}{8}$ " X 9"
086 - $\frac{5}{8}$ " X 12"
0130 - $\frac{5}{8}$ " X $14\frac{1}{2}$ "



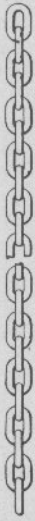
087



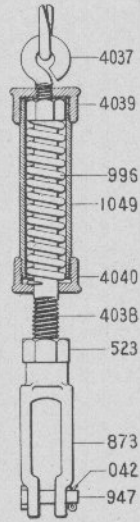
067



WEIGHT LEVER
9130 - 10 LBS. $\frac{3}{4}$ " X 2"
9129 - 17 " $\frac{1}{2}$ " X 2"
4337 - 50 " $\frac{1}{2}$ " X 2"
9379 - 50 " $\frac{3}{4}$ " X 2"
6665 - 65 " $\frac{1}{2}$ " X 2"



1668 - 20 INCHES
9393 - 4 FEET
0183 - $\frac{1}{4}$ " PITCH
0549 - $\frac{1}{4}$ " PROOF



3978

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

169

Order
No.

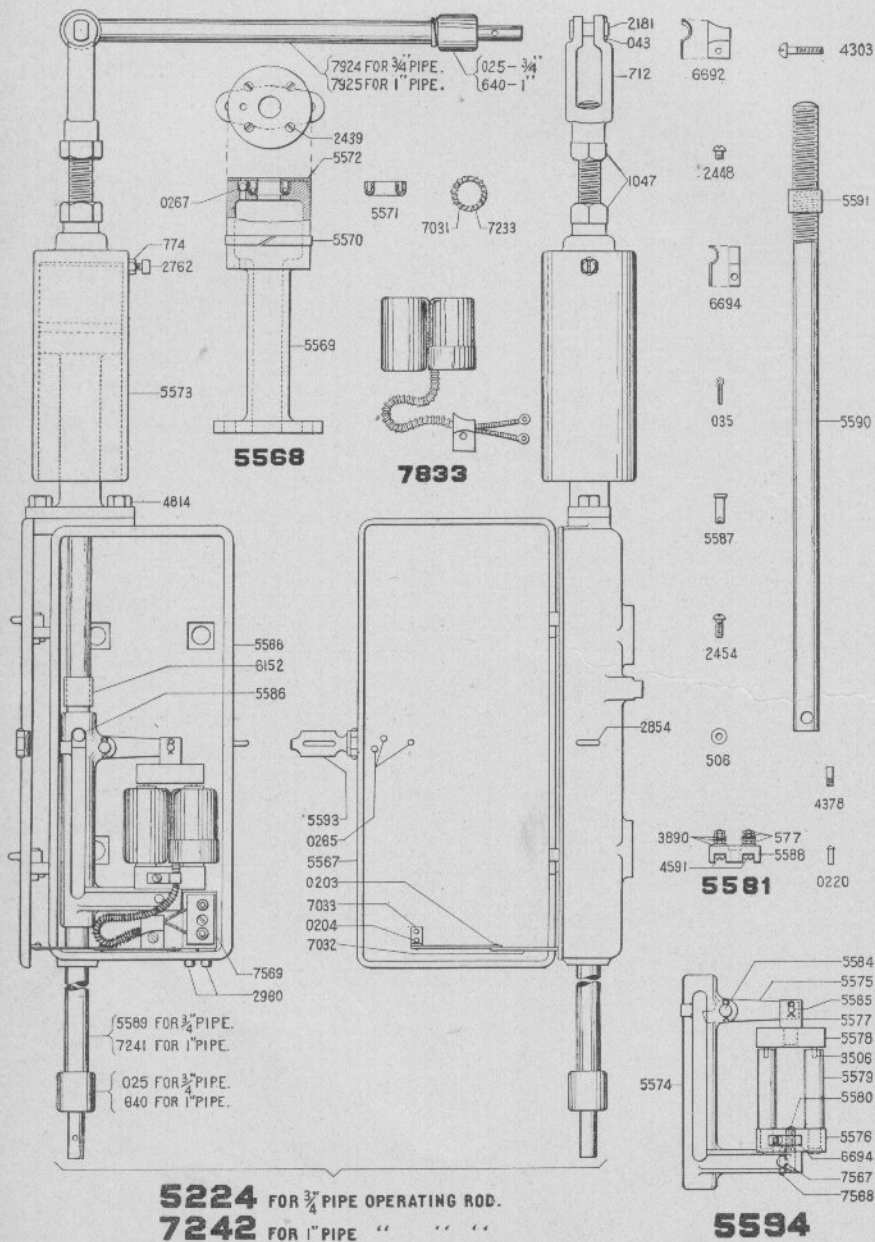
WEIGHTS AND FITTINGS FOR LOCKS, SLOTS, ETC.

List Price.

022	BOLT with Nut, $\frac{3}{8}$ " x 6"	.14
024	BOLT with Nut, $\frac{1}{4}$ " x 2 $\frac{1}{4}$ ", for 797, etc.	.08
042	COTTER PIN, $\frac{3}{16}$ " x 1", for 3978 (per 100)	.80
067	LAG SCREW, $\frac{3}{4}$ " x 4"	.07
086	BOLT with Nut, $\frac{5}{8}$ " x 12"	.14
087	IRON WASHER for $\frac{5}{8}$ " Bolt	.01
0130	BOLT with Nut, $\frac{5}{8}$ " x 14 $\frac{1}{2}$ "	.16
0135	BOLT with Nut, $\frac{5}{8}$ " x 9"	.12
0183	$\frac{1}{4}$ " PITCH CHAIN (per foot)	.80
0193	BOLT with Nut, $\frac{3}{4}$ " x 4 $\frac{1}{2}$ "	.12
0549	$\frac{1}{4}$ " PROOF CHAIN (per foot)	.17
523	NUT for 3978	.07
797	CLAMP Complete, holding Selectors, Locks or Slots to 6 $\frac{3}{8}$ " O. D. Iron Pole	3.70
798	CLAMP Complete, holding Selectors, Locks or Slots to 5 $\frac{9}{16}$ " O. D. Iron Pole	3.70
873	MALLEABLE SCREW JAW for 3978	.33
947	PIN for 3978	.12
996	SPRING for 3978	.40
1049	CASE for 3978	1.00
1668	CHAIN, 20" long, used for connecting Regular Signal Machine to 3978 for One and Three-Arm Poles	.30
2581	BASE for 798	2.00
2582	CAP for 798	.80
2583	BASE for 797	2.50
2584	CAP for 797	1.10
3978	CASE AND SPRING Complete, connecting Signal Machine with Selectors, Counterweight or Locks	4.00
4037	EYE BOLT for 3978	.20
4038	ROD for 3978	.50
4039	TOP CAP for 3978	.50
4040	BOTTOM CAP for 3978	.50
4110	CLAMP Complete, holding Selectors, Locks or Slots to 4 $\frac{1}{2}$ " O. D. Iron Pole	3.50
4111	BASE for 4110	2.00
4112	CAP for 4110	.70
4337	50 LB. WEIGHT Complete, with Bolt for $\frac{1}{2}$ " x 2" Lever	3.30
5583	BOLT with Nuts and Washer, $\frac{5}{8}$ " x 9", for fastening Slots to Wood Pole	.18
5598	BOLT with Nuts and Washer, $\frac{5}{8}$ " x 12", for fastening Slots to Wood Pole	.20
5599	BOLT with Nuts and Washer, $\frac{5}{8}$ " x 14", for fastening Slots to Wood Pole	.22
6665	65 LB. WEIGHT Complete with Bolt, for $\frac{1}{2}$ " x 2" Lever	4.10
9129	17 LB. WEIGHT Complete with Bolt, for $\frac{1}{2}$ " x 2" Lever	1.24
9130	10 LB. WEIGHT Complete with Bolt, for $\frac{3}{4}$ " x 2" Lever	.80
9379	50 LB. WEIGHT Complete with Bolt, for $\frac{1}{2}$ " x 2" Lever	3.30
9393	PITCH CHAIN, 4' long, connecting Reversible Signal Machine to 3978. Used on Two-Arm Pole	3.20

Order by NUMBER and NAME Appearing in Large Type.

SLOTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

171

Order No.	SLOTS.	List Price.
025	$\frac{3}{4}$ " REINFORCED PIPE COUPLING.....	.14
035	COTTER PIN for 5594 (per 100).....	.80
043	COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (per 100).....	.80
073	WASHER for $\frac{3}{4}$ " Bolt.....	.02
0203	RIVET holding 7032 to 7033.....	.01
0204	RIVET holding 7033 to Cover 5567.....	.01
0220	RIVET holding 7032 to Case 5566.....	.01
0265	RIVET holding Hasp 5593 to 5567.....	.01
0267	BALL for 5568.....	.01
0407	THUMB SCREW, $\frac{1}{4}$ " x $\frac{3}{4}$ ".....	.10
0410	SCREW, $\frac{1}{4}$ " x $\frac{3}{4}$ ", Fillister Head.....	.02
0411	CAP SCREW, $\frac{1}{4}$ " x $1\frac{1}{4}$ ", Hex. Head.....	.03
506	WASHER between 7032 and Case 5566.....	.01
577	NUT for 5581.....	.02
640	1" REINFORCED PIPE COUPLING.....	.19
712	JAW for 5224 or 7242.....	.40
774	NUT for Screw 2762 on 5224 or 7242.....	.02
1047	NUT for 5224 or 7242.....	.09
2181	PIN for Jaw 712, for 5224 or 7242.....	.07
2439	SCREW for 5568.....	.01
2448	SCREW holding 6694 for 5594.....	.02
2454	SCREW holding 5581 to Case 5566.....	.03
2762	SCREW for Cylinder 5573.....	.06
2854	STAPLE for Case 5566.....	.08
2960	RUBBER BUSHING for 5224 or 7242.....	.12
3506	BRASS PIN in Core 5579 for 5594.....	.02
3890	WASHER for 5581.....	.01
4303	BRASS SCREW, $\frac{1}{4}$ " x $1\frac{1}{2}$ ", Round Head.....	.04
4364	$\frac{3}{4}$ " HEX. NUT (thin).....	.04
4378	SCREW, Guide for Stop 7032.....	.02
4591	SCREW for 5581.....	.03
4814	SCREW holding 5568 to Case 5566.....	.08
5224	SEMI. AUTOMATIC SLOT Complete, Style B, for connecting to $\frac{3}{4}$ " Pipe Operating Rod. Pole Fastenings to be specified separately. For Fastenings see page 168.....	70.00
5566	CASE for 5224 or 7242.....	8.00
5567	COVER for 5224 or 7242.....	3.00
5568	PLUNGER Complete for 5224 or 7242.....	15.00
5569	PLUNGER, Casting only for 5568.....	10.00
5570	RING, Plunger for 5568.....	2.00
5571	RING, Leather Packing for 5568.....	2.00
5572	PLATE RING, Retaining, 5571 for 5568.....	.50
5573	CYLINDER for 5224 or 7242.....	12.00
5574	SLIDING FRAME, Casting only, for 5594.....	4.00
5575	LATCH for 5594.....	2.00
5576	MAGNET YOKE for 5594.....	1.20
5577	JAW for 5594.....	2.00
5578	ARMATURE for 5594.....	1.00
5579	MAGNET CORE for 5594.....	.80
5580	SCREW holding 5576 to 5574, for 5594.....	.20
5581	TERMINAL BLOCK Complete, for 5224 or 7242. (Specify whether Block is to be of Wood or Slate).....	.50
5584	LATCH PIN for 5594.....	.20
5585	PIN for Armature Jaw, for 5594.....	.20
5586	PIN for Rod 5590, for moving 5594.....	.20
5587	HINGE PIN holding 5566 to 5567.....	.20
5588	BLOCK for 5581.....	.30
5589	ROD with $\frac{3}{4}$ " Pipe Tang End, for 5224.....	1.20
5590	OPERATING ROD for 5224 or 7242.....	1.50

Order by NUMBER and NAME Appearing in Large Type.

Order
No.

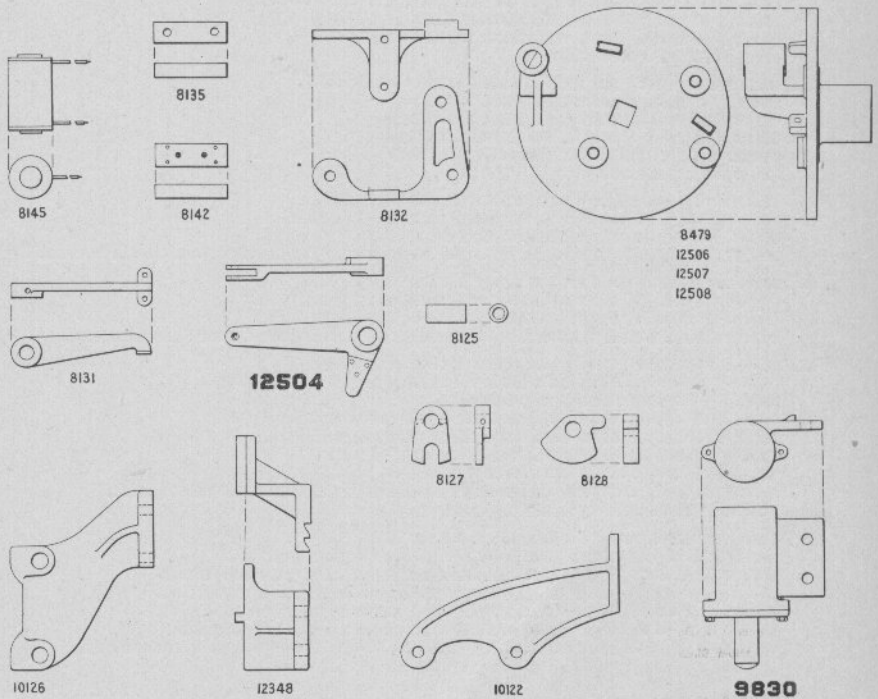
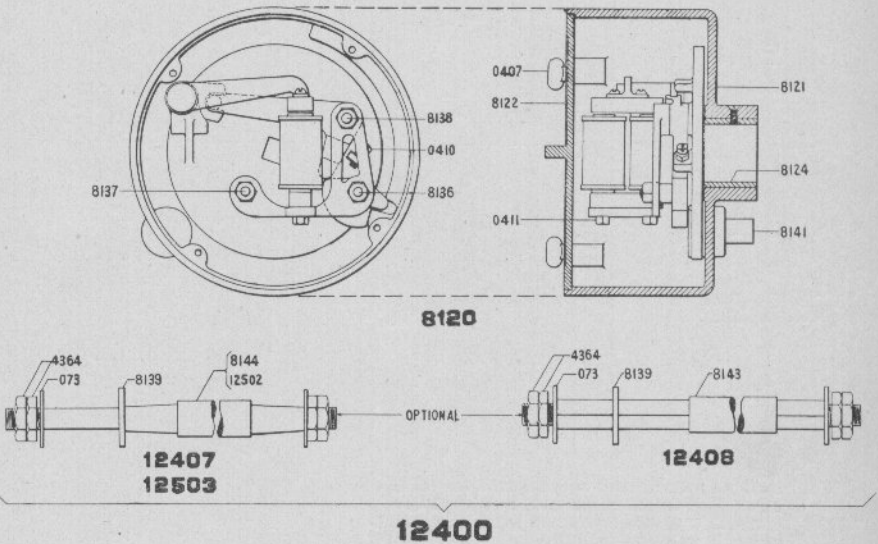
SLOTS.—CONT.

List Price.

5591	COLLAR for Rod 5590.....	.40	....
5593	HASP for 5224 or 7242.....	.30	....
5594	SLIDING FRAME Complete, for 5224 or 7242	12.00	....
6152	COLLAR limiting the upward movement of Frame 5594.....	.20	....
6692	CLIP fastening Terminal End of Magnet Coil Leads for 7833.....	.50	....
6694	CLIP fastening Coils to 5594.....	.20	....
7031	SPRING for Ring 7233.....	.20	....
7032	STOP for Cover for 5224 or 7242.....	....	....
7033	BRACKET fastening 7032 to 5567.....	....	....
7233	RING for Leather Packing 5571, for 5568.....	.20	....
7241	ROD with 1" Pipe Tang End for 7242.....	1.50	....
7242	SEMI. AUTOMATIC SLOT Complete, Style B, for connecting *to 1" Pipe Operating Rod. Pole Fastenings to be specified separately. For Fastenings see page 168.....	70.00	....
7567	PIN for 5594.....	....	....
7568	PIN for 5594.....	....	....
7569	INSULATOR for insulating 5581, for 5224 or 7242. ....	....	....
7833	MAGNETS Complete, One Set Magnets with Clip and Spring protect- ing Lead, for 5224 or 7242.....	14.00	....
7924	ROD for 3/4" Pipe Connection.....	1.20	....
7925	ROD for 1" Pipe Connection, for 7242.....	1.50	....
8120	SPINDLE SLOT Complete as shown. When ordering specify number of Spectacle for which same is to be used.....	50.00	....
8121	CASE, Casting only, for 8120.....	....	....
8122	COVER for 8120.....	....	....
8124	BUSHING for 8120.....	....	....
8125	BUSHING for Base Plates.....	....	....
8127	JAW for Spindle Slot.....	....	....
8128	DOG for Spindle Slot.....	....	....
8131	ARMATURE LEVER for Spindle Slot.....	....	....
8132	BRACKET for Spindle Slot.....	....	....
8135	YOKE for Spindle Slot.....	....	....
8136	STUD for 8120.....	....	....
8137	STUD for 8120.....	....	....
8138	STUD for 8120.....	....	....
8139	WASHER for Spindle 12407, etc.....	....	....
8141	PIN for 8120.....	....	....
8142	ARMATURE for Spindle Slot.....	....	....
8143	STRAIGHT SPINDLE only, for 12408.....	....	....
8144	TAPER SPINDLE only, for 12407.....	....	....
8145	SINGLE COIL for 8120 (When ordering specify resistance).....	....	....
8479	BASE for Spindle Slot. (When ordering specify Spectacle for which same is to be used.....	....	....
9830	DASH POT Complete.....	6.00	....
10122	BRACKET supporting Dash Pot 9830. (Special for Iron Pole).....	1.50	....
10126	BRACKET supporting Dash Pot 9830 to Standard Semaphore Bearing for Iron Pole.....	1.50	....
12348	BRACKET supporting Dash Pot 9830 to Wood Poles.....	1.50	....
12400	SPINDLE SLOT Complete with Spindle as specified. (When ordering specify Spectacle for which same is required.....	57.50	....
12407	TAPER SPINDLE Complete. Special for Spectacle 4562	7.50	....
12408	STRAIGHT SPINDLE Complete.....	7.50	....
12502	TAPER SPINDLE only for 12503.....	....	....
12503	TAPER SPINDLE Complete for Standard Spectacles.....	7.50	....
12504	LOCK LEVER Complete for Spindle Slot.....	....	....
12506	BASE for Spindle Slot. } When ordering specify Spectacle for which	....	....
12507	BASE for Spindle Slot. } same is to be used.	....	....
12508	BASE for Spindle Slot. }	....	....

Order by NUMBER and NAME Appearing in Large Type.

SPINDLE SLOTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DIAGRAM OF CIRCUITS.

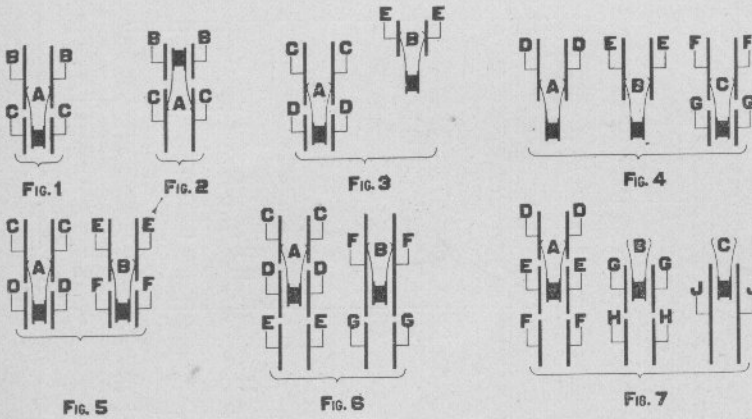


FIG. 1 SHOWS THE CONTACTS FOR 2 POSITION CIRCUIT BREAKER No. 819.

CIRCUIT **B B** REMAINS CLOSED UNTIL SIGNAL IS CLEAR.
CIRCUIT **C C** REMAINS CLOSED UNTIL SIGNAL IS AT DANGER.
CONTACT **A** SNAPS FROM DANGER TO CLEAR BUT, NOT FROM CLEAR TO DANGER.

FIG. 2 SHOWS THE CONTACTS FOR 2 POSITION INVERTED CIRCUIT BREAKER No. 4834.

CIRCUIT **C C** REMAINS CLOSED UNTIL SIGNAL IS CLEAR.
CIRCUIT **B B** REMAINS CLOSED UNTIL SIGNAL IS AT DANGER.
CONTACT **A** SNAPS IN BOTH DIRECTIONS.

FIG. 3 SHOWS THE CONTACTS FOR 2 POSITION CIRCUIT BREAKER No. 2492.

CIRCUIT **C C** REMAINS CLOSED UNTIL SIGNAL IS CLEAR.
CIRCUIT **D D** REMAINS CLOSED UNTIL SIGNAL IS AT DANGER.
CIRCUIT **E E** OPENS AS SOON AS SIGNAL STARTS TO CLEAR.
CONTACT **A** SNAPS FROM CLEAR TO DANGER, BUT NOT FROM DANGER TO CLEAR.
CONTACT **B** DOES NOT SNAP

FIG. 4 SHOWS THE CONTACTS FOR 2 POSITION CIRCUIT BREAKER No. 9355.

CIRCUITS **D D, E E, AND F F** REMAIN CLOSED UNTIL SIGNAL IS CLEAR.
CIRCUIT **G G** REMAINS CLOSED UNTIL SIGNAL IS AT DANGER.
CONTACTS **A, B, AND C** MOVE TOGETHER AND SNAP FROM CLEAR TO DANGER, BUT NOT FROM DANGER TO CLEAR.

FIG. 5 SHOWS THE CONTACTS FOR 2 POSITION CIRCUIT BREAKER No. 3739.

CIRCUITS **C C, AND E E** REMAIN CLOSED UNTIL SIGNAL IS CLEAR.
CIRCUITS **D D, AND F F** REMAIN CLOSED UNTIL SIGNAL IS AT DANGER.
CONTACTS **A AND B** MOVE TOGETHER AND SNAP FROM CLEAR TO DANGER, BUT NOT FROM DANGER TO CLEAR.

FIG. 6 SHOWS THE CONTACTS FOR 3 POSITION CIRCUIT BREAKER No. 4742.

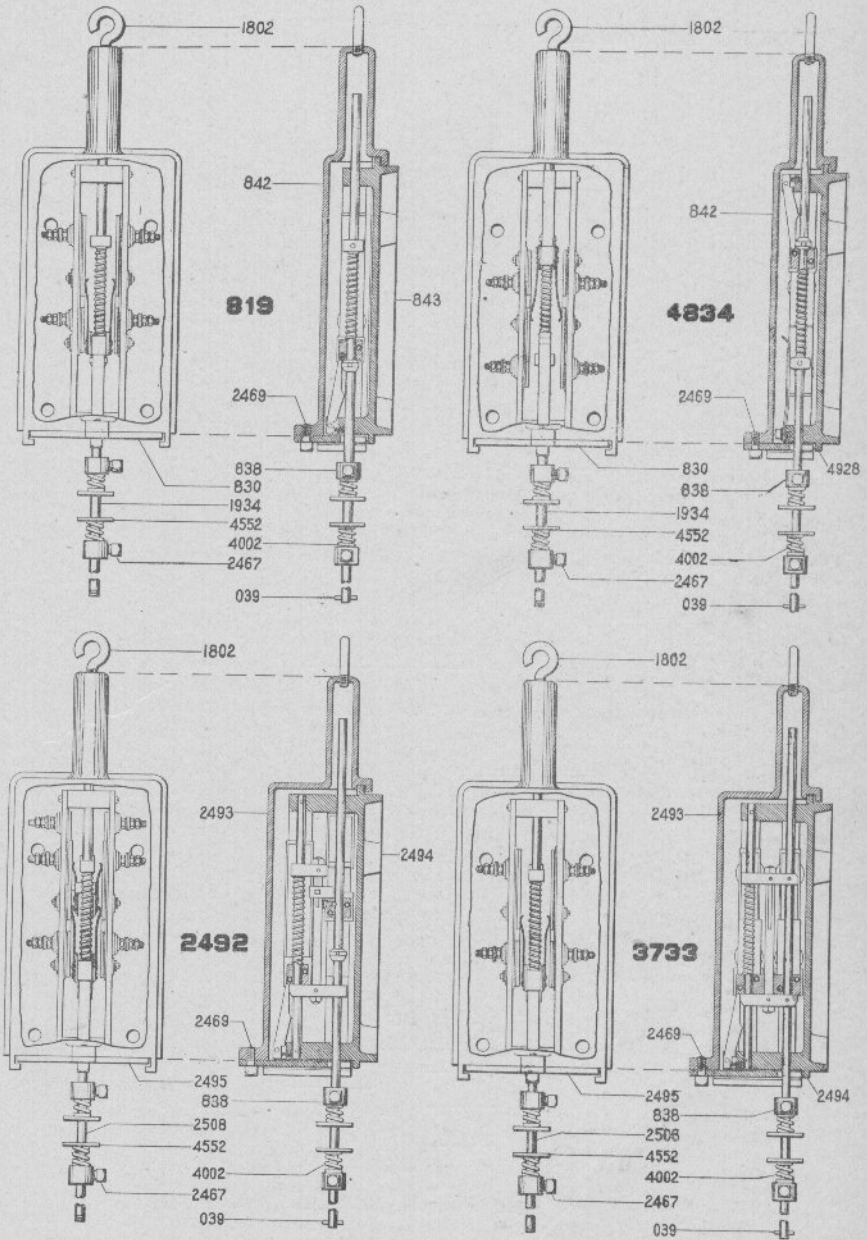
CIRCUIT **C C** REMAINS CLOSED UNTIL SIGNAL HAS REACHED THE CAUTION POSITION.
CIRCUIT **D D** REMAINS CLOSED UNTIL SIGNAL HAS REACHED THE CLEAR POSITION.
CIRCUIT **E E** REMAINS CLOSED UNTIL THE SIGNAL HAS RETURNED TO CAUTION.
CIRCUIT **D D** REMAINS CLOSED UNTIL THE SIGNAL HAS RETURNED TO DANGER.
CIRCUIT **F F** REMAINS CLOSED UNTIL SIGNAL IS CLEAR.
CIRCUIT **G G** REMAINS CLOSED UNTIL SIGNAL IS AT CAUTION.
CONTACTS **A, AND B** MOVE TOGETHER AND SNAP FROM DANGER TO CAUTION, FROM CAUTION TO CLEAR, FROM CLEAR TO CAUTION, AND CAUTION TO DANGER.

FIG. 7 SHOWS THE CONTACTS FOR 3 POSITION CIRCUIT BREAKER No. 6547.

CIRCUIT **D D** REMAINS CLOSED UNTIL SIGNAL HAS REACHED THE CAUTION POSITION.
CIRCUITS **E E AND G G** REMAIN CLOSED UNTIL SIGNAL HAS REACHED THE CLEAR POSITION.
CIRCUIT **J J** REMAINS CLOSED FROM CAUTION TO CLEAR AND FROM CLEAR TO CAUTION.
CIRCUITS **F F AND H H** REMAIN CLOSED UNTIL SIGNAL HAS RETURNED TO CAUTION.
CIRCUITS **E E, G G, AND J J** REMAIN CLOSED UNTIL SIGNAL HAS RETURNED TO DANGER.
CONTACTS **A, B, AND C** MOVE TOGETHER AND SNAP FROM DANGER TO CAUTION, FROM CAUTION TO CLEAR, FROM CLEAR TO CAUTION, AND CAUTION TO DANGER.

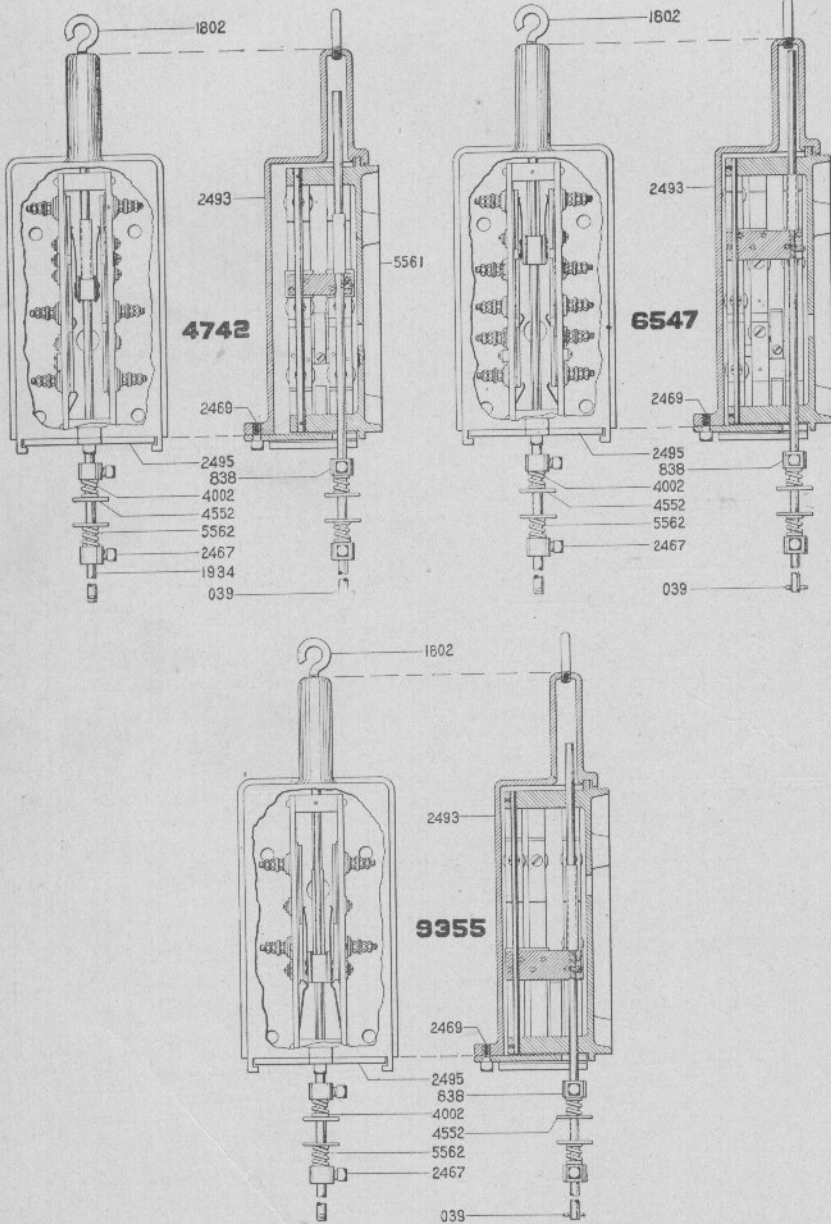
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT BREAKERS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT BREAKERS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

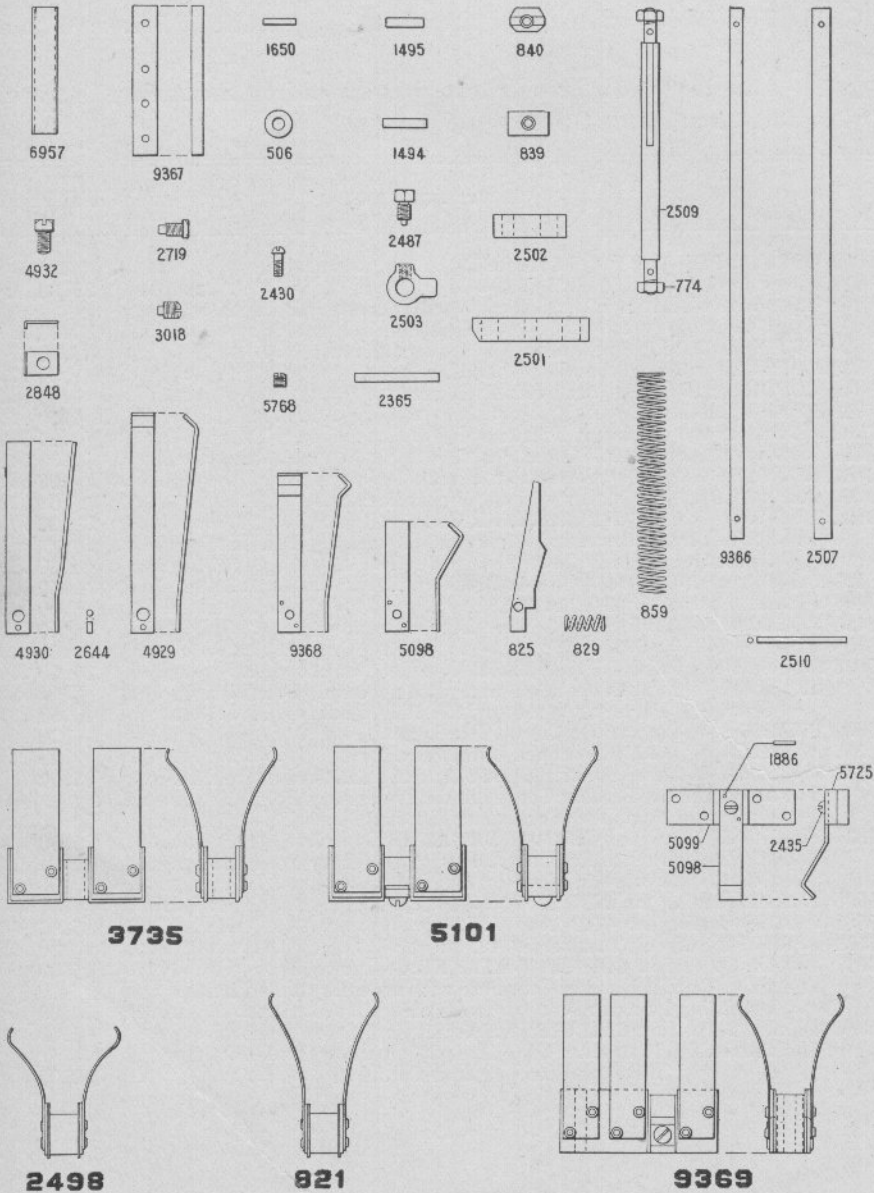
NOTE:—In selecting Circuit Breakers, see Diagram of Circuits, page 174.

When ordering Circuit Breakers Complete with Fittings and Operating Parts, the following information is necessary:

- (1) Pole (Wood or Iron) and size of same where Circuit Breaker is to be fastened.
- (2) Whether Circuit Breaker is to be operated from Semaphore Operating Rod or direct from Blade Grip.

Order No.	CIRCUIT BREAKERS.	List Price.
039	COTTER PIN, $\frac{1}{4}$ " x $\frac{3}{4}$ " (per 100).....	.80
819	Single Deck CIRCUIT BREAKER Complete as shown	25.00
	The above Circuit Breaker Complete with necessary Pole Fittings and Operating Parts for Wood or Iron Pole	30.00
830	BOTTOM CAP for Single Deck Circuit Breakers .....	.30
838	COLLAR for Circuit Breaker Operating Rods.....	.20
842	COVER for Single Deck Circuit Breakers	4.00
843	FRAME Casting for 819	4.50
1802	HOOK for top of Circuit Breakers .....	.16
1934	ROD for 819 or 4834 .....	.50
2467	SET SCREW, $\frac{3}{8}$ " x $\frac{1}{2}$ ", for various Circuit Breakers.....	.03
2469	CAP SCREW, $\frac{3}{8}$ " x $\frac{1}{2}$ ", for various Circuit Breakers.....	.04
2492	Double Deck CIRCUIT BREAKER Complete, as shown.....	35.00
	The above Circuit Breaker Complete with necessary Pole Fittings and Operating Parts for Wood or Iron Pole.....	40.00
2493	COVER for 2 or 3-Deck Circuit Breakers	4.50
2494	FRAME Casting for 2492 or 3733	5.00
2495	BOTTOM PLATE for 2 or 3-Deck Circuit Breakers. ....	.40
2508	ROD for 2492 or 3733 .....	.50
3733	Double Deck CIRCUIT BREAKER Complete, as shown.....	35.00
	The above Circuit Breaker Complete with necessary Pole Fittings and Operating Parts for Wood or Iron Pole.....	40.00
4002	SPRING used for various Circuit Breakers .....	.20
4552	WASHER, Special, for various Circuit Breakers .....	.02
4742	Double Deck, Three Position CIRCUIT BREAKER Complete, as shown	35.00
	The above Circuit Breaker Complete with necessary Pole Fittings and Operating Parts for Wood or Iron Pole.....	40.00
4834	Single Deck Inverted CIRCUIT BREAKER Complete, as shown	25.00
	The above Circuit Breaker Complete with necessary Pole Fittings and Operating Parts for Wood or Iron Pole.....	30.00
4928	FRAME Casting for 4834	4.50
5561	FRAME Casting for 4742	5.00
5562	SPRING for Circuit Breakers 4742, etc .....	.20
6547	3-Deck, 3-Position CIRCUIT BREAKER Complete, as shown	45.00
	The above Circuit Breaker Complete with necessary Pole Fittings and Operating Parts for Wood or Iron Pole.....	50.00
9355	3-Deck, 2-Position CIRCUIT BREAKER Complete, as shown	45.00
	The above Circuit Breaker Complete with necessary Pole Fittings and Operating Parts for Wood or Iron Pole.....	50.00

CIRCUIT BREAKER PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

HIGH SIGNALS.

179

Order No.	CIRCUIT BREAKER PARTS.	List Price
493	INSULATED WASHER for 9220.....	.04
506	BRASS WASHER for $\frac{1}{4}$ " Screw.....	.01
528	BRASS NUT for $\frac{1}{4}$ " Screw .....	.02
648	FIBRE WASHER for various Circuit Breakers .....	.02
774	STEEL NUT for Rod 2509 .....	.02
821	CONTACT SPRING Complete for Circuit Breakers 819 and 2492.	2.00
825	DOG for Circuit Breakers 3733, etc.....	.50
829	DOG SPRING for Circuit Breakers 3733, etc.....	.16
839	COLLAR for Circuit Breaker 819 .....	.20
840	COLLAR for various Circuit Breakers .....	.30
848	SCREW for 9220 .....	.14
859	OPERATING SPRING for various Circuit Breakers.....	.30
975	BRASS WASHER for various Circuit Breakers.....	.01
1494	PIN, $\frac{3}{16}$ " dia., fastening Spring Retaining Collar to various Circuit Breakers .....	.02
1495	PIN, $\frac{3}{16}$ " dia., fastening Dog Trip Collar to various Circuit Breakers..	.02
1650	$\frac{1}{8}$ " PIN for various Circuit Breakers.....	.02
1833	MICANITE WASHER for 9220 .....	.30
1834	MICANITE WASHER, $\frac{3}{4}$ " O. D., for various Circuit Breakers.....	.24
1835	MICANITE BUSHING for 9220 .....	.24
1836	MICANITE BUSHING, $\frac{1}{2}$ " O. D., for various Circuit Breakers .....	.20
1886	DOWEL PIN fastening 5098 to 5725 .....	.02
2365	HINGE PIN for Trip Dog, for various Circuit Breakers.....	.02
2430	SCREW for fastening Side Plates to Circuit Breakers.....	.01
2435	SCREW fastening 5098 to 5099.....	.01
2487	$\frac{1}{4}$ " SET SCREW. Special .....	.12
2498	CONTACT SPRING Complete for Circuit Breaker 2492.	2.00
2501	DOG TRIP BLOCK for various Circuit Breakers .....	.60
2502	BLOCK for Circuit Breaker 2492 .....	.40
2503	DOG, Special, for Circuit Breaker 2492 .....	.70
2507	$\frac{3}{8}$ " GUIDE ROD for Double-Deck Circuit Breakers .....	.20
2509	OPERATING ROD for Double-Deck Type 3733, etc.....	.60
2510	PIN holding Rod 2507 to Frame .....	.02
2573	SIDE PLATE Complete, 1" wide, for Circuit Breakers 3733, etc.	4.50
2574	SIDE PLATE Complete for Circuit Breaker 2492	2.50
2644	DOWEL PIN for fastening Springs 4929, 4930 to 4834. ....	.02
2719	SET SCREW for Lower Spring Block on Circuit Breaker 2492 .....	.20
2848	LOCK WASHER for $\frac{1}{4}$ " Sq. Hd. Screw .....	.01
3018	SET SCREW, Special for Circuit Breaker 4742 .....	.10
3735	CONTACT SPRING Complete for Circuit Breaker 3733.....	3.00
4900	SIDE PLATE Complete, 1" wide, for Circuit Breaker 4742	5.80
4929	SPECIAL SPRING for Circuit Breaker 4834.....	.60
4930	SPECIAL SPRING for Circuit Breaker 4834 .....	.40
4932	CAP SCREW, $\frac{1}{4}$ " x $\frac{1}{4}$ ", Sq. Hd. Special, for Circuit Breaker 4834.....	.06
5098	SNAP SPRING for Circuit Breakers 4742 and 6547.....	.40
5099	PLATE supporting Spring 5098, for Circuit Breaker 4742.....	.40
5101	CONTACT SPRING Complete for Circuit Breaker 4742.....	3.00
5717	BRASS SCREW, No 8 x $\frac{3}{8}$ ", R. H., for various Circuit Breakers .....	.02
5725	WASHER supporting Spring for Circuit Breaker 4742. ....	.20
5768	SET SCREW, $\frac{1}{4}$ " x $\frac{3}{8}$ ", Headless. ....	.03
6161	SIDE PLATE Complete, 1" wide, for Circuit Breaker 4742	5.00
6957	STOP TUBE for Circuit Breakers 4742 or 6547. ....	.20
9220	BINDING POST Complete, for Side Plates on various Circuit Breakers .....	.80
9361	SIDE PLATE Complete, $\frac{3}{4}$ " wide, for Circuit Breaker 6547.....	5.00

Order by NUMBER and NAME Appearing in Large Type.

HIGH SIGNALS.

Order No.	CIRCUIT BREAKER PARTS —CONT.	List Price.
9362	SIDE PLATE Complete, $\frac{3}{4}$ " wide, for Circuit Breaker 6547.....	5.80
9363	SIDE PLATE Complete, $\frac{3}{4}$ " wide, for Circuit Breaker 6547.....	3.50
9364	SIDE PLATE Complete, $\frac{3}{4}$ " wide, for Circuit Breaker 9355.....	5.00
9365	SIDE PLATE Complete, $\frac{3}{4}$ " wide, for Circuit Breaker 9355.....	3.00
9366	GUIDE ROD, $\frac{1}{4}$ " dia, for Three-Deck Circuit Breakers.....	.20
9367	PLATE supporting Springs for Three-Deck Circuit Breakers.....	.50
9368	SNAP SPRING for Circuit Breaker 9355.....	.50
9369	CONTACT SPRING Complete for Three-Deck Circuit Breakers.....	4.00

Order by NUMBER and NAME Appearing in Large Type.

CIRCUIT BREAKER PARTS.



2573-1" WIDE



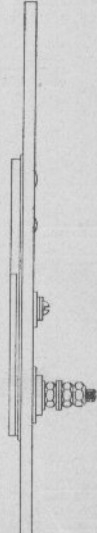
2574-1" WIDE



9363- $\frac{3}{4}$ " WIDE



9364- $\frac{3}{4}$ " WIDE



9365- $\frac{3}{4}$ " WIDE



6161-1" WIDE



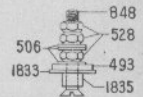
4900-1" WIDE



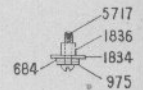
9361- $\frac{3}{4}$ " WIDE



9362- $\frac{3}{4}$ " WIDE

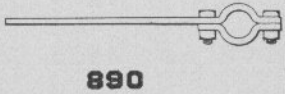
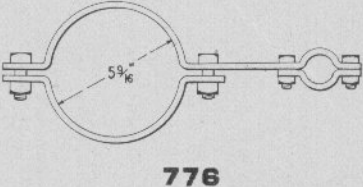
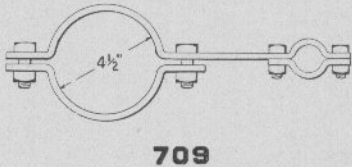
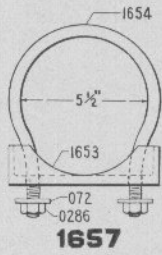
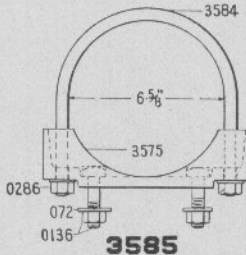
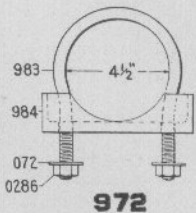
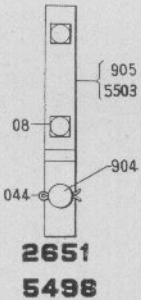
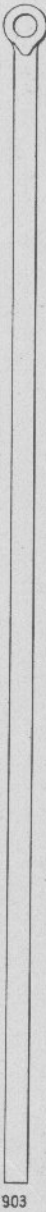
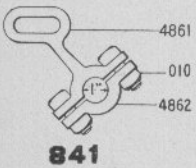
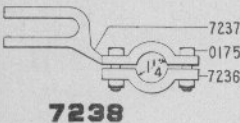
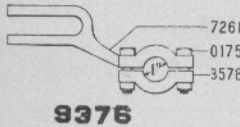
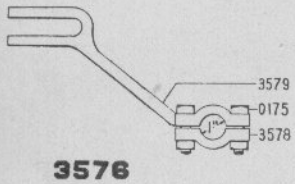
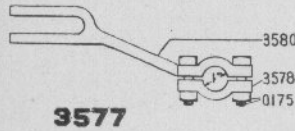


9220



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT BREAKER OPERATING RODS AND GUIDES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order
No.

CIRCUIT BREAKER OPERATING RODS AND GUIDES.

List Price.

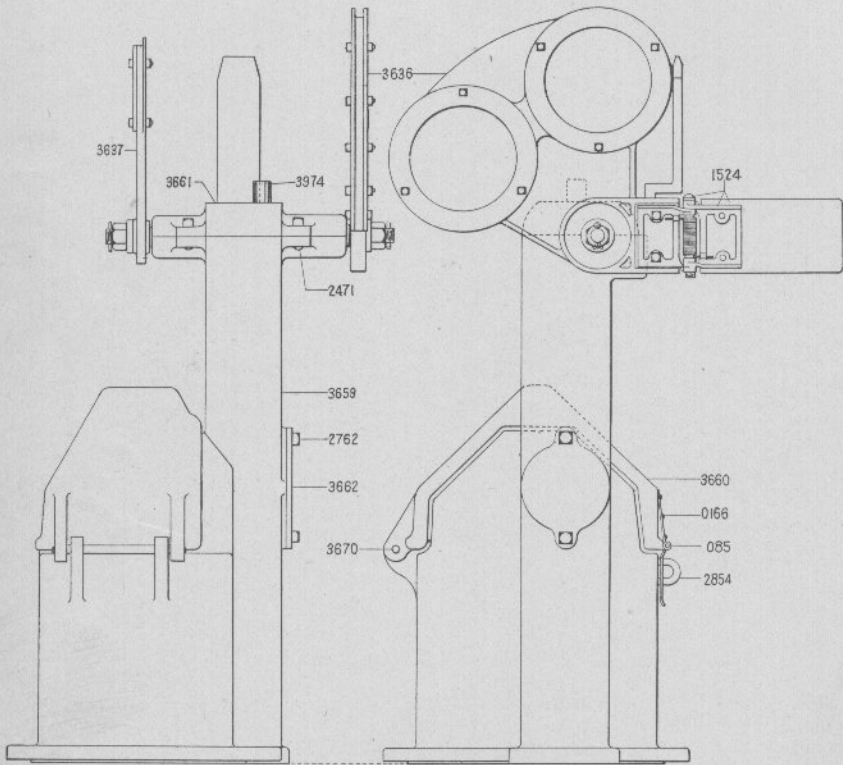
08 BOLT with Nut, $\frac{3}{8}$ " x 2"	.03
010 BOLT with Nut, $\frac{1}{2}$ " x $1\frac{1}{2}$ ", for 841	.04
044 COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)	.80
072 IRON WASHER for $\frac{1}{2}$ " Bolt	.01
0136 BOLT with Nut, $\frac{1}{2}$ " x $2\frac{1}{2}$ ", for 3585	.04
0175 BOLT with Nut, $\frac{3}{8}$ " x $1\frac{1}{2}$ "	.03
0286 NUT for Clamps, 972, etc.	.02
709 GUIDE Complete, for operating Rod 903, for $4\frac{1}{2}$ " O. D. Pole	1.30
776 GUIDE Complete, for Operating Rod 903, for $5\frac{1}{2}$ " O. D. Pole	1.34
841 CLAMP Complete. Used for connecting Rod 903 to operate Circuit Breakers.	.70
890 GUIDE Complete, for Operating Rod 903, for Wood Pole	.28
903 Circuit Breaker Operating ROD, with 1" Eye	2.50
904 STUD for 2651	.12
905 BRACKET for 2651	.60
972 CLAMP Complete for holding Circuit Breaker to $4\frac{1}{2}$ " O. D. Pole	.90
983 U BOLT for 972	.40
984 CLAMP for 972	.40
1653 CLAMP for 1657	.40
1654 U BOLT for 1657	.40
1657 CLAMP Complete for holding Circuit Breaker to $5\frac{1}{2}$ " O. D. Pole	.90
2651 BRACKET Complete. Used for fastening to Signal Arm for operating Circuit Breaker	.80
3575 CLAMP for 3585	.60
3576 CLAMP Complete, for operating Circuit Breaker from outside Semaphore Operating Rod on Two-Arm Pole	.80
3577 CLAMP Complete, for Operating Circuit Breaker from Semaphore Operating Rod on One-Arm Pole, or inside rod on Two-Arm Pole	.80
3578 CAP, for Clamp 3576, 3577 or 9376	.20
3579 FORK Casting for Clamp 3576	.50
3580 FORK Casting for Clamp 3577	.50
3584 U BOLT for 3585	.40
3585 CLAMP Complete, for holding Circuit Breaker to $6\frac{5}{8}$ " O. D. Pole	1.20
4861 CLAMP for 841	.50
4862 CAP for 841	.20
7204 BRACKET for 7213	.70
7213 BRACKET Complete, Special. Used for fastening to Signal Arm, for operating Circuit Breaker	.90
7214 STUD for 7213	.12
7236 CAP for 7238	.20
7237 FORK Casting for 7238	.50
7238 CLAMP Complete, Special, for operating Circuit Breaker from 1" Pipe Operating Rod	.80
7261 FORK Casting for 9376	.50
9376 CLAMP Complete, for operating Circuit Breaker from inside Operating Rod. Special	.80

Order by NUMBER and NAME Appearing in Large Type.

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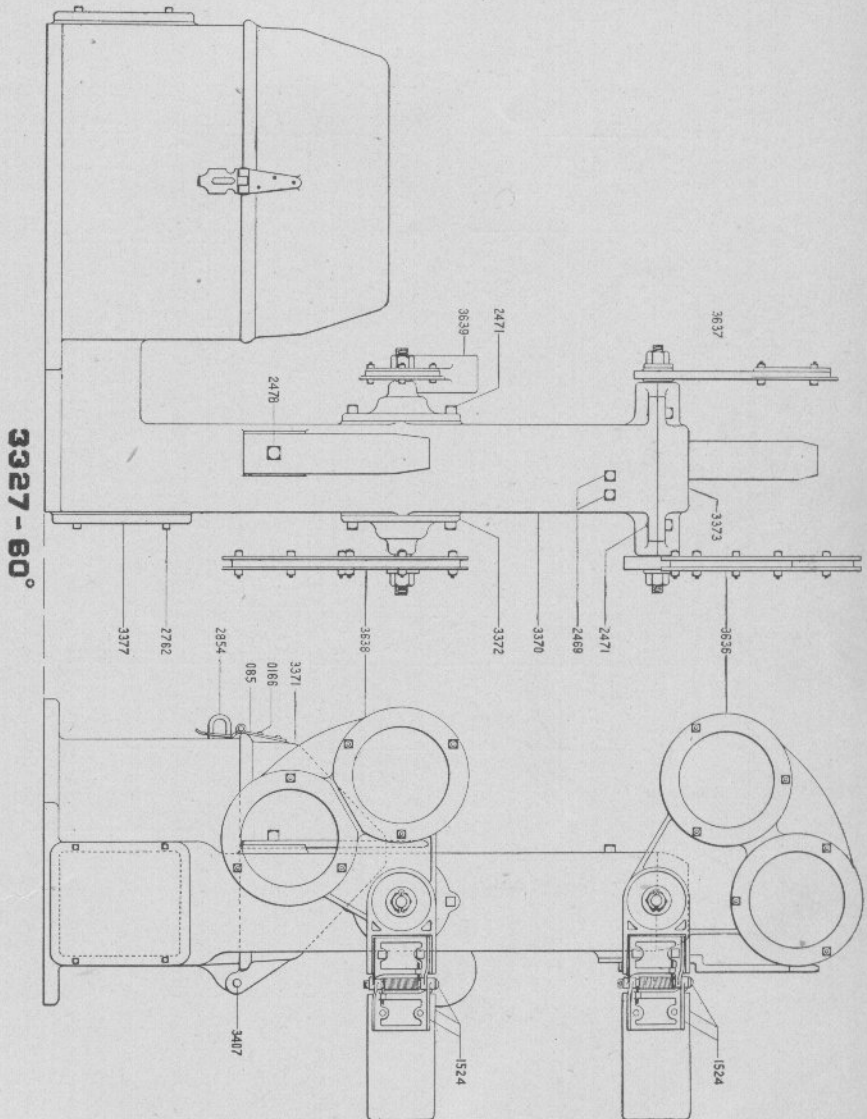
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 MODEL 2, SINGLE AND DOUBLE ARM 60 AND 90 DEGREE DWARF SIGNALS.

**3658-60°****3673-90°****6459-90°** WITH WATER TIGHT BASE.**6545-60°** " " " " " "

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

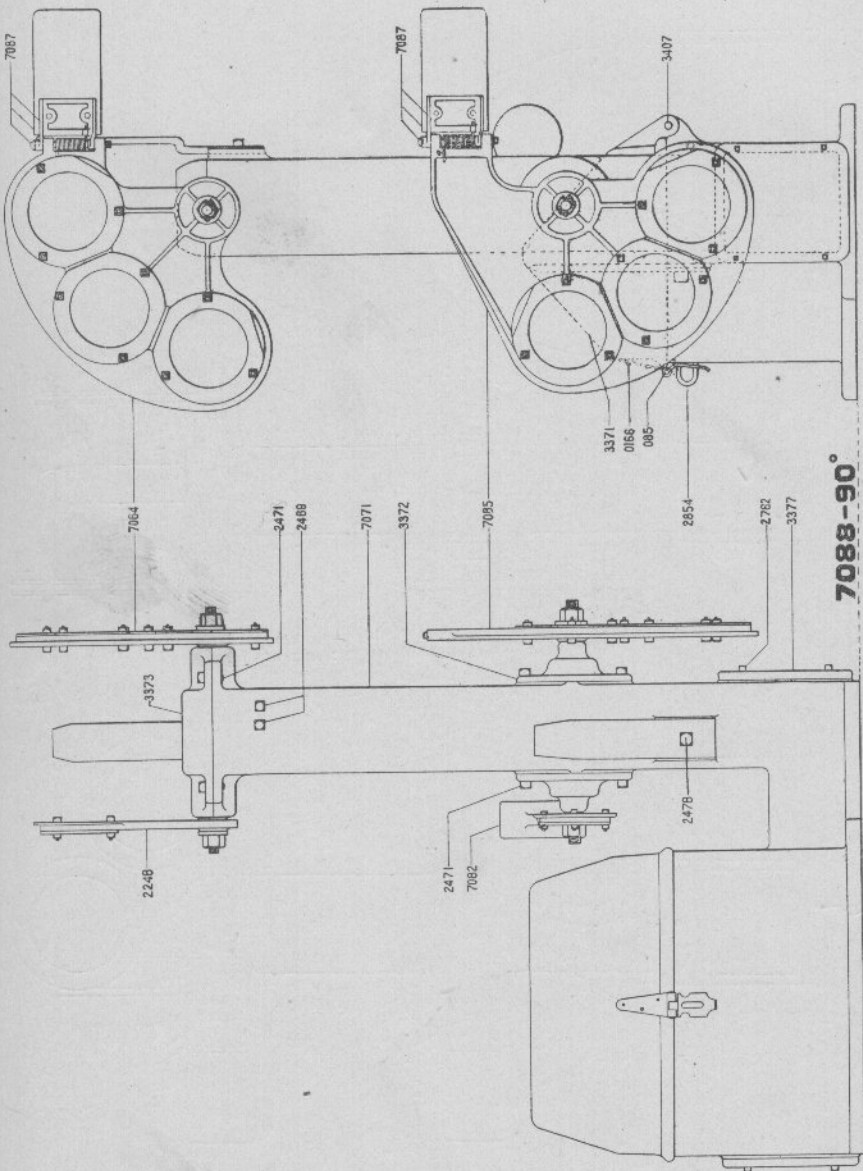
MODEL 2, SINGLE AND DOUBLE ARM 60 AND 90 DEGREE DWARF SIGNALS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DWARF SIGNALS.

MODEL 2, SINGLE AND DOUBLE ARM 60 AND 90 DEGREE DWARF SIGNALS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

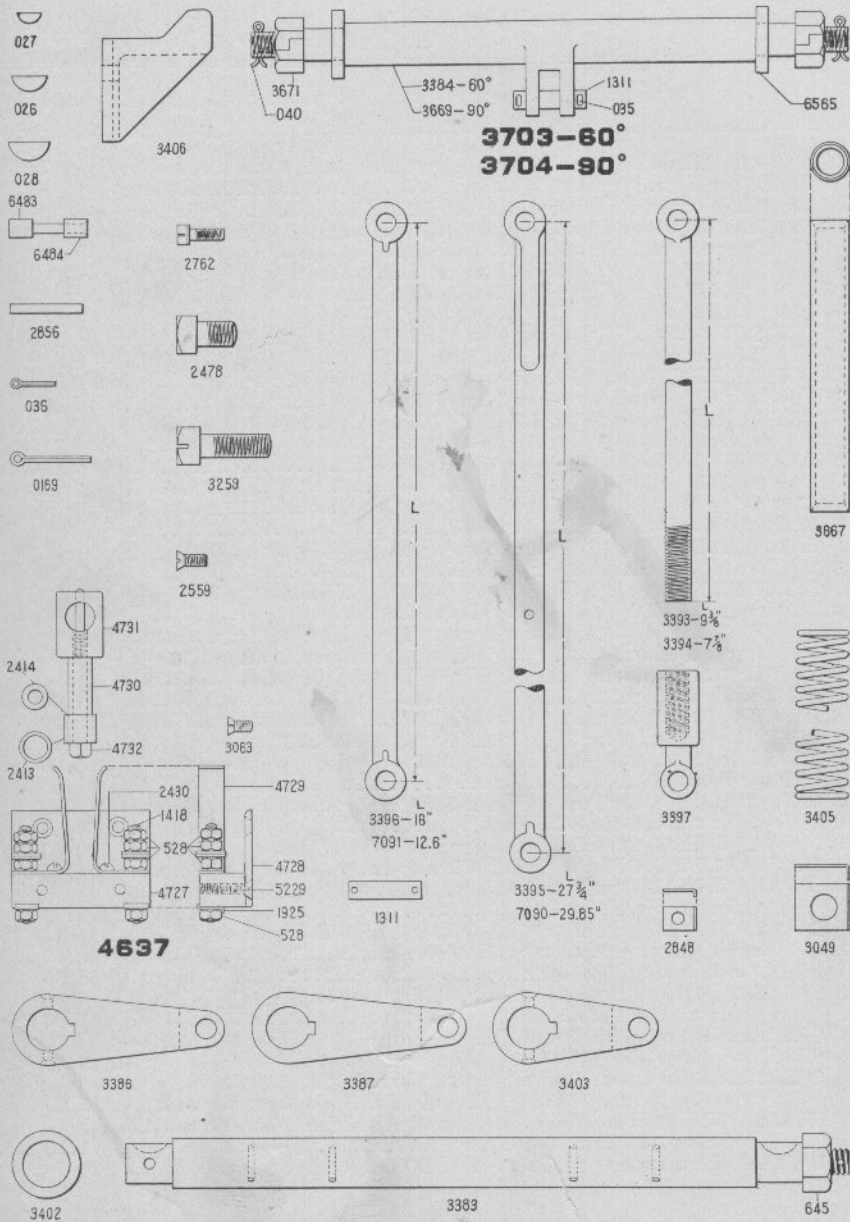
NOTE:—Lamps, Glass, Roundels and Lenses are not included with Complete Signal, and should be ordered separately if desired. For Lamps, see page 212; for Glass, Roundels or Lenses, see page 210. Spectacles furnished with Signals as specified, see pages 200 to 205.

Order No.	MODEL 2, SINGLE AND DOUBLE ARM DWARF SIGNALS.	List Price.
085	HASP for Single and Double Arm Dwarf Signals.....	.10....
0166	RIVET for fastening Hasp to Cover.....	.01....
1524	BLADE, Wood, with Hinge Complete.....	1.50....
2248	SPECTACLE, Back Light Complete, 7 $\frac{1}{8}$ " Centers (2 $\frac{7}{8}$ " Glass). For 90 Degree Dwarf Signals.....	.64....
2469	CAP SCREW, $\frac{3}{8}$ " x $\frac{3}{4}$ ", holding Bracket 3406 to Post.....	.04....
2471	CAP SCREW, $\frac{3}{8}$ " x 1", holding Cap to Post.....	.04....
2478	CAP SCREW, $\frac{1}{2}$ x $\frac{3}{4}$ ", holding Lamp Bracket to Post.....	.05....
2762	CAP SCREW, $\frac{1}{4}$ " x $\frac{3}{4}$ ", holding Hand Hole Caps to Post.....	.06....
2854	STAPLE used in connection with Hasp 085.....	.08....
3327	DWARF SIGNAL Complete, Two-Arm, 60 Degree Throw.....	280.00....
3370	POST for 60 Degree, Two-Arm Signal 3327.....	54.00....
3371	COVER for Two-Arm Signal 3327 or 7088. If Hasp 085 is required, order separately.....	5.00....
3372	BEARING, Lower Spectacle for 3327 or 7088.....	2.00....
3373	CAP for 3327 or 7088.....	1.50....
3377	CAP, Hand Hole, for 3327 or 7088.....	1.20....
3407	PIN, Cover to Post for 3327 or 7088.....	.20....
3636	SPECTACLE Complete, Front, Two-Light, 7 $\frac{1}{8}$ " Centers, 60 Degree Throw (5 $\frac{3}{8}$ " Glass). For Back Light see 3637.....	2.00....
3637	SPECTACLE Complete, Back, 7 $\frac{1}{8}$ " Centers, (2 $\frac{7}{8}$ " Glass). For Front Light see 3636.....	.64....
3638	SPECTACLE Complete, Lower Front, Two-Light, 6 $\frac{1}{2}$ " Centers, 60 Degree Throw, for 3327 (5 $\frac{3}{8}$ " Glass). For Back Light see 3639..	2.00....
3639	SPECTACLE Complete, Lower Back, 6 $\frac{1}{2}$ " Centers (2 $\frac{7}{8}$ " Glass), for 3327. For Front Light see 3638.....	1.00....
3658	DWARF SIGNAL Complete, One-Arm, 60 Degree Throw.....	150.00....
3659	POST, Casting only, for 3658, etc.....	40.00....
3660	COVER for Post 3659, etc. If Hasp 085 is required, order separately.....	4.00....
3661	CAP for Post 3659.....	1.50....
3662	CAP, Hand Hole, for Post 3659, for 3658, etc.....	.80....
3670	PIN, Cover to Post, for 3658, etc.....	.20....
3673	DWARF SIGNAL Complete, One-Arm, 90 Degree Throw.....	160.00....
3974	INSULATED PLUG, for Lighting Wires to Lamp, for 3658, etc.....	.40....
6459	DWARF SIGNAL Complete with Water Tight Base, One-Arm, 90 Degree Throw.....	170.00....
6545	DWARF SIGNAL Complete with Water Tight Base, One-Arm, 60 Degree Throw.....	160.00....
7071	POST, Casting only, for 7088.....	58.00....
7082	SPECTACLE Complete, Lower Back, 6 $\frac{1}{2}$ " Centers, for 7088 (2 $\frac{7}{8}$ " Glass). For Front Light see 7085.....	1.00....
7084	SPECTACLE Complete, Front, Three-Light, 7 $\frac{1}{8}$ " Centers, 90 Degree Throw, for 7088 (4 $\frac{1}{2}$ " Glass). For Back Light see 2248.....	3.00....
7085	SPECTACLE Complete, Lower Front, Three-Light, 6 $\frac{1}{2}$ " Centers, 90 Degree Throw, for 7088 (4 $\frac{1}{2}$ " Glass). For Back Light see 7082..	3.00....
7087	BLADE, Wood, with Hinge Complete. Used in connection with Spectacles 7084 and 7085.....	1.10....
7088	DWARF SIGNAL Complete, Two-Arm, 90 Degree Throw.....	320.00....

Order by NUMBER and NAME Appearing in Large Type.

DWARF SIGNALS.

MODEL 2, SINGLE AND DOUBLE ARM DETAIL PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

191

3385

3382-60°
3658-90°

1156°

0184
3375

3389
3391
3392
035
3893
1925

0184
3412

4257
044
3411

1554
1555
3654
3481
3477
3401

3374

3390

3388
045

4257
044
3411

3761-60°
7835-90°

4257

4252-60°
4254-90°

4253-60°
4255-90°

1768

3973

3665

3495

2438

3494

6081

2154
3671
2145
2471
3664

3705

3706-60°
3707-90°

3493
528
3964

506
3482
3461
5499
3482

3487

3492
528
3964

506
3965
3490
3529

3486

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order
No.

MODEL 2, SINGLE AND DOUBLE ARM DETAIL PARTS.

List Price.

026 KEY, Circular, for Gear to Crank Shaft.....	.07
027 KEY, Circular, for holding Commutator 3494 to Crank.....	.06
028 KEY, Circular, for holding Cranks 3386, etc., to Shaft 3383.....	.08
035 COTTER PIN, $\frac{3}{32}$ " x $\frac{5}{8}$ ", for 3706, etc. (per 100).....	.80
036 COTTER PIN, $\frac{3}{32}$ " x $\frac{3}{4}$ " (per 100).....	.80
040 COTTER PIN, $\frac{3}{16}$ " x 1" (per 100).....	.80
044 COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100).....	.80
045 COTTER PIN, $\frac{3}{16}$ " x $1\frac{3}{4}$ " (per 100).....	.80
0169 COTTER PIN, $\frac{1}{8}$ " x $1\frac{1}{2}$ " (per 100).....	.80
0184 COTTER PIN, $\frac{3}{32}$ " x $\frac{7}{8}$ " (per 100).....	.80
506 WASHER for $\frac{1}{4}$ " Brass Screw.....	.01
528 NUT, $\frac{1}{4}$ "-24, Brass.....	.02
645 NUT for Shaft 3383.....	.04
1156 NUT for Cranks 3382 and 3668.....	.02
1311 PIN for Crank Shafts and Cranks 3703, etc.....	.10
1418 STUD for 4637.....	.08
1554 CORE, Upper, for 3706, etc.....	.80
1555 CAP, Copper, for Core 1554.....	.10
1768 BUSHING, Fibre, for Inlet Wires on Water-Tight Dwarf Signals.....	.30
1925 WASHER, Lock, $\frac{1}{4}$ ", for 3706, etc.....	.01
2145 WASHER, Lock, for 3705.....	.01
2154 WASHER for 3705.....	.02
2413 BRASS CONTACT, for 4637.....	.30
2414 INSULATED BUSHING, for 4637.....	.50
2430 SCREW, No. 8 x $\frac{1}{2}$ ", for 4637.....	.01
2438 SCREW, No. 10 x $\frac{1}{2}$ ", for 3494 Commutator.....	.02
2471 SCREW, $\frac{3}{8}$ " x 1", for 3705.....	.04
2478 SCREW, Cap, $\frac{1}{2}$ " x $\frac{3}{4}$ ".....	.05
2559 SCREW for fastening 3487 to Yoke 3706, etc.....	.02
2762 SCREW, $\frac{1}{4}$ " x $\frac{3}{4}$ ", for fastening 3486 to 3706, etc.....	.06
2848 WASHER, Lock, for Screw 2762 and fastening 3486 to Yokes.....	.01
2856 PIN, fastening Cranks 3386 or 3403 to Shaft 3383.....	.04
3049 WASHER, Lock, for Screw 3259, fastening Yoke to Post.....	.02
3063 SCREW, $\frac{1}{2}$ " x $\frac{1}{2}$ ", for fastening 4637 to 3706, etc.....	.01
3259 SCREW, $\frac{1}{2}$ " x 2", fastening Yokes 3706, etc., to Post.....	.06
3374 CAP, Bottom, for 3706, etc.....	6.00
3375 YOKE, Upper, for 3761 or 7835.....	8.00
3382 CRANK, Shaft, 60 Degree, for 3706 or 3761.....	10.00
3383 SHAFT, Rocker, for Two-Arm Dwarf Signals.....	2.00
3384 CRANK, Shaft, 60 Degree, for 3703.....	9.00
3385 GEAR for 3706, etc.....	1.50
3386 CRANK, Rocker Shaft, for 60 Degree Two-Arm Dwarf Signals.....	4.00
3387 CRANK on operating end of Rocker Shaft for 60 Degree Two-Arm Dwarf Signal.....	4.00
3388 YOKE, Bottom, for 3706, etc.....	3.00
3389 GEAR RACK, for 3706, etc.....	5.00
3390 CORE, Bottom, for 3706, etc.....	2.00
3391 ROLLER for 3706, etc.....	.24
3392 SHAFT for 3706, etc.....	.10
3393 ROD, connecting to Lower Arm Rocker Shaft for Two-Arm Dwarf Signal.....	1.80
3394 ROD, connecting to Upper Arm Rocker Shaft for Two-Arm Dwarf Signal.....	2.60
3395 ROD for operating Upper Arm on 60 Degree Two-Arm Dwarf Signal.....	3.20
3396 ROD for operating Lower Arm on 60 Degree Two-Arm Dwarf Signal.....	3.20

Order by NUMBER and NAME Appearing in Large Type.

DWARF SIGNALS.

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Order
No.

MODEL 2, SINGLE AND DOUBLE ARM DETAIL PARTS.—CONT.

List Price.

3397	EYE, Adjusting, for Rods 3393 or 3394.	1.30
3401	COLLAR for 3706, etc.....	.40	....
3402	WASHER for Rocker Shaft 3383.....	.02	....
3403	CRANK, Rocker Shaft, for 90 Degree, Two-Arm Dwarf Signal	4.00	....
3405	SPRING, Arm Returning, for operating Rod 3395.....	.40	....
3406	BRACKET, Stop, for operating Rod Springs on Two-Arm Dwarf Signals.....	.50	....
3411	WASHER, Leather, for 3706, etc.....	.06	....
3412	YOKE, Upper, for 3706 and 3707.....	8.00	....
3461	SPRING Contact, for 3486 or 3487.....	.30	....
3462	SPRING Contact, for 3486 or 3487.....	.30	....
3477	SPRING for 3706, etc.....	.20	....
3481	WASHER for 3706, etc.....	.10	....
3486	BLOCK, Terminal, Complete, for Single and Double Arm Dwarf Signals	5.00	....
3487	BLOCK, Terminal, Complete. (Used only when reversed contact is required).....	6.00	....
3488	BRACKET for 3487.....	1.50	....
3489	BLOCK, Lower, for 3487.....	.40	....
3490	BLOCK, Terminal, for 3486 or 3487.....	.80	....
3492	STUD for 3486.....	.20	....
3493	STUD for 3487.....	.20	....
3494	COMMUTATOR Complete, for Single and Double Arm Dwarf Signals	6.00	....
3498	CONTACT, Indication, for 3494.....	.50	....
3529	BRACKET for 3486.....	1.50	....
3654	BOLT for 3706, etc.....	.10	....
3664	EYE, Adjusting, for 3705.....	2.80	....
3665	ROD, Operating, for 3705.....	1.20	....
3667	PIPE, Guide or Lighting Wires for Single Arm Dwarf Signals .....	.80	....
3668	CRANK SHAFT, 90 Degree, for 3707 or 7835	10.00	....
3669	CRANK SHAFT, 90 Degree, for 3704.....	9.00	....
3671	NUT, Elastic, for 3703, etc.....	.04	....
3703	CRANK SHAFT Complete, 60 Degree, for Single or Double Arm Dwarf Signals.....	9.00	....
3704	CRANK SHAFT Complete, 90 Degree, for Single or Double Arm Dwarf Signals.....	9.00	....
3705	ROD, Operating, Complete, for Single Arm Dwarf Signals.....	5.00	....
3706	FRAME, Solenoid, Complete, 60 Degree, for Single Arm Dwarf and Lower Arm of Two-Arm Dwarf Signal.....	44.00	....
3707	FRAME, Solenoid, Complete, 90 Degree, for Single Arm Dwarf and Lower Arm of Two-Arm Dwarf Signal.....	44.00	....
3761	FRAME, Solenoid, Complete, for Upper Arm of 60 Degree Two-Arm Dwarf Signal.....	44.00	....
3893	NUT for Bolt 3654.....	.06	....
3964	SCREW, $\frac{1}{4}$ " x 2", Brass (Special) for 3486 or 3487.....	.10	....
3965	SCREW, $\frac{1}{4}$ " x $1\frac{1}{2}$ ", Brass, (Special) for 3486 or 3487.....	.12	....
3973	PLUG for Single Arm Dwarf Signal Cap when no Lighting Wires are required .....	.40	....
4252	RETAINING COIL (Single Coil), for 60 Degree Dwarf Signals.....	4.00	....
4253	OPERATING COIL (Single Coil), for 60 Degree Dwarf Signals.....	9.00	....
4254	RETAINING COIL (Single Coil), for 90 Degree Dwarf Signals.....	6.00	....
4255	OPERATING COIL (Single Coil), for 90 Degree Dwarf Signals.....	12.00	....
4256	WASHER, Felt, for protecting Coils 4252, etc.....	.04	....
4257	TUBE, Spacing, for 3706, etc.....	.30	....
4637	CIRCUIT BREAKER Complete (Special). Used on Single Arm Dwarf Signals.....	14.00	....
4727	BLOCK for 4637.....	2.50	....

DWARF SIGNALS.

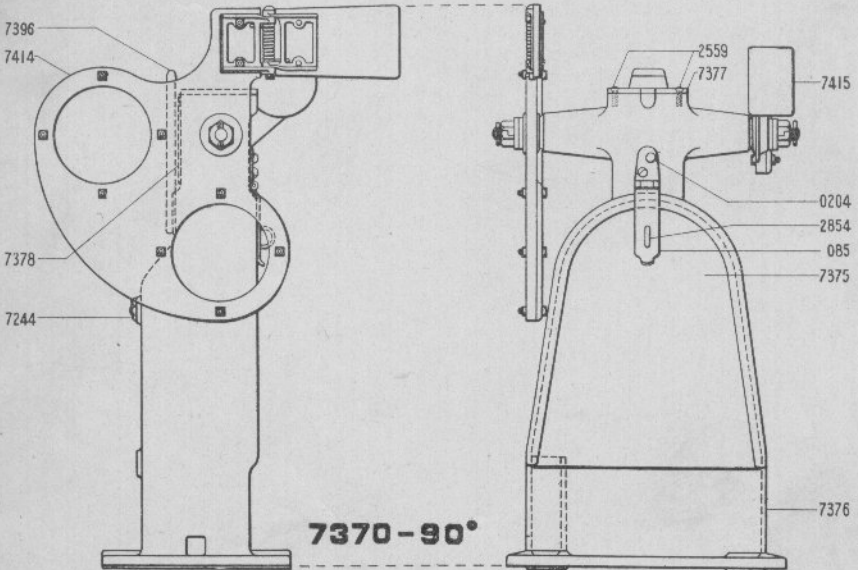
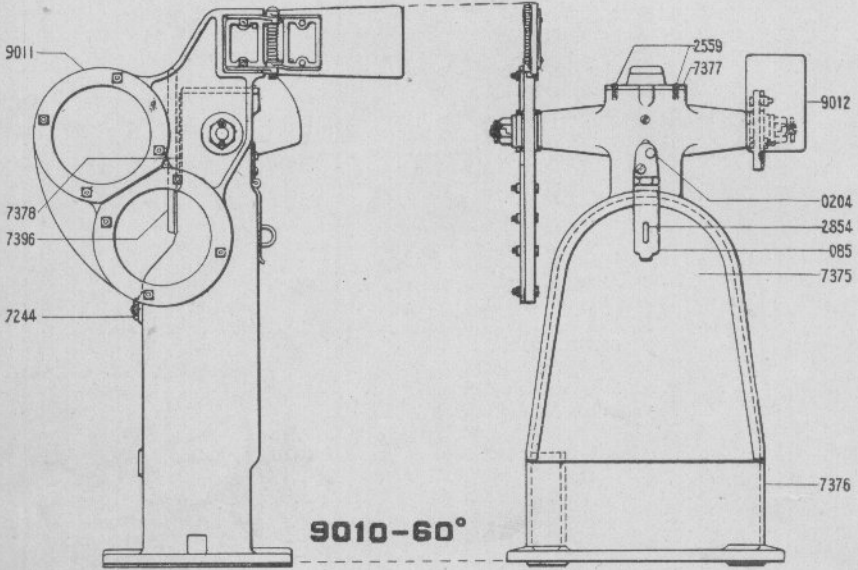
Order No.	MODEL 2, SINGLE AND DOUBLE ARM DETAIL PARTS.—CONT.	List Price.
4728	PLATE for 4637.....	2.00....
4729	SPRING for 4637	3.00....
4730	SLEEVE for 4637.....	1.00....
4731	COLLAR for 4637	1.50....
4732	SCREW for 4637	2.00....
5229	SCREW, $\frac{1}{4}$ " x $1\frac{1}{4}$ ", for 4637.....	.06....
5499	WASHER for 3486 or 3487 .....	.02....
6081	SPRING for 3705. ....	.80....
6483	PIN for Retaining Spring on Operating Rod.....	.12....
6484	COLLAR for Pin 6483.....	.10....
6565	WASHER for 3703 or 3704.....	.08....
7090	ROD for operating upper arm on 90 Degree Two-Arm Dwarf Signal..	3.20....
7091	ROD for operating lower arm on 90 Degree Two-Arm Dwarf Signal..	2.60....
7835	FRAME, Solenoid Complete, for Upper Arm of 90 Degree Two-Arm Dwarf Signal.....	44.00....

Order by NUMBER and NAME Appearing in Large Type.

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DWARF SIGNALS.

MODEL 3, DWARF SIGNAL AND DETAIL PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DWARF SIGNALS.

197

Order
No.

MODEL 3, DWARF SIGNAL AND DETAIL PARTS.

List Price.

034	COTTER PIN, $\frac{3}{32}$ " x $\frac{1}{2}$ " (per 100).....	.80	....
035	COTTER PIN, $\frac{3}{32}$ " x $\frac{3}{8}$ " (per 100).....	.80	....
036	COTTER PIN, $\frac{3}{32}$ " x $\frac{3}{4}$ " (per 100).....	.80	....
040	COTTER PIN, $\frac{1}{8}$ " x 1" (per 100).....	.80	....
045	COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100).....	.80	....
085	HASP for 7370 or 9010.....	.10	....
0204	RIVET, fastening Hinge to Post, for 7370 or 9010 .....	.01	....
0348	HEADLESS SET SCREW, $\frac{1}{4}$ " x $\frac{3}{8}$ ", fastening 7398 or 9018 to Shaft. .	.03	....
0402	CIRCULAR KEY, Crank to Shaft .....	.10	....
528	BRASS NUT, $\frac{1}{2}$ "-24 .....	.02	....
1225	WASHER for Binding Post .....	.01	....
1554	UPPER CORE for 12449 or 12450 .....	.80	....
1555	COPPER CAP for Core 1554.....	.10	....
1925	$\frac{1}{4}$ " LOCK WASHER.....	.01	....
2473	SCREW for holding Solenoid Caps 7384 to Post.....	.03	....
2559	SCREW holding Cover to Post 7376.....	.02	....
2577	RESTORING SPRING.....	.40	....
2854	STAPLE for Door 7375.....	.08	....
3390	LOWER CORE for 12449 or 12450	2.00	....
3654	BOLT, Cap to Frame.....	.10	....
3671	ELASTIC NUT for 9078 or 9079.....	.04	....
3893	NUT for Bolt 3654.....	.06	....
4252	RETAINING COIL (Single Coil), for 60 Degree Dwarf Signals.....	4.00	....
4253	OPERATING COIL (Single Coil), for 60 Degree Dwarf Signals.....	9.00	....
4254	RETAINING COIL (Single Coil), for 90 Degree Dwarf Signals.....	6.00	....
4255	OPERATING COIL (Single Coil), for 90 Degree Dwarf Signals.....	12.00	....
4256	FELT WASHER for protecting Coils 4252, etc.....	.02	....
4257	SPACING TUBE between 7374 and 7384.....	.30	....
4851	SCREW, fastening Lamp Bracket to Post .....	.03	....
6565	WASHER for 9078 or 9079 .....	.08	....
6704	INSULATING WASHER for Binding Posts and Contact Studs.....	.24	....
7244	NUT, $\frac{1}{2}$ ", Special, for 7370 or 9010.....	.10	....
7370	DWARF SIGNAL Complete, One-Arm, 90 Degree Throw, with Spec- tacles as specified. For Spectacles see pages 200 to 204. Lamp, Glass or Roundels are not included.....	170.00	....
7371	INSULATOR for Contact Springs .....	.50	....
7372	INSULATING BUSHING for Binding Posts.....	.50	....
7374	CIRCUIT BREAKER FRAME	10.00	....
7375	DOOR for 7370 or 9010.....	2.00	....
7376	POST, Casting, for 7370 or 9010.....	44.00	....
7377	COVER for Post 7376.....	1.40	....
7378	CAP for Post 7376.....	1.00	....
7379	CONTACT SPRING (long). .....	.24	....
7381	CONNECTING LINK.....	.20	....
7382	Indication Contact ARM .....	.10	....
7383	Control Contact ARM.....	2.00	....
7384	SOLENOID CAP.....	7.00	....
7385	SOLENOID YOKE.....	3.00	....
7386	PIN SHAFT for Arm 7383.....	.10	....
7388	ROLLER PIN for operating Jaw.....	.06	....
7390	STUD for Front Contacts.....	.24	....
7391	INSULATING BUSHING.....	.30	....
7392	PIN for holding Contacts to Control Arm 7383.....	.10	....
7395	Thin BRASS NUT, $\frac{1}{4}$ "-24.....	.03	....
7396	LAMP BRACKET for 7370 or 9010.....	.40	....
7397	90 Degree SHAFT for 9079.....	2.50	....

Order by NUMBER and NAME Appearing in Large Type.

DWARF SIGNALS.

Order
No.

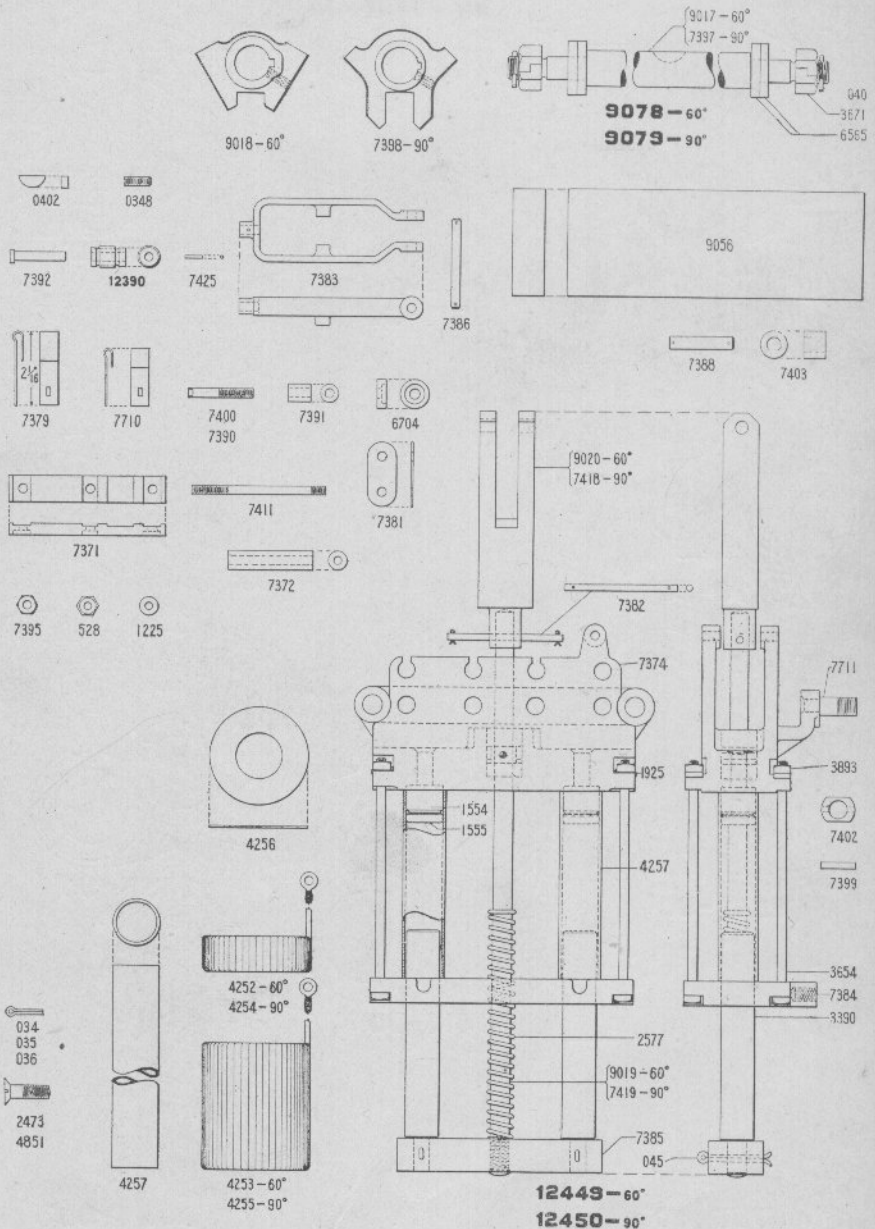
MODEL 3, DWARF SIGNAL AND DETAIL PARTS.—CONT.

List Price.

7398	CRANK for 90 Degree Dwarf Signal.....	5.00	....
7399	PIN holding 7402 to 7419 or 9019 .....	.06	....
7400	STUD for Back Contacts.....	.24	....
7402	OPERATING COLLAR.....	.40	....
7403	ROLLER for operating Jaw.....	.20	....
7411	STUD for Binding Posts.....	.20	....
7414	FRONT SPECTACLE Complete, Two-Light, 6" Centers, 90 Degree Throw, Glass 5 $\frac{3}{8}$ ". For Back Light see 7415.....	2.50	....
7415	BACK SPECTACLE Complete, 6" Centers, Glass 2 $\frac{1}{2}$ ". For Front Light see 7414.....	1.00	....
7418	90 Degree OPERATING JAW.....	5.00	....
7419	90 Degree OPERATING ROD.....	1.00	....
7425	PIN, 7392 to 7383. ....	.02	....
7710	CONTACT SPRING (short).....	.20	....
7711	STUD for holding Circuit Breaker Frame to Post .....	.20	....
9010	DWARF SIGNAL Complete, One-Arm, 60 Degree Throw, with Spec- tacles as specified. For Spectacles see pages 200 to 204. Lamp, Glass or Roundels are not included.....	160.00	....
9011	SPECTACLE Complete, Front, Two-Light, 6" Centers, 60 Degree Throw, Glass 5 $\frac{3}{8}$ ". For Back Light see 9012.....	2.50	....
9012	BACK SPECTACLE Complete, 6" Centers, Glass 2 $\frac{1}{2}$ ". For Front Light see 9011.....	1.00	....
9017	60 Degree SHAFT for 9078.....	2.50	....
9018	CRANK for 60 Degree Dwarf Signal.....	5.00	....
9019	60 Degree OPERATING ROD.....	1.00	....
9020	60 Degree OPERATING JAW.....	5.00	....
9056	FILLER BLOCK for 60 Degree Dwarf Signals .....	.30	....
9078	SHAFT Complete for 60 Degree Dwarf Signals.....	3.00	....
9079	SHAFT Complete for 90 Degree Dwarf Signals.....	3.00	....
12390	CONTACT COLLAR for Indication Arm 7382	1.00	....
12449	SOLENOID FRAME Complete, as shown, for 60 Degree Dwarf Signal .....		....
12450	SOLENOID FRAME Complete, as shown, for 90 Degree Dwarf Signal .....		....

Order by NUMBER and NAME Appearing in Large Type.

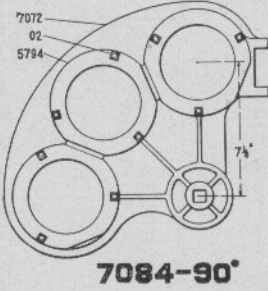
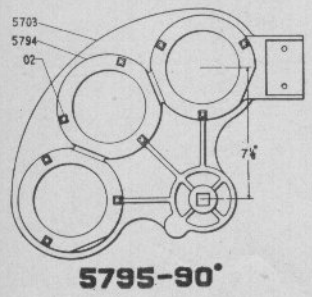
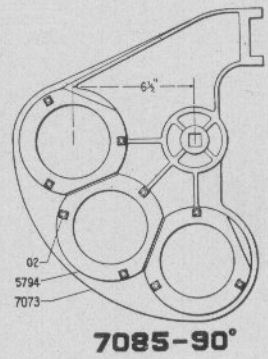
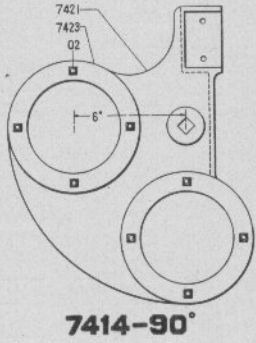
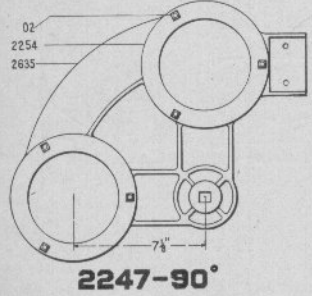
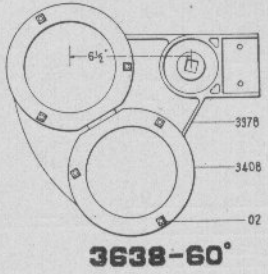
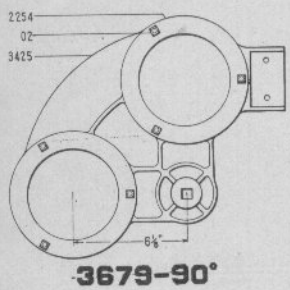
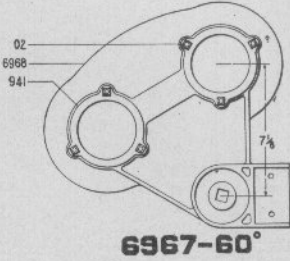
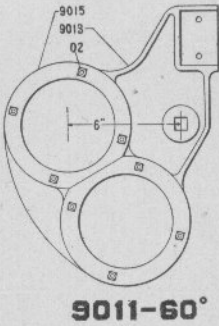
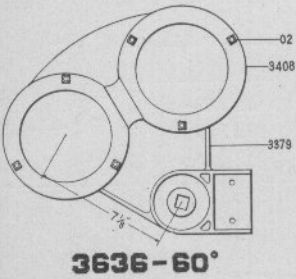
MODEL 3, DWARF SIGNAL AND DETAIL PARTS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DWARF SIGNALS.

FRONT SPECTACLES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DWARF SIGNALS.

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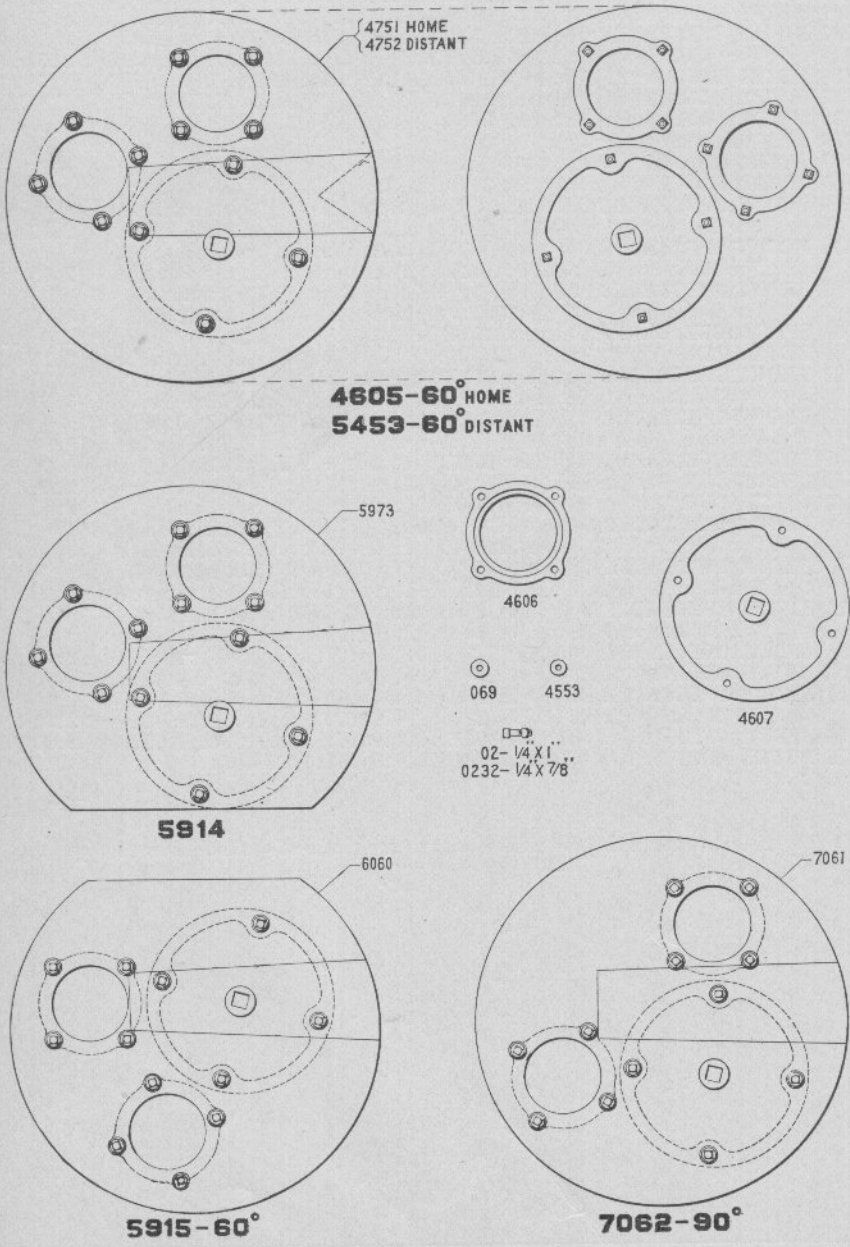
Order No.	FRONT SPECTACLES.	List Price.
02	BOLT and Nut, $\frac{1}{4}$ " x 1", fastening Bezel Rings to Front Spectacles..	.02
941	BEZEL RING for 6967.....	.10
2247	FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass $5\frac{3}{8}$ ", not included) For Back Spectacle 2248.....	2.00
2254	BEZEL RING for 2247 or 3679.....	.16
2635	SPECTACLE, Casting only, for 2247.....	1.60
3378	SPECTACLE, Casting only, for 3638.....	1.60
3379	SPECTACLE, Casting only, for 3636.....	1.60
3408	BEZEL RING for 3636 or 3638 (Sheet Metal).....	.20
3425	SPECTACLE, Casting only, for 3679.....	1.50
3636	FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass, $5\frac{3}{8}$ ", not included) For Back Spectacle 3637.....	2.00
3638	FRONT SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass $5\frac{3}{8}$ ", not included). For Back Spectacle 3639.....	2.00
3679	FRONT SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass $5\frac{3}{8}$ ", not included) For Back Spectacle see 3680.....	1.80
5703	SPECTACLE, Casting only, for 5795.....	2.40
5794	BEZEL RING for 5795.....	.16
5795	FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass $4\frac{1}{2}$ ", not included) For Back Spectacle see 2248.....	3.00
6967	FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass $3\frac{1}{2}$ ", not included). For Back Spectacle 3637.....	1.80
6968	SPECTACLE, Casting only, for 6967.....	1.60
7072	SPECTACLE, Casting only, for 7084.....	2.40
7073	SPECTACLE, Casting only, for 7085.....	2.40
7084	FRONT SPECTACLE Complete, $7\frac{1}{8}$ " Centers (Glass $4\frac{1}{2}$ ", not included) For Back Spectacle see 2248.....	3.00
7085	FRONT SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass $4\frac{1}{2}$ ", not included). For Back Spectacle see 7082.....	3.00
7414	FRONT SPECTACLE Complete, 6" Centers (Glass $5\frac{3}{8}$ ", not included). For Back Spectacle see 7415.....	2.50
7421	SPECTACLE, Casting only, for 7414.....	2.00
7423	BEZEL RING for 7414.....	.16
9011	FRONT SPECTACLE Complete, 6" Centers (Glass $5\frac{3}{8}$ ", not included) For Back Spectacle see 9012.....	2.50
9013	SPECTACLE, Casting only, for 9011.....	2.00
9015	BEZEL RING for 9011 (Sheet Metal).....	.20

NOTE.—Spectacles as enumerated above are made of malleable iron.

Order by NUMBER and NAME Appearing in Large Type.

DWARF SIGNALS.

DWARF SIGNAL DISCS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DWARF SIGNALS.

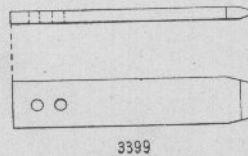
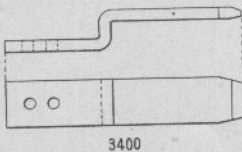
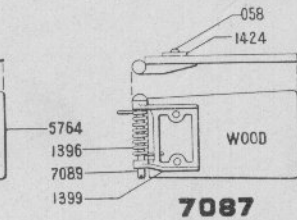
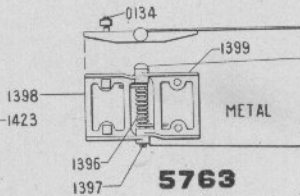
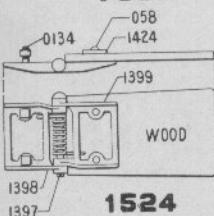
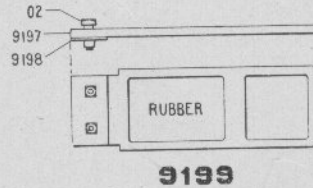
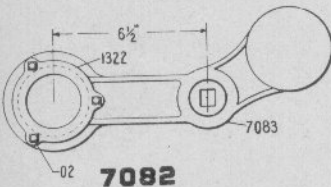
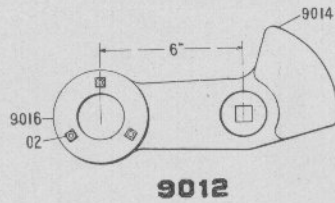
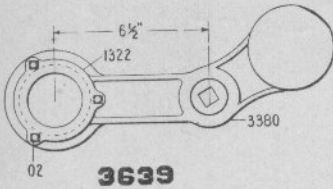
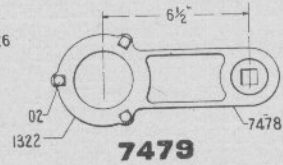
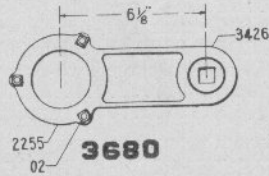
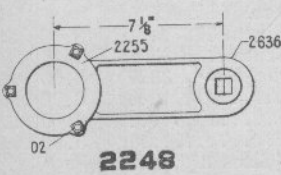
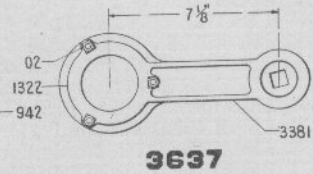
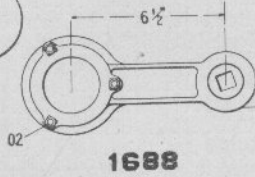
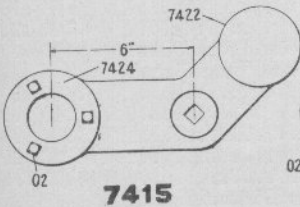
203

Order No.	DWARF SIGNAL DISCS.	List Price.
002	BOLT and Nut, $\frac{1}{4}$ " x 1", fastening Bezel Rings to Front Discs.....	.02
009	WASHER for $\frac{1}{4}$ " Bolt.....	.01
0232	BOLT with Nut, $\frac{1}{4}$ " x $\frac{3}{8}$ ".....	.02
4553	LEATHER WASHER for $\frac{1}{4}$ " Bolt. Used with Enameled Front Discs.....	.01
4605	ENAMELED FRONT DISC Complete, $6\frac{1}{2}$ " Centers, for Home Signal. (Glass $3\frac{1}{2}$ ", not included).....	7.00
4606	BEZEL RING for Enameled Front Discs.....	.40
4607	HUB for Enameled Front Discs.....	1.00
4751	ENAMELED DISC only, for 4605.....	5.00
4752	ENAMELED DISC only, for 5453.....	5.00
5453	ENAMELED FRONT DISC Complete, $6\frac{3}{4}$ " Centers, for Distant Signal. (Glass $3\frac{1}{2}$ ", not included).....	7.00
5914	UPPER ENAMELED FRONT DISC Complete, $6\frac{1}{2}$ " Centers. (Glass $3\frac{1}{2}$ ", not included). For 60 Degree Two-Arm Dwarf Signal 3327....	8.00
5915	LOWER ENAMELED FRONT DISC Complete, $6\frac{1}{2}$ " Centers. (Glass $3\frac{1}{2}$ ", not included). For 60 Degree Two-Arm Dwarf Signal 3327	8.00
5973	DISC only, for 5914.....	6.00
6060	DISC only, for 5915.....	6.00
7061	DISC only, for 7062.....	5.00
7062	ENAMELED FRONT DISC Complete, $6\frac{1}{2}$ " Centers. (Glass $3\frac{1}{2}$ ", not included). For 90 Degree Dwarf Signals.....	7.00

Order by NUMBER and NAME Appearing in Large Type.

DWARF SIGNALS.

BACK SPECS, BLADES AND LAMP BRACKETS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DWARF SIGNALS.

205

Order
No.

BACK SPECS, BLADES AND LAMP BRACKETS.

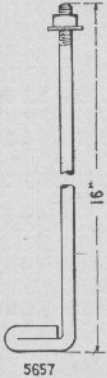
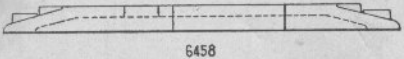
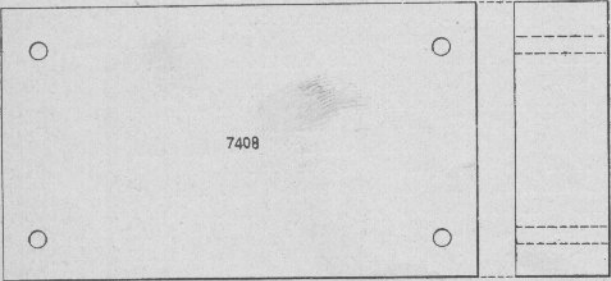
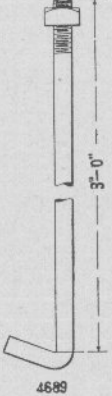
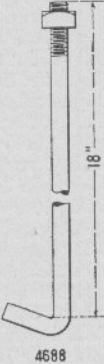
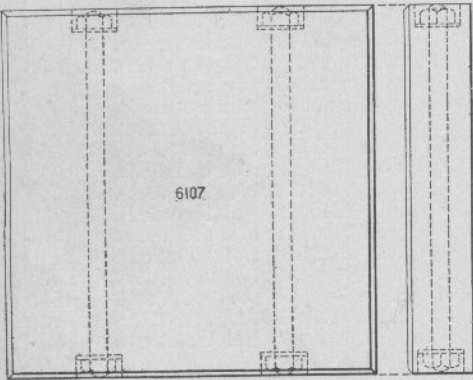
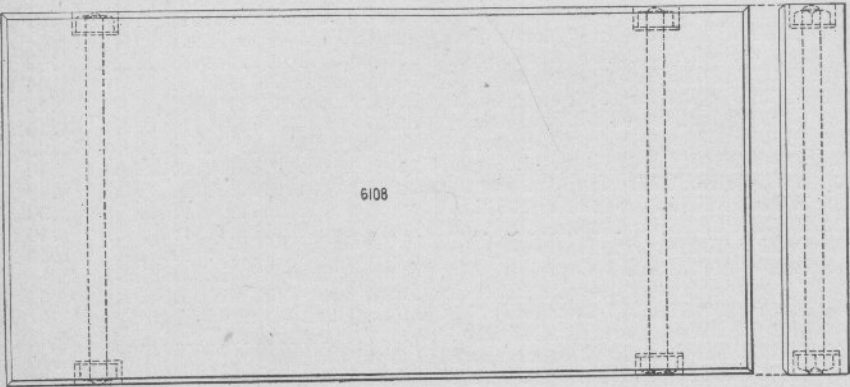
List Price.

02	BOLT and Nut, $\frac{1}{4}$ " x 1", for fastening Bezel Rings to Back Specs.....	.02	.....
058	RIVET, $\frac{3}{16}$ " x $\frac{3}{4}$ ", for 1524, etc.....	.01	.....
0134	BOLT with Nut, $\frac{1}{4}$ " x $\frac{3}{4}$ ", for fastening Hinged Blades to Front Spectacles.....	.02	.....
942	SPECTACLE, Casting only, for 1688.....	.54	.....
1322	BEZEL RING, for 1688, etc.....	.10	.....
1396	SPRING for Hinged Blades 1524, etc.....	.16	.....
1397	PIN for Hinged Blades 1524, etc.....	.06	.....
1398	STATIONARY HINGE for 1524 or 5763.....	.40	.....
1399	SWINGING HINGE for 1524, etc.....	.40	.....
1423	WOOD BLADE for 1524 or 7087.....	.30	.....
1424	BACK PLATE for 1524.....	.10	.....
1524	WOOD BLADE with Hinge Complete.....	1.50	.....
1688	BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3" dia., not included). For use with Enameled Front Disc 4605, etc.....	.64	.....
2248	BACK SPECTACLE Complete, $7\frac{1}{2}$ " Centers (Glass 3", not included) For Front Spectacle 2247 and 5795.....	.64	.....
2255	BEZEL RING for Back Spectacles 2248 or 3680.....	.10	.....
2636	SPECTACLE, Casting only, for 2248.....	.54	.....
3380	SPECTACLE, Casting only, for 3639.....	.90	.....
3381	SPECTACLE, Casting only, for 3637.....	.50	.....
3399	LAMP BRACKET, Plain Style. When ordering specify style of Lamp, Front Spectacle, and number of Dwarf Signal for which Bracket is intended.....	.36	.....
3400	LAMP BRACKET, Offset Style. When ordering specify style of Lamp, Front Spectacle and number of Dwarf Signal for which Bracket is intended.....	.50	.....
3426	SPECTACLE, Casting only, for 3680.....	.54	.....
3637	BACK SPECTACLE Complete, $7\frac{1}{2}$ " Centers (Glass 3", not included) For Front Spectacle 3636.....	.64	.....
3639	BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3", not included) For Front Spectacle 3638.....	1.00	.....
3680	BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3", not included) For Front Spectacle 3679.....	.64	.....
5763	METAL BLADE with Hinge Complete.....	1.50	.....
5764	METAL BLADE for 5763.....	.50	.....
7082	BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3", not included). For Front Spectacle 7085.....	1.00	.....
7083	SPECTACLE, Casting only, for 7082.....	.90	.....
7087	WOOD HINGE BLADE Complete. For use with Front Spectacle 7084 or 7085.....	1.10	.....
7089	PIN for 7087.....	.06	.....
7415	BACK SPECTACLE Complete, 6" Centers (Glass $2\frac{1}{2}$ ", not included). For Front Spectacle 7414.....	1.00	.....
7422	SPECTACLE, Casting only, for 7415.....	.90	.....
7424	BEZEL RING for 7415.....	.10	.....
7478	SPECTACLE, Casting only, for 7479.....	.50	.....
7479	BACK SPECTACLE Complete, $6\frac{1}{2}$ " Centers (Glass 3", not included) For Front Spectacle 7085.....	.64	.....
9012	BACK SPECTACLE Complete, 6" Centers (Glass $2\frac{1}{2}$ ", not included). For Front Spectacle 9011.....	1.00	.....
9014	SPECTACLE, Casting only, for 9012.....	.90	.....
9016	BEZEL RING for 9012.....	.10	.....
9197	RUBBER BLADE for 9199.....	.60	.....
9198	PLATE for 9199.....	.07	.....
9199	RUBBER BLADE Complete with Bolts and Plate.....	.70	.....

Order by NUMBER and NAME Appearing in Large Type.

DWARF SIGNALS.

DWARF SIGNAL FOUNDATION TOPS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DWARF SIGNALS.

207

Order
No.

DWARF SIGNAL FOUNDATION TOPS.

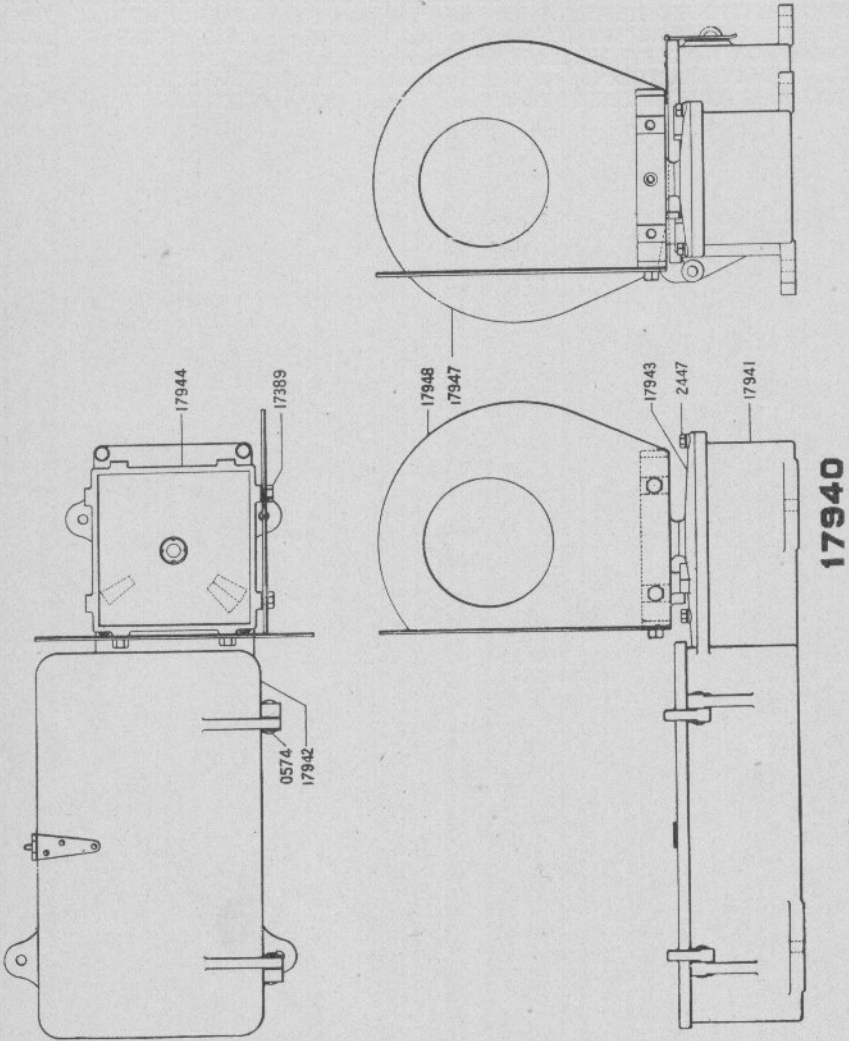
List Price

011	BOLT with Nut, $\frac{1}{2}$ " x 2", for fastening Base 6459 or 6545 to Single Arm Dwarf Signals.....	.04	.....
4688	FOUNDATION BOLT, $\frac{3}{4}$ " x 18".....	.26	.....
4689	FOUNDATION BOLT, $\frac{3}{4}$ " x 36".....	.42	.....
5657	FOUNDATION BOLT, $\frac{1}{2}$ " x 16".....	.20	.....
6107	OAK FOUNDATION TOP for One-Arm Dwarf Signals 3658 or 3673..	2.00	.....
6108	OAK FOUNDATION TOP for Two-Arm Dwarf Signals 3327 or 7088..	2.50	.....
6458	IRON WATERTIGHT BASE for Dwarf Signals 6459 or 6545.....	6.00	.....
7407	PLATE WASHER for use with Foundation Top 7408.....	.40	.....
7408	OAK FOUNDATION TOP for Dwarf Signals 7370 or 9010.....	1.10	.....

Order by NUMBER and NAME Appearing in Large Type.

DWARF SIGNALS.

POT SIGNAL.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

DWARF SIGNALS.

209

Order
No.

POT SIGNAL.

List Price.

NOTE:—Attention is called to the fact that the detail operating parts of the following assembled Pot Signal are the same as those of Model 3 Dwarf Signal, which are shown on page 199, which parts can be referred to when it is desired to order.

0574	IRON RIVET, $\frac{1}{4}$ " x $1\frac{3}{4}$ ", Round Head.....	.01	.....
2447	CAP SCREW, $\frac{1}{4}$ " x $\frac{7}{8}$ ", Sq. Head.....	.06	.....
17389	CAP SCREW, $\frac{3}{8}$ " x $\frac{1}{2}$ ", Hex. Head.....	.04	.....
17940	POT SIGNAL Complete	170.00	.....
17941	CASE CASTING for 17940 .....		.....
17942	HINGED COVER for 17940.....		.....
17943	COVER supporting Lamp Stand, for 17940 .....		.....
17944	LAMP STAND for 17940 .....		.....
17947	DISC for 17940 .....		.....
17948	DISC for 17940 .....		.....

GLASS.



7066—PLAIN
9234—ROUNDEL



9226—PLAIN
9235—ROUNDEL



1680—PLAIN
9236—ROUNDEL



2600—PLAIN
9237—ROUNDEL



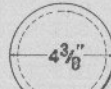
924—PLAIN
9238—ROUNDEL



9227—PLAIN
9239—ROUNDEL



9228—PLAIN
9240—ROUNDEL



9229—PLAIN
9241—ROUNDEL



7064—PLAIN
4682—ROUNDEL



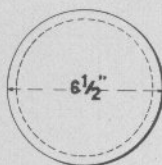
9230—PLAIN
9242—ROUNDEL



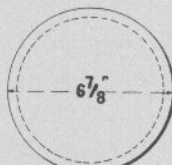
9231—PLAIN
9243—ROUNDEL



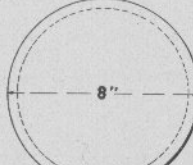
2599—PLAIN
9244—ROUNDEL



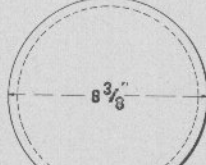
1681—PLAIN
9245—ROUNDEL



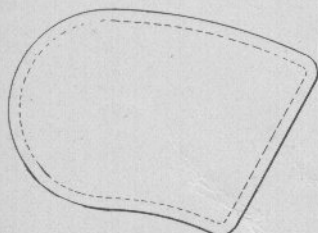
9232—PLAIN
9246—ROUNDEL



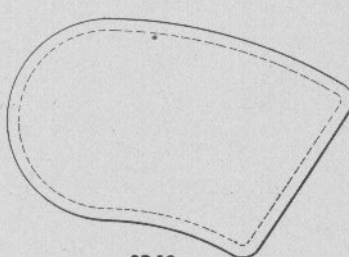
5166—PLAIN
9247—ROUNDEL



9233—PLAIN
4679—ROUNDEL



9248



9249

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

GLASS.

DOUBLE THICK PLAIN SEMAPHORE CIRCLES.

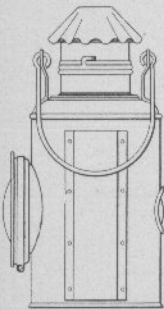
Order Number.	Diameter.	Flashed Red.	Pot Metal Green.	Pot Metal Yellow.	Pot Metal Blue.	Pot Metal Purple.	Clear.
7066	2 $\frac{3}{8}$ "	.10	.10	.10	.10	.10	.04
9226	2 $\frac{1}{2}$ "	.10	.10	.10	.10	.10	.04
1680	2 $\frac{7}{8}$ "	.12	.12	.12	.12	.12	.05
2600	3 "	.12	.12	.12	.12	.12	.05
924	3 $\frac{1}{8}$ "	.14	.14	.14	.14	.14	.06
9227	3 $\frac{1}{2}$ "	.14	.14	.14	.14	.14	.06
9228	4 "	.16	.16	.16	.16	.16	.07
9229	4 $\frac{1}{8}$ "	.17	.17	.17	.17	.17	.08
7064	4 $\frac{3}{8}$ "	.18	.18	.18	.18	.18	.08
9230	4 $\frac{3}{4}$ "	.20	.20	.20	.20	.20	.10
9231	5 "	.22	.22	.22	.22	.22	.10
2599	5 $\frac{3}{8}$ "	.25	.25	.25	.25	.25	.11
1681	6 $\frac{1}{2}$ "	.32	.32	.32	.32	.32	.12
9232	6 $\frac{3}{4}$ "	.36	.36	.36	.36	.36	.14
5166	8 "	.45	.45	.45	.45	.45	.20
9233	8 $\frac{3}{8}$ "	.50	.50	.50	.50	.50	.20

SOLID COLOR MOULDED SEMAPHORE ROUNDELS.

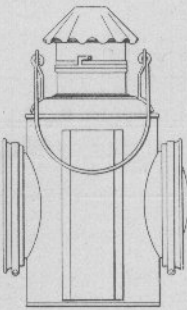
Order Number.	Diameter.	Red.	Green.	Yellow.	Blue.	Purple.	Clear.
9234	2 $\frac{3}{8}$ "	.38	.19	.19	.19	.19	.12
9235	2 $\frac{1}{2}$ "	.38	.19	.19	.19	.19	.12
9236	2 $\frac{7}{8}$ "	.48	.24	.24	.24	.24	.14
9237	3 "	.48	.24	.24	.24	.24	.14
9238	3 $\frac{1}{8}$ "	.58	.29	.29	.29	.29	.19
9239	3 $\frac{1}{2}$ "	.58	.34	.34	.34	.34	.24
9240	4 "	.58	.34	.34	.34	.34	.24
9241	4 $\frac{3}{8}$ "	.67	.38	.38	.38	.38	.26
4682	4 $\frac{1}{2}$ "	.67	.38	.38	.38	.38	.26
9242	4 $\frac{3}{4}$ "	.72	.48	.48	.48	.48	.31
9243	5 "	.72	.48	.48	.48	.48	.31
9244	5 $\frac{3}{8}$ "	.72	.48	.48	.48	.48	.34
9245	6 $\frac{1}{2}$ "	1.20	.67	.67	.67	.67	.48
9246	6 $\frac{3}{8}$ "	1.32	.72	.72	.72	.72	.53
9247	8 "	1.80	1.20	1.20	1.20	1.20	.60
4679	8 $\frac{3}{8}$ "	1.80	1.20	1.20	1.20	1.20	.60
9248		3.60	1.80	1.80	1.80	1.80	...
9249		4.20	2.11	2.11	2.11	2.11	...

DWARF SIGNALS.

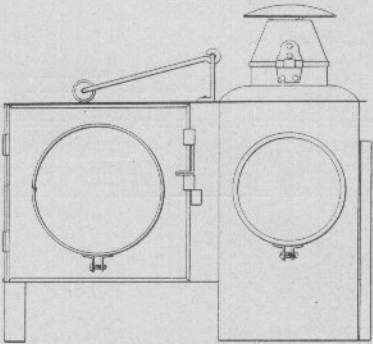
LAMPS AND BURNERS.



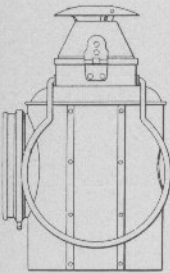
030
4000



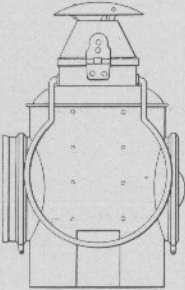
17861



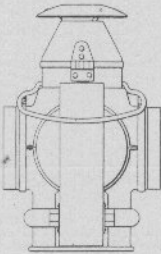
7109



17860



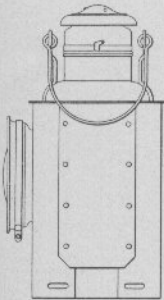
7108



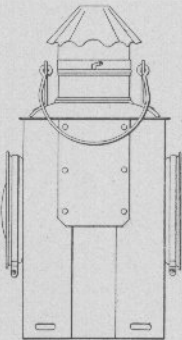
17864



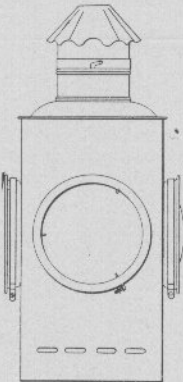
0350 - 2 C.P.
0351 - 4 C.P.
0352 - 6 C.P.
0354 - 8 C.P.
0109 - 16 C.P.



17865



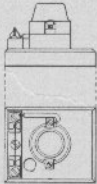
17866



11403



1977



3994



17868



17869



17870



17871



17867

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

NOTE:—On the opposite page are shown a few Standard Semaphore Lamps. There are a number of other makes and designs not shown, all of which we are prepared to furnish.

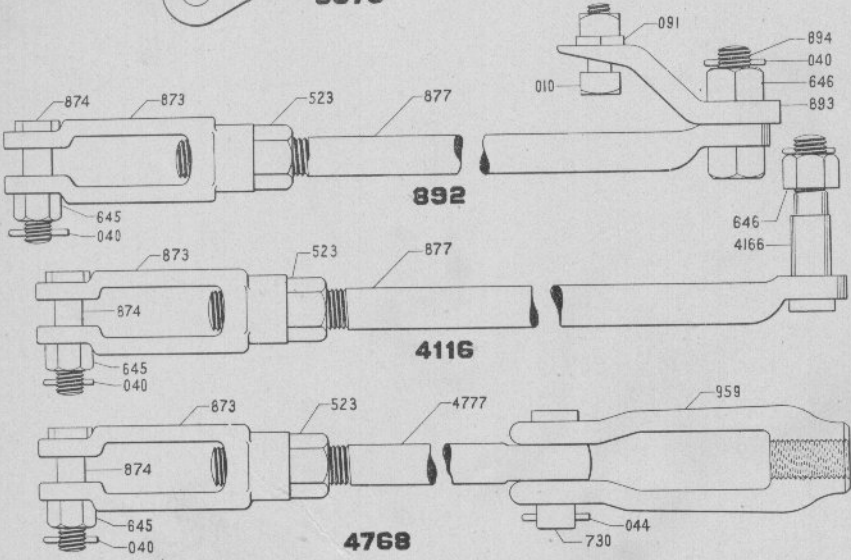
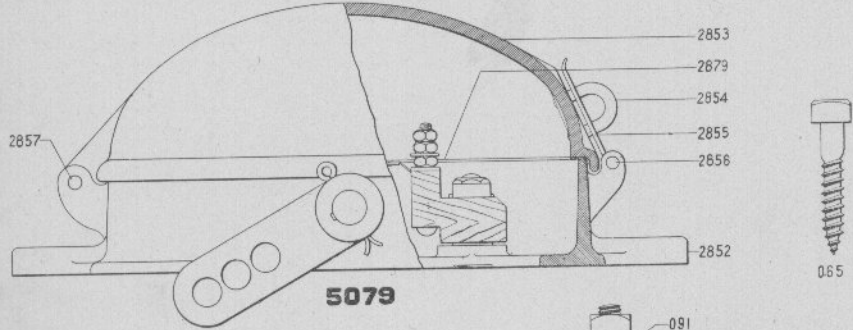
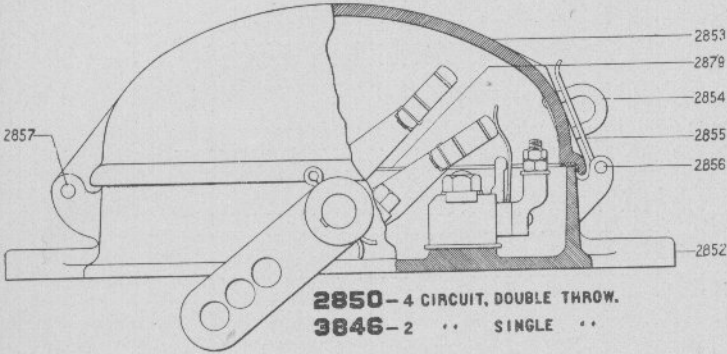
When ordering, specify make, style of body, number of and style of lenses; whether for oil, electric light or convertible.

Order No.	LAMPS AND BURNERS.	List Price.
030	No. 8 DRESSEL SEMAPHORE LAMP, Arranged for Oil.....	
0109	LAMP, 16 C. P., 110 Volts.....	
0350	LAMP, 2 C. P., 110 Volts.....	
0351	LAMP, 4 C. P., 110 Volts.....	
0352	LAMP, 6 C. P., 110 Volts.....	
0354	LAMP, 8 C. P., 110 Volts.....	
1977	FUSE, 3 Ampere.....	.05
3994	ELECTRIC SOCKET Complete, for Lamp 4000.....	
4000	No. 8 DRESSEL SEMAPHORE LAMP, Arranged for Electric Socket.....	
7108	No. 605 A. & W. SEMAPHORE LAMP with inside Socket.....	
7109	DISTANT SEMAPHORE LAMP.....	
11403	No. 10 POT SIGNAL LAMP.....	
17860	No. 508 A. & W. SEMAPHORE LAMP with One Lense.....	
17861	No. 8 DRESSEL SEMAPHORE LAMP with Two Lenses.....	
17864	A. & W. STEEL BODY SEMAPHORE LAMP, Two Lenses.....	
17865	SQUARE SEMAPHORE LAMP, One Lense, with Slide Door.....	
17866	SQUARE SEMAPHORE LAMP, Two Lenses.....	
17867	DRESSEL LONG TIME BURNER AND OIL FOUNT.....	
17868	DRESSEL BURNER, Long Stem.....	
17869	DRESSEL BURNER, Short Stem.....	
17870	CALLENDER BURNER, Long Stem.....	
17871	CALLENDER BURNER, Short Stem.....	

Order by NUMBER and NAME Appearing in Large Type.

CIRCUIT CONTROLLERS.

SWITCH BOXES AND SELECTORS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT CONTROLLERS.

217

Order
No.

SWITCH BOXES AND SELECTORS.

List Price.

010 BOLT with Nut, $\frac{1}{4}$ " x $1\frac{1}{2}$ "	.04
026 KEY for Shaft 2871	.07
040 COTTER PIN, $\frac{1}{8}$ " x 1" (per 100)	.80
043 COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (per 100)	.80
044 COTTER PIN, $\frac{3}{16}$ " x $1\frac{1}{2}$ " (per 100)	.80
046 COTTER PIN, $\frac{3}{16}$ " x 2" (per 100)	.80
065 LAG SCREW, $\frac{1}{2}$ " x 3"	.03
071 WASHER used under 5082 for 5079	.01
073 WASHER used on 2871	.02
091 NUT LOCK for 892	.02
506 BRASS WASHER for $\frac{1}{4}$ " Screw	.01
523 $\frac{7}{8}$ " HEX. NUT	.07
528 BRASS NUT for $\frac{1}{4}$ " Screw	.02
645 $\frac{3}{8}$ " HEX. NUT	.04
646 $\frac{1}{2}$ " HEX. NUT	.05
730 PIN, $\frac{1}{4}$ " x $2\frac{3}{4}$ "	.07
873 SCREW JAW for 892, 4116 or 4768	.33
874 PIN for 892, 4116 or 4768	.30
877 ROD for 892 or 4116	1.50
892 OPERATING ROD Complete, connecting Switch Box to Switch Points	3.30
893 FOOT for 892	.80
894 BOLT for 892	.20
959 $1\frac{1}{4}$ " WROUGHT SCREW JAW for 4768	1.10
1156 NUT for Stud 2858	.02
1225 WASHER for 5187	.01
1572 SCREW for 2865	.03
1925 LOCK WASHER for 2859 or 2877	.01
2145 LOCK WASHER for 2859 or 2877	.01
2432 SCREW for 2859 or 2877	.02
2850 SWITCH BOX Complete, Model 2, Four Circuits, Double Throw	30.00
2852 BASE, Casting only, for 2850, 3846 or 5079	5.00
2853 COVER, Casting only, for 2850, etc.	2.50
2854 STAPLE for Hasp, for 2850, etc.	.08
2855 HASP for 2850, etc.	.04
2856 PIN for Hasp for 2850, etc.	.04
2857 PIN for Hinge for 2850, etc.	.03
2858 STUD holding 2865 or 5082 to 2852 Base	.06
2859 CONTACT FORK Complete, with Two Contacts for 2850 or 3846	4.00
2860 ARM for 2859 or 2877	1.50
2861 INSULATOR for 2859 or 2877	.24
2862 BLOCK, Insulating, for 2859 or 2877	.80
2863 CONTACT for 2859	.30
2864 CONTACT for 2877	.50
2865 BLOCK Complete, with Contact Springs for 2850 or 3846	6.00
2866 Contact BLOCK for 2865	1.00
2867 Spring HOLDER for 2865	.40
2868 SPRING, Contact, for 2865	.24
2869 Contact POST for 2865	.50
2871 SHAFT for 2850, 3846 or 5079	.50
2872 CRANK, Outside, for 2850, 3846 or 5079	.40
2874 LOCK WASHER for Nut 1156 on Stud 2858	.02
2875 Felt WASHER used under 2865 for 2850 or 3846	.02
2877 Contact FORK Complete with One Contact (Special)	4.00
2879 Felt GASKET for 2850, 3846 or 5079	.20
2882 INSULATOR for 2859 or 2877	.24
3520 SCREW for 2865	.08
3846 SWITCH BOX Complete, Model 2, Two Circuit, Single Throw	20.00

Order by NUMBER and NAME Appearing in Large Type.

CIRCUIT CONTROLLERS.

Order
No.

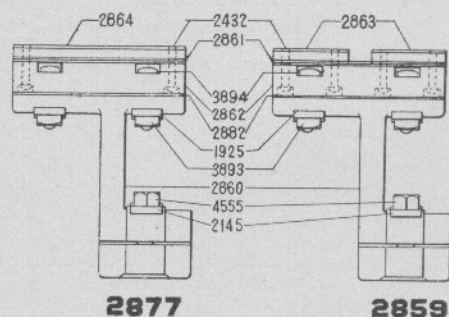
SWITCH BOXES AND SELECTORS.—CONT.

List Price.

3881	SPRING CONTACT for 5187.....	2.00	....
3883	CONTACT for 5187.....	1.50	....
3893	NUT for Bolt 3894.....	.06	....
3894	BOLT for 2859 or 2877.....	.06	....
3964	SCREW for 5187.....	.10	....
4116	OPERATING ROD Complete, connecting Switch Box to Front Rods, with Jaw Ends.....	2.30	....
4166	PIN for 4116.....	.40	....
4555	SCREW for 2859 or 2877.....	.05	....
4768	OPERATING ROD Complete, connecting Switch Box to Front Rods, with Screw Ends.....	3.50	....
4777	ROD for 4768.....	1.60	....
5079	SWITCH BOX Complete, Model 3, four independent Shunt Contacts.	30.00	....
5082	BLOCK for 5079.....	.80	....
5167	CAM for Shunt Springs for 5079.....	2.00	....
5187	SPRING CONTACT Complete, with Binding Post for one Shunt Con- tact, for 5079.....	4.00	....
5188	PIN fastening 5167 to 2871 for 5079.....	.04	....
5499	WASHER for 5187.....	.02	....
5563	WASHER used on Block 5082 under Washer 2874, for 5079.....	.02	....

Order by NUMBER and NAME Appearing in Large Type.

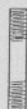
SWITCH BOXES AND SELECTORS.



1156



2874



2858



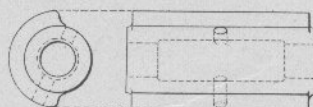
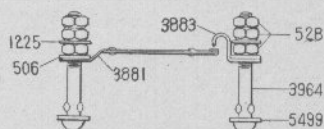
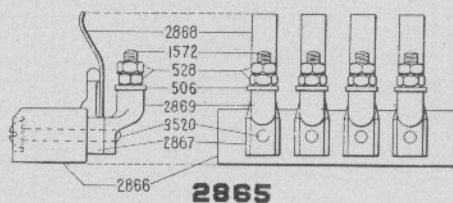
5563



2875



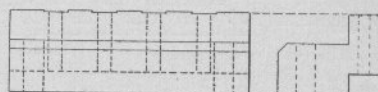
071



5167



5188



5082



2872



046



2871



026



043

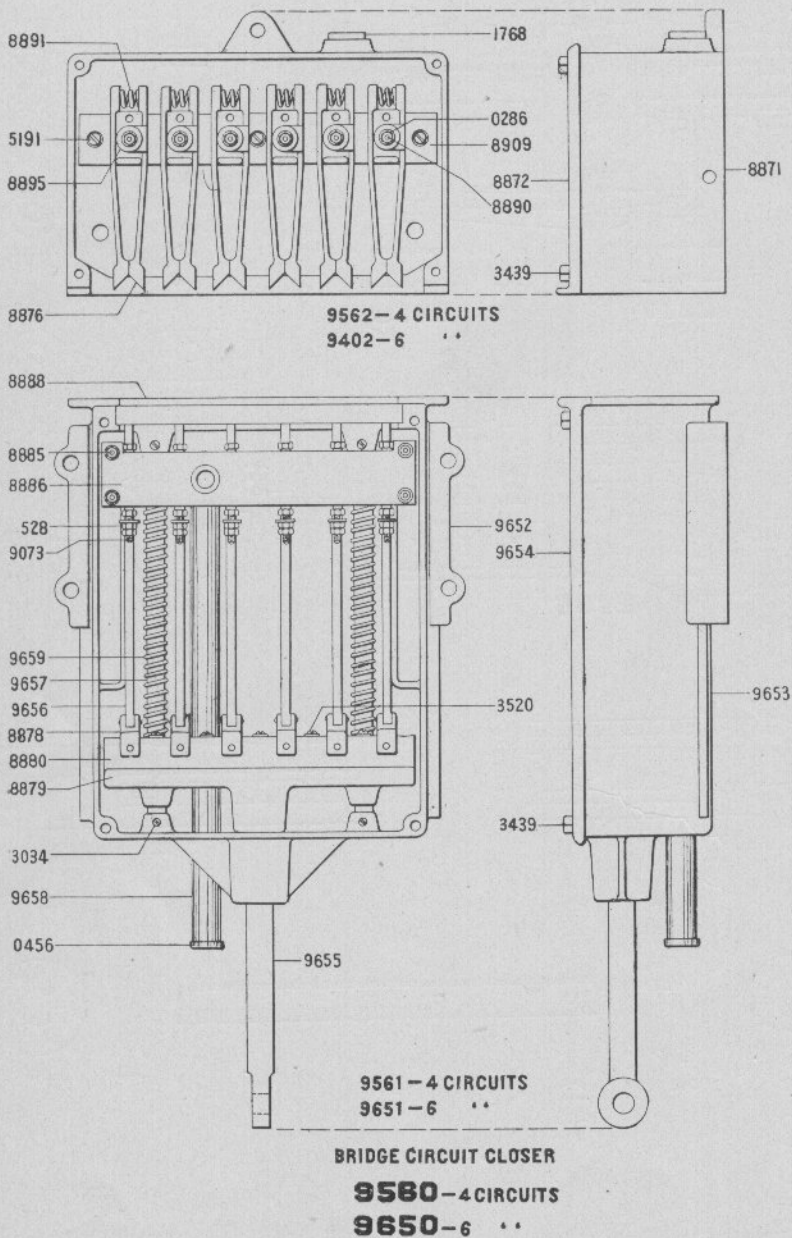


073

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT CONTROLLERS.

BRIDGE CIRCUIT CLOSER.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

CIRCUIT CONTROLLERS.

221

Order
No.

BRIDGE CIRCUIT CLOSER.

List Price.

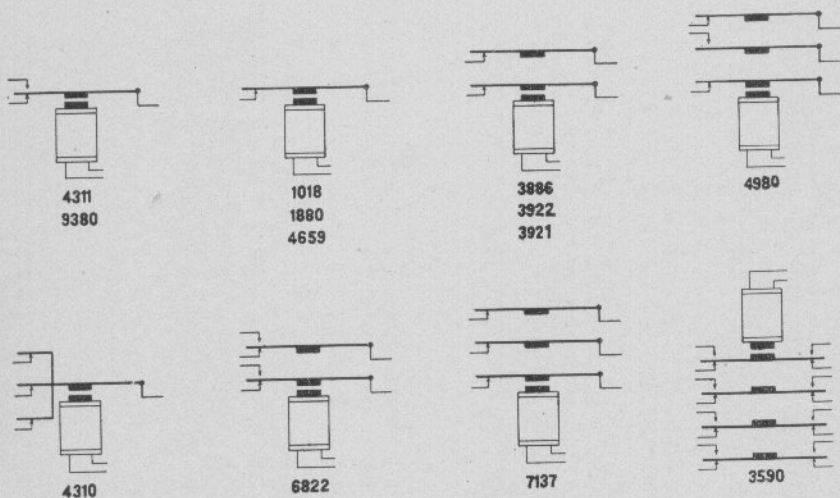
0286	1/2" HEX. NUT.....	.02	....
0456	BUSHING for Lead Conduit 9658.....	.20	....
528	BRASS NUT, 1/2"-24.....	.02	....
1768	INSULATED BUSHING for inlet wires.....	.30	....
3034	SCREW, Rod to Case.....	.06	....
3439	CAP SCREW, holding Cover to Case.....	.04	....
3520	SCREW, 1/2" x 2", Rd. Hd. Brass.....	.08	....
5191	SCREW, 3/8" x 1 1/4", F. Hd. Insulator to Base.....	.06	....
8871	CASE, Casting only, for 9402.....	14.00	....
8872	COVER, Casting only, for 9402.....	2.50	....
8876	CONTACT CASTING for 9402.....	2.50	....
8878	SOCKET for Contact Blade for 9651.....	2.00	....
8879	SLIDING YOKES for Blades, for 9651.....	10.00	....
8880	INSULATOR for Yoke 8879.....	2.00	....
8885	STUD supporting Spring Insulator, for 9651.....	.50	....
8886	INSULATOR for Contact Springs.....	2.00	....
8888	WOOD CAP, for moving Case, for 9651.....	2.50	....
8890	CONTACT STUD for 9402.....	1.00	....
8891	Contact Compression SPRING for 9402.....	.20	....
8895	WASHER for 9402.....	.10	....
8909	CONTACT INSULATOR for 9402.....	4.50	....
9073	Contact Spring STUD for 9651.....	.10	....
9402	SHORE END OF CIRCUIT CLOSER 9650.....	74.00	....
9560	BRIDGE CIRCUIT CLOSER, Complete for four Circuits.....	140.00	....
9561	BRIDGE END OF CIRCUIT CLOSER 9560.....	86.00	....
9562	SHORE END OF CIRCUIT CLOSER 9560.....	54.00	....
9650	BRIDGE CIRCUIT CLOSER, Complete for six Circuits.....	190.00	....
9651	BRIDGE END OF CIRCUIT CLOSER 9650.....	116.00	....
9652	BASE for 9651.....	7.00	....
9653	CASE for 9651.....	18.00	....
9654	COVER for 9651.....	6.00	....
9655	EYE ROD for 9651.....	3.00	....
9656	CONTACT BAR for 9651.....	2.00	....
9657	GUIDE ROD for 9651.....	.40	....
9658	INSULATED CONDUIT TUBE for 9651.....	3.00	....
9659	SPRING for 9651.....	1.00

Order by NUMBER and NAME Appearing in Large Type.

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DIAGRAM OF RELAYS.



- 1018** 1 FRONT CARBON CONTACT, WITHOUT MAGNETIC BLOWOUT.
1880 1 FRONT CARBON CONTACT, WITH MAGNETIC BLOWOUT.
3590 8 FRONT, AND 8 BACK CONTACTS, WITH 4 FRONT, AND 4 BACK CIRCUITS.
3886 2 FRONT CARBON CONTACTS, INDEPENDENT CIRCUITS.
3922 2 FRONT CONTACTS, 1 CARBON, 1 SILVER, INDEPENDENT CIRCUITS.
3921 2 FRONT SILVER CONTACTS, INDEPENDENT CIRCUITS.
4310 3 FRONT CONTACTS, 2 CARBON, 1 SILVER.
4311 1 FRONT CARBON CONTACT, 1 BACK SILVER CONTACT.
4659 1 FRONT SILVER CONTACT, WITH MAGNETIC BLOWOUT.
4980 2 FRONT CARBON CONTACTS, 1 BACK SILVER CONTACT, INDEPENDENT CIRCUITS.
6822 2 FRONT CARBON CONTACTS, 2 BACK SILVER CONTACTS, 2 INDEPENDENT CIRCUITS.
7137 3 FRONT CARBON CONTACTS, INDEPENDENT CIRCUITS.
9380 1 FRONT, AND 1 BACK SILVER CONTACT.

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

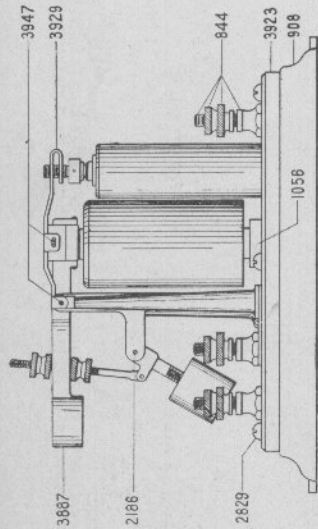
RELAYS.

The diagrams on the page opposite show the various forms of Model 1 Relays, open types, which are especially designed for the purpose of carrying heavy currents through the contact points for the control of the operating current for electric interlocking devices. These Relays are shown complete and in detail on pages 226 to 231 inclusive.

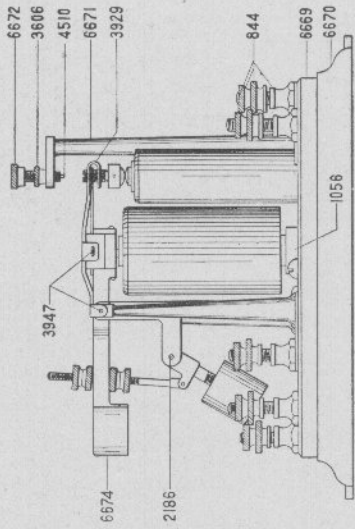
On page 234 is shown Model 11 Enclosed Type Relay for carrying heavy currents. For description see page 233.

On page 232 is shown Model 9 Relay Neutral Type. For description see page 233.

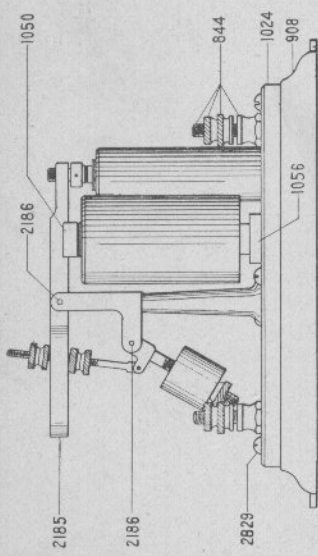
RELAYS.



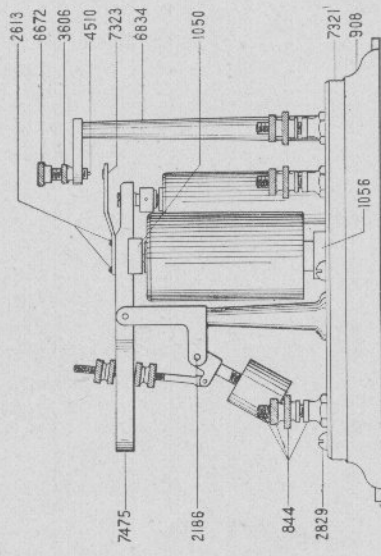
3886 2 CARBON CONTACTS
3921 2 SILVER CONTACTS
3922 1 SILVER & 1 CARBON CONTACT



4980 2 FRONT CARB N & 1 BACK SILVER CONTACTS



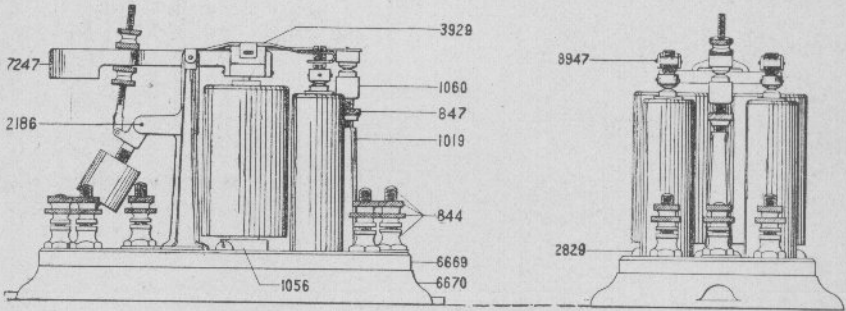
1880 CARBON CONTACT
4659 SILVER CONTACT



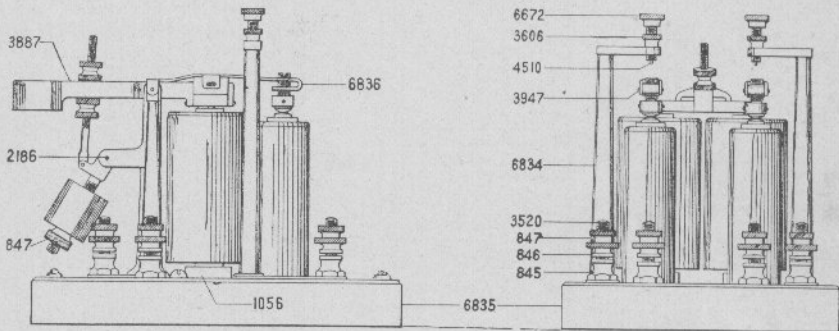
4311 1 FRONT CARBON & 1 BACK SILVER CONTACT

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

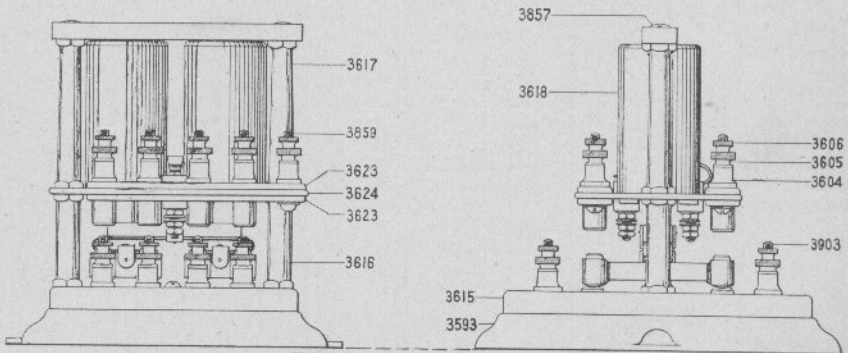
RELAYS.



7137 3 FRONT CARBON CONTACTS



6822 2 FRONT CARBON & 2 BACK SILVER CONTACTS



3590 MULTIPLE CONTACT

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order No.	RELAYS.	List Price.
070	IRON WASHER for $\frac{5}{16}$ " Screw.....	.01
0209	COPPER WASHER.....	.01
506	BRASS WASHER for $\frac{1}{4}$ " Screw.....	.01
528	BRASS NUT for $\frac{1}{4}$ "-24 Screw.....	.02
577	NUT, No. 10-32 Brass.....	.02
844	BINDING POST, Complete for Relays.....	.28
845	BASE for Binding Posts.....	.08
846	NUT for Binding Posts.....	.06
847	NUT LOCK for Binding Posts and Counterweights.....	.05
879	SCREW for Binding Post 844.....	.08
908	IRON BASE for Relay 1880, etc.....	1.50
975	WASHER for No. 8 Screw.....	.01
1019	CONTACT POST for 7137.....	1.50
1020	COUNTERWEIGHT for various Relays.....	.30
1024	SLATE BASE for 1880 or 4659.....	1.50
1034	CARBON CONTACT for various Relays.....	.20
1050	ARMATURE for 1880, etc.....	.80
1052	ROD supporting Counterweight for various Relays.....	.20
1055	WASHER for Stand 2184.....	.02
1056	MAGNET YOKE for 1880, etc.....	.40
1059	NUT LOCK used on various Relays.....	.05
1060	SCREW holding Carbon Contact, for 7137.....	.40
1102	NUT holding Stands to Base, for various Relays.....	.08
1880	TRACK RELAY, Complete, with one Front Carbon Contact and Magnetic Blowout. When ordering specify ohms resistance required.	30.00
1886	PIN for various Relays.....	.02
2184	STAND for various Relays.....	2.50
2185	LEVER for 1880 or 4659.....	2.00
2186	PIN for 1880, etc.....	.04
2217	BRASS NUT for No. 8-32 Screw.....	.04
2317	SCREW, Magnets and Contact Posts to Base, for various Relays.....	.04
2454	SCREW, fastening Hinge Post 3888 to Base, for various Relays.....	.03
2456	IRON SCREW, $\frac{1}{4}$ " x $1\frac{1}{4}$ ".....	.02
2613	SCREW for 4311.....	.01
2819	UPPER CONTACT, Complete (Carbon), for various Relays.....	.70
2820	CARBON CONTACT for various Relays.....	.40
2821	CONTACT HOLDER, used with various Relays.....	.30
2822	BRASS PIN for fastening Contacts to Holder 2821.....	.02
2829	SCREW fastening Slate to Iron Base, for 1880.....	.02
2899	BRASS WASHER for $\frac{5}{16}$ " Screw.....	.02
3089	BRASS SCREW, No. 10 x $\frac{1}{2}$ ".....	.02
3506	PIN for 4240.....	.02
3520	BRASS SCREW, $\frac{1}{4}$ " x 2".....	.08
3524	BRASS SCREW, No. 8 x $1\frac{1}{4}$ ".....	.02
3590	MULTIPLE CONTACT RELAY, Complete. 8 Front and 8 Back Contacts.....	80.00
3593	IRON BASE for 3590.....	2.00
3604	BASE for Binding Post for 3590.....	.08
3605	NUT for Binding Post for 3590.....	.06
3606	NUT LOCK for Binding Post for 3590.....	.05
3607	LINK connecting Lower Contacts for Relay 3590.....	.20
3608	LOWER CONTACT for Relay 3590.....	.50
3611	UPPER CONTACT for Relay 3590.....	.70

Order by NUMBER and NAME Appearing in Large Type.

Order No.	RELAYS.	List Price.
3615	SLATE BASE for 3590.....	2.00
3616	POST, Lower, for 3590.....	2.00
3617	POST, Upper, for 3590.....	2.00
3618	MAGNET, (Single Magnet), Complete, 800 ohms resistance.....	6.00
3623	INSULATOR for Upper Binding Posts on Relay 3590.....	2.00
3624	BRASS PLATE for supporting Magnets and Upper Contacts on Relay 3590.....	5.00
3627	CARBON CONTACT for Relay 3590. See 3848.....	.50
3628	SCREW holding 3848 to 3629 Block.....	.30
3629	BLOCK for holding Bar 3848 for Relay 3590.....	.80
3631	INSULATING WASHER for Upper Contact Screw for Relay 3590.....	.10
3702	SQUARE BRASS WASHER for Relay 3590.....	.06
3742	INSULATING THREADED BUSHING, for Relay 3590.....	.30
3744	CIRCUIT BREAKER PLUNGER, for Relay 3590.....	.40
3782	CONTACT SPRING for Relay 3590.....	1.00
3800	MAGNETIC CONTACT POST, Complete with Silver Plated Contact Used on various Relays.....	4.00
3801	LOWER CONTACT (Silver Plated), for various Relays.....	.70
3802	UPPER CONTACT (Silver Plated), for various Relays.....	1.00
3803	UPPER CONTACT, Complete (Silver Plated), for various Relays.....	1.30
3848	CONTACT BAR, Complete for Relay 3590.....	2.50
3849	BAR only for 3848.....	1.50
3856	PIN for fastening 4245 to Block 3629.....	.04
3857	SCREW for Relay 3590.....	.50
3859	SCREW, No. 10 x 1 $\frac{1}{4}$ ", Special for Relay 3590.....	.30
3886	TRACK RELAY, Complete, with 2 Front Carbon Contacts with independent circuits When ordering specify ohms resistance required.....	35.00
3887	LEVER for Relays 3886, etc.....	2.00
3888	HINGE POST for various Relays.....	2.00
3903	SCREW No. 10 x 1 $\frac{1}{4}$ " for Relay 3590.....	.20
3921	TRACK RELAY, Complete, with Two Front Silver Contacts with independent circuits. When ordering specify ohms resistance required.....	35.00
3922	TRACK RELAY, Complete, with One Silver and One Carbon Contact with independent circuits. When ordering specify ohms resistance required.....	35.00
3923	SLATE BASE for Relays 3886, etc.....	1.50
3925	LINK used on Double Contact Relays.....	.24
3928	ARMATURE for various Relays.....	1.60
3929	CONTACT ARM for Relays 3886, etc.....	.80
3930	INSULATING BLOCK. Used with Armature 3928.....	.50
3931	SCREW fastening 3930 to 3928.....	.06
3933	MAGNET (Single Magnet), Complete, 1.6 ohms resistance.....	5.50
3945	MAGNETIC CONTACT POST, Complete with Carbon Contact for various Relays.....	4.00
3947	PIN for various Relays.....	.04
3948	PIN fastening Armature to Lever For various Relays.....	.04
4239	UPPER YOKE, Complete with Cores for Relay 3590.....	5.00
4240	LOWER YOKE, Complete with Cores for Relay 3590.....	6.00
4245	SPRING, Complete, for supporting Contact Bars, for Relay 3590.....	2.00
4249	SMALL PIN for 3590.....	.01
4250	INSULATING BUSHING for Circuit Breaker on Relay 3590.....	.40
4251	INSULATING WASHER for Circuit Breaker on Relay 3590.....	.60

Order by NUMBER and NAME Appearing in Large Type.

TRACK CIRCUIT.

231

Order
No.

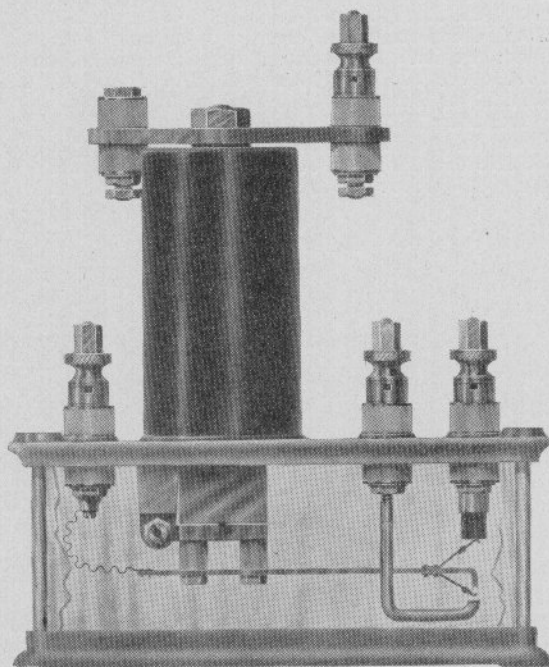
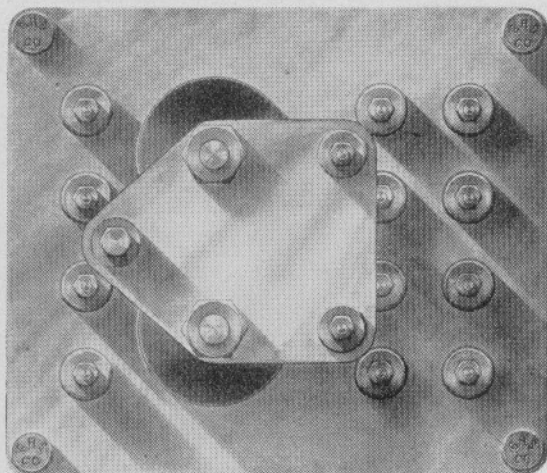
RELAYS.—CONT.

List Price.

4311	TRACK RELAY, Complete with One Front Carbon and One Back Silver Contact. When ordering specify ohms resistance required.	35.00	....
4510	SILVER CONTACT PIN for 4311, etc.	.10	....
4659	TRACK RELAY, Complete with One Silver Plated Contact and Magnetic Blowout. When ordering specify ohms resistance required.	30.00	....
4695	HOLDER for Carbon Contact.	.20	....
4699	CARBON CONTACT	.40	....
4980	TRACK RELAY, Complete with Two Front Carbon and One Back Silver Contact with independent circuits. When ordering specify ohms resistance required.	40.00	....
5047	SCREW, No. 10 x 1", R. H. Brass.	.03	....
6212	BLOCK for supporting Counterweight for various Relays.	.60	....
6552	MAGNET, (Single Magnet), Complete. 7.5 ohms resistance.	5.50	....
6553	MAGNET (Single Magnet), Complete. 25 ohms resistance.	5.50	....
6669	SLATE BASE for Relay 4980.	1.50	....
6670	IRON BASE for Relay 4980.	1.50	....
6671	BACK CONTACT POST for Relay 4980.	4.50	....
6672	BACK CONTACT SCREW for Relays 4311, etc.	.20	....
6673	BUSHING for Back Contact Posts for Relay 4311, etc.	.30	....
6674	LEVER, Complete, for Relay 4980.	3.50	....
6822	TRACK RELAY, Complete, with Two Front Carbon and Two Back Silver Contacts, with two independent circuits. When ordering specify ohms resistance required.	45.00	....
6834	BACK CONTACT POST for Relay 6822.	4.50	....
6835	SLATE BASE for 6822.	3.00	....
6886	CONTACT ARM with Back Platinum Contact, for Relay 6882.	2.00	....
6887	LINK for Relay 6822.	.60	....
7137	TRACK RELAY, Complete, with Three Front Carbon Contacts with independent circuits. When ordering specify ohms resistance required.	40.00	....
7246	CONTACT SPRING for Relay 7137.	.60	....
7247	LEVER only, for Relay 7137.	2.00	....
7321	SLATE BASE for Relay 4311.	1.50	....
7323	CONTACT SPRING with Platinum Contact for Relay 4311.	1.50	....
7475	LEVER for Relay 4311.	2.00	....

Order by NUMBER and NAME Appearing in Large Type.

MODEL 9 RELAY.



MODEL 9. NEUTRAL TYPE RELAY.

RELAYS.

On the opposite page (232) is shown our Model 9 Relay, Neutral Type. This Relay is made with from one to four Front and Back Contacts inclusive. We also make this model in a polarized type, which has the same outside appearance and dimensions. Unless otherwise specified, this style of Relay will be furnished with Carbon Front and Platinum Back Contacts.

When ordering specify resistance of Magnets.

Order No.	MODEL 9 RELAY. NEUTRAL AND POLARIZED TYPE.	List Price.
13020	POLARIZED RELAY, 2 point Neutral, 2 Point Polar, with 2 Front Carbon and 2 Back Platinum Contacts.....	
13021	4 POINT NEUTRAL RELAY, with 4 Front and 4 Back Contacts.....	
13022	3 POINT NEUTRAL RELAY, with 3 Front and 3 Back Contacts.....	
13023	2 POINT NEUTRAL RELAY, with 2 Front and 2 Back Contacts.....	
13024	1 POINT NEUTRAL RELAY, with 1 Front and 1 Back Contact.....	

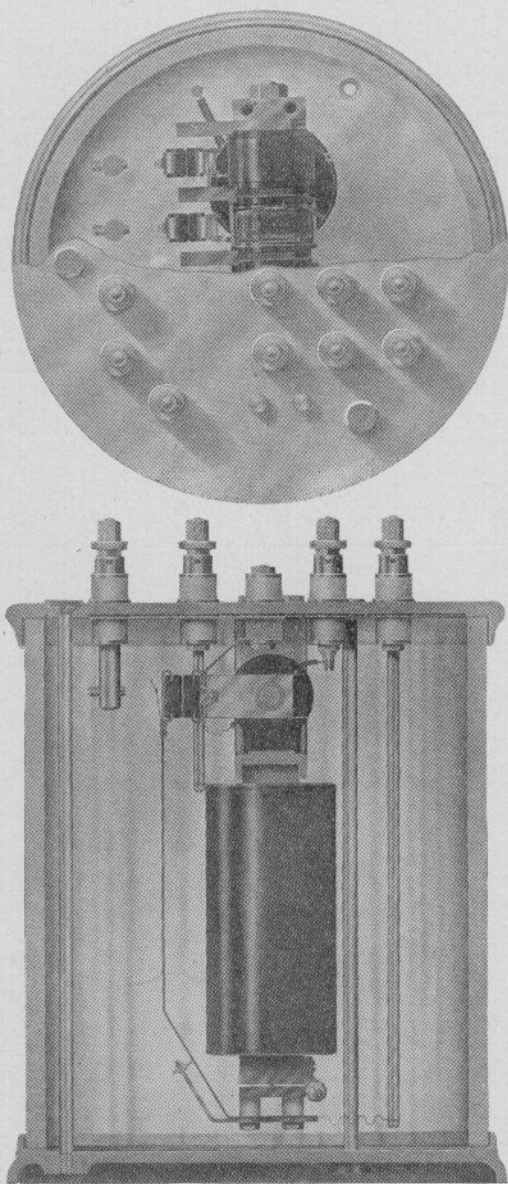
On page 234 we show our Model 11, Heavy Current Relay of the Enclosed Type. It is equipped with a powerful magnetic blow-out. It can be equipped with from one to four sets of front or back contacts, as specified. The front contacts are provided with heavy carbon blocks which make with a rubbing contact. The back contacts are platinum. As illustrated, this Relay is completely enclosed by means of the usual brass top and bottom plates and cylindrical glass case, whereby the working parts may be seen, all connections being made from without. On account of the heavy duty imposed on this Relay, it is larger than the ordinary Track Relay (similar to Model 9) and therefore will require a special box.

When ordering specify resistance of Magnets.

Order No.	MODEL 11, HEAVY CURRENT RELAY.	List Price.
18000	4 POINT RELAY, with 4 Front and 4 Back Contacts.....	
18001	3 POINT RELAY, with 3 Front and 3 Back Contacts.....	
18002	2 POINT RELAY, with 2 Front and 2 Back Contacts.....	
18003	1 POINT RELAY, with 1 Front and 1 Back Contact.....	

Order by NUMBER and NAME Appearing in Large Type.

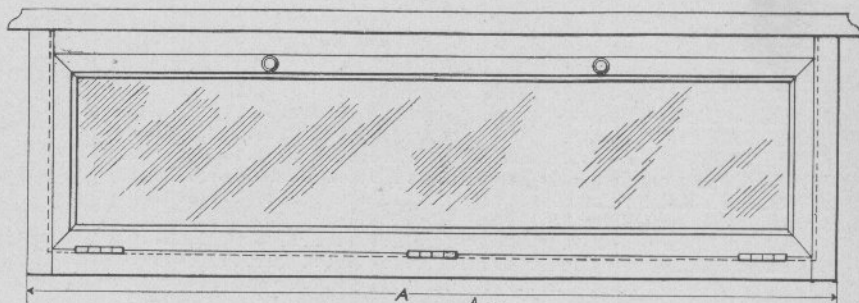
MODEL 11 RELAY.



MODEL 11. HEAVY CURRENT RELAY.

For Description and Numbers see page 233.

RELAY CASES AND BOXES



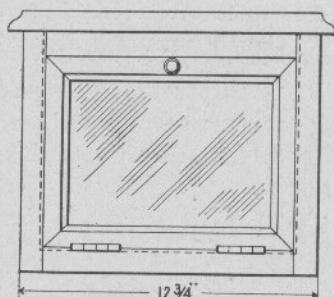
	A	A
4468 - FOR 1 RELAY -	12 3/4"	
1028 " 2 "	23 3/4"	
1659 " 3 "	2' - 10 5/16"	
1027 " 4 "	2' - 4 3/4"	
6259 " 5 "	2' - 10 3/4"	
4554 " 6 "	3' - 4 3/4"	
5292 " 7 "	3' - 10 3/4"	
6199 " 8 "	4' - 4 3/4"	
6839 " 9 "	4' - 10 3/4"	



051



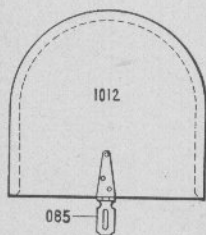
0382



6202 - FOR 1 RELAY - 3590

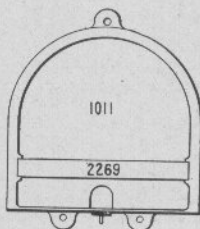


082

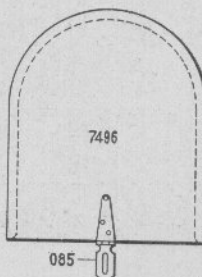


085

2265



2269



085

7512



7495

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRACK CIRCUIT.

Order
No.

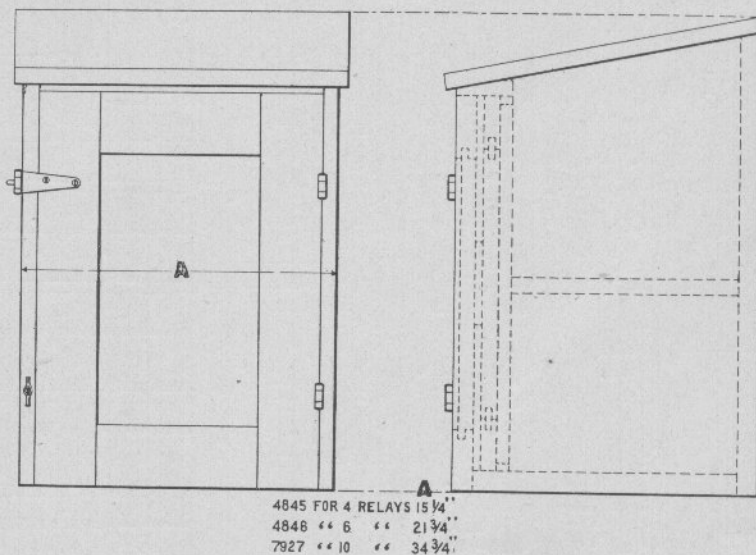
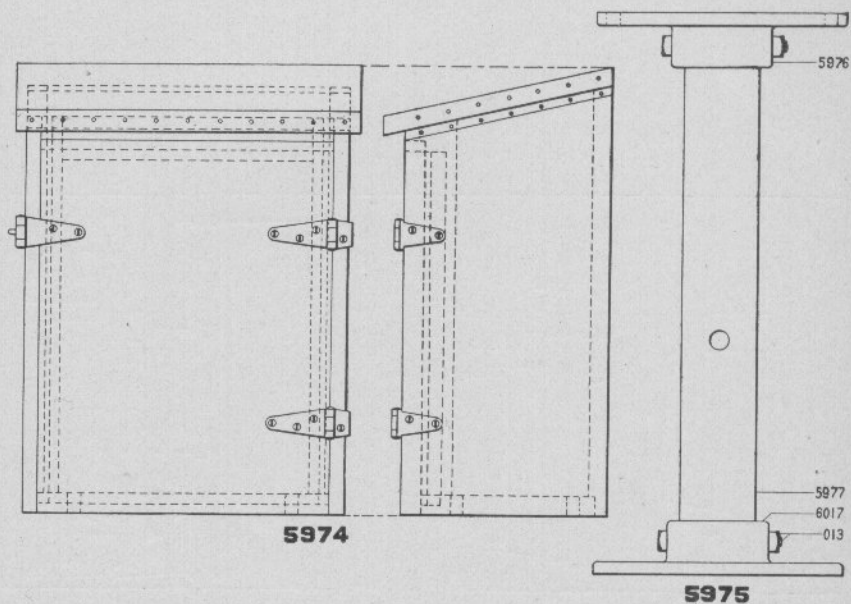
RELAY CASES AND BOXES.

List Price

013	BOLT and Nut, $\frac{1}{2}$ " x 6"	.07
051	PADLOCK only. (If Keys are required order separately)	1.20
062	LAG SCREW, $\frac{3}{8}$ " x 2 $\frac{1}{2}$ "	.02
085	HASP with Staple	.10
0382	KEY for Padlock 051	.16
1011	BOX, Cast Iron, for 2265	4.50
1012	COVER for 2265	2.20
1027	OAK CASE for 4 Relays. (Side by side)	24.00
1028	OAK CASE for 2 Relays. (End to end)	20.00
1659	OAK CASE for 3 Relays. (End to end)	24.00
2265	IRON CASE Complete, for Track Relays	7.00
2269	WOOD BLOCK for 2265	.30
4468	OAK CASE for 1 Relay 1880, etc.	12.00
4554	OAK CASE for 6 Relays. (Side by side)	28.00
4845	RELAY BOX for 4 Relays	12.00
4846	RELAY BOX for 6 Relays	20.00
5292	OAK CASE for 7 Relays. (Side by side)	30.00
5974	RELAY BOX, used with Post 5975	12.00
5975	POST Complete, for supporting Relay Box 5974	11.00
5976	CAP for Post 5975	2.50
5977	IRON POST only for 5975	6.00
6017	BASE for Post 5975	2.50
6199	OAK CASE for 8 Relays. (Side by side)	32.00
6202	OAK CASE for 1 Relay 3590	12.00
6259	OAK CASE for 5 Relays. (Side by side)	26.00
6839	OAK CASE for 9 Relays. (Side by side)	34.00
7495	BOX, Cast Iron, for 7512	5.00
7496	COVER for 7512	2.80
7512	IRON CASE Complete, for Glass Encased Relays	8.00
7927	RELAY BOX for 10 Relays	27.00

Order by NUMBER and NAME Appearing in Large Type.

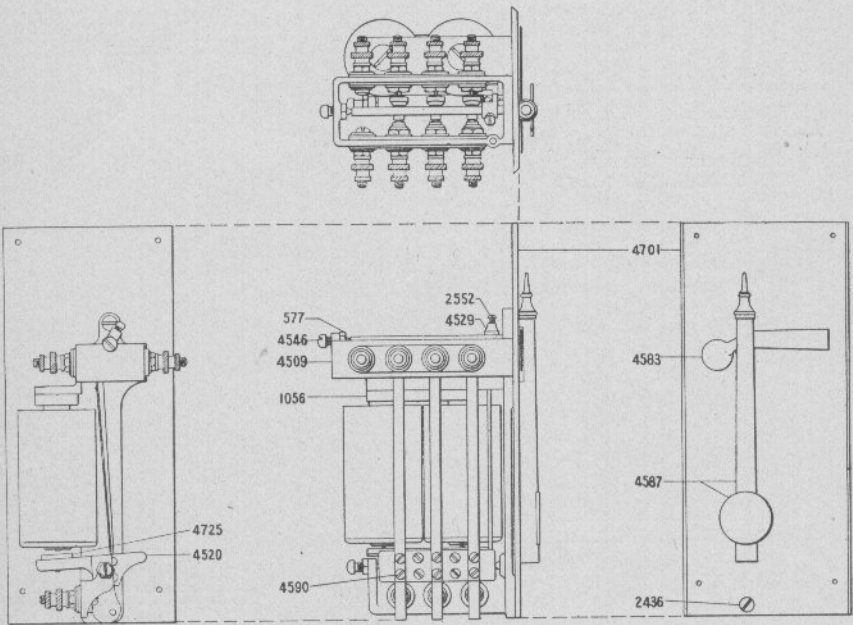
RELAY CASES AND BOXES.



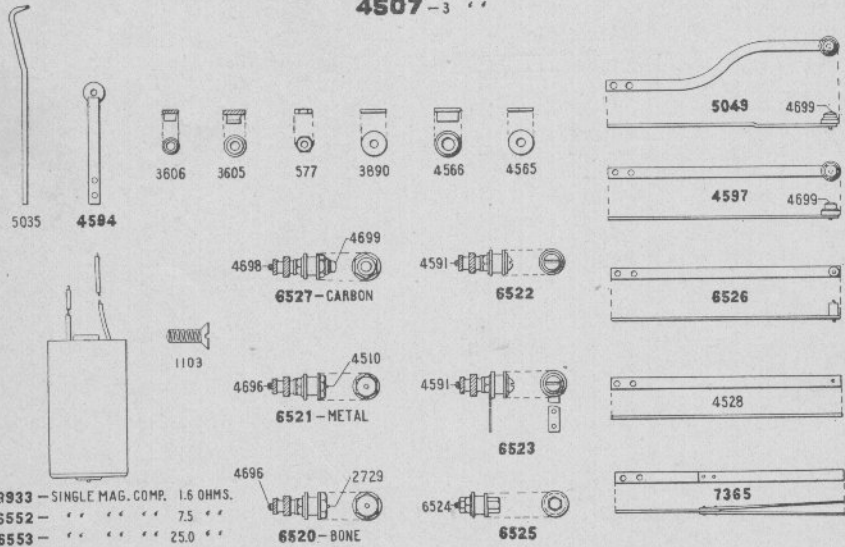
Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRACK CIRCUIT.

INDICATORS.



4581 - 1 CIRCUIT
4580 - 2 "
4507 - 3 "



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order No.	INDICATORS.	List Price.
577	BRASS NUT for No. 10-32 Screw.....	.02
1056	YOKE for Magnets.....	.40
1103	SCREW, $\frac{5}{16}$ " x $\frac{3}{8}$ ", F. H. Machine.....	.02
2436	BRASS SCREW, No. 10 x $\frac{3}{8}$ ", F. H.....	.01
2552	IRON SCREW, No. 6 x $\frac{3}{8}$ ", R. H.....	.01
2729	BONE STOP for 6520.....	.18
3605	NUT for various Binding Posts.....	.06
3606	LOCK NUT for various Binding Posts.....	.06
3890	BRASS WASHER for No. 10 Screws.....	.01
3933	MAGNET (Single Magnet) Complete 1.6 ohms resistance. Two required per each Indicator.....	5.50
4507	INDICATOR Complete, for Three Circuits. When ordering specify kind of Contacts, Front and Back; also resistance of Magnets..	32.00
4509	FRAME, Casting only, for Indicators 4507, etc.....	6.00
4510	SILVER CONTACT PIN for 6521.....	.10
4520	ARM supporting Armature for 4507, etc.....	1.20
4528	CONTACT SPRING for use with Indicators.....	.50
4529	CRANK for Blade Shaft for various Indicators.....	.50
4546	ADJUSTING SCREW for various Indicators.....	.16
4565	INSULATING WASHER for various Binding Posts.....	.06
4566	INSULATING BUSHING for various Binding Posts.....	.12
4580	INDICATOR Complete for Two Circuits. When ordering specify kind of Contacts, Front and Back; also resistance of Magnets.....	30.00
4581	INDICATOR Complete for One Circuit. When ordering specify kind of Contacts, Front and Back; also resistance of Magnets.....	28.00
4583	ARM with Shaft Complete, for various Indicators. When ordering specify whether for Home or Distant.....	1.50
4587	POST Complete with Number Plate. When ordering specify Number or Letter.....	3.00
4590	BRASS SCREW, No. 6 x $\frac{1}{2}$ ", F. H. Machine.....	.01
4591	BRASS SCREW, No. 10 x $\frac{1}{4}$ ", Round Head.....	.03
4594	FLEXIBLE CONNECTING STRIP Complete, with Washer.....	.30
4597	CONTACT ARM Complete, with Metal and Carbon Contacts.....	1.00
4696	CONTACT SCREW for Binding Posts 6520 or 6521.....	.20
4698	CONTACT SCREW for Binding Post 6527.....	.24
4699	CARBON CONTACT.....	.40
4701	PLATE for Mounted Indicators.....	2.50
4725	ARMATURE for various Indicators.....	.80
5035	OPERATING ROD used on Indicators when Normal Position is clear	1.00
5049	CONTACT ARM Complete, with Metal and Carbon Contacts. Special	2.00
6520	BINDING POST Complete, with Bone Stop. For various Indicators	.80
6521	BINDING POST Complete, with Metal Contact. Used Front or Back, as required.....	.60
6522	BINDING POST Complete. Used on various Indicators.....	.40
6523	BINDING POST Complete, with Flexible Conductor for Lower Terminals.....	.60
6524	SCREW (Special), for 6525.....	.16
6525	STOP Complete, for Kick-Off Spring. For use on various Indicators	.40
6526	CONTACT ARM Complete, with Metal Contact, Front and Back....	.80
6527	BINDING POST Complete, with Carbon Contact.....	1.00
6552	MAGNET (Single Magnet) Complete. 7.5 ohms resistance. Two required per each Indicator.....	5.50

Order by NUMBER and NAME Appearing in Large Type.

Order
No.

INDICATORS.—CONT.

List Price.

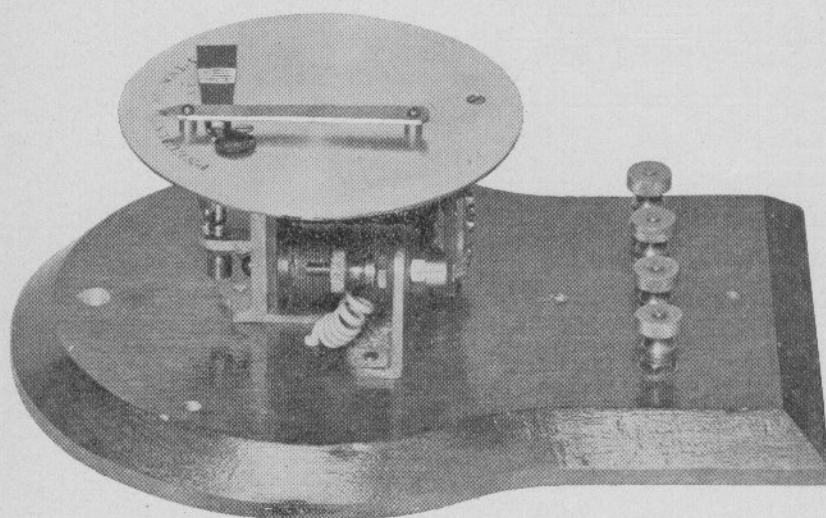
6553 MAGNET (Single Magnet) Complete. 25 ohms resistance. Two required per each Indicator.....	5.50
7365 CONTACT SPRING Complete. Special for making Front Contact before breaking rear.....	4.00

NOTE.—The illustration on the opposite page shows another form of Home Signal Indicator. This Indicator can be supplied with either one front or one back contact. We also manufacture a Three Position Distant Signal Indicator which has the same external appearance as the Home Signal Indicator, but has two pair of magnets so arranged that current is required to operate the blade to either the danger or clear position. This style of Indicator cannot be furnished with contacts.

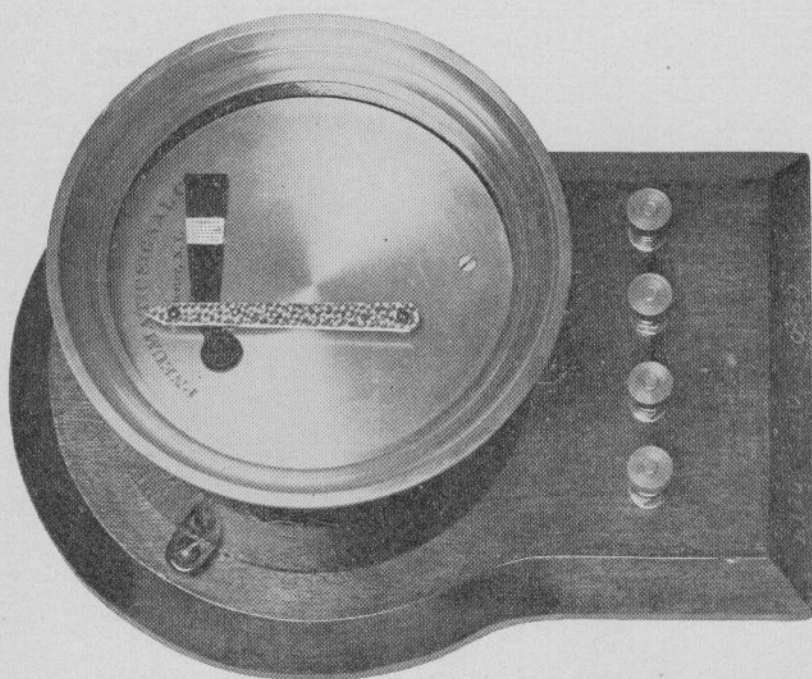
8462 HOME SIGNAL INDICATOR without Contacts. When ordering specify resistance of Magnets.....	30.00
If Front and Back Contacts are required, add to List Price.....	6.00
8463 DISTANT SIGNAL INDICATOR Complete. When ordering specify resistance of Magnets.	36.00

Order by NUMBER and NAME Appearing in Large Type.

INDICATORS.



HOME SIGNAL INDICATOR—CASE REMOVED.



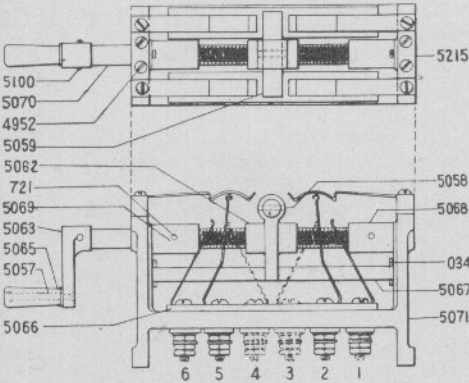
HOME SIGNAL INDICATOR—COMPLETE.

8462 HOME INDICATOR.

8463 DISTANT INDICATOR.

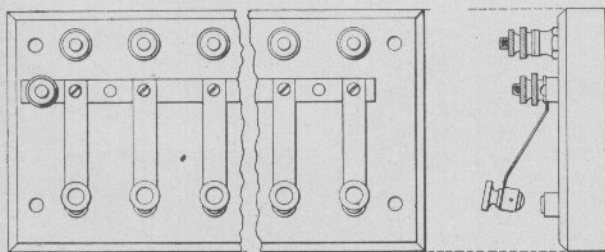
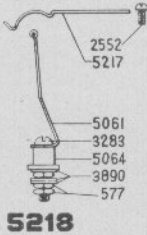
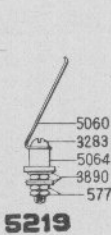
TRACK CIRCUIT.

RELEASE KEYS, PUSH BUTTONS, ETC.

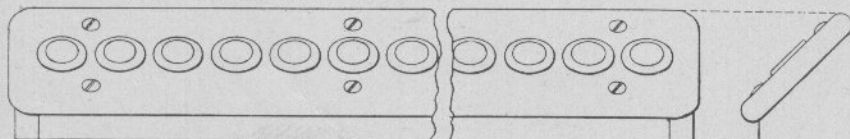
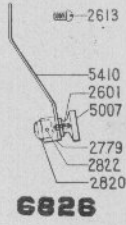
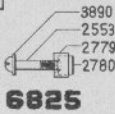
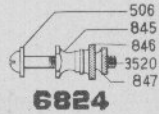


6922 - SINGLE

4987 - DOUBLE



- 5412 - 2 SPRING HAND KEYS,
- 7852 - 3 " " " " "
- 7853 - 4 " " " " "
- 5411 - 5 " " " " "
- 5483 - 6 " " " " "
- 5551 - 7 " " " " "
- 5550 - 8 " " " " "
- 7854 - 9 " " " " "
- 7855 - 10 " " " " "
- 7352 - 11 " " " " "



7343 - 8 PUSH BUTTONS.
4882 - 11 " " " "

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRACK CIRCUIT.

243

Order
No.

RELEASE KEYS, PUSH BUTTONS, ETC.

List Price.

034	COTTER PIN, $\frac{3}{8}$ " x $\frac{1}{2}$ " (per 100).....	.80	.....
506	BRASS WASHER for $\frac{1}{8}$ " Screw .....	.01	.....
577	BRASS NUT for No. 10-32 Screw.....	.02	.....
721	PIN, $\frac{1}{8}$ " x $\frac{3}{8}$" .....	.02	.....
845	BASE for Binding Posts.....	.08	.....
846	NUT for Binding Posts.....	.06	.....
847	NUT LOCK for Binding Posts.....	.05	.....
2552	IRON SCREW, No. 6 x $\frac{3}{8}$ ", Rd. Hd.....	.01	.....
2553	BRASS SCREW, No. 8 x $\frac{1}{2}$ ", Rd. Hd.....	.02	.....
2601	BRASS SCREW, No. 6 x $\frac{1}{4}$ ", F. Hd.....	.01	.....
2613	BRASS SCREW, No. 6 x $\frac{1}{4}$ ", Rd. Hd.....	.01	.....
2779	HOLDER for Carbon Contacts.....	.20	.....
2780	CARBON CONTACT for 6825 .....	.30	.....
2820	UPPER CARBON CONTACT for Spring Keys.....	.40	.....
2822	PIN holding 2820 to 2779.....	.02	.....
3283	BRASS SCREW, No. 10 x $\frac{1}{4}$ ", for 5208 or 5219.....	.03	.....
3520	BRASS SCREW, $\frac{1}{4}$ " x $\frac{1}{2}$ ", Rd. Hd.....	.08	.....
3890	BRASS WASHER for No. 10 Screw.....	.01	.....
4882	BOX Complete with 11 Push Buttons.....	10.00	.....
4952	IRON SCREW, No. 6 x $\frac{3}{8}$ ", Rd. Hd.....	.01	.....
4987	SCREW HAND KEY Complete, equipped on both sides with Front Contacts 1, 2, 5 and 6. If Back Contacts 3 and 4 are required, specify separately	30.00	.....
5007	INSULATING BUTTON for Spring Hand Keys.....	.20	.....
5057	PIN, Handle to Crank.....	.20	.....
5058	PIN, $\frac{1}{8}$ " x $\frac{9}{16}$" .....	.04	.....
5059	INSULATOR for Crosshead, for 4987 or 6922.....	.30	.....
5060	SIDE CONTACT SPRING for 5219.....	.50	.....
5061	CENTER CONTACT SPRING for 5218.....	.50	.....
5062	CROSSHEAD for 4987.....	2.50	.....
5063	CRANK for 4987.....	2.00	.....
5064	INSULATING BUSHING for 5218 or 5219 .....	.20	.....
5065	CRANK HANDLE for 4987 or 6922 .....	.30	.....
5066	CONTACT POST INSULATOR for 4987 or 6922.....	.80	.....
5067	GUIDE ROD for 4987 or 6922.....	.40	.....
5068	BACK SLEEVE for 4987 or 6922.....	.30	.....
5069	FRONT SLEEVE for 4987 or 6922.....	.30	.....
5070	CRANK SHAFT for 4987 or 6922.....	3.00	.....
5071	FRAME, Casting only, for 4987 or 6922.....	10.00	.....
5100	SCREW fastening 5063 to 5070.....	.12	.....
5215	INSULATING BLOCK for retaining Springs for 4987 or 6922 .....	.70	.....
5217	RETAINING SPRING for 5218.....	.70	.....
5218	CENTER CONTACT Complete, for 4987 or 6922.....	1.40	.....
5219	SIDE CONTACT Complete, for 4987 or 6922.....	.70	.....
5410	SPRING for Hand Keys.....	.30	.....
5411	5 SPRING HAND KEYS Mounted Complete	26.00	.....
5412	2 SPRING HAND KEYS Mounted Complete	14.00	.....
5483	6 SPRING HAND KEYS Mounted Complete	30.00	.....
5550	8 SPRING HAND KEYS Mounted Complete	38.00	.....
5551	7 SPRING HAND KEYS Mounted Complete	34.00	.....
6824	BINDING POST Complete, for Spring Hand Keys .....	.30	.....
6825	LOWER CONTACT Complete.....	.52	.....
6826	SPRING CONTACT Complete for Spring Hand Keys.....	1.20	.....
6922	SCREW HAND RELEASE KEY Complete, equipped on one side with Front Contacts 1, 2, 5 and 6. If Back Contacts 3 and 4 are required, specify separately.....	25.00	.....

Order by NUMBER and NAME Appearing in Large Type.

TRACK CIRCUIT.

Order No.	RELEASE KEYS, PUSH BUTTONS, ETC.—CONT.	List Price.
7343	BOX Complete with 8 Push Buttons.....	8.00
7352	11 SPRING HAND KEYS mounted Complete.....	50.00
7359	Binding Post STUD.....	.06
7852	3 SPRING HAND KEYS mounted Complete.....	18.00
7853	4 SPRING HAND KEYS mounted Complete.....	22.00
7854	9 SPRING HAND KEYS mounted Complete.....	42.00
7855	10 SPRING HAND KEYS mounted Complete.....	46.00

BELL KEY.

On the upper part of the opposite page is shown the Bell Key (8448) which is the standard of this Company. It has front and back contacts and may therefore be used on open or closed circuit or as a two-way circuit controller. The contacts are all of platinum. To change the circuit, considerable pressure must be applied to the push-button. The binding posts are carefully insulated from the frame.

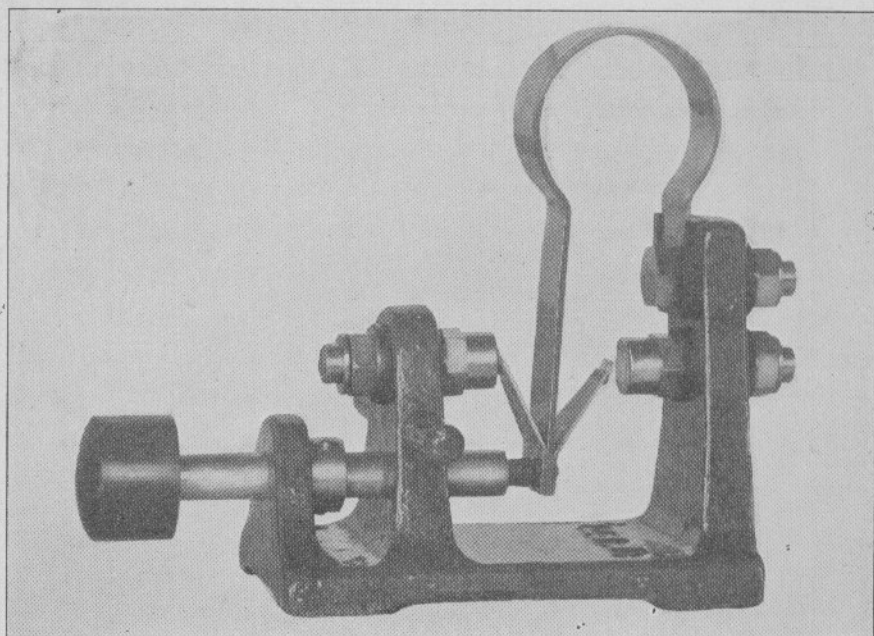
8448 BELL KEY.....		
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HAND SWITCH.

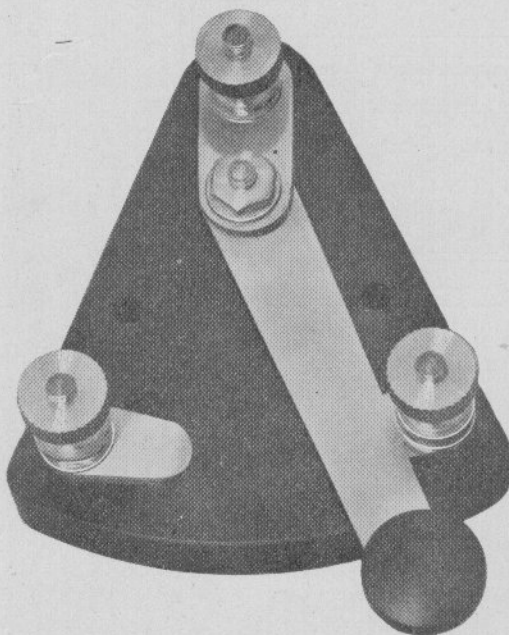
On the lower part of the same page is represented one form of hand switch (12431) made by this Company. As made in this form it is suitable for a number of different purposes. This same style of switch will be furnished with as many poles as desired.

12431 HAND SWITCH.....		
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Order by NUMBER and NAME Appearing in Large Type.



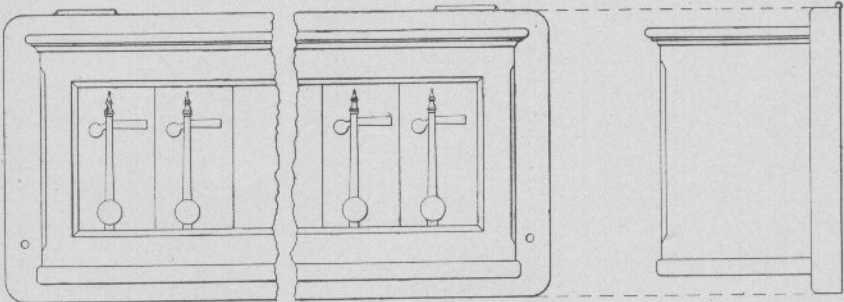
BELL KEY (8448).



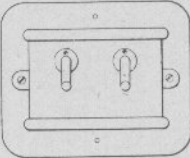
HAND SWITCH (12431).

TRACK CIRCUIT.

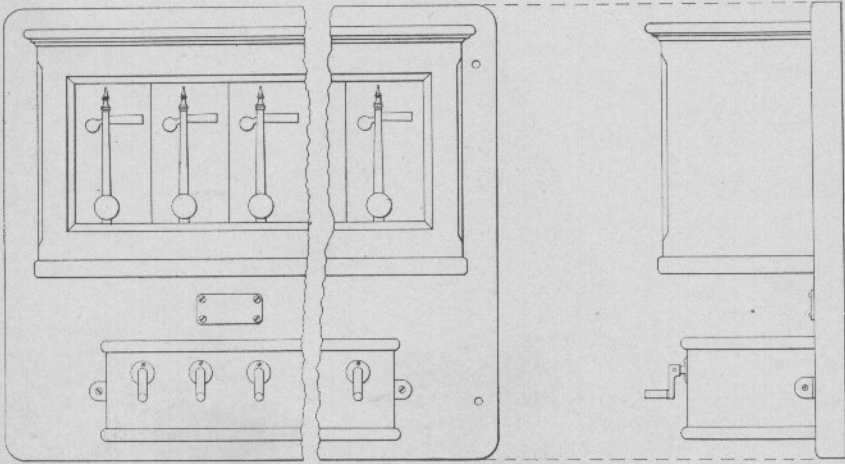
INDICATOR AND RELEASE KEY CASES.



- 5514, CASE WITH 1 INDICATOR.
5457 “ “ 2 “
6630 “ “ 3 “
6260 “ “ 4 “
5456 “ “ 5 “
5484 “ “ 6 “
5552 “ “ 7 “
5508 “ “ 8 “
6631 “ “ 9 “
5509 “ “ 10 “
7858 “ “ 11 “
6238 “ “ 12 “
7859 “ “ 13 “
7860 “ “ 14 “
7351 “ “ 15 “



5275



- 6223, CASES WITH 1 INDICATOR & 1 RELEASE KEY.
7684 “ “ 2 “ 2 “ “
6583 “ “ 3 “ 3 “ “
6251 “ “ 4 “ 3 “ “
4984 “ “ 4 “ 4 “ “
8670 “ “ 5 “ 4 “ “
9701 “ “ 6 “ 5 “ “

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

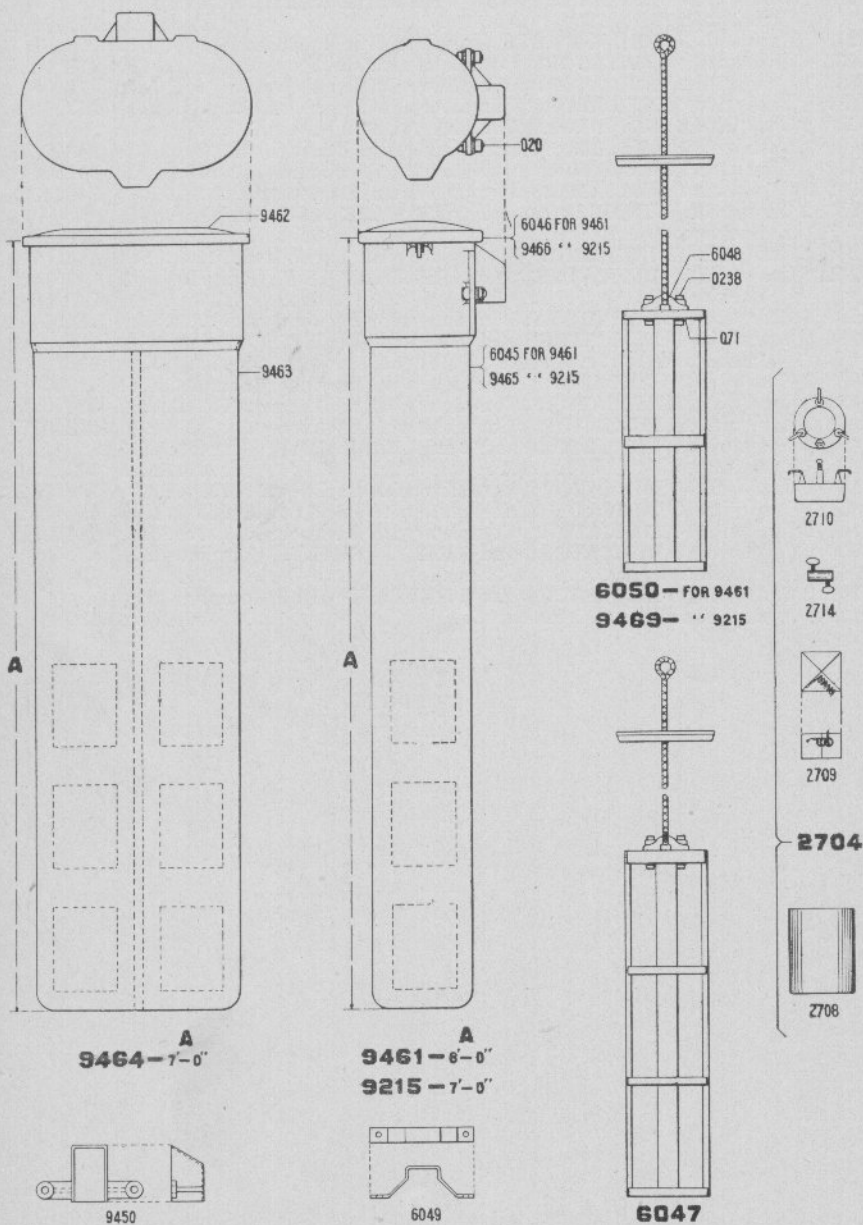
TRACK CIRCUIT.

247

Order No.	INDICATOR AND RELEASE KEY CASES.	List Price.
4984	2 Cases with 4 INDICATORS and 4 RELEASE KEYS, Complete with Backboard	272.00
5275	1 Case with 2 RELEASE KEYS, Complete with Backboard	66.00
5456	1 Case with 5 INDICATORS, Complete with Backboard	178.00
5457	1 Case with 2 INDICATORS, Complete with Backboard	76.00
5484	1 Case with 6 INDICATORS, Complete with Backboard	212.00
5508	1 Case with 8 INDICATORS, Complete with Backboard	280.00
5509	1 Case with 10 INDICATORS, Complete with Backboard	348.00
5514	1 Case with 1 INDICATOR, Complete with Backboard	42.00
5552	1 Case with 7 INDICATORS, Complete with Backboard	246.00
6223	2 Cases with 1 INDICATOR and 1 RELEASE KEY Complete with Backboard	76.00
6238	1 Case with 12 INDICATORS, Complete with Backboard	416.00
6251	2 Cases with 4 INDICATORS and 3 RELEASE KEYS, Complete with Backboard	240.00
6260	1 Case with 4 INDICATORS, Complete with Backboard	144.00
6583	2 Cases with 3 INDICATORS and 3 RELEASE KEYS, Complete with Backboard	206.00
6630	1 Case with 3 INDICATORS, Complete with Backboard	110.00
6631	1 Case with 9 INDICATORS, Complete with Backboard	314.00
7351	1 Case with 15 INDICATORS, Complete with Backboard	518.00
7684	2 Cases with 2 INDICATORS and 2 RELEASE KEYS, Complete with Backboard	142.00
7858	1 Case with 11 INDICATORS, Complete with Backboard	382.00
7859	1 Case with 13 INDICATORS, Complete with Backboard	450.00
7860	1 Case with 14 INDICATORS, Complete with Backboard	484.00
8670	2 Cases with 5 INDICATORS and 4 RELEASE KEYS, Complete with Backboard	306.00
9701	2 Cases with 6 INDICATORS and 5 RELEASE KEYS, Complete with Backboard	372.00

Order by NUMBER and NAME Appearing in Large Type.

BATTERIES AND CHUTES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRACK CIRCUIT.

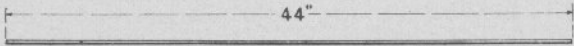
249

Order No.	BATTERIES AND CHUTES.	List Price.
020	BOLT WITH NUT, $\frac{3}{8}$ "x2".....	.08
071	WASHER for $\frac{3}{8}$ " Bolt.....	.01
0238	BOLT WITH NUT, $\frac{3}{8}$ "x3".....	.03
2704	GRAVITY BATTERY Complete.....	
2708	GLASS JAR, 6"x8" for 2704.....	.34
2709	COPPER, with Connecting Wire, for 2704.....	.20
2710	4 POUND ZINC, for 2704.....	
2714	CONNECTOR for Wire Terminal.....	
6045	BATTERY CHUTE, Casting only, for 9461.....	
6046	COVER for 9461.....	
6047	THREE CELL ELEVATOR for use with 9461, etc.....	2.10
6048	HANGER for Battery Elevators.....	
6049	STRAP for holding Trunking to 9461.....	
6050	TWO-CELL ELEVATOR for use with 9461.....	1.82
9215	FOOT CAST IRON BATTERY CHUTE Complete with Elevator and Frost Board to hold 2 or 3 cells, 6"x8" Gravity Battery. When ordering specify whether for two or three cells.....	30.50
9450	CAP for holding Trunking to 9215.....	
9461	6-FOOT CAST IRON BATTERY CHUTE Complete with Elevator and Frost Board, to hold 2 or 3 cells, 6"x8" Gravity Battery. When ordering specify whether for two or three cells.....	26.30
9462	COVER for Double Battery Chute 9464.....	
9463	BATTERY CHUTE, Casting only, for 9464.....	
9464	7-FOOT DOUBLE BATTERY CHUTE Complete with Elevators and Frost Board, to hold 4 or 6 cells of 6"x8" Gravity Battery. When ordering specify whether for four or six cells.....	54.00
9465	BATTERY CHUTE, Casting only, for 9215.....	
9466	COVER only for 9215.....	
9469	TWO-CELL ELEVATOR for use with 9215.....	

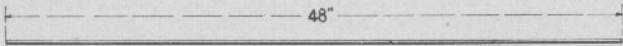
Order by NUMBER and NAME Appearing in Large Type.

TRACK CIRCUIT.

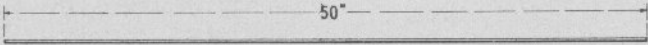
SPLICE BARS, CHANNEL PINS AND BOND WIRES.



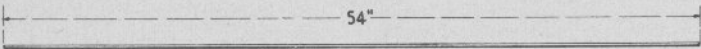
12350



12351



12352



12353



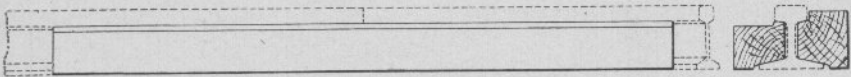
12354



- 12391—4 1/4"
- 12392—4 1/2"
- 12393—4 3/4"
- 12394—5"
- 12395—5 1/8"
- 12396—5 3/4"



10350



12349

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order
No.

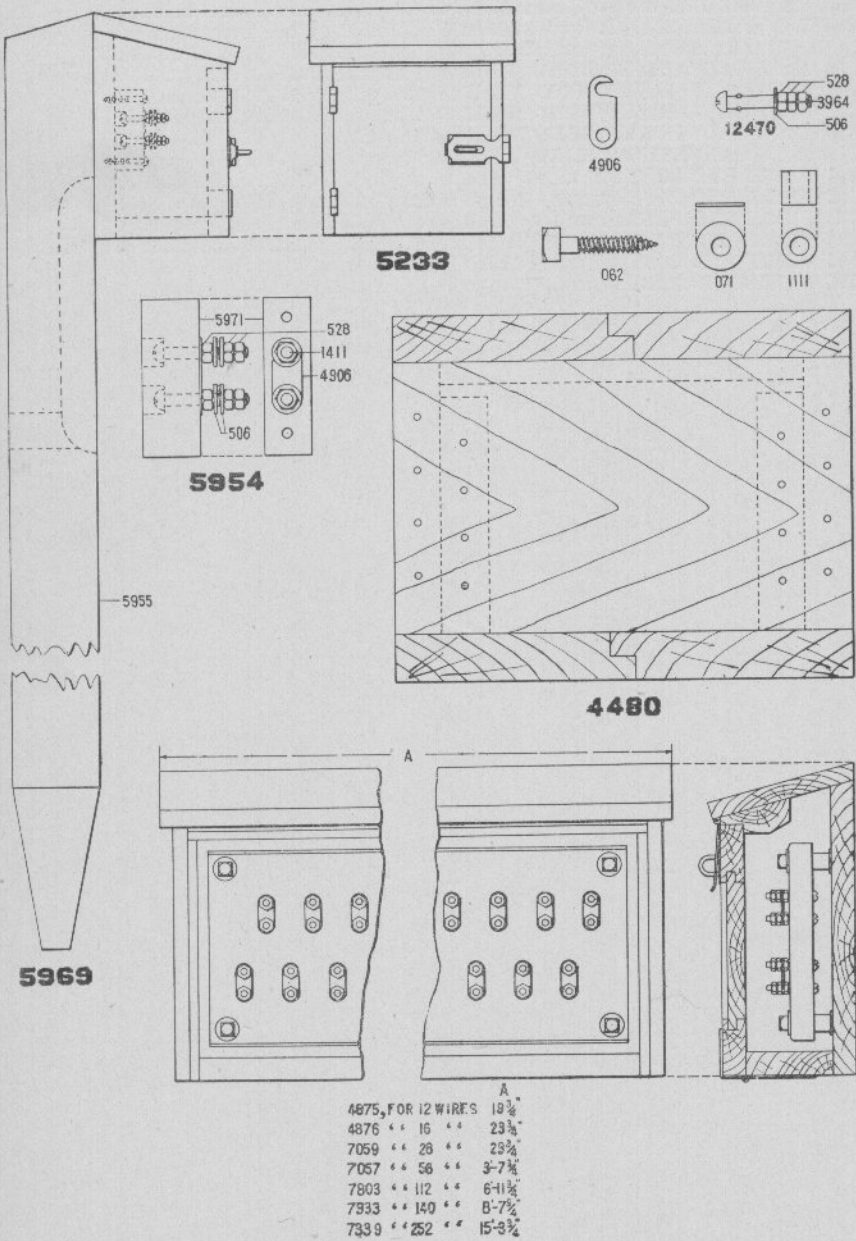
SPLICE BARS, CHANNEL PINS AND BOND WIRES.

List Price.

10350	CHANNEL PIN for No. 8 Bond Wire.....	.....
12349	WOOD SPLICE BAR for Insulated Rail Joint. When ordering send print of Rail Section.....	.....
12350	No. 8 GALVANIZED BOND WIRE 44" long.....	.....
12351	No. 8 GALVANIZED BOND WIRE 48" long.....	.....
12352	No. 8 GALVANIZED BOND WIRE 50" long.....	.....
12353	No. 8 GALVANIZED BOND WIRE 54" long.....	.....
12354	No. 8 GALVANIZED BOND WIRE 60" long.....	.....
12391	FIBRE END POST for rail 4 $\frac{1}{4}$ " high.....	.....
12392	FIBRE END POST for rail 4 $\frac{1}{2}$ " high.....	.....
12393	FIBRE END POST for rail 4 $\frac{3}{4}$ " high.....	.....
12394	FIBRE END POST for rail 5" high.....	.....
12395	FIBRE END POST for rail 5 $\frac{3}{8}$ " high.....	.....
12396	FIBRE END POST for rail 5 $\frac{1}{4}$ " high.....	.....

Prices on Application.

JUNCTION BOXES.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRUNKING AND STAKES.

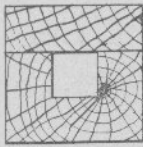
253

Order No.	JUNCTION BOXES.	List Price.
062	LAG SCREW, $\frac{3}{8}$ "x2 $\frac{1}{2}$ "	.02
071	$\frac{3}{8}$ " PLATE WASHER	.01
506	BRASS WASHER for $\frac{1}{4}$ " Screw	.01
528	BRASS NUT for $\frac{1}{4}$ " Screw	.02
1111	BUSHING supporter between Terminal Board and Box	.12
1411	BRASS SCREW, $\frac{1}{4}$ "x1 $\frac{3}{4}$ "	.08
3964	BRASS SCREW $\frac{1}{4}$ "x2". Special	.10
4480	WOOD JUNCTION BOX, 15 $\frac{1}{2}$ "x15 $\frac{1}{2}$ " inside	4.50
4875	WOOD JUNCTION BOX Complete with Terminal Board for 12 Wires	18.00
4876	WOOD JUNCTION BOX Complete with Terminal Board for 16 Wires	21.20
4906	CONNECTING LINK for Terminal Binding Posts	.20
5233	JUNCTION BOX for 5969	2.00
5954	TERMINAL BLOCK Complete for 5969	1.10
5955	POST for 5969	1.20
5969	JUNCTION BOX AND STAKE Complete, with Terminal Block for Branch Common	4.50
5971	SLATE TERMINAL BLOCK for 5954	.60
7057	WOOD JUNCTION BOX Complete with Terminal Board for 56 Wires	53.20
7059	WOOD JUNCTION BOX Complete with Terminal Board for 28 Wires	30.80
7339	WOOD JUNCTION BOX Complete with Terminal Board for 252 Wires	176.40
7803	WOOD JUNCTION BOX Complete with Terminal Board for 112 Wires	88.00
7933	WOOD JUNCTION BOX Complete with Terminal Board for 140 Wires	107.60
12470	BINDING POST for Junction Box Terminal Board	.18

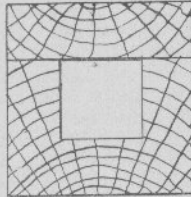
Order by NUMBER and NAME Appearing in Large Type.



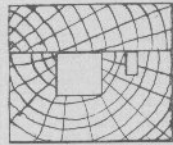
2747



898



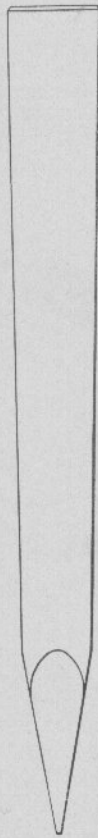
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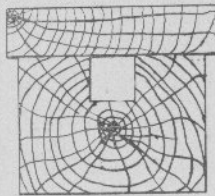
2059



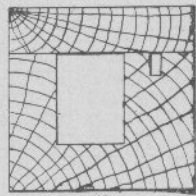
5524-3'X4'X4'-0"
6034-4'X4'X3'-6"



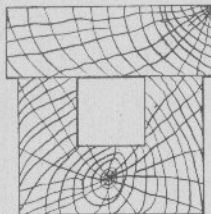
915-4'DIA. X 3'-0"



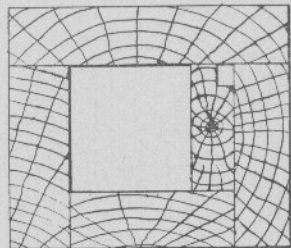
6033



2058



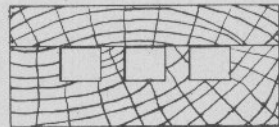
5246



2057



5791



5730

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

TRUNKING AND STAKES.

255

Order No.	TRUNKING AND STAKES.	List Price.
897	TRUNKING, 3"x4", with lid 1 1/4"x4", groove 1 1/4"x1 3/4" per ft.....	.10
898	TRUNKING, 2"x3", with lid 1"x3", groove 1"x1" per ft.....	.06
915	STAKE, 4" dia. 3" long.....	.30
2057	TRUNKING, 4"x6", with lid 1 1/4"x6", grooves 2 3/4"x2 3/8" and 1/2"x3/8" per ft.....	.10
2058	TRUNKING, 3"x4" with lid 1"x4", grooves 1 1/2"x2" and 1/2"x1/2" per ft..	.10
2059	TRUNKING, 2"x3 1/2", with lid 1"x3", grooves 1"x1" and 1/2"x1/2" per ft..	.08
2747	TRUNKING for Wood Poles, 1 3/4"x3", groove 3/4"x1" per ft.....	.06
5246	TRUNKING, 3"x4", with lid 1 1/2"x4 1/2", groove 1 1/2"x1 1/2" per ft.....	.10
5524	STAKE, 3"x4"x4' long.....	.31
5730	TRUNKING, 1 3/4"x5 3/4", with lid 7/8"x5 3/4", with three grooves 3/4"x7/8" per ft	.10
5731	TRUNKING, 1 3/4"x3 3/4", with lid 7/8"x3 3/4", with two grooves 3/4"x3/4" per ft..	.07
6033	TRUNKING, 3"x4", with lid 1"x4 1/2", groove 1"x1" per ft.....	.10
6034	STAKE, 4"x4"x3'-6" long.....	.36

Order by NUMBER and NAME Appearing in Large Type.

Under this heading have been included Gasoline and Gas Engines, Motors, Generators, Storage Batteries and Switch Boards.

ENGINES AND BATTERIES.

Gasoline or Gas Engines and Storage Batteries of any desired make can be furnished to suit the preference of the purchaser. As we do not manufacture these, they are therefore not listed. In a table given on pages 258 and 259 we show the size of Engine or Motor and Generator which it is recommended should be used for charging Storage Batteries of various capacities most frequently employed in electric interlocking plants.

MOTORS AND GENERATORS.

Motors and Generators manufactured by this Company, which are designed especially for this class of work, are shown complete and in detail on pages 260 to 267 inclusive.

SWITCH BOARDS.

Switch Boards of the general design, illustrated on pages 268 and 269, are also manufactured by this Company, and can be furnished on specification, as required. On account of the great variety in combination of instruments, switches, etc., which depend upon the conditions at the particular plant for which the Switch Boards are designed, we have not shown in detail all of the various kinds of Switch Boards Complete which we are prepared to furnish. Detail parts which go to make up any desired combination are illustrated and listed on pages 271 to 284 inclusive.

BATTERY INFORMATION.

Battery.	Normal Charging Rate.	Generator Order No.	Minimum Size of Engine Permissible.	Minimum Size of Motor Permissible.
30 A. H.	3.75 Amp.	2262	1.5 H. P.	1 H. P.
40 "	5. "	2262	2. "	1.5 "
45 "	5.6 "	2262	2. "	1.5 "
60 "	7.5 "	2262	2.5 "	2. "
75 "	9.3 "	2262	3. "	2.5 "
80 "	10 "	2262	3. "	2.5 "
90 "	11.25 "	2135	3.5 "	3. "
100 "	12.5 "	2135	3.75 "	3.25 "
120 "	15. "	2135	4.5 "	4. "
140 "	17.5 "	6075	5. "	4.5 "
160 "	20 "	6075	5.5 "	5. "

GENERATOR INFORMATION.

Generator Order No.	Amperes.	Volts.	Approximate Speed.	Approximate H. P. to Drive.
2262	10	110-150	1400	2.7
2135	15	110-150	1400	3.6
6075	20	110-150	1400	5.

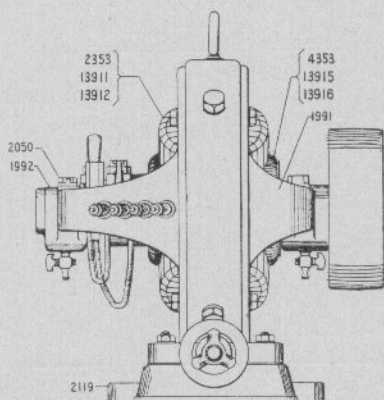
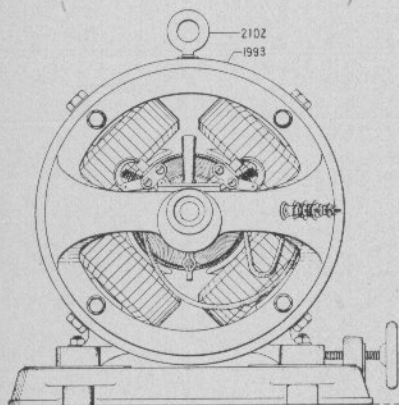
MOTOR INFORMATION.

Motor.	H. P.	Volts.	Approximate Amperage.	Approximate Speed.
13897	2	110	17.	1400
13898	2	220	8.5	1400
13899	3	110	20.	1400
13900	3	220	10.	1400
6142	5	110	40.	1400
6143	5	220	20.	1400

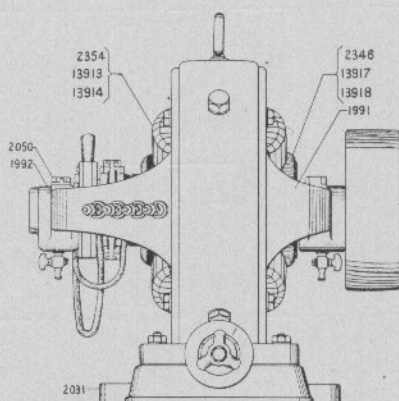
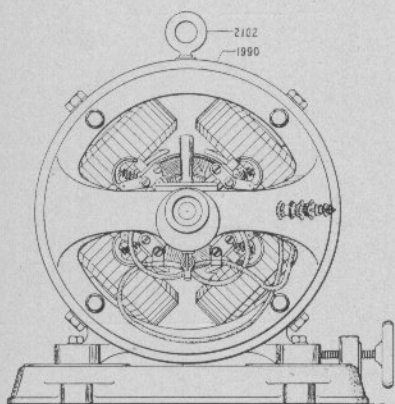
MOTOR GENERATOR SETS.

Motor Gen. Order No.	Motor Order No.	Generator Order No.	INPUT.		OUTPUT.	
			Approximate Amperes.	Volts.	Amperes.	Volts.
13903	13897	2262	17.	110	8.	150
13904	13898		8.5	220		
13905	13899	2262	20.	110	10.	150
13906	13900		10.	220		
13907	13899	2135	25.	110	12.5	150
13908	13900		12.5	220		
13909	6142	2135	30.	110	15.	150
13910	6143		15.	220		
4547	6142	6075	40.	110	20.	150
7648	6143		20.	220		

MOTORS AND GENERATORS.



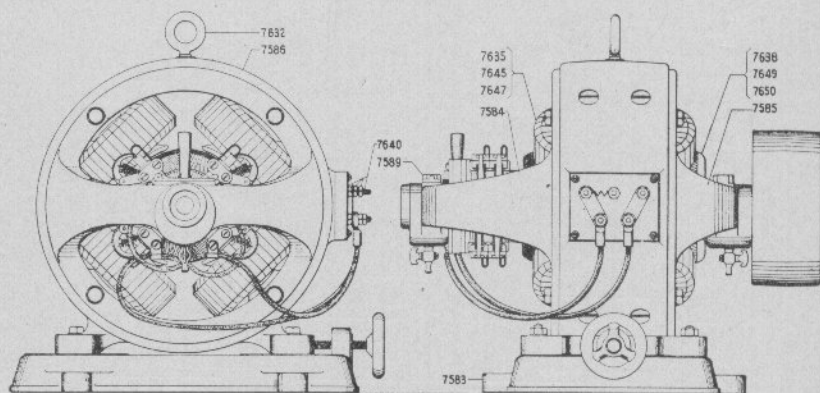
2262 - GENERATOR No.1
 13897 - MOTOR 2 H.P. 110 V.
 13898 - " 2 " 220 V.



2135 - GENERATOR No.2
 13899 - MOTOR 3 H.P. 110 V.
 13900 - " 3 H.P. 220 V.

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

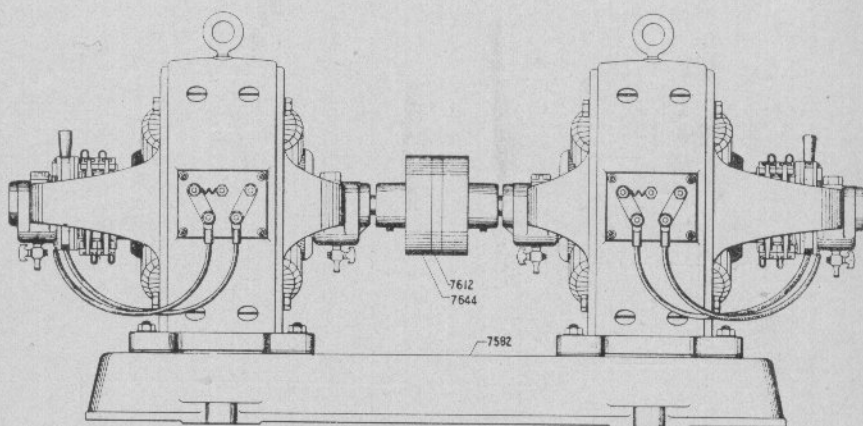
MOTORS AND GENERATORS.



6075-GENERATOR NO. 3

6142-MOTOR-5 H.P. -110V.

6143- " " 5 H.P. -220V.

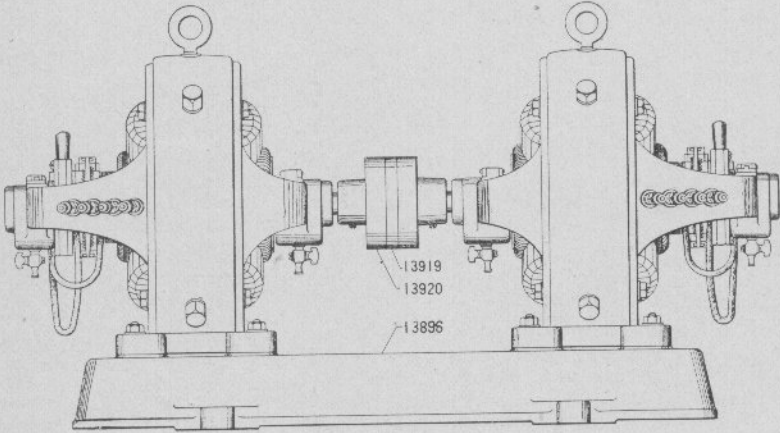


4547

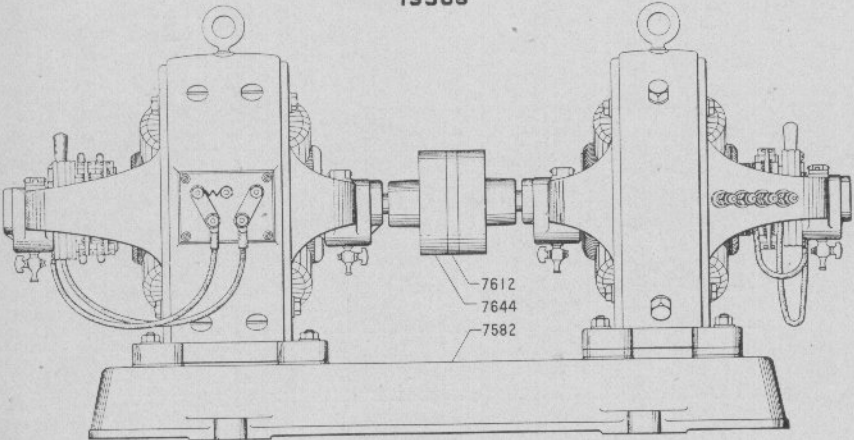
7648

POWER APPARATUS.

MOTOR GENERATOR SETS.



13303
13904
13905
13906
13907
13908



13909
13910

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

POWER APPARATUS.

263

Order
No.

MOTORS AND GENERATORS.

List Price.

1990	FIELD for Generator 2135.....	24.00	.....
1991	BACK BEARING BRACKET for 2135 or 2262.....	10.00	.....
1992	FRONT BEARING BRACKET for 2135 or 2262.....	16.00	.....
1993	FIELD for Generator 2262.....	26.00	.....
2031	BASE for 2135.....	8.00	.....
2050	COVER for Oil Well on 2135 or 2262.....	.20	.....
2102	EYE BOLT for 2135 or 2262.....	.40	.....
2119	BASE for 2262.....	7.00	.....
2135	GENERATOR Complete, 15 Amperes, 110 to 150 Volts, with Belt Tightener, Pulley and Base Complete as shown. For other data, see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....	240.00	.....
2262	GENERATOR Complete, 10 Amperes, 110 to 150 Volts, with Belt Tightener, Pulley and Base as shown. For other data, see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....	200.00	.....
2346	ARMATURE Complete, for 2135.....	90.00	.....
2353	SINGLE FIELD COIL, for 2262. (If a set is required, order 4 Coils).....	10.00	.....
2354	SINGLE FIELD COIL, for 2135. (If a set is required, order 4 Coils).....	12.50	.....
4353	ARMATURE Complete, for 2262.....	80.00	.....
4547	MOTOR GENERATOR Complete, as shown, 220 Volt Motor, 20 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	624.00	.....
6075	GENERATOR Complete, 20 Amperes, 110 to 150 Volts, with Belt Tightener, Pulley and Base as shown. For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....	300.00	.....
6142	MOTOR Complete, 5 H.P., 110 Volt, with Belt Tightener, Pulley and Base as shown (Starting Box not included). For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....	300.00	.....
6143	MOTOR Complete, 5 H.P., 220 Volt, with Belt Tightener, Pulley and Base as shown (Starting Box not included). For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....	320.00	.....
7582	BASE, for 6547 or 7648.....		.....
7583	BASE, Casting only, for 6075, etc.....		.....
7584	FRONT BEARING BRACKET, for 6075, etc.....		.....
7585	BACK BEARING BRACKET, for 6075, etc.....		.....
7586	FIELD, Casting only, for 6075, etc.....		.....
7589	COVER for Oil Well, for 6075, etc.....		.....
7612	LEATHER DISC for between Flanges, for 4547 or 7648.....		.....
7632	EYE BOLT for 6075, etc.....		.....
7635	SINGLE FIELD COIL for 6075. (If a set is required, order 4 Coils).....		.....
7638	ARMATURE Complete for 6075.....		.....
7640	TERMINAL BLOCK Complete with Binding Posts, for 6075, etc.....		.....
7644	FLANGE with Studs, for 4547 or 7648.....		.....
7645	SINGLE FIELD COIL for 6142. (If a set is required, order 4 Coils).....		.....
7647	SINGLE FIELD COIL for 6143. (If a set is required, order 4 Coils).....		.....
7648	MOTOR GENERATOR Complete as shown, 110 Volt Motor, 20 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	644.00	.....
7649	ARMATURE Complete for 6142.....		.....
7650	ARMATURE Complete for 6143.....		.....

Order by NUMBER and NAME Appearing in Large Type.

Order
No.

MOTORS AND GENERATORS.—CONT.

List Price.

13896	BASE for 13903, etc.....	.....
13897	MOTOR Complete, 2 H.P., 110 Volt, with Belt Tightener, Pulley and Base as shown. (Starting Box not included). For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....	200.00
13898	MOTOR Complete, 2 H.P., 220 Volt, with Belt Tightener, Pulley and Base as shown. (Starting Box not included). For other data see table, page 258. Specify size of pulley required. For sizes of Pulleys see table, page 266.....	210.00
13899	MOTOR Complete, 3 H.P., 110 Volt, with Belt Tightener, Pulley and Base as shown. (Starting Box not included). For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....	240.00
13900	MOTOR Complete, 3 H.P., 220 Volt, with Belt Tightener, Pulley and Base as shown. (Starting Box not included.) For other data see table, page 258. Specify size of Pulley required. For sizes of Pulleys see table, page 266.....	256.00
13903	MOTOR GENERATOR Complete, as shown, 110 Volt Motor, 8 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	420.00
13904	MOTOR GENERATOR Complete as shown, 220 Volt Motor, 8 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	430.00
13905	MOTOR GENERATOR Complete as shown, 110 Volt Motor, 10 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	460.00
13906	MOTOR GENERATOR Complete as shown, 220 Volt Motor, 10 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	480.00
13907	MOTOR GENERATOR Complete as shown, 110 Volt Motor, 12.5 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	500.00
13908	MOTOR GENERATOR Complete as shown, 220 Volt Motor, 12.5 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	516.00
13909	MOTOR GENERATOR COMPLETE as shown, 110 Volt Motor, 15 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	564.00
13910	MOTOR GENERATOR Complete as shown, 220 Volt Motor, 15 Amperes, 110 to 150 Volt Generator. For other data see table, page 259.....	584.00
13911	SINGLE FIELD COIL for 13897. (If a set is required, order 4) Coils.	10.00
13912	SINGLE FIELD COIL for 13898. (If a set is required, order 4) Coils.	13.00
13913	SINGLE FIELD COIL for 13899. (If a set is required, order 4) Coils.	12.50
13914	SINGLE FIELD COIL for 13900. (If a set is required, order 4) Coils.	16.00
13915	ARMATURE Complete for 13897.....	80.00
13916	ARMATURE Complete for 13898.....	80.00
13917	ARMATURE Complete for 13899.....	90.00
13918	ARMATURE Complete for 13900.....	90.00
13919	LEATHER DISC between Flange, for 13903, etc.....	.....
13920	FLANGE with Stud, for 13903.....	.....

Order by NUMBER and NAME Appearing in Large Type.

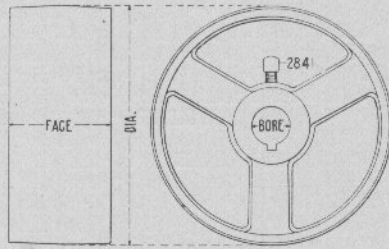
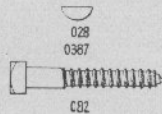
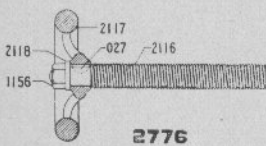
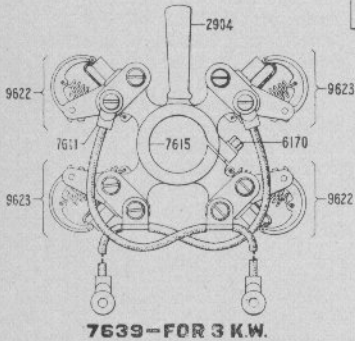
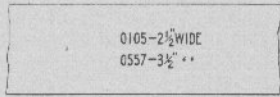
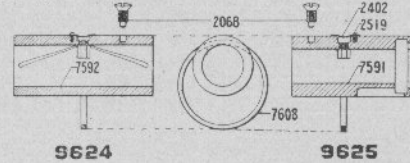
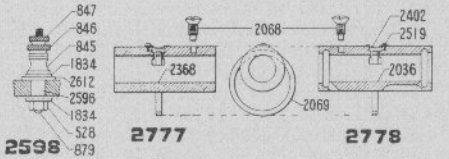
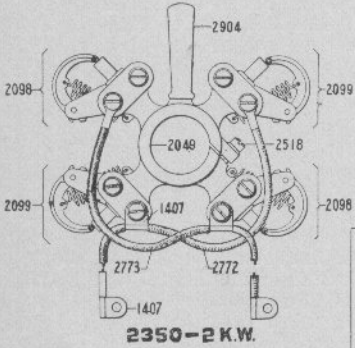
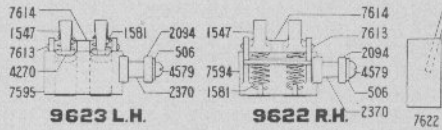
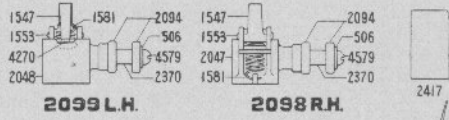
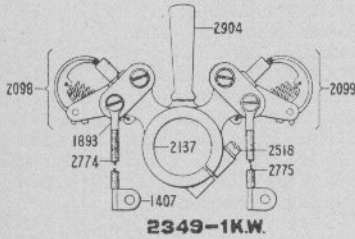
POWER APPARATUS.

265

Order No.	GENERATOR PARTS.	List Price.
027	KEY for 2776.....	.06
028	KEY, Pulley to Shaft for 2135 or 2262.....	.08
079	BIBB COCK for Oil Wells for Motors and Generators.....	.32
082	LAG SCREW, $\frac{3}{8}$ " x 4", Generator to floor.....	.06
0105	LEATHER BELT, 24", Single Ply, for Generators 2135 or 2262, per ft.....	
0387	KEY, Pulley to Shaft for 6075, 6142 or 6143.....	.10
0557	LEATHER BELT, 31", Single Ply, for Generators 6075 per ft.....	
506	BRASS WASHER for $\frac{1}{4}$ " Screw.....	.01
528	BRASS NUT for $\frac{1}{4}$ " Screw.....	.02
845	BASE for 2598 (Copper Plated).....	.10
846	THUMB NUT for 2598 (Copper Plated).....	.08
847	LOCK NUT for 2598 (Copper Plated).....	.07
879	SCREW for 2598 (Copper Plated).....	.10
1156	NUT for 2776 (Blued).....	.04
1407	TERMINAL for 2349 and 2350.....	.05
1547	ARM for various Brush Holders.....	.36
1553	PIN for 2098 or 2099.....	.02
1581	SPRING for various Brush Holders.....	.15
1834	INSULATING WASHER for 2598.....	.24
1893	TERMINAL for 2349 or 2350.....	.05
2036	BUSHING for 2778.....	4.00
2047	BRUSH HOLDER for 2098.....	1.50
2048	BRUSH HOLDER for 2099.....	1.50
2049	ARM supporting Brush Holders for 2350.....	5.00
2068	SCREW, Special holding Generator Bushings to Generator Brackets.....	.14
2069	OIL RING for 2077 or 2778.....	.40
2094	INSULATOR for various Brush Holders.....	.60
2098	BRUSH HOLDER Complete, Right Hand, for 2349 or 2350.....	3.70
2099	BRUSH HOLDER Complete, Left Hand, for 2349 or 2350.....	3.70
2116	SCREW for 2776.....	1.40
2117	HAND WHEEL for 2776.....	1.00
2118	WASHER for 2776.....	.12
2137	ARM supporting Brush Holders for 2349.....	3.50
2349	BRUSH HOLDERS Complete with Arm, for Generator 2262.....	12.50
2350	BRUSH HOLDERS Complete with Arm, for Generator 2135.....	20.00
2368	BUSHING for 2777.....	2.50
2370	INSULATING BUSHING for various Brush Holders.....	.16
2402	GUIDE for 2777, etc.....	.30
2417	CARBON BRUSH for 2349 or 2350.....	.20
2518	SCREW for 2349 or 2350.....	.04
2519	SCREW for holding Guide to Bushing 2777, etc.....	.01
2595	INSULATING STRIP for Binding Posts.....	.40
2596	INSULATING BUSHING for 2598.....	.24
2598	BINDING POST Complete for Generators 2135 or 2262.....	1.30
2612	INSULATING WASHER for 2598.....	.24
2772	LEAD WIRE, Long, with Terminals for 2350.....	.60
2773	LEAD WIRE, Short, with Terminals for 2350.....	.60
2774	LEAD WIRE, Long, with Terminals for 2349.....	.40
2775	LEAD WIRE, Short, with Terminals for 2349.....	.40
2776	BELT TIGHTENING SCREW Complete, for various Generators.....	2.50
2777	BUSHING Complete for Bearing Bracket 1991.....	3.20
2778	BUSHING Complete for Bearing Bracket 1992.....	4.70
2840	PULLEY, 7" dia., 3" face, for 1 and 2 K. W. Generators.....	3.00
2841	SET SCREW for various-Generator Pulleys.....	.03

Order by NUMBER and NAME Appearing in Large Type.

GENERATOR PARTS.



	FACE	DIA.	BORE
5487	3"	5 1/2"	1 1/2"
2987	3"	6"	1 1/2"
2840	3"	7"	1 1/2"
4460	3"	8"	1 1/2"
4716	3"	9"	1 1/2"
4733	3"	10"	1 1/2"
7590	4"	7"	1 1/2"
4719	4"	9"	1 1/2"
4720	4"	10"	1 1/2"

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

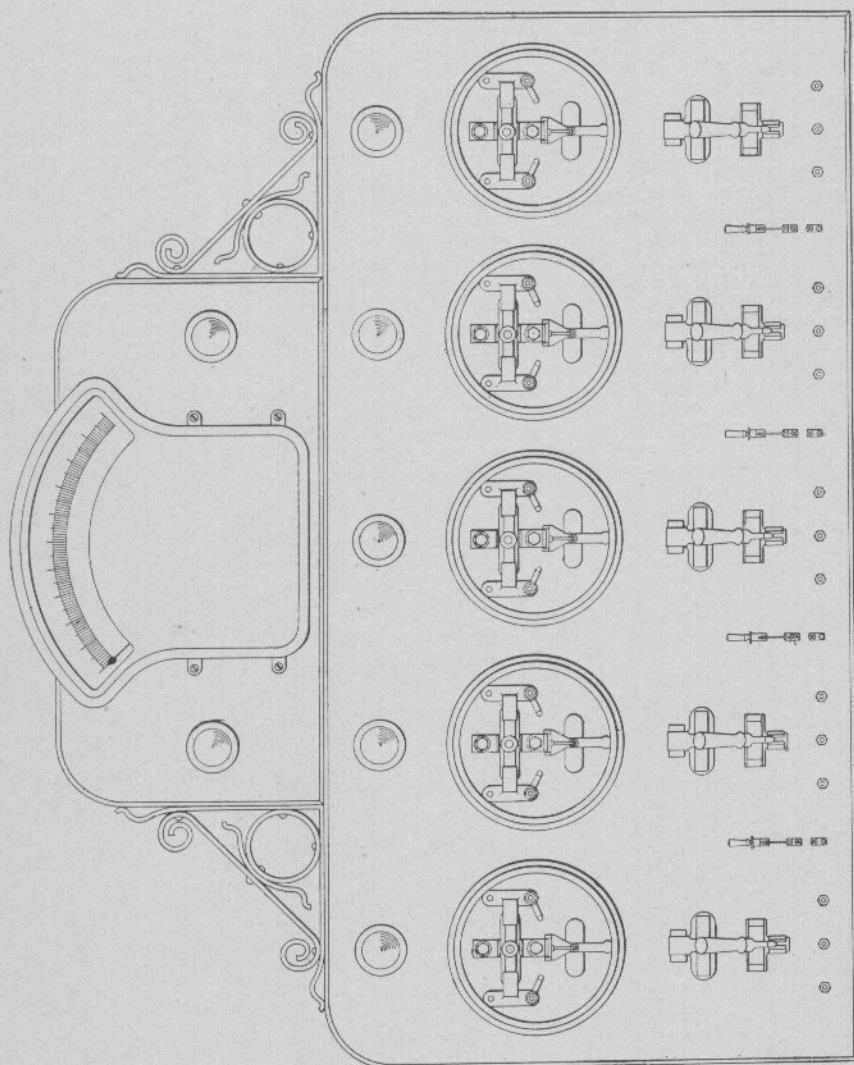
POWER APPARATUS.

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Order No.	GENERATOR PARTS.--CONT.	List Price.
2904	HANDLE for 2349, 2350 or 763970
2987	PULLEY, 6" dia. 3" face, for 1 and 2 K. W. Generators.....	2.50
4270	LATERAL SPRING for various Brush Holders.....	.10
4460	PULLEY, 8" dia., 3" face, for 1 and 2 K. W. Generators.....	3.50
4579	BRASS SCREW, No. 12 x 1 $\frac{3}{8}$ ", for various Brush Holders.....	.04
4716	PULLEY, 9" dia., 3" face, for 1 and 2 K. W. Generators.....	4.00
4719	PULLEY, 9" dia., 4" face, for 3 K. W. Generators and Motors.....	5.00
4720	PULLEY, 10" dia., 4" face, for 3 K. W. Generators and Motors.....	9.50
4738	PULLEY, 10" dia., 3" face, for 1 and 2 K. W. Generators.....	4.50
5487	PULLEY, 5 $\frac{1}{2}$ " dia., 3" face, for 1 and 2 K. W. Generators.....	2.50
6170	CAP SCREW, $\frac{3}{8}$ " x 1", Hex. Hd.....	.05
7590	PULLEY, 7" dia., 4" face, for 3 K. W. Generators and Motors.....	4.00
7591	BUSHING for 9625.....	
7592	BUSHING for 9624.....	
7594	BRUSH HOLDER for 9622.....	
7595	BRUSH HOLDER for 9623.....	
7608	OIL RING for 9624 or 9625.....	
7611	TERMINAL for 7639.....	
7613	PIN for 9622 or 9623.....	
7614	WASHER for spacing Arms for 9622 or 9623.....	
7615	ARM supporting Brush Holders for 7639.....	
7622	BRUSH Complete for 7639.....	
7639	BRUSH HOLDER Complete with Arm, for 6075, 6142 or 6413.....	
9622	BRUSH HOLDER Complete, Right Hand, for 7639.....	
9623	BRUSH HOLDER Complete, Left Hand, for 7639	
9624	BUSHING Complete for Bearing Bracket 7585.....	
9625	BUSHING Complete for Bearing Bracket 7584.....	

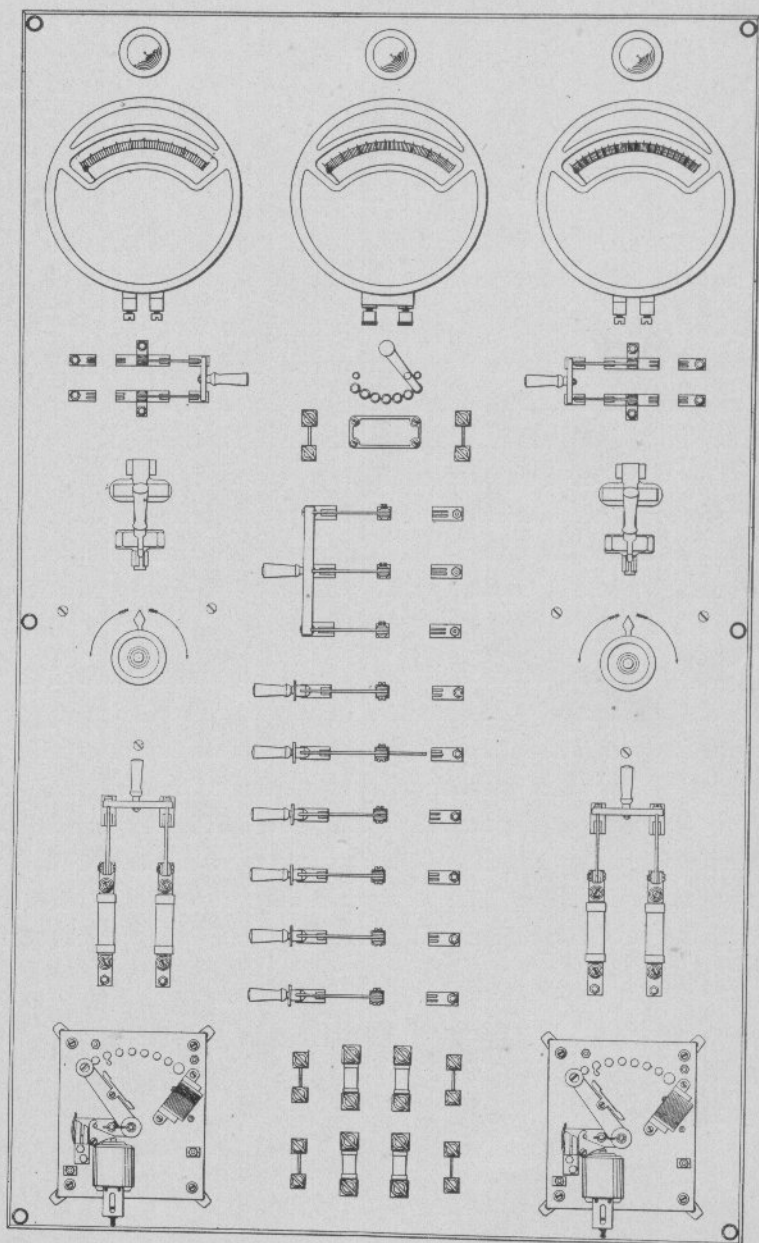
Order by NUMBER and NAME Appearing in Large Type.

SWITCH BOARDS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

SWITCH BOARDS.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

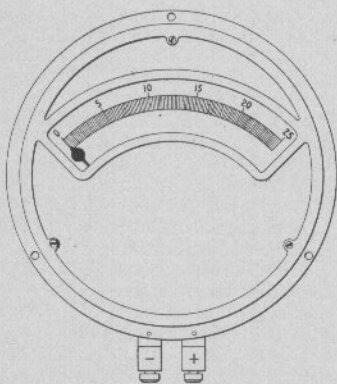
CURRENT MEASUREMENT IN TWO OR MORE CIRCUITS USING BUT ONE AMMETER.

There are two methods of measuring the current in two or more circuits by the use of but one instrument.

One method consists in the use of a special Ammeter (0485, etc.) in combination with "external shunts." A separate shunt is required in each of the circuits to be measured, said shunts being connected to the instrument, one at a time, through the medium of a multi-circuit switch (0349, page 274). Their use is recommended on circuits of 50 amperes or over where the current flow is continuous. It is to be noted that in case repairs are necessary, not only the instrument, but all of the shunts and connecting cords, must be returned. These ammeters should be used only with the shunts and cords with which they have been calibrated.

The other method consists in the use of Ammeter Jack 10247, see page 271, in combination with Ammeter 0110, etc. The design is such that the introduction or withdrawal of plug 10248 inserts the Ammeter in, or withdraws it from the circuit in question without opening said circuit or disturbing the flow of current, as illustrated by the circuit, Fig. A, page 271. It is recommended for use on circuits of 50 amperes or less where the flow is continuous, or on circuits up to 75 amperes when the current is of short duration. One Jack is required for each circuit to be measured, and one plug for each Ammeter.

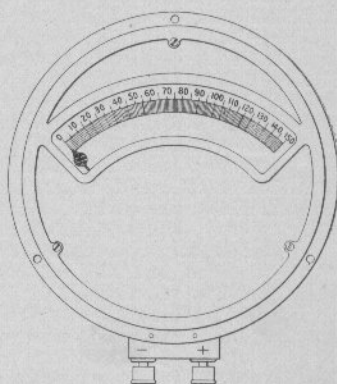
AMMETER, VOLTMETERS, ETC.



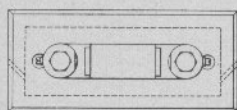
0110 0-25
0111 0-50
0377 0-75
0481 - 10-0-25
0112 - 15-0-35
0223 - 25-0-50
0484 - 25-0-75

ADAPTED FOR EXTERNAL SHUNTS.

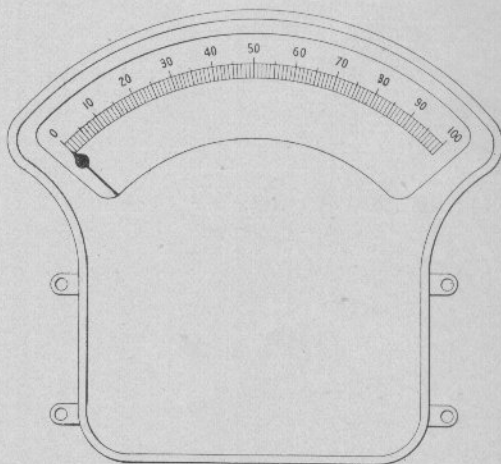
0485 0-25
0486 0-50
0487 0-75
0488 - 10-0-25
0482 - 15-0-35
0378 - 25-0-50
0488 - 25-0-75



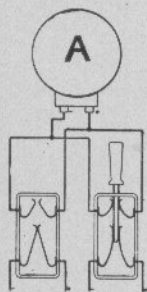
0108 - 0-150
0294 - 0-100
0465 - 0-600



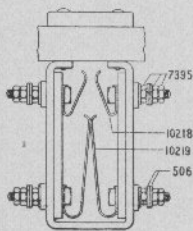
0315



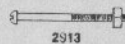
0489 - 0-75
0389 - 0-100



10248



10247



2913



2912



064



2911

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order No.	AMMETERS, VOLTMETERS, ETC.	List Price.
064	LAG SCREW, $\frac{1}{2}$ " x $2\frac{1}{2}$ "	.03
0108	VOLTMETER, Round Pattern, Scale 0-150	56.00
0110	AMMETER, Round Pattern, Scale 0-25	47.50
0111	AMMETER, Round Pattern, Scale 0-50	48.00
0112	AMMETER, Round Pattern, Scale 15-0-35	48.00
0223	AMMETER, Round Pattern, Scale 25-0-50	49.00
0294	VOLTMETER, Round Pattern, Scale 0-100	53.00
0315	EXTERNAL SHUNT used with Ammeters 0485 (page 272), etc.	5.70
NOTE.—These should not be ordered separately as they are calibrated and used with the Ammeter for which they are intended.		
0377	AMMETER, Round Pattern, Scale 0-75	49.00
0378	AMMETER, Round Pattern, Scale 25-0-50, adapted for use with external Shunts 0315, which are extra. In ordering give number of Shunts required also length of Connecting Cords. For description see page 270	49.00
0389	AMMETER, Illuminated Dial, Scale 0-100, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270	142.50
0458	AMMETER, Round Pattern, Scale 25-0-75, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270	50.00
0465	VOLTMETER, Round Pattern, Scale 0-600	66.00
0481	AMMETER, Round Pattern, Scale 10-0-25, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270	47.50
0482	AMMETER, Round Pattern, Scale 15-0-35, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270	48.00
0484	AMMETER, Round Pattern, Scale 25-0-75, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270	50.00

Order by NUMBER and NAME Appearing in Large Type.

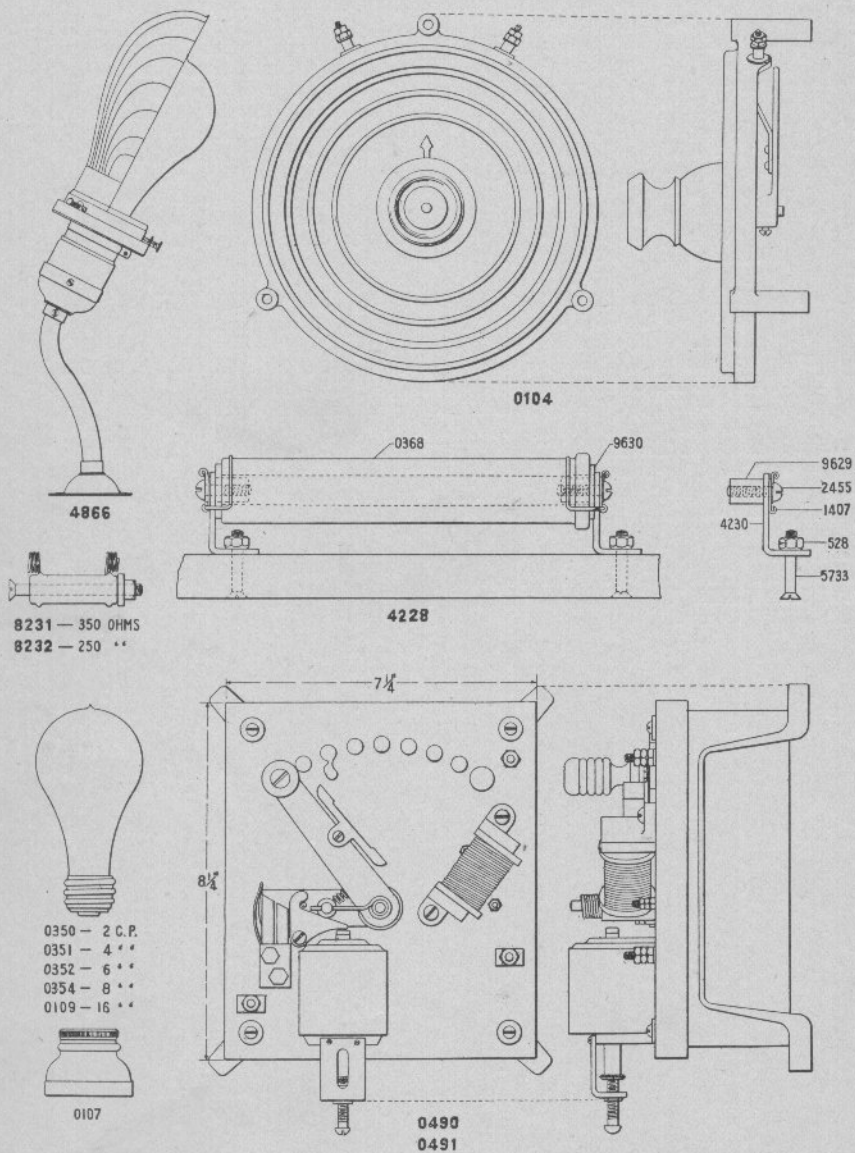
POWER APPARATUS.

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Order No.	AMMETERS, VOLTMETER, ETC.	List Price.
0485	AMMETER, Round Pattern, Scale 0-25, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270.	47.50
0486	AMMETER, Round Pattern, Scale 0-50, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270.	48.00
0487	AMMETER, Round Pattern, Scale 0-75, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270.	49.00
0488	AMMETER, Round Pattern, Scale 10-0-25, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270.	47.50
0489	AMMETER, Illuminated Dial, Scale 0-75, adapted for use with External Shunts 0315, which are extra. In ordering give number of Shunts required; also length of Connecting Cords. For description see page 270.	142.50
506	BRASS WASHER for $\frac{1}{4}$ " Screw.	.01
2911	SCREW WITH NUT AND WASHER for fastening Lamp Bracket to Switch Boards.	.08
2912	SCREW WITH NUT AND WASHER for fastening Instruments to Switch Boards.	.10
2913	SCREW WITH NUT AND WASHER for fastening Rheostat to Switch Boards.	.12
7395	BRASS NUT, Thin, for $\frac{1}{4}$ " Screw.	.03
10218	CONTACT SPRING for 10247.	.30
10219	CONTACT SPRING for 10247.	.30
10247	AMMETER JACK Complete. See description, page 270.	5.00
10248	PLUG Complete, for use with 10247.	3.00

POWER APPARATUS.

RHEOSTATS, RESISTANCE UNITS, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order
No.

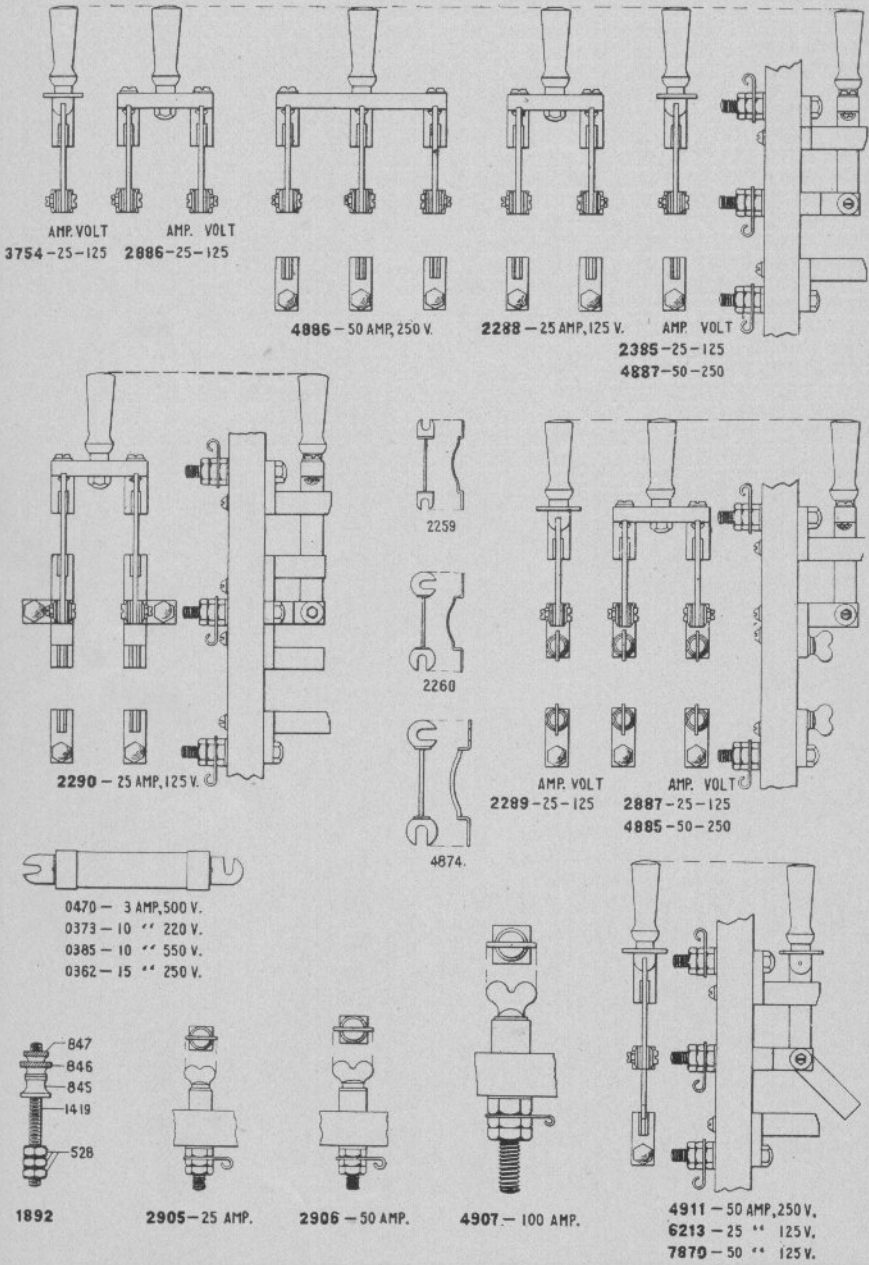
RHEOSTATS, RESISTANCE UNITS, ETC.—CONT.

List Price.

0101	RHEOSTAT for 1 or 2 K. W. Generators.....	
0107	SOCKET for various Lamps.....	
0109	LAMP, 16 C. P., 110 Volts.....	
0350	LAMP, 2 C. P., 110 Volts.....	
0351	LAMP, 4 C. P., 110 Volts.....	
0352	LAMP, 6 C. P., 110 Volts.....	
0354	LAMP, 8 C. P., 110 Volts.....	
0368	RESISTANCE UNIT, 60 ohms.....	1.44
0490	MOTOR STARTER, from 1 to 3 H. P. In ordering, specify voltage..	
0491	MOTOR STARTER, for 5 H. P. In ordering, specify voltage.....	
528	BRASS NUT for $\frac{1}{4}$ " Screw.....	.02
1407	WIRE TERMINAL for $\frac{1}{4}$ " Screw.....	.05
2455	IRON SCREW, $\frac{1}{4}$ " x 1", R. H.....	.02
4228	RESISTANCE UNIT Complete, 60 ohms.....	4.00
4230	BRACKET for 4228.....	.40
4866	LAMP BRACKET Complete with Shield. Used on various Switch Boards.....	
5733	SCREW for fastening 4228 to Switch Boards.....	.04
8231	RESISTANCE UNIT, 350 ohms, complete for mounting to Switch Board.....	.80
8232	RESISTANCE UNIT, 250 ohms, complete for mounting to Switch Board.....	.80
9629	BUSHING for 4228.....	.40
9630	ASBESTOS WASHER for 4228.....	.02

Order by NUMBER and NAME Appearing in Large Type.

KNIFE SWITCHES, FUSES, POSTS, ETC.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

POWER APPARATUS.

277

Order
No.

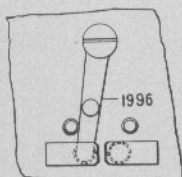
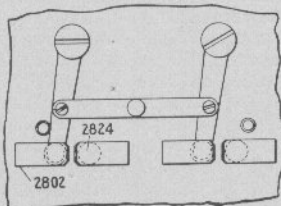
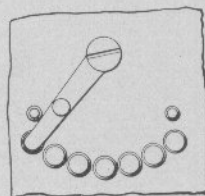
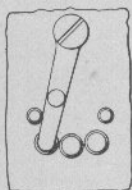
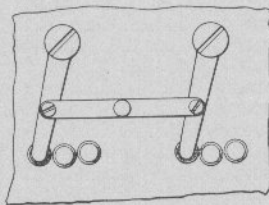
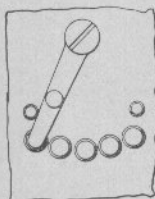
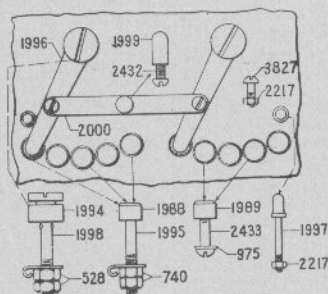
KNIFE SWITCHES, FUSES, POSTS, ETC.

List Price.

0362	ENCLOSED FUSE, 15 Amperes, 250 Volts.....	.50
0373	ENCLOSED FUSE, 10 Amperes, 220 Volts.....	.50
0385	ENCLOSED FUSE, 10 Amperes, 550 Volts.....	.50
0470	ENCLOSED FUSE, 3 Amperes, 500 Volts.....	.50
528	BRASS NUT for $\frac{1}{4}$ " Screw.....	.02
845	BASE for Binding Post 1892.....	.08
846	THUMB NUT for Binding Post 1892.....	.06
847	LOCK NUT for Binding Post 1892.....	.05
1419	SCREW for Binding Post 1892.....	.08
1892	BINDING POST Complete.....	.30
2259	FUSE, 10, 15, 20 or 30 Amperes, as specified.....	.10
2260	FUSE, 40, 50 or 60 Amperes, as specified.....	.10
2288	KNIFE SWITCH, 25 Amperes, D. P. D. T.....	
2289	KNIFE SWITCH, 25 Amperes, S. P. S. T., with Fuse Extension.....	
2290	KNIFE SWITCH, 25 Amperes, D. P. S. T., with extra Binding Post at Hinge.....	
2385	KNIFE SWITCH, 25 Amperes, S. P. D. T.....	
2886	KNIFE SWITCH, 25 Amperes, D. P. S. T.....	
2887	KNIFE SWITCH, 25 Amperes, D. P. S. T., with Fuse Extension.....	
2905	FUSE POST, 25 Amperes.....	.50
2906	FUSE POST, 50 Amperes.....	.80
3754	KNIFE SWITCH, 25 Amperes, S. P. S. T.....	
4874	FUSE, 60, 75 or 90 Amperes.....	.16
4885	KNIFE SWITCH, 50 Amperes, D. P. S. T., with Fuse Extension.....	
4886	KNIFE SWITCH, 50 Amperes, T. P. D. T., Single Break.....	
4887	KNIFE SWITCH, 50 Amperes, S. P. D. T.....	
4907	FUSE POST, 100 Amperes.....	1.50
4911	KNIFE SWITCH, 50 Amperes, 250 Volts, S. P. D. T. To make before break.....	
6213	KNIFE SWITCH, 25 Amperes, 125 Volts, S. P. D. T. To make before break.....	
7870	KNIFE SWITCH, 50 Amperes, 125 Volts, S. P. D. T. To make before break.....	

Order by NUMBER and NAME Appearing in Large Type.

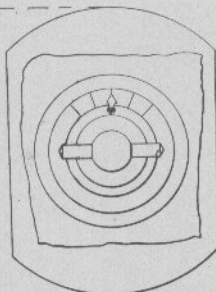
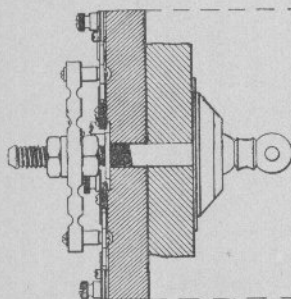
AMMETER AND VOLTMETER SWITCHES.

**3212****2800****4308****1981****1983****1982****1984**

1893



1408



1407



5080

5081

0349 - 4 CIRCUITS.**0341** - 5 " " "**0212** - 6 " " "

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

POWER APPARATUS.

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Order
No.

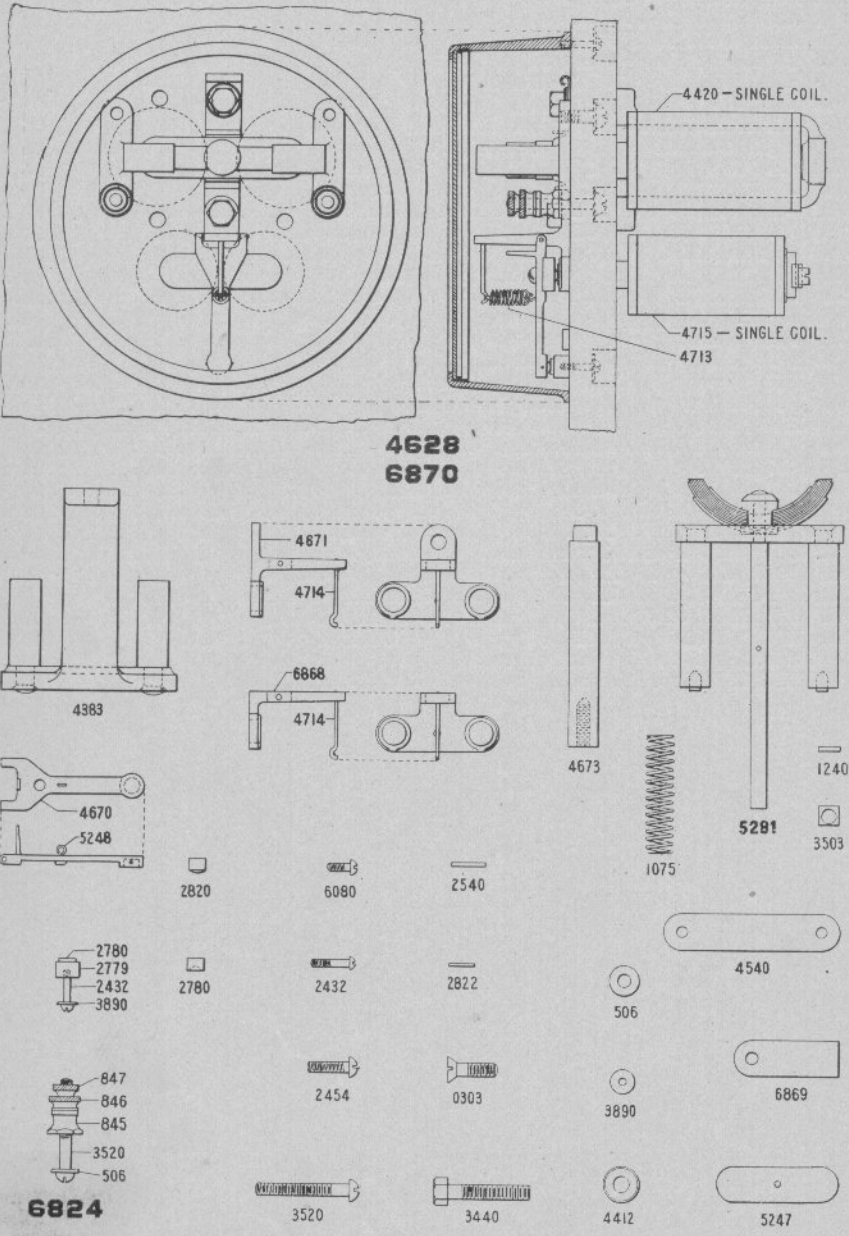
AMMETER AND VOLTMETER SWITCHES.

List Price.

0212	AMMETER SWITCH, Double Pole, 6 Circuits.....	
0341	AMMETER SWITCH, Double Pole, 5 Circuits.....	
0349	AMMETER SWITCH, Double Pole, 4 Circuits.....	
528	BRASS NUT for $\frac{1}{4}$ " Screw.....	.02
740	BRASS NUT for No. 12 Screw.....	.04
975	BRASS WASHER for No. 8 Screw.....	.01
1407	WIRE TERMINAL for $\frac{1}{4}$ " Screw.....	.05
1408	WIRE TERMINAL for $\frac{3}{8}$ " Screw.....	.05
1893	BINDING POST TERMINAL for No. 12 Wire.....	.05
1981	VOLTMETER SWITCH, Single Pole, 2 Circuits.....	3.00
1982	VOLTMETER SWITCH, Single Pole, 3 Circuits.....	3.70
1983	VOLTMETER SWITCH, Double Pole, 2 Circuits.....	5.50
1984	VOLTMETER SWITCH, Double Pole, 3 Circuits.....	7.00
1988	CONTACT for various Voltmeter Switches.....	.20
1989	INSULATED CONTACT for various Voltmeter Switches.....	.20
1994	WASHER for various Voltmeter Switches.....	.16
1995	SCREW for various Voltmeter Switches.....	.10
1996	LEVER for various Voltmeter Switches.....	.50
1997	STOP for various Voltmeter Switches.....	.30
1998	STUD for various Voltmeter Switches.....	.50
1999	HANDLE for various Voltmeter Switches.....	.40
2000	CROSS BAR for Double Pole Voltmeter Switches.....	1.00
2217	BRASS NUT for No. 8 Screw.....	.04
2432	BRASS SCREW, No. 8 x $\frac{3}{4}$ ", Round Head.....	.02
2433	BRASS SCREW, No. 8 x $\frac{1}{2}$ ", R. H.....	.02
2800	AMMETER SWITCH, Double Pole, 2 Circuits.....	7.50
2802	CONTACT SPRING for 2800.....	.40
2824	CONTACT for 2800.....	.20
3212	AMMETER SWITCH, Single Pole, 2 Circuits.....	4.00
3827	BRASS SCREW, No. 8 x $\frac{1}{2}$ ".....	.02
4308	VOLTMETER SWITCH, Single Pole, 4 Circuits.....	4.40
5080	TERMINAL for $\frac{1}{2}$ " Binding Post.....	.10
5081	TERMINAL for $\frac{3}{8}$ " Binding Post.....	.10

Order by NUMBER and NAME Appearing in Large Type.

CIRCUIT BREAKER RELAY. MODEL 4.



Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

POWER APPARATUS.

281

Order
No.

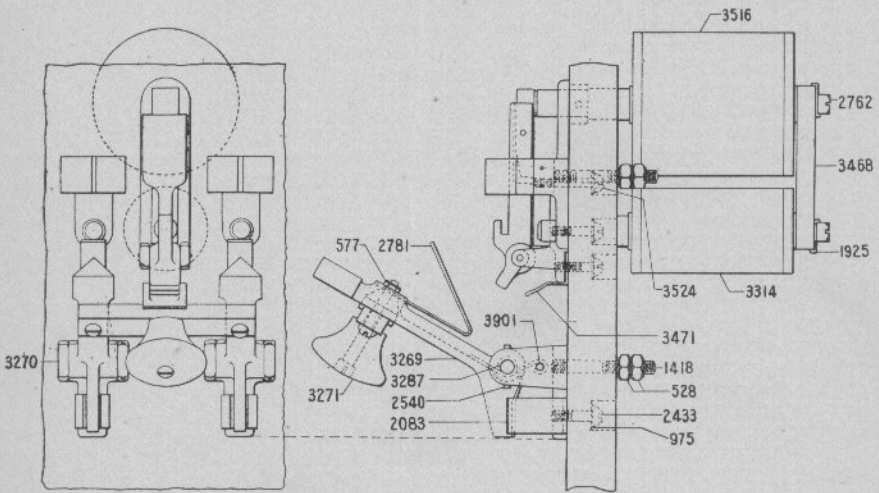
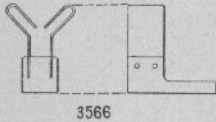
CIRCUIT BREAKER RELAY. MODEL 4.

List Price.

0303	SCREW, $\frac{5}{16}$ " x 1", Flat Head.....	.03	..*
506	BRASS WASHER for $\frac{1}{4}$ " Screw.....	.01	..
845	BASE for $\frac{1}{4}$ " Binding Post.....	.08	..
846	THUMB NUT for $\frac{1}{4}$ " Binding Post.....	.06	..
847	LOCK NUT for $\frac{1}{4}$ " Binding Post.....	.05	..
1075	SPRING for Relays 4628 or 6870.....	.10	..
1240	PIN holding 3503 to 5281.....	.05	..
2432	BRASS SCREW, No. 8 x $\frac{3}{4}$ ", Round Head.....	.02	..
2454	BRASS SCREW, $\frac{1}{4}$ " x $\frac{7}{8}$ ", Round Head.....	.03	..
2540	PIN, $\frac{3}{16}$ " x $\frac{3}{8}$ ", for 4628 or 6870.....	.02	..
2779	HOLDER for Carbon Contact for 4628 or 6870.....	.20	..
2780	LOWER CARBON CONTACT for 4628 or 6870.....	.30	..
2820	UPPER CARBON CONTACT for 4628 or 6870.....	.40	..
2822	BRASS PIN, $\frac{1}{16}$ ", for 4628.....	.02	..
3440	CAP SCREW, $\frac{5}{16}$ " x $1\frac{1}{2}$ " Hex. Hd.....	.04	..
3503	COLLAR used on 5281 for 4628 or 6870.....	.10	..
3520	BRASS SCREW, $\frac{1}{4}$ " x 2", Round Head.....	.08	..
3890	BRASS WASHER for No. 8 Screw.....	.01	..
4383	BACK YOKE Complete for 4628 or 6870.....	5.00	..
4412	SPECIAL WASHER for $\frac{5}{16}$ " Screw.....	.06	..
4420	SINGLE MAGNET COIL Complete, Operating Coil for 4628 or 6870..	7.00	..
4540	FLEXIBLE LINK for 4628.....	.20	..
4628	CIRCUIT BREAKER RELAY Complete (Model 4), used in connection with Differential Circuit Breakers 3268.....	60.00	..
4670	LEVER Only for 4628.....	2.00	..
4671	BASE for 4628.....	2.00	..
4673	CORE for 4628 or 6870.....	.80	..
4713	SPRING, Lever Retaining, for 4628 or 6870.....	.20	..
4714	HOOK for Spring for 4628 or 6870.....	.24	..
4715	SINGLE MAGNET COIL Complete. Actuating Coil for 4628 or 6870	5.00	..
5247	ARMATURE for 4628 or 6870.....	1.00	..
5248	EYE for 4670, for holding Spring 4713.....	.10	..
5281	BRUSH CONTACT with Yoke and Core Complete, for 4628 or 6870..	12.00	..
6080	IRON SCREW, No. 10 x $\frac{1}{2}$ ", Round Head (Blued).....	.02	..
6824	BINDING POST Complete for 4628.....	.30	..
6868	BASE for 6870.....	2.00	..
6869	FLEXIBLE LINK for 6870.....	.20	..
6870	CIRCUIT BREAKER RELAY Complete (Model 4), used in connection with Polarized Relay 4931.....	60.00	..

Order by NUMBER and NAME Appearing in Large Type.

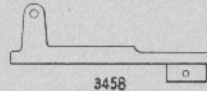
SWITCH BOARD CIRCUIT BREAKERS.

**3268**

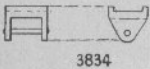
3566



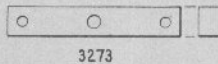
3276



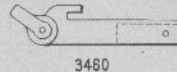
3458



3834



3273



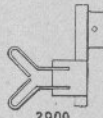
3460



2779



2780



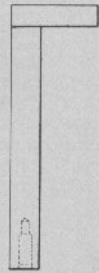
2909



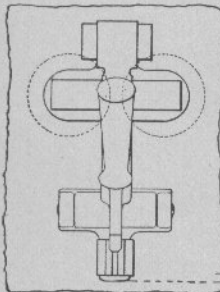
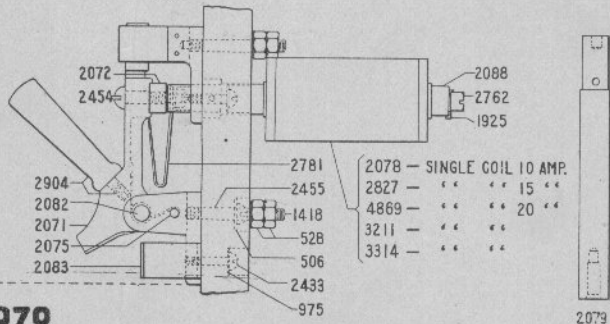
1144



3465



3833

**2070**

2078 - SINGLE COIL 10 AMP.
 2827 - " " 15 "
 4869 - " " 20 "
 3211 - " " "
 3314 - " " "

2079

Numbers Appearing on Castings are not Order Numbers. See pages 306 to 311.

Order No.	SWITCH BOARD CIRCUIT BREAKERS.	List Price.
506	BRASS WASHER for $\frac{1}{4}$ " Screw.....	.01
528	BRASS NUT for $\frac{1}{4}$ " Screw.....	.02
577	BRASS NUT for No. 10 Screw.....	.02
975	BRASS WASHER for No. 8 Screw.....	.01
1144	PIN, $\frac{1}{8}$ " x $1\frac{1}{8}$ ".....	.04
1418	$\frac{1}{4}$ " BRASS STUD for Binding Posts.....	.08
1925	LOCK WASHER for $\frac{1}{4}$ " Screw.....	.01
2070	UNDERLOAD CIRCUIT BREAKER, Single Pole, Complete. See note	30.00

NOTE.—In ordering, specify Coils as follows:

For 10 Ampere Underload Breakers order two Coils 2078.

For 15 Ampere Underload Breakers order two Coils 2827.

For 20 Ampere Underload Breakers order two Coils 4869.

For 10 Ampere Differential Breakers order one Coil 2078 and one Coil 3211.

For 15 Ampere Differential Breakers order one Coil 2827 and one Coil 3211.

For 20 Ampere Differential Breakers order one Coil 4869 and one Coil 3211.

When used in connection with Polarized Relays use two Coils 3314.

NOTE.—The underload circuit breakers open before the current reaches zero.

The differential circuit breakers open only after the current passes zero and starts to reverse.

2071	ARM for 2070.....	2.20
2072	ARMATURE for 2070.....	.80
2075	STOP PIN for 2070.....	.10
2078	SINGLE MAGNET COIL, 10 Amperes, for 2070.....	5.00
2079	CORE for Magnets, for 2070.....	.80
2082	PIN for Supporting Arm, for 2070.....	.06
2083	STOP SPRING for 2070.....	1.00
2088	YOKE for Magnets, for 2070.....	.80
2433	IRON SCREW, No. 8 x $\frac{7}{8}$ ", for 2070 or 3268.....	.02
2454	BRASS SCREW, $\frac{1}{4}$ " x $\frac{7}{8}$ ", for 2070.....	.03
2455	IRON SCREW, $\frac{1}{4}$ " x 1", for 2070.....	.02
2540	PIN for 3268.....	.02
2762	CAP SCREW, $\frac{1}{4}$ " x $\frac{3}{4}$ ", Sq. Hd.....	.06
2779	HOLDER for Carbon Contact, for 2070.....	.20
2780	CARBON CONTACT for 2070.....	.30
2781	AUXILIARY CONTACT SPRING for 2070 or 3268.....	.40
2827	SINGLE MAGNET COIL, 15 Amperes, for 2070.....	5.00
2904	HANDLE with Screw, for 2070.....	.70
2909	CONTACT BLOCK Complete, for 2070.....	2.50
3211	SINGLE MAGNET COIL, Retaining Coil for 2070, resistance 1500 ohms	7.00
3268	CIRCUIT BREAKER Complete, Double Pole, Differential.....	50.00
3269	ARM for 3268.....	1.50
3270	BASE for 3268.....	1.00
3271	HANDLE for 3268.....	.60
3273	BAR for Handle, for 3268.....	2.00
3276	OPERATING SPRING for 2070 or 3268.....	.20
3287	PIN for Supporting Arm, for 3268.....	.20
3314	SINGLE MAGNET COIL, used as Retaining Coil for 3268; also for 2070, when Polarized Relays are used. Resistance 1500 ohms..	7.00
3458	YOKE for 3268.....	2.00

Order by NUMBER and NAME Appearing in Large Type.

POWER APPARATUS.

Order
No.

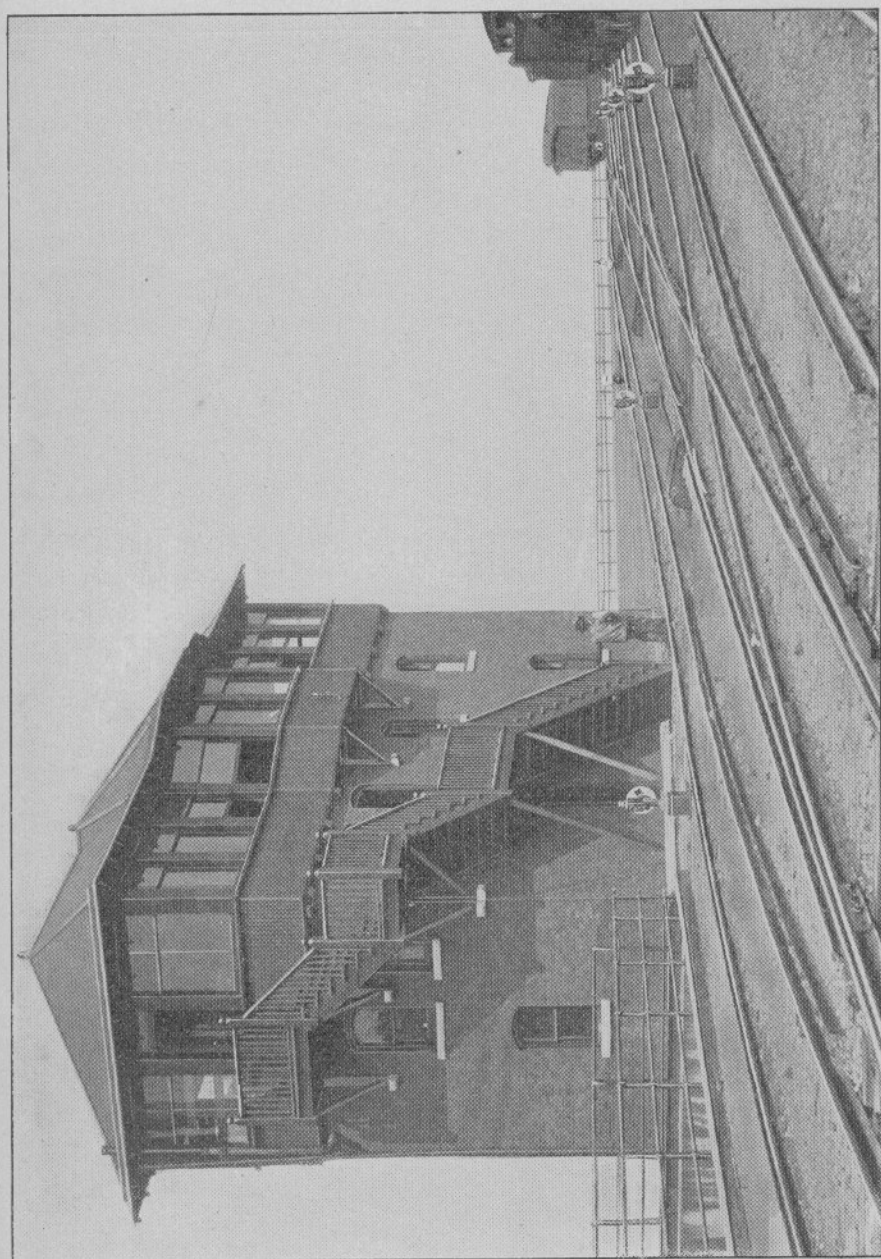
SWITCH BOARD CIRCUIT BREAKERS.

List Price.

3460	ARMATURE HOLDER for 3268.....	2.00	....
3465	ARMATURE for 3268.....	.60	....
3468	MAGNET YOKE for 3268.....	.80	....
3471	STOP SPRING for 3268.....	.20	....
3516	SINGLE MAGNET COIL for 3268.....	8.00	....
3524	BRASS SCREW, No. 8 x 1 $\frac{1}{4}$ " Rd Hd.....	.02	....
3566	CONTACT BLOCK Complete for 3268.....	2.00	....
3833	CORE AND POLE PIECE Complete for 3268.....	1.30	....
3834	HOLDER Complete for 3268.....	.50	....
3901	SPRING, Retaining Pin, for 3268.....	.10	....
4869	SINGLE MAGNET COIL, 20 Amperes, for 2070.....	5.00

Order by NUMBER and NAME Appearing in Large Type.

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EXTERIOR VIEW OF TOWER AT LA SALLE STREET, CHICAGO

As towers and buildings for the accommodation of Interlocking Machines and Power Apparatus are usually built upon specification, we have not attempted to show details of any particular design of such buildings.

We will, however, take pleasure in furnishing estimates for any style of tower or power building upon application accompanied by detail plans and specifications.

On the opposite page is a view of the exterior of a tower erected for the L. S. & M. S. Railroad at La Salle Street, Chicago.

Below we give a list of various sizes of tower most commonly used. Should any other size be required, the dimensions may be determined by multiplying the number of lever spaces in the interlocking machine by two inches and adding the required amount of clearance space between the ends of machine and walls of building.

SIZES OF TOWERS.

<i>For Machines.</i>	<i>Width.</i>	<i>Length.</i>
8 to 40 Spaces	12 ft.	12 ft.
44 " 60 "	12 "	15 "
64 " 70 "	12 "	17 "
76 " 84 "	12 "	19 "
88 " 104 "	12 "	22 "
108 " 132 "	12 "	27 "
136 " 152 "	12 "	30 "

In the above list $2\frac{1}{2}$ feet has been assumed as the clearance space at each end of machine.

On the following pages will be found lists of various sizes of Commercial Bolts, Screws, Lag Screws, Cotter Pins, Rivets, etc., used in connection with Electric Interlocking Devices, to which our order numbers have been assigned.

SQUARE HEAD MACHINE BOLTS WITH NUTS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0300	$\frac{1}{4}$ " x $\frac{5}{8}$ "	0185	$\frac{1}{2}$ " x 5"	0269	$\frac{5}{8}$ " x 13"
0134	$\frac{1}{4}$ " x $\frac{3}{4}$ "	0192	$\frac{1}{2}$ " x $5\frac{1}{2}$ "	0130	$\frac{5}{8}$ " x $14\frac{1}{2}$ "
0232	$\frac{1}{4}$ " x $\frac{7}{8}$ "	013	$\frac{1}{2}$ " x 6"	0271	$\frac{5}{8}$ " x $1\frac{1}{2}$ "
02	$\frac{1}{4}$ " x 1"	014	$\frac{1}{2}$ " x $6\frac{1}{2}$ "	020	$\frac{5}{8}$ " x 2"
05	$\frac{1}{4}$ " x $1\frac{1}{4}$ "	015	$\frac{1}{2}$ " x 7"	024	$\frac{5}{8}$ " x $2\frac{1}{4}$ "
03	$\frac{1}{4}$ " x $1\frac{1}{2}$ "	016	$\frac{1}{2}$ " x $7\frac{1}{2}$ "	0299	$\frac{5}{8}$ " x $2\frac{3}{4}$ "
04	$\frac{1}{4}$ " x $1\frac{3}{4}$ "	017	$\frac{1}{2}$ " x 8"	0314	$\frac{5}{8}$ " x $3\frac{1}{4}$ "
0256	$\frac{1}{4}$ " x 2"	0117	$\frac{1}{2}$ " x 9"	0276	$\frac{5}{8}$ " x $3\frac{3}{4}$ "
0258	$\frac{1}{4}$ " x $2\frac{1}{4}$ "	0190	$\frac{1}{2}$ " x $9\frac{1}{2}$ "	0404	$\frac{5}{8}$ " x 4"
0343	$\frac{1}{4}$ " x $2\frac{1}{2}$ "	0194	$\frac{1}{2}$ " x 10"	0193	$\frac{5}{8}$ " x $4\frac{1}{2}$ "
0257	$\frac{1}{4}$ " x $2\frac{3}{4}$ "	0118	$\frac{1}{2}$ " x 12"	0162	$\frac{5}{8}$ " x 5"
0196	$\frac{5}{16}$ " x 5"	0369	$\frac{1}{2}$ " x 13"	0163	$\frac{5}{8}$ " x $5\frac{1}{2}$ "
06	$\frac{3}{8}$ " x 1"	0119	$\frac{1}{2}$ " x 14"	022	$\frac{5}{8}$ " x 6"
07	$\frac{3}{8}$ " x $1\frac{1}{4}$ "	0233	$\frac{1}{2}$ " x $1\frac{1}{2}$ "	023	$\frac{5}{8}$ " x $6\frac{1}{2}$ "
0175	$\frac{3}{8}$ " x $1\frac{1}{2}$ "	0322	$\frac{1}{2}$ " x 16"	0278	$\frac{5}{8}$ " x 7"
0291	$\frac{3}{8}$ " x $1\frac{3}{4}$ "	090	$\frac{1}{2}$ " x $1\frac{3}{4}$ "	0214	$\frac{5}{8}$ " x $7\frac{1}{2}$ "
08	$\frac{3}{8}$ " x 2"	0161	$\frac{1}{2}$ " x 2"	0427	$\frac{5}{8}$ " x 8"
0238	$\frac{3}{8}$ " x 3"	0419	$\frac{1}{2}$ " x $2\frac{1}{4}$ "	0227	$\frac{5}{8}$ " x $8\frac{1}{2}$ "
0435	$\frac{3}{8}$ " x 4"	0149	$\frac{1}{2}$ " x $2\frac{1}{2}$ "	0133	$\frac{5}{8}$ " x 9"
09	$\frac{3}{8}$ " x 1"	0195	$\frac{1}{2}$ " x 3"	0151	$\frac{5}{8}$ " x 10"
077	$\frac{3}{8}$ " x $1\frac{1}{4}$ "	0126	$\frac{1}{2}$ " x $3\frac{1}{2}$ "	0437	$\frac{5}{8}$ " x 11"
010	$\frac{3}{8}$ " x $1\frac{1}{2}$ "	018	$\frac{1}{2}$ " x 4"	0180	$\frac{5}{8}$ " x 12"
0390	$\frac{3}{8}$ " x $1\frac{3}{4}$ "	0211	$\frac{1}{2}$ " x $4\frac{1}{4}$ "	0131	$\frac{5}{8}$ " x 13"
011	$\frac{3}{8}$ " x 2"	019	$\frac{1}{2}$ " x $4\frac{1}{2}$ "	0181	$\frac{5}{8}$ " x 14"
0136	$\frac{3}{8}$ " x $2\frac{1}{4}$ "	0366	$\frac{1}{2}$ " x 5"	0153	$\frac{5}{8}$ " x $14\frac{1}{2}$ "
012	$\frac{3}{8}$ " x $2\frac{1}{2}$ "	0216	$\frac{1}{2}$ " x 6"	0333	$\frac{5}{8}$ " x 15"
0242	$\frac{3}{8}$ " x 3"	0208	$\frac{1}{2}$ " x 7"	0152	$\frac{5}{8}$ " x 20"
098	$\frac{3}{8}$ " x $3\frac{1}{4}$ "	0219	$\frac{1}{2}$ " x 8"	0132	$\frac{5}{8}$ " x 22"
0150	$\frac{3}{8}$ " x 4"	0135	$\frac{1}{2}$ " x 9"	0425	$\frac{5}{8}$ " x 5"
0191	$\frac{3}{8}$ " x $4\frac{1}{2}$ "	086	$\frac{1}{2}$ " x 12"	0202	$\frac{1}{2}$ " x 12"

SQUARE HEAD MACHINE BOLTS WITH HEX. NUTS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0522	$\frac{1}{2}$ " x $1\frac{3}{4}$ "	0525	$\frac{1}{2}$ " x $2\frac{3}{4}$ "	0502	$\frac{5}{8}$ " x $3\frac{1}{4}$ "
0524	$\frac{1}{2}$ " x 2"	0127	$\frac{1}{2}$ " x $2\frac{1}{2}$ "	0432	$\frac{5}{8}$ " x $2\frac{3}{4}$ "
092	$\frac{1}{2}$ " x $2\frac{1}{2}$ "	0501	$\frac{5}{8}$ " x $2\frac{1}{2}$ "	0412	$\frac{5}{8}$ " x $3\frac{1}{2}$ "

HEX. HEAD MACHINE BOLTS WITH NUTS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0512	$\frac{1}{4}$ " x $1\frac{1}{2}$ "	081	$\frac{3}{8}$ " x $1\frac{1}{2}$ "	0519	$\frac{1}{2}$ " x $3\frac{3}{4}$ "
0102	$\frac{5}{16}$ " x 1"	0521	$\frac{3}{8}$ " x 2"	0451	$\frac{1}{2}$ " x $2\frac{3}{4}$ "
0101	$\frac{5}{16}$ " x $1\frac{3}{4}$ "	078	$\frac{3}{8}$ " x $1\frac{1}{2}$ "	0283	$\frac{1}{2}$ " x 3"
0532	$\frac{5}{16}$ " x $2\frac{1}{2}$ "	076	$\frac{3}{8}$ " x $2\frac{1}{2}$ "		

BOLTS, SCREWS, COTTER PINS, ETC.

HEX. HEAD TAP BOLTS

Order No.	Size.	Order No.	Size.	Order No.	Size.
0511	$\frac{1}{4}" \times \frac{7}{8}"$	0526	$\frac{3}{8}" \times 1\frac{1}{8}"$	0520	$\frac{1}{2}" \times 3"$
0455	$\frac{5}{16}" \times 3"$	0391	$\frac{1}{2}" \times 1"$	0528	$\frac{3}{8}" \times 1\frac{1}{8}"$
0398	$\frac{5}{8}" \times \frac{3}{4}"$	0551	$\frac{3}{4}" \times 1\frac{1}{2}"$	0503	$\frac{3}{8}" \times 1\frac{1}{2}"$

COUNTERSUNK HEAD BOLTS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0255	$\frac{1}{4}" \times \frac{3}{4}"$	0346	$\frac{3}{8}" \times 2"$	021	$\frac{3}{8}" \times 2\frac{1}{2}"$
0261	$\frac{1}{2}" \times 1\frac{3}{4}"$	0128	$\frac{3}{8}" \times 1\frac{1}{2}"$	0448	$\frac{1}{2}" \times 3\frac{1}{4}"$
0531	$\frac{5}{8}" \times 1\frac{1}{4}"$	0296	$\frac{3}{8}" \times 2"$		
0260	$\frac{5}{8}" \times 1\frac{3}{4}"$	0537	$\frac{3}{4}" \times 2\frac{1}{4}"$		

HEX. HEAD CAP SCREWS

Order No.	Size.	Order No.	Size.	Order No.	Size.
0321	$\frac{1}{4}" \times 1\frac{1}{4}"$	4814	$\frac{1}{4}" \times 1\frac{1}{8}"$	6768	$\frac{5}{8}" \times 1\frac{3}{4}"$
3439	$\frac{5}{16}" \times 1"$	5255	$\frac{1}{2}" \times 1\frac{1}{4}"$	6007	$\frac{5}{8}" \times 2"$
2878	$\frac{5}{16}" \times 1\frac{1}{2}"$	2818	$\frac{1}{2}" \times 1\frac{1}{2}"$	2890	$\frac{5}{8}" \times 2\frac{1}{2}"$
3440	$\frac{5}{16}" \times 1\frac{3}{4}"$	5221	$\frac{1}{2}" \times 1\frac{3}{4}"$	4811	$\frac{657}{8}" \times 2\frac{1}{2}"$
5048	$\frac{5}{16}" \times 2\frac{1}{2}"$	3343	$\frac{1}{2}" \times 2"$	2521	$\frac{5}{8}" \times 3\frac{1}{8}"$
6170	$\frac{5}{16}" \times 1"$	5190	$\frac{1}{2}" \times 2\frac{1}{2}"$	6014	$\frac{5}{8}" \times 2"$
2472	$\frac{3}{8}" \times 1\frac{1}{4}"$	3065	$\frac{1}{2}" \times 2\frac{1}{2}"$	6013	$\frac{5}{8}" \times 2\frac{1}{4}"$
6376	$\frac{3}{8}" \times 1\frac{1}{2}"$	6006	$\frac{3}{8}" \times \frac{3}{4}"$	6015	$\frac{5}{8}" \times 2\frac{1}{2}"$
0280	$\frac{3}{8}" \times 2\frac{1}{8}"$	6601	$\frac{3}{8}" \times 1\frac{1}{2}"$		
0281	$\frac{3}{8}" \times 4\frac{3}{8}"$	2891	$\frac{3}{8}" \times 1\frac{1}{2}"$		

SQUARE HEAD CAP SCREWS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
4780	No. 10 $\times \frac{5}{16}"$	2461	$\frac{5}{16}" \times 1\frac{1}{2}"$	2481	$\frac{1}{2}" \times 1\frac{1}{4}"$
6821	No. 10 $\times 1\frac{3}{8}"$	2469	$\frac{3}{8}" \times \frac{3}{4}"$	4965	$\frac{1}{2}" \times 1\frac{1}{2}"$
3144	$\frac{1}{4}" \times \frac{5}{8}"$	2471	$\frac{3}{8}" \times 1"$	3259	$\frac{1}{2}" \times 2"$
2762	$\frac{1}{4}" \times \frac{3}{8}"$	4555	$\frac{3}{8}" \times 1\frac{1}{2}"$	3056	$\frac{3}{8}" \times 3\frac{1}{4}"$
2447	$\frac{1}{4}" \times \frac{7}{8}"$	1762	$\frac{3}{8}" \times 1\frac{3}{4}"$	2483	$\frac{3}{8}" \times 2\frac{1}{2}"$
3029	$\frac{1}{4}" \times 1"$	2476	$\frac{3}{8}" \times 2\frac{1}{2}"$	2484	$\frac{3}{8}" \times 2\frac{3}{4}"$
3034	$\frac{1}{4}" \times 1\frac{1}{4}"$	1761	$\frac{3}{8}" \times 3"$	4693	$\frac{3}{8}" \times 3"$
2457	$\frac{5}{16}" \times \frac{3}{4}"$	2894	$\frac{3}{8}" \times 4\frac{1}{2}"$	2485	$\frac{3}{8}" \times 3\frac{1}{4}"$
1104	$\frac{5}{16}" \times 1"$	2478	$\frac{1}{2}" \times \frac{3}{4}"$		
2458	$\frac{5}{16}" \times 1\frac{1}{4}"$	2479	$\frac{1}{2}" \times 1"$		

Order by NUMBER and NAME Appearing in Large Type.

ROUND HEAD IRON MACHINE SCREWS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
3790	No. 3 x $\frac{1}{8}$ "	628	No. 10 x $\frac{3}{4}$ "	0516	No. 14 x $1\frac{1}{8}$ "
2519	No. 4 x $\frac{1}{8}$ "	3044	No. 10 x $1\frac{1}{8}$ "	3955	$\frac{1}{8}$ " x $\frac{1}{4}$ "
2426	No. 6 x $\frac{1}{4}$ "	0454	No. 10 x $1\frac{1}{4}$ "	2450	$\frac{1}{4}$ " x $\frac{9}{16}$ "
2552	No. 6 x $\frac{1}{2}$ "	2556	No. 12 x $\frac{1}{8}$ "	2451	$\frac{1}{4}$ " x $\frac{5}{8}$ "
4952	No. 6 x $\frac{3}{4}$ "	2440	No. 12 x $\frac{3}{4}$ "	2452	$\frac{1}{4}$ " x $\frac{3}{4}$ "
2427	No. 8 x $\frac{5}{16}$ "	2441	No. 12 x $\frac{1}{2}$ "	2455	$\frac{1}{4}$ " x $1\frac{1}{8}$ "
2429	No. 8 x $\frac{7}{16}$ "	2442	No. 12 x $1\frac{1}{8}$ "	0320	$\frac{1}{4}$ " x $1\frac{1}{8}$ "
2430	No. 8 x $\frac{1}{2}$ "	2169	No. 12 x $1\frac{1}{4}$ "	3357	$\frac{1}{4}$ " x $1\frac{1}{4}$ "
2431	No. 8 x $\frac{3}{4}$ "	1410	No. 12 x $1\frac{1}{2}$ "	2555	$\frac{1}{4}$ " x $1\frac{3}{8}$ "
2433	No. 8 x $\frac{7}{8}$ "	2444	No. 12 x $2\frac{1}{8}$ "	2464	$\frac{5}{16}$ " x $1\frac{1}{8}$ "
3523	No. 8 x $1\frac{1}{8}$ "	2170	No. 12 x $2\frac{1}{4}$ "	2317	$\frac{5}{16}$ " x $1\frac{1}{8}$ "
2434	No. 10 x $\frac{1}{4}$ "	2830	No. 12 x $2\frac{1}{2}$ "	2486	$\frac{5}{16}$ " x $1\frac{1}{4}$ "
2435	No. 10 x $\frac{1}{2}$ "	2831	No. 12 x $3\frac{1}{4}$ "	1584	$\frac{5}{16}$ " x $1\frac{3}{8}$ "
3519	No. 10 x $\frac{3}{4}$ "	0517	No. 14 x $\frac{3}{8}$ "	3084	$\frac{5}{16}$ " x $2\frac{1}{8}$ "
2784	No. 10 x $\frac{7}{8}$ "	0523	No. 14 x $\frac{1}{2}$ "		

FLAT HEAD IRON MACHINE SCREWS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0101	No. 6 x $\frac{1}{4}$ "	2453	$\frac{1}{2}$ " x $\frac{3}{4}$ "	4851	$\frac{3}{8}$ " x $\frac{3}{4}$ "
4909	No. 6 x $\frac{1}{2}$ "	7518	$\frac{1}{4}$ " x $1\frac{1}{8}$ "	2473	$\frac{3}{8}$ " x $1\frac{1}{4}$ "
1366	No. 6 x $\frac{3}{4}$ "	5733	$\frac{1}{4}$ " x $1\frac{1}{2}$ "	5580	$\frac{3}{8}$ " x $1\frac{15}{16}$ "
2437	No. 10 x $\frac{1}{4}$ "	6105	$\frac{1}{4}$ " x $2\frac{1}{8}$ "	2480	$\frac{1}{4}$ " x $1\frac{1}{8}$ "
2439	No. 10 x $\frac{3}{8}$ "	1103	$\frac{5}{16}$ " x $\frac{3}{4}$ "	2983	$\frac{1}{4}$ " x $1\frac{1}{2}$ "
5263	$\frac{1}{4}$ " x $\frac{1}{8}$ "	0303	$\frac{5}{16}$ " x $1\frac{1}{8}$ "		
2559	$\frac{1}{4}$ " x $\frac{3}{8}$ "	2462	$\frac{5}{16}$ " x $1\frac{1}{2}$ "		

FILISTER HEAD IRON MACHINE SCREWS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0325	No. 10 x $\frac{3}{8}$ "	2488	$\frac{1}{4}$ " x $\frac{3}{4}$ "	2474	$\frac{3}{8}$ " x $1\frac{1}{8}$ "
0472	No. 10 x $\frac{1}{2}$ "	2518	$\frac{1}{4}$ " x $1\frac{1}{8}$ "	5191	$\frac{3}{8}$ " x $1\frac{1}{4}$ "
0327	No. 10 x $\frac{3}{4}$ "	3282	$\frac{1}{4}$ " x $1\frac{3}{8}$ "		
3043	No. 10 x $1\frac{1}{8}$ "	7662	$\frac{3}{8}$ " x $\frac{7}{8}$ "		

Order by NUMBER and NAME Appearing in Large Type.

BOLTS, SCREWS, COTTER PINS, ETC.

LAG SCREWS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0541	$\frac{3}{8}$ " x 2"	0566	$\frac{1}{8}$ " x 3 $\frac{1}{2}$ "	068	$\frac{3}{4}$ " x 5"
062	$\frac{3}{8}$ " x 2 $\frac{1}{2}$ "	066	$\frac{1}{8}$ " x 3"	0231	$\frac{3}{4}$ " x 6"
063	$\frac{3}{8}$ " x 2"	0440	$\frac{1}{8}$ " x 3 $\frac{1}{2}$ "	0567	$\frac{3}{4}$ " x 7"
064	$\frac{3}{8}$ " x 2 $\frac{1}{2}$ "	082	$\frac{1}{8}$ " x 4"	0568	$\frac{3}{4}$ " x 8"
065	$\frac{3}{8}$ " x 3"	067	$\frac{1}{8}$ " x 4"		

COMMERCIAL IRON WASHERS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0177	$\frac{3}{16}$ "	072	$\frac{1}{8}$ "	074	1"
069	$\frac{1}{4}$ "	087	$\frac{3}{16}$ "	0381	1 $\frac{1}{4}$ "
070	$\frac{5}{16}$ "	073	$\frac{1}{2}$ "		
071	$\frac{3}{8}$ "	0393	$\frac{3}{4}$ "		

LOCK WASHERS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0510	$\frac{1}{4}$ "	0113	$\frac{5}{8}$ "	0570	1"
0569	$\frac{3}{8}$ "	029	$\frac{3}{4}$ "		
091	$\frac{1}{2}$ "	0426	$\frac{7}{8}$ "		

COTTER PINS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
033	$\frac{3}{32}$ " x $\frac{3}{8}$ "	040	$\frac{1}{8}$ " x 1"	047	$\frac{1}{4}$ " x 1 $\frac{1}{2}$ "
034	$\frac{3}{32}$ " x $\frac{3}{8}$ "	041	$\frac{1}{8}$ " x 1 $\frac{1}{4}$ "	048	$\frac{1}{4}$ " x 1 $\frac{3}{4}$ "
035	$\frac{3}{32}$ " x $\frac{3}{8}$ "	0169	$\frac{1}{8}$ " x 1 $\frac{1}{2}$ "	0446	$\frac{1}{4}$ " x 2"
036	$\frac{3}{32}$ " x $\frac{3}{8}$ "	088	$\frac{3}{16}$ " x $\frac{3}{4}$ "	0213	$\frac{1}{4}$ " x 2 $\frac{1}{2}$ "
0184	$\frac{3}{32}$ " x $\frac{3}{8}$ "	042	$\frac{3}{16}$ " x 1"	049	$\frac{1}{4}$ " x 3"
037	$\frac{3}{32}$ " x 1"	043	$\frac{3}{16}$ " x 1 $\frac{1}{4}$ "	0277	$\frac{1}{4}$ " x 3 $\frac{1}{2}$ "
0156	$\frac{3}{32}$ " x 1 $\frac{1}{4}$ "	044	$\frac{3}{16}$ " x 1 $\frac{1}{2}$ "	050	$\frac{1}{4}$ " x 4"
038	$\frac{3}{16}$ " x $\frac{3}{4}$ "	045	$\frac{3}{16}$ " x 1 $\frac{3}{4}$ "	0273	$\frac{5}{16}$ " x 2"
039	$\frac{1}{8}$ " x $\frac{3}{4}$ "	046	$\frac{3}{16}$ " x 2"	0311	$\frac{3}{8}$ " x 1 $\frac{1}{2}$ "

Order by NUMBER and NAME Appearing in Large Type.

ROUND HEAD IRON RIVETS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0178	$\frac{3}{8}$ " x $\frac{7}{8}$ "	075	$\frac{1}{4}$ " x $1\frac{3}{8}$ "	0347	$\frac{1}{2}$ " x $1\frac{3}{8}$ "
0342	$\frac{1}{8}$ " x $\frac{1}{2}$ "	0574	$\frac{1}{4}$ " x $1\frac{1}{2}$ "	0414	$\frac{1}{2}$ " x $2\frac{1}{2}$ "
055	$\frac{1}{8}$ " x $\frac{3}{4}$ "	0305	$\frac{1}{4}$ " x $1\frac{1}{2}$ "	060	$\frac{5}{8}$ " x $1\frac{1}{8}$ "
056	$\frac{1}{8}$ " x 1 "	080	$\frac{1}{4}$ " x $2\frac{3}{8}$ "	0457	$\frac{5}{8}$ " x $1\frac{1}{4}$ "
057	$\frac{1}{8}$ " x $1\frac{1}{4}$ "	0313	$\frac{5}{16}$ " x $1\frac{3}{8}$ "	0447	$\frac{5}{8}$ " x $2\frac{1}{4}$ "
0361	$\frac{3}{16}$ " x $\frac{3}{16}$ "	0413	$\frac{3}{8}$ " x 1 "	093	$\frac{3}{4}$ " x $1\frac{1}{2}$ "
0203	$\frac{3}{16}$ " x $\frac{3}{8}$ "	0171	$\frac{3}{8}$ " x $1\frac{1}{2}$ "	061	$\frac{3}{4}$ " x $1\frac{3}{4}$ "
0204	$\frac{3}{16}$ " x $\frac{1}{2}$ "	0428	$\frac{3}{8}$ " x $1\frac{1}{2}$ "	0420	$\frac{3}{4}$ " x 2 "
0220	$\frac{3}{16}$ " x $\frac{5}{8}$ "	0360	$\frac{3}{8}$ " x $1\frac{3}{8}$ "	097	$\frac{3}{4}$ " x $2\frac{1}{4}$ "
058	$\frac{3}{16}$ " x $\frac{3}{4}$ "	0207	$\frac{1}{2}$ " x $\frac{3}{4}$ "	0200	$\frac{3}{4}$ " x 3 "
0323	$\frac{3}{16}$ " x $1\frac{1}{2}$ "	0235	$\frac{1}{2}$ " x 1 "	0415	$\frac{3}{4}$ " x $6\frac{1}{4}$ "
0224	$\frac{1}{4}$ " x $\frac{3}{4}$ "	059	$\frac{1}{2}$ " x $1\frac{1}{8}$ "	0416	$\frac{3}{4}$ " x $8\frac{3}{4}$ "
0115	$\frac{1}{4}$ " x $1\frac{1}{4}$ "	0228	$\frac{1}{2}$ " x $1\frac{3}{8}$ "		
0114	$\frac{1}{4}$ " x $1\frac{1}{2}$ "	0450	$\frac{1}{2}$ " x $1\frac{1}{2}$ "		

COUNTERSUNK HEAD IRON RIVETS.

Order No.	Size.	Order No.	Size.	Order No.	Size.
0230	$\frac{1}{8}$ " x $\frac{7}{16}$ "	0218	$\frac{3}{8}$ " x $1\frac{1}{4}$ "	0225	$\frac{5}{8}$ " x $1\frac{1}{8}$ "
0172	$\frac{1}{8}$ " x $\frac{1}{4}$ "	0529	$\frac{1}{2}$ " x 1 "	099	$\frac{3}{4}$ " x $1\frac{1}{2}$ "
0265	$\frac{3}{16}$ " x $\frac{1}{2}$ "	0449	$\frac{1}{2}$ " x $1\frac{1}{4}$ "	0226	$\frac{3}{4}$ " x $1\frac{5}{8}$ "
0166	$\frac{3}{16}$ " x $\frac{3}{4}$ "	0527	$\frac{1}{2}$ " x $1\frac{3}{4}$ "	0295	$\frac{3}{4}$ " x 2 "
0243	$\frac{1}{4}$ " x $\frac{3}{4}$ "	089	$\frac{5}{8}$ " x 1 "		

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03	137	.02	082	95	.06	0215	91	.04	0407	171	.10
04	137	.02	083	19	.06	0219	129	.12	0410	171	.02
05	129	.02	085	47	.10	0220	171	.01	0411	171	.03
06	133	.02	086	169	.14	0223	272	49.00	0412	61	.10
07	79	.02	087	169	.01	0225	51	.02	0419	55	.07
08	183	.03	088	21	.008	0226	51	.03	0424	65	.10
010	55	.04	089	79	.01	0229	75	.03	0425	102	.16
011	17	.04	091	73	.02	0231	99	.09	0426	102	.02
012	17	.04	093	51	.03	0232	203	.02	0427	91	.16
013	159	.07	094	47	.01	0234	55	.02	0432	55	.10
014	133	.07	095	47	.01	0236	37	.15	0435	95	.04
016	159	.07	097	65	.04	0238	249	.03	0437	99	.19
017	159	.07	098	95	.05	0255	147	.02	0440	95	.05
019	129	.09	0104	275	....	0256	143	.02	0446	75	.008
020	249	.08	0105	265	....	0257	143	.02	0447	65	.03
022	83	.14	0107	275	....	0260	73	.06	0448	69	.08
024	169	.08	0108	272	56.00	0261	73	.04	0449	73	.02
025	155	.14	0109	275	....	0265	171	.01	0450	79	.02
026	37	.07	0110	272	47.50	0267	171	.01	0451	75	.14
027	192	.06	0111	272	48.00	0272	61	.03	0456	221	.20
028	192	.08	0112	272	48.00	0273	151	.008	0457	73	.02
029	47	.02	0113	55	.02	0274	47	.02	0458	272	50.00
030	213	....	0114	155	.01	0283	69	.10	0465	272	66.00
034	41	.008	0115	155	.01	0286	155	.02	0470	277	.50
035	19	.008	0117	159	.09	0288	51	.03	0477	155	.06
036	19	.008	0118	159	.10	0293	155	.02	0481	272	47.50
039	177	.008	0119	159	.10	0294	272	53.00	0482	272	48.00
040	45	.008	0122	45	.01	0295	79	.03	0484	272	50.00
041	37	.008	0126	69	.07	0296	73	.09	0485	273	47.50
042	79	.008	0127	75	.07	0299	91	.10	0486	273	48.00
043	43	.008	0130	169	.16	0303	281	.03	0487	273	49.00
044	55	.008	0131	83	.19	0307	113	.12	0488	273	47.50
045	37	.008	0133	91	.16	0315	272	5.70	0489	273	42.50
046	43	.008	0134	139	.02	0341	279	....	0490	275	....
047	75	.008	0135	169	.12	0343	143	.02	0491	275	....
048	41	.008	0136	183	.04	0347	79	.02	0529	75	.02
049	43	.008	0149	79	.07	0348	197	.03	0549	169	.17
050	83	.008	0150	153	.06	0349	279	....	0551	151	.03
051	236	1.20	0151	83	.16	0350	275	....	0557	265	....
052	37	1.00	0166	189	.01	0351	275	....	0574	209	.01
054	155	....	0169	41	.008	0352	275	....	409	41	.90
058	205	.01	0171	79	.01	0354	275	....	410	41	1.00
059	79	.02	0175	95	.03	0360	165	.01	420	41	.40
060	79	.02	0180	47	.19	0362	277	.50	421	41	.40
062	95	.02	0183	169	.80	0366	151	.10	425	47	.06
064	79	.03	0184	192	.008	0368	275	1.44	426	47	.04
065	95	.03	0190	133	.09	0373	277	.50	429	41	.05
066	37	.05	0192	133	.06	0377	272	49.00	430	41	.05
067	51	.07	0193	91	.12	0378	272	49.00	431	41	.05
068	47	.08	0194	133	.09	0382	236	.16	441	137	.12
069	163	.01	0195	83	.07	0385	277	.50	446	163	.24
070	165	.01	0203	47	.01	0387	265	.10	460	47	.80
071	37	.01	0204	197	.01	0389	272	142.50	461	47	1.20
072	95	.01	0208	129	.12	0390	129	.04	462	37	.80
073	47	.02	0209	229	.01	0391	151	.02	463	47	1.00
074	147	.02	0210	129	.04	0393	137	.02	464	47	.50
077	133	.04	0212	279	0402	197	.10	466	41	7.00

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470	41	.80	765	43	1.50	935	87	1.14	1140	159	.10
472	41	4.00	771	155	1.30	937	137	.16	1141	159	.06
493	179	.04	773	43	1.30	939	147	.10	1142	159	.12
506	21	.01	774	113	.02	941	201	.10	1144	283	.04
520	43	.24	775	155	1.40	942	205	.54	1147	45	.02
522	43	.15	776	155	1.34	944	87	.44	1148	159	.02
523	147	.07	777	159	1.20	947	169	.12	1150	159	.30
528	21	.02	786	79	.36	959	87	1.10	1155	41	.02
533	41	.60	789	159	1.20	960	51	8.00	1156	45	.02
536	19	.30	793	61	1.70	962	55	7.70	1158	159	.30
545	65	.19	794	61	1.70	963	55	7.90	1159	159	.24
554	47	.12	796	131	4.00	972	183	.90	1161	159	3.10
555	47	.06	797	169	3.70	975	179	.01	1168	65	.10
558	51	.40	798	169	3.70	983	131	.40	1178	51	9.00
559	51	.30	799	79	.12	984	183	.40	1179	17	.20
566	37	.30	805	51	5.00	996	169	.40	1200	19	.40
577	21	.02	819	177	25.00	1000	43	.30	1214	19	.10
633	73	4.00	821	179	2.00	1011	236	4.50	1215	26	.20
634	79	.14	825	179	.50	1012	236	2.20	1216	26	.30
635	75	.12	826	65	2.50	1015	43	.06	1218	26	.50
636	75	.12	827	65	2.20	1019	229	1.50	1221	19	1.00
637	83	1.12	829	179	.16	1020	229	.30	1222	19	.15
638	75	1.10	830	177	.30	1024	229	1.50	1225	197	.01
639	79	.40	836	153	.50	1027	236	24.00	1230	75	.36
640	65	.19	837	165	1.70	1028	236	20.00	1231	19	.15
641	79	.24	838	177	.20	1034	229	.20	1232	19	.20
642	75	.36	839	179	.20	1036	26	.04	1239	19	.10
645	91	.04	840	179	.30	1037	155	.60	1240	19	.05
646	47	.05	841	183	.70	1038	159	3.30	1249	19	1.00
649	75	.12	842	177	4.00	1047	55	.09	1251	159	.36
653	87	....	843	177	4.50	1048	17	.03	1255	159	150.00
659	87	1.34	844	229	.28	1049	169	1.00	1256	37	.80
660	87	.50	845	29	.08	1050	229	.80	1257	26	.40
661	79	.72	846	29	.06	1052	229	.20	1258	26	.40
670	163	.30	847	29	.05	1055	229	.02	1264	159	1.00
673	26	.15	848	179	.14	1056	239	.40	1268	26	.20
684	179	.02	859	179	.30	1059	229	.05	1269	26	.05
694	147	1.60	861	65	1.30	1060	229	.40	1272	51	8.60
709	155	1.30	873	169	.33	1066	19	1.00	1273	51	9.80
710	155	1.40	874	217	.30	1069	19	.10	1274	51	10.20
712	171	.40	877	217	1.50	1070	19	.20	1275	26	.60
719	26	1.40	879	163	.08	1075	281	.10	1282	26	.50
721	243	.02	890	155	.28	1098	79	.52	1283	26	.30
723	43	.30	891	155	.33	1099	159	1.00	1285	73	8.00
724	43	.30	892	217	3.30	1102	229	.08	1286	47	.02
729	79	.50	893	217	.80	1103	239	.02	1296	165	1.52
730	87	.07	894	217	.20	1104	17	.04	1301	159	.20
731	43	.30	897	255	.10	1111	253	.12	1302	159	.20
736	21	.06	898	255	.06	1112	159	8.00	1303	17	25.00
737	41	.04	903	183	2.50	1113	159	8.00	1311	192	.10
740	279	.04	904	183	.12	1117	159	1.00	1322	205	.10
743	83	1.12	905	183	.60	1118	159	.10	1333	159	.06
744	87	.84	908	229	1.50	1119	159	.12	1338	165	18.00
750	41	.40	915	255	.30	1128	159	1.00	1352	165	1.60
751	41	.70	924	210	....	1136	159	5.00	1361	87	1.12
755	43	2.00	929	159	3.00	1137	159	1.00	1364	19	11.00
756	41	7.00	931	87	.74	1138	159	1.00	1367	19	1.20

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1369	165	4.00	1550	37	7.00	1754	26	.30	1928	43	.14
1370	165	3.00	1551	37	2.00	1761	160	.08	1930	43	.40
1371	165	3.00	1553	37	.02	1762	160	.05	1934	177	.50
1374	165	.80	1554	192	.80	1767	37	.40	1941	147	1.16
1381	165	.20	1555	192	.10	1768	131	.30	1942	27	.40
1382	165	.16	1568	17	3.50	1771	37	.40	1943	27	.40
1387	165	.12	1572	37	.03	1772	37	.10	1944	137	.16
1389	37	.10	1573	37	.30	1775	61	1.60	1948	131	.32
1391	159	.36	1576	165	.90	1776	61	1.60	1949	131	.80
1396	205	.16	1579	165	.80	1781	43	22.00	1953	165	.06
1397	205	.06	1581	37	.15	1788	155	.70	1968	17	24.00
1398	205	.40	1584	165	.08	1789	155	.68	1969	17	36.00
1399	205	.40	1585	17	18.00	1790	131	3.00	1970	17	48.00
1407	29	.05	1586	17	30.00	1791	139	.12	1971	17	60.00
1408	279	.05	1587	17	42.00	1802	177	.16	1976	33	.12
1410	165	.02	1588	17	54.00	1807	153	1.76	1977	29	.05
1411	21	.08	1589	17	66.00	1808	153	1.76	1978	29	.05
1412	19	.30	1590	17	78.00	1811	26	.60	1981	279	3.00
1413	19	.40	1595	160	.90	1812	26	.40	1982	279	3.70
1418	29	.08	1596	160	.90	1813	26	.60	1983	279	5.50
1419	29	.08	1597	160	.30	1814	26	.30	1984	279	7.00
1420	29	.02	1598	160	.30	1815	26	.50	1988	279	.20
1421	29	.10	1600	37	2.70	1816	26	.40	1989	279	.20
1422	29	.05	1601	37	.01	1819	79	.50	1990	263	24.00
1423	205	.30	1602	37	.02	1833	179	.30	1991	263	10.00
1424	205	.10	1639	160	.02	1834	179	.24	1992	263	16.00
1437	17	.50	1640	160	.04	1835	179	.24	1993	263	26.00
1438	160	40.00	1642	17	15.00	1836	179	.20	1994	279	.16
1440	19	8.00	1647	160	.10	1839	26	1.90	1995	279	.10
1445	19	.20	1649	37	2.70	1869	83	3.02	1996	279	.50
1449	160	.80	1650	179	.02	1871	75	1.86	1997	279	.30
1457	26	.20	1651	147	1.68	1872	79	.70	1998	279	.50
1458	26	.30	1652	160	6.00	1874	87	2.60	1999	279	.40
1464	26	.30	1653	183	.04	1880	229	30.00	2000	279	1.00
1467	26	.40	1654	131	.40	1882	43	9.00	2006	47	.02
1469	26	.30	1657	183	.90	1886	179	.02	2014	73	8.00
1471	160	30.00	1659	236	24.00	1889	61	.08	2031	263	8.00
1478	45	.02	1660	43	3.00	1890	61	.08	2036	265	4.00
1480	26	.04	1661	131	1.50	1891	29	.28	2047	265	1.50
1481	26	.04	1663	165	1.65	1892	29	.30	2048	265	1.50
1494	179	.02	1668	169	.30	1893	29	.05	2049	265	5.00
1495	43	.02	1671	153	.05	1899	29	.20	2050	263	.20
1507	29	1.40	1677	26	.40	1910	43	9.00	2056	47	4.50
1510	29	1.60	1678	26	.60	1911	43	5.50	2057	255	....
1520	47	.10	1680	210	....	1912	43	5.50	2058	255	.10
1523	160	.20	1681	210	....	1913	43	.28	2059	255	.08
1524	189	1.50	1687	160	6.00	1914	43	.40	2064	133	1.28
1525	19	9.00	1688	205	.64	1915	43	.60	2065	133	1.40
1527	37	6.50	1702	165	.20	1916	43	.24	2066	133	1.50
1528	37	10.00	1713	160	1.80	1917	43	.50	2067	133	1.56
1536	37	2.50	1714	160	3.40	1918	43	.12	2068	265	.14
1537	37	1.00	1715	160	5.50	1919	43	.08	2069	265	.40
1538	37	.50	1716	160	5.20	1920	43	.12	2070	283	30.00
1539	37	.10	1722	160	.90	1922	43	.01	2071	283	2.20
1543	37	2.00	1728	160	.03	1923	43	.08	2072	283	.80
1544	37	.50	1746	160	2.50	1924	45	.06	2075	283	.10
1547	37	.36	1747	160	2.50	1925	45	.01	2078	283	5.00

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2079	283	.80	2338	17	15.00	2479	43	.05	2613	229	.01
2082	283	.06	2346	263	90.00	2481	151	.05	2632	55	3.00
2083	283	1.00	2349	265	12.50	2484	47	.16	2635	201	1.60
2088	283	.80	2350	265	20.00	2485	47	.20	2636	205	.54
2094	265	.60	2353	263	10.00	2486	160	.04	2639	45	.50
2098	265	3.70	2354	263	12.50	2487	179	.12	2644	179	.02
2099	265	3.70	2360	27	.80	2490	27	.12	2649	45	.01
2102	37	.40	2365	179	.02	2492	177	35.00	2651	183	.80
2116	265	1.40	2368	265	2.50	2493	177	4.50	2652	43	5.00
2117	265	1.00	2370	265	.16	2494	177	5.00	2653	43	2.00
2118	265	.12	2371	153	.60	2495	177	.40	2655	37	3.00
2119	263	7.00	2372	153	.24	2498	179	2.00	2658	79	.12
2133	19	1.20	2373	153	.40	2501	179	.60	2666	41	18.00
2135	263	240.00	2385	277	....	2502	179	.40	2667	55	.40
2137	265	3.50	2400	37	.10	2503	179	.70	2668	55	1.30
2144	165	.12	2402	265	.30	2507	179	.20	2669	55	.40
2145	165	.01	2413	192	.30	2508	177	.50	2671	75	2.52
2154	192	.02	2414	192	.50	2509	179	.60	2672	75	1.92
2163	165	.40	2417	265	.20	2510	179	.02	2673	21	7.00
2164	27	.50	2420	29	.06	2518	265	.04	2674	21	.40
2165	27	.70	2421	29	.40	2519	265	.01	2676	21	6.00
2166	27	.80	2422	29	.10	2540	281	.02	2685	79	.64
2172	65	.30	2425	19	.02	2542	160	.60	2686	79	.64
2181	155	.07	2426	37	.01	2543	160	.40	2687	73	2.70
2184	229	2.50	2430	27	.01	2544	160	.60	2688	83	1.36
2185	229	2.00	2432	217	.02	2545	160	.40	2693	95	.31
2186	229	.04	2433	283	.02	2550	21	15.00	2694	95	.21
2187	165	5.50	2434	165	.01	2552	45	.01	2695	95	.09
2192	27	.70	2435	160	.01	2553	243	.02	2696	95	.05
2217	229	.04	2436	29	.01	2555	29	.02	2697	87	1.90
2229	27	.40	2438	192	.02	2559	192	.02	2698	79	.92
2230	27	.70	2439	171	.01	2561	21	.40	2699	87	1.08
2236	133	1.32	2441	37	.01	2562	21	.40	2704	249	....
2237	133	1.40	2446	160	.02	2565	21	1.00	2708	249	.34
2238	133	1.50	2447	209	.06	2566	21	.40	2709	249	.20
2239	133	1.56	2448	160	.02	2567	21	.04	2710	249	....
2243	133	1.40	2451	17	.02	2569	21	.30	2714	249	....
2244	133	1.44	2452	160	.02	2570	21	.80	2719	179	.20
2247	201	2.00	2453	17	.02	2571	29	.05	2723	21	.40
2248	189	.64	2454	229	.03	2573	179	4.50	2724	21	.20
2254	201	.16	2455	29	.02	2574	179	2.50	2725	21	.20
2255	205	.10	2456	29	.02	2577	197	.40	2729	239	.18
2259	277	.10	2457	43	.04	2581	169	2.00	2732	55	.40
2260	277	.10	2459	41	.03	2582	169	.80	2747	255	.06
2262	263	200.00	2460	165	.03	2583	169	2.50	2755	21	5.00
2265	236	7.00	2461	37	.04	2584	169	1.10	2756	21	5.00
2269	236	.30	2462	17	.03	2588	21	.04	2762	21	.06
2279	43	4.00	2464	19	.05	2595	265	.40	2764	21	5.00
2288	277	....	2467	177	.03	2596	265	.24	2772	265	.60
2289	277	....	2468	160	.03	2597	165	3.30	2773	265	.60
2290	277	....	2469	189	.04	2598	265	1.30	2774	265	.40
2300	80	1.36	2470	41	.03	2599	210	....	2775	265	.40
2302	27	.60	2471	37	.04	2600	210	....	2776	265	2.50
2313	27	.50	2472	115	.05	2601	243	.01	2777	265	3.20
2314	27	.40	2473	197	.03	2602	21	.02	2778	265	4.70
2315	27	.60	2474	17	.06	2606	41	50.00	2779	283	.20
2317	229	.04	2476	37	.06	2611	21	.20	2780	283	.30
2330	37	76.00	2478	129	.05	2612	265	.24	2781	283	.40

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2789	55	2.70	2882	217	.24	3003	45	1.50	3113	131	13.00
2790	55	2.70	2884	37	20.00	3004	45	.70	3114	131	30.00
2791	55	1.60	2886	277	....	3005	45	.10	3115	131	40.00
2792	55	.64	2887	277	....	3013	45	1.50	3116	131	14.50
2795	65	5.60	2889	37	.80	3018	179	.10	3117	131	34.00
2796	99	2.20	2890	37	.14	3020	45	3.50	3118	131	43.00
2797	99	.64	2891	37	.12	3021	45	1.50	3144	19	.06
2799	55	4.90	2892	37	160.00	3022	45	.30	3150	27	.40
2800	279	7.50	2893	38	7.50	3023	45	.20	3152	27	1.50
2801	160	8.00	2894	38	.10	3024	45	.50	3153	27	2.00
2802	279	.40	2895	38	.10	3025	45	.40	3154	27	.06
2804	65	4.10	2899	229	.02	3026	45	3.00	3174	14	64.00
2811	65	1.28	2904	267	.70	3027	45	.60	3175	14	60.00
2812	65	.32	2905	277	.50	3028	45	.40	3176	14	44.00
2813	87	.09	2906	277	.80	3029	163	.06	3177	14	48.00
2814	65	3.60	2908	19	.20	3030	45	.04	3198	27	.80
2815	65	6.10	2909	283	2.50	3033	45	.40	3200	27	.80
2819	229	.70	2911	273	.08	3034	45	.06	3201	27	.80
2820	229	.40	2912	273	.10	3035	45	.08	3208	27	.80
2821	229	.30	2913	273	.12	3038	45	.06	3209	27	.40
2822	229	.02	2917	160	1.00	3040	45	1.50	3211	283	7.00
2824	279	.20	2922	75	.12	3041	45	.30	3212	279	4.00
2827	283	5.00	2923	75	.12	3043	45	.02	3217	33	99.00
2828	51	.60	2924	75	.12	3044	45	.02	3218	27	.20
2829	229	.02	2927	95	.53	3049	192	.02	3241	29	.03
2835	21	.20	2928	95	.024	3057	45	.03	3251	27	.60
2836	21	.20	2929	95	.31	3058	45	.14	3252	21	7.00
2839	19	.12	2933	87	.07	3063	192	.01	3253	21	1.00
2840	265	3.00	2934	95	.05	3065	17	.10	3256	21	.40
2841	265	.03	2935	21	.02	3067	163	.20	3257	45	.30
2842	160	.50	2936	160	.24	3069	45	.50	3259	192	.06
2847	29	1.80	2937	160	.24	3072	165	.30	3264	45	.09
2848	19	.01	2938	155	.38	3073	19	.50	3268	283	50.00
2850	217	30.00	2939	155	1.44	3074	19	.50	3269	283	1.50
2852	217	5.00	2940	155	1.48	3075	19	.50	3270	283	1.00
2853	217	2.50	2941	155	1.40	3076	19	.50	3271	283	.60
2854	37	.08	2943	155	.07	3077	19	.50	3273	283	2.00
2855	37	.04	2944	21	.02	3078	19	.50	3276	283	.20
2856	37	.04	2947	155	.90	3079	165	.40	3283	243	.03
2857	217	.03	2948	155	1.08	3080	29	2.00	3287	283	.20
2858	217	.06	2950	163	.20	3081	29	.80	3314	283	7.00
2859	217	4.00	2953	165	....	3082	29	1.00	3327	189	280.00
2860	217	1.50	2956	160	.40	3084	33	.06	3336	33	126.00
2861	217	.24	2960	160	.12	3085	29	.70	3337	33	.80
2862	217	.80	2963	27	1.00	3089	45	.02	3347	33	4.00
2863	217	.30	2964	27	.60	3090	75	.12	3348	33	.30
2864	217	.50	2965	45	.02	3093	21	.40	3349	33	.30
2865	217	6.00	2973	27	.40	3094	17	.30	3370	189	54.00
2866	217	1.00	2974	75	.36	3095	17	.30	3371	189	5.00
2867	217	.40	2975	75	.36	3096	19	10.00	3372	189	2.00
2868	217	.24	2976	75	.36	3097	19	13.00	3373	189	1.50
2869	217	.50	2977	79	.70	3098	19	11.00	3374	192	6.00
2871	217	.50	2979	79	.64	3099	21	1.00	3375	192	8.00
2872	217	.40	2982	75	.12	3100	21	2.00	3377	189	1.20
2874	217	.02	2985	165	3.60	3101	21	1.50	3378	201	1.60
2875	217	.02	2986	165	5.10	3102	21	1.20	3379	201	1.60
2877	217	4.00	2987	267	2.50	3104	33	.01	3380	205	.90
2879	217	1.20	3002	45	9.00	3105	29	.09	3381	205	.50

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3383	192	2.00	3494	193	6.00	3658	189	150.00	3886	230	35.00
3384	192	9.00	3498	193	.50	3659	189	40.00	3887	230	2.00
3385	192	1.50	3499	163	.50	3660	189	4.00	3888	230	2.00
3386	192	4.00	3503	163	.10	3661	189	1.50	3890	21	.01
3387	192	4.00	3505	166	1.60	3662	189	.80	3893	193	.06
3388	192	3.00	3506	229	.02	3664	193	2.80	3894	218	.06
3389	192	5.00	3507	166	1.00	3665	193	1.20	3901	284	.10
3390	192	2.00	3509	166	.20	3667	193	.80	3903	230	.20
3391	192	.24	3510	163	.50	3368	193	10.00	3905	133	2.60
3392	192	.10	3513	163	.20	3669	193	9.00	3906	133	3.10
3393	192	1.80	3516	284	8.00	3670	189	.20	3907	133	2.20
3394	192	2.60	3520	217	.08	3671	193	.01	3908	133	3.00
3395	192	3.20	3524	229	.02	3673	189	160.00	3909	133	4.00
3396	192	3.20	3529	193	1.50	3679	201	1.80	3910	133	4.90
3397	193	1.30	3530	163	.20	3680	205	.64	3914	45	.10
3399	205	.36	3531	163	5.00	3688	21	.40	3917	163	7.00
3400	205	.50	3532	163	5.00	3691	21	2.00	3921	230	35.00
3401	193	.40	3533	163	40.00	3702	230	.06	3922	230	35.00
3402	75	.02	3536	163	30.00	3703	193	9.00	3923	230	1.50
3403	193	4.00	3553	55	12.50	3704	193	9.00	3925	230	.24
3405	193	.40	3557	55	2.00	3705	193	5.00	3928	230	1.60
3406	193	.50	3558	55	.24	3706	193	44.00	3929	230	.80
3407	189	.20	3559	55	2.50	3707	193	44.00	3930	230	.50
3408	201	.20	.....	.....	.....	3733	177	35.00	3931	230	.06
3411	193	.06	3566	284	2.00	3735	179	3.00	3933	230	5.50
3412	193	8.00	3575	183	.60	3738	166	130.00	3945	230	4.00
3425	201	1.50	3576	183	.80	3742	230	.30	3947	230	.04
3426	205	.54	3577	183	.80	3744	230	.40	3948	230	.04
3435	33	.04	3578	183	.20	3748	27	.60	3954	160	.04
3437	33	54.00	3579	183	.50	3752	33	67.50	3955	160	.01
3439	221	.04	3580	183	.50	3754	277	.....	3964	29	.10
3440	281	.04	3584	183	.40	3761	193	44.00	3965	193	.12
3444	33	90.00	3585	183	1.20	3782	230	1.00	3966	155	1.36
3446	33	63.00	3590	229	80.00	3784	19	11.00	3967	33	31.50
3448	33	1.00	3593	229	2.00	3785	19	.30	3973	193	.40
3458	283	2.00	3599	33	72.00	3800	230	4.00	3974	189	.40
3460	284	2.00	3604	229	.08	3801	230	.70	3975	17	15.00
3461	193	.30	3605	229	.06	3802	230	1.00	3978	169	4.00
3462	193	.30	3606	229	.05	3803	230	1.30	3982	160	5.50
3465	284	.60	3607	229	.20	3825	19	13.00	3987	43	22.00
3468	284	.80	3608	229	.50	3826	27	.60	3994	213	.....
3469	75	.12	3611	229	.70	3827	279	.02	4000	213	.....
3471	284	.20	3615	230	2.00	3833	284	1.30	4001	160	.24
3477	193	.20	3616	230	2.00	3834	284	.50	4002	177	.20
3480	163	45.00	3617	230	2.00	3846	217	20.00	4007	133	.28
3481	193	.10	3618	230	6.00	3848	230	2.50	4008	133	.32
3482	163	1.00	3623	230	2.00	3849	230	1.50	4009	133	.38
3483	163	5.00	3624	230	5.00	3856	230	.04	4014	133	.70
3484	163	.90	3627	230	.50	3857	230	.50	4015	133	.80
3485	163	6.50	3628	230	.30	3859	230	.30	4016	133	.90
3486	193	5.00	3629	230	.80	3860	19	.03	4018	133	.24
3487	193	6.00	3631	230	.10	3866	27	.80	4019	134	.28
3488	193	1.50	3636	189	2.00	3867	27	.80	4020	134	.30
3489	193	.40	3637	189	.64	3871	160	150.00	4021	134	.36
3490	193	.80	3638	189	2.00	3874	160	2.00	4022	21	.10
3491	163	5.00	3639	189	1.00	3877	33	45.00	4023	133	17.50
3492	193	.20	3649	83	3.50	3881	218	2.00	4024	133	19.50

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4026	133	17.00	4134	131	.90	4308	279	4.40	4540	281	.20
4027	160	8.00	4137	131	.90	4309	33	198.00	4546	239	.16
4037	169	.20	4142	131	1.20	4311	231	35.00	4547	263	624.00
4038	169	.50	4145	134	.42	4322	91	5.50	4549	80	.28
4039	169	.50	4147	153	.60	4323	91	2.80	4552	177	.02
4040	169	.50	4148	153	.24	4324	91	1.30	4553	203	.01
4046	131	136.00	4151	131	4.00	4325	91	.50	4554	236	28.00
4047	131	80.00	4152	134	.10	4326	91	.72	4555	218	.05
4053	33	40.50	4153	134	1.00	4327	91	.62	4560	19	5.00
4055	133	.28	4155	131	4.00	4328	91	1.48	4562	139	5.40
4056	133	.30	4157	131	4.00	4329	91	1.40	4565	239	.06
4057	133	.34	4160	61	.08	4330	91	2.00	4566	239	.12
4058	133	.38	4166	218	.40	4331	91	1.36	4579	267	.04
4063	83	2.00	4167	65	6.10	4333	91	.08	4580	239	30.00
4064	83	.40	4168	65	1.20	4336	27	.80	4581	239	28.00
4065	83	1.45	4170	65	3.16	4337	169	3.30	4582	139	4.80
4066	83	2.00	4172	65	2.20	4353	263	80.00	4583	239	1.50
4067	83	1.00	4195	87	1.10	4354	54	.90	4587	239	3.00
4068	133	19.50	4196	80	.72	4364	75	.04	4590	239	.01
4069	133	22.00	4197	87	1.90	4374	87	1.50	4591	21	.03
4070	133	7.50	4198	87	2.00	4375	87	1.32	4594	239	.30
4071	133	11.00	4199	87	1.12	4378	27	.02	4597	239	1.00
4072	133	14.00	4200	87	.80	4379	27	.02	4605	203	7.00
4073	133	5.90	4201	87	1.20	4383	281	5.00	4606	203	.40
4074	133	8.70	4202	87	1.44	4386	27	.60	4607	203	1.00
4075	133	11.00	4203	87	1.70	4412	281	.06	4617	38	10.00
4076	133	8.00	4204	87	2.00	4415	27	.30	4618	38	2.90
4077	134	11.50	4205	87	2.46	4420	281	7.00	4619	38	.30
4078	134	14.90	4206	87	2.26	4425	91	1.70	4621	143	1.80
4079	134	6.50	4207	87	1.10	4432	131	.80	4625	143	1.25
4080	134	9.20	4211	129	24.50	4436	33	139.50	4628	281	60.00
4081	134	12.00	4212	33	49.50	4447	33	58.50	4634	38	.05
4082	134	4.00	4213	29	.20	4450	38	.20	4635	55	3.70
4083	134	7.50	4228	275	4.00	4459	65	.20	4637	193	14.00
4084	134	11.00	4230	275	.40	4460	267	3.50	4638	47	.50
4085	134	3.10	4233	129	....	4461	73	8.00	4640	61	3.40
4086	134	5.90	4234	129	.70	4468	236	12.00	4641	61	3.40
4087	134	8.80	4235	129	3.70	4470	33	108.00	4643	51	.30
4088	134	13.00	4236	129	....	4471	33	81.00	4649	143	8.68
4089	134	15.00	4237	129	.36	4472	33	2.61	4650	143	7.50
4096	134	.18	4238	129	.50	4474	80	.76	4651	143	.30
4098	134	.20	4239	230	5.00	4475	80	.28	4652	147	1.16
4100	134	1.10	4240	230	6.00	4476	80	.36	4653	147	1.00
4101	134	.46	4245	230	2.00	4480	253	4.50	4654	147	.16
4102	134	.30	4247	155	1.40	4499	147	.08	4656	147	.70
4104	134	.20	4249	230	.01	4507	239	32.00	4659	231	30.00
4107	160	1.20	4250	230	.40	4509	239	6.00	4660	51	5.50
4108	160	.40	4251	230	.60	4510	231	.10	4661	51	9.00
4109	160	.60	4252	193	4.00	4515	95	.48	4662	51	13.00
4110	169	3.50	4253	193	9.00	4519	95	.16	4666	33	112.50
4111	169	2.00	4254	193	6.00	4520	239	1.20	4667	147	1.40
4112	169	.70	4255	193	12.00	4527	95	.05	4668	147	1.10
4116	218	2.30	4256	193	.04	4528	239	.50	4670	281	2.00
4121	134	.42	4257	193	.30	4529	239	.50	4671	281	2.00
4122	134	.38	4262	87	.11	4535	95	1.20	4673	281	.80
4123	134	.22	4270	267	.10	4536	95	1.48	4679	210
4129	131	3.00	4295	61	.10	4537	95	1.76	4682	210

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4688	207	.26	4861	183	.50	5081	279	.10	5554	147	1.68
4689	207	.42	4862	183	.20	5082	218	.80	5561	177	5.00
4690	155	1.48	4866	275	....	5090	143	.12	5562	177	.20
4691	155	1.20	4867	29	.05	5091	43	.60	5563	218	.02
4695	231	.20	4869	284	5.00	5098	179	.40	5566	171	8.00
4696	239	.20	4870	19	.10	5099	179	.40	5567	171	3.00
4698	239	.24	4871	33	.30	5100	243	.12	5568	171	15.00
4699	239	.40	4872	33	.30	5101	179	3.00	5569	171	10.00
4701	239	2.50	4874	277	.16	5166	210	....	5570	171	2.00
4702	51	6.20	4875	253	18.00	5167	218	2.00	5571	171	2.00
4703	51	10.50	4876	253	21.20	5187	218	4.00	5572	171	.50
4713	281	.20	4882	243	10.00	5188	218	.04	5573	171	12.00
4714	281	.24	4885	277	....	5191	221	.06	5574	171	4.00
4715	281	5.00	4886	277	....	5203	33	36.00	5575	171	2.00
4716	267	4.00	4887	277	....	5215	243	.70	5576	171	1.20
4718	80	.80	4900	179	5.80	5217	243	.70	5577	171	2.00
4719	267	5.00	4906	253	.20	5218	243	1.40	5578	171	1.00
4720	267	9.50	4907	277	1.50	5219	243	.70	5579	171	.80
4725	239	.80	4910	19	.02	5224	171	70.00	5580	171	.20
4727	193	2.50	4911	277	....	5227	129	25.00	5581	171	.50
4728	194	2.00	4928	177	4.50	5229	194	.06	5583	169	.18
4729	194	3.00	4929	179	.60	5233	253	2.00	5584	171	.20
4730	194	1.00	4930	179	.40	5235	129	....	5585	171	.20
4731	194	1.50	4931	21	15.00	5236	129	....	5586	171	.20
4732	194	2.00	4932	179	.06	5239	129	3.70	5587	171	.20
4734	75	1.32	4952	243	.01	5246	255	.10	5588	171	.30
4735	51	2.00	4980	231	40.00	5247	281	1.00	5589	171	1.20
4737	99	1.80	4984	247	272.00	5248	281	.10	5590	171	1.50
4738	267	4.50	4987	243	30.00	....	....	....	5591	172	.40
4742	177	35.00	5007	243	.20	5275	247	66.00	5593	172	.30
4743	47	7.50	5018	41	160.00	5277	47	8.00	5594	172	12.00
4747	55	2.32	5019	41	160.00	5281	281	12.00	5596	65	2.80
4748	55	.48	5020	43	37.00	5292	236	30.00	5597	65	5.50
4751	203	5.00	5021	43	37.00	5296	21	2.00	5598	169	.20
4752	203	5.00	5035	239	1.00	5410	243	.30	5599	169	.22
4765	51	13.50	5046	29	.01	5411	243	26.00	5630	91	1.74
4767	55	11.30	5047	29	.03	5412	243	14.00	5631	91	.80
4768	218	3.50	5049	239	2.00	5453	203	7.00	5646	91	1.32
4769	55	3.30	5057	243	.20	5456	247	178.00	5647	91	2.80
4777	218	1.60	5058	243	.04	5457	247	76.00	5648	91	5.30
4778	19	5.00	5059	243	.30	5470	134	.42	5649	91	.40
4780	19	.06	5060	243	.50	5472	134	.44	5650	91	1.60
4781	19	.24	5061	243	.50	5483	243	30.00	5657	207	.20
4782	19	.40	5062	243	2.50	5484	247	212.00	5674	91	1.46
4783	19	.50	5063	243	2.00	5487	267	2.50	5693	83	1.28
4784	19	4.60	5064	243	.20	5492	65	7.00	5694	83	1.28
4786	19	4.60	5065	243	.30	5493	65	3.60	5696	83	1.96
4804	75	.12	5066	243	.80	5499	194	.02	5697	83	1.96
4806	17	4.00	5067	243	.40	5508	247	280.00	5700	33	.30
4814	171	.08	5068	243	.30	5509	247	348.00	5701	33	.30
4815	27	2.40	5069	243	.30	5514	247	42.00	5703	201	2 40
4820	43	5.00	5070	243	3.00	5517	153	.60	5717	179	.02
4834	177	25.00	5071	243	10.00	5524	255	.31	5718	47	.20
4835	29	1.00	5075	29	1.20	5544	151	1.60	5725	179	.20
4836	29	.80	5076	29	1.00	5545	147	1.60	5730	255	.10
4845	236	12.00	5077	30	2.20	5550	243	38.00	5731	255	.07
4846	236	20.00	5079	218	30.00	5551	243	34.00	5733	275	.04
4851	29	.03	5080	279	.10	5552	247	246.00	5763	205	1.50

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5764	205	.50	6057	38	160.00	6386	41	1.50	6575	156	1.04
5768	179	.03	6060	203	6.00	6387	41	2.50	6578	75	.64
5776	131	28.00	6075	263	300.00	6388	41	.20	6579	69	....
5777	131	32.00	6080	281	.02	6389	41	.80	6583	247	206.00
5779	131	38.00	6081	194	.80	6412	153	1.00	6610	69	....
5780	131	42.00	6094	45	5.00	6413	153	1.00	6611	69	....
5787	51	11.50	6095	45	.30	6433	61	1.60	6612	69	....
5794	201	.16	6096	47	13.50	6434	61	1.60	6616	55	4.00
5795	201	3.00	6097	47	13.50	6439	45	5.00	6617	56	4.00
5861	95	.15	6101	27	1.50	6440	45	.70	6618	56	3.08
5862	95	.09	6102	27	1.20	6443	45	.30	6621	69	....
5863	95	.03	6103	27	1.00	6445	51	9.50	6630	247	110.00
5868	95	....	6104	41	50.00	6447	45	.08	6631	247	314.00
5914	203	8.00	6107	207	2.00	6458	207	6.00	6644	113	6.50
5915	203	8.00	6108	207	2.50	6459	189	170.00	6645	113	13.00
5922	55	2.00	6142	263	300.00	6460	45	.24	6650	113	5.00
5923	155	.28	6143	263	320.00	6465	65	1.16	6660	113	2.00
5924	155	.33	6152	172	.20	6466	65	3.80	6663	87	....
5925	155	1.30	6161	179	5.00	6478	113	1.00	6665	169	4.10
5926	155	1.30	6170	115	.05	6479	61	1.08	6669	231	1.50
5927	155	1.34	6199	236	32.00	6480	61	1.08	6670	231	1.50
5928	156	1.40	6202	236	12.00	6481	65	7.90	6671	231	4.50
5929	65	2.00	6212	231	.60	6482	65	2.68	6672	231	.20
5930	65	2.00	6213	277	....	6483	194	.12	6673	231	.30
5935	163	7.50	6223	47	76.00	6484	194	.10	6674	231	3.50
5936	163	.50	6225	163	.06	6485	131	18.00	6675	145	9.00
5946	153	1.76	6234	87	1.70	6486	65	4.00	6685	83	5.50
5947	153	1.76	6235	87	2.50	6487	51	1.30	6686	83	5.00
5948	51	12.00	6238	247	416.00	6489	45	2.50	6687	145	8.00
5951	153	.50	6244	33	85.50	6490	55	6.25	6692	172	.50
5954	253	1.10	6251	247	240.00	6506	151	4.00	6694	172	.20
5955	253	1.20	6255	153	.70	6507	151	1.80	6704	197	.24
5959	51	1.60	6256	113	28.00	6508	151	1.52	6709	56	7.30
5961	131	.20	6259	236	26.00	6513	80	.12	6711	113	1.00
5962	131	.20	6260	247	144.00	6516	33	166.50	6752	117	37.00
5969	253	4.50	6262	113	1.00	6520	239	.80	6753	117	5.50
5971	253	.60	6270	83	3.80	6521	239	.60	6754	117	4.00
5973	203	6.00	6271	83	2.60	6522	239	.40	6759	117	.80
5974	236	12.00	6273	113	2.00	6523	239	.60	6765	21	14.00
5975	236	11.00	6280	113	.12	6524	239	.16	6766	21	11.00
5976	236	2.50	6298	156	1.36	6525	239	.40	6767	21	11.00
5977	236	6.00	6299	156	1.40	6526	239	.80	6768	91	.12
5997	69	....	6300	69	....	6527	239	1.00	6769	33	130.50
5998	69	....	6301	113	3.00	6528	51	8.00	6770	69	....
5999	69	....	6302	113	1.80	6529	51	7.50	6774	69	....
6000	69	....	6304	113	3.00	6533	45	50.00	6780	117	6.00
6001	69	....	6351	113	.80	6534	160	140.00	6781	51	6.00
6002	69	....	6352	113	.40	6535	160	140.00	6793	69	....
6012	131	7.50	6353	115	.60	6545	189	160.00	6794	69	....
6017	236	2.50	6354	115	.10	6547	177	45.00	6795	69	....
6033	255	.10	6363	113	3.00	6552	239	5.50	6796	69	....
6034	255	.36	6365	113	2.00	6553	231	5.50	6800	113	3.00
6045	249	....	6375	41	8.00	6565	194	.08	6801	156	1.48
6046	249	....	6376	113	.05	6567	80	.80	6810	113	.60
6047	249	2.10	6380	41	.30	6568	156	1.30	6811	69	....
6048	249	....	6383	19	.60	6569	156	30.00	6817	117	5.50
6049	249	6384	41	1.50	6570	113	10.00	6822	231	45.00
6050	249	1.82	6385	41	1.50	6571	115	7.00	6824	243	.30

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6826	243	1.20	7072	201	2.40	7376	197	44.00	7562	115	240.00
6834	231	4.50	7073	201	2.40	7377	197	1.40	7563	113	260.00
6835	231	3.00	7066	210	....	7378	197	1.00	7564	113	260.00
6836	231	2.00	7082	189	1.00	7379	197	.24	7567	172	....
6837	231	.60	7083	205	.90	7381	197	.20	7568	172	....
6839	236	34.00	7084	189	3.00	7382	197	.10	7569	172	....
6868	281	2.00	7085	189	3.00	7383	197	2.00	7574	51	14.50
6869	281	.20	7087	189	1.10	7384	197	7.00	7582	263	....
6870	281	60.00	7088	189	320.00	7385	197	3.00	7583	263	....
6871	17	1.10	7089	205	.06	7386	197	.10	7584	263	....
6872	17	20.00	7090	194	3.20	7388	197	.06	7585	263	....
6882	56	6.30	7091	194	2.60	7390	197	.24	7586	263	....
6883	56	5.00	7108	213	....	7391	197	.30	7589	263	....
6891	87	.50	7109	213	....	7392	197	.10	7590	267	4.00
6892	87	2.80	7137	231	40.00	7395	197	.03	7591	267	....
6893	56	.09	7196	134	16.50	7396	197	.40	7592	267	....
6896	160	1.20	7204	183	.70	7397	197	2.50	7594	267	....
6897	117	.40	7212	83	7.00	7398	198	5.00	7595	267	....
6901	141	4.80	7213	183	.90	7399	198	.06	7608	267	....
6902	139	.16	7214	183	.12	7400	198	.24	7611	267	....
6914	117	7.50	7233	172	.20	7402	198	.40	7612	263	....
6915	117	.80	7236	183	.20	7403	198	.20	7613	267	....
6916	117	5.40	7237	183	.50	7407	207	.40	7614	267	....
6917	117	1.40	7238	183	.80	7408	207	1.10	7615	267	....
6919	134	3.00	7241	172	1.50	7411	198	.20	7622	267	....
6922	243	25.00	7242	172	70.00	7414	198	2.50	7632	263	....
6928	117	.30	7244	197	.10	7415	198	1.00	7635	263	....
6929	117	.40	7246	231	.60	7418	198	5.00	7638	263	....
6930	117	2.50	7247	231	2.00	7419	198	1.00	7639	267	....
6931	117	2.50	7261	183	.50	7421	201	2.00	7640	263	....
6937	113	3.00	7269	43	.50	7422	205	.90	7644	263	....
6942	139	.30	7276	56	4.30	7423	201	.16	7645	263	....
6943	166	....	7293	131	18.00	7424	205	.10	7647	263	....
6944	113	.10	7318	134	4.80	7425	198	.02	7648	263	644.00
6946	166	.20	7321	231	1.50	7426	87	2.30	7649	263	....
6948	117	.12	7323	231	1.50	7428	87	.44	7650	263	....
6957	179	.20	7326	51	2.20	7432	129	1.40	7662	17	.05
6967	201	1.80	7334	99	2.04	7433	129	.90	7665	51	.24
6968	201	1.60	7335	99	.70	7434	129	1.70	7670	83	.02
6976	113	3.00	7339	253	176.40	7435	129	.50	7684	247	142.00
6977	113	3.00	7340	153	1.76	7436	129	.50	7697	61	.12
6993	131	.50	7341	153	1.76	7437	131	1.20	7708	21	8.00
6994	131	.90	7342	153	1.00	7471	21	.40	7709	21	5.00
6997	117	60.00	7343	244	8.00	7472	21	.40	7710	198	.20
7015	56	8.00	7345	69	....	7475	231	2.00	7711	198	.20
7017	56	10.30	7346	69	....	7476	65	1.04	7718	17	72.00
7019	51	9.50	7347	69	....	7477	65	4.90	7719	30	.16
7020	51	9.50	7348	69	....	7478	205	.50	7720	30	.20
7031	172	.20	7349	69	....	7479	205	.64	7721	27	2.50
7032	172	....	7351	247	518.00	7486	134	2.80	7722	30	.12
7033	172	....	7352	244	50.00	7495	236	5.00	7723	30	.14
7057	253	53.20	7359	244	.06	7496	236	2.80	7724	33	76.50
7059	253	30.80	7365	240	4.00	7512	236	8.00	7725	33	94.50
7061	203	5.00	7370	197	170.00	7557	113	320.00	7726	33	117.00
7062	203	7.00	7371	197	.50	7558	113	320.00	7727	33	121.50
7064	210	7372	197	.50	7559	113	360.00	7728	33	135.00
7067	56	10.30	7374	197	10.00	7560	113	360.00	7729	33	144.00

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7731	33	153.00	7933	253	107.60	8138	172	8314	102	3.80
7732	33	157.50	7934	30	.30	8139	172	8315	102	.30
7733	33	162.00	7964	117	.50	8141	172	....	8316	102	4.00
7734	33	175.50	7994	51	....	8142	172	....	8317	102	.30
7735	33	180.00	8002	51	10.00	8143	172	....	8318	102	.30
7736	33	184.50	8003	51	10.00	8144	172	....	8319	102	8.00
7737	33	189.00	8004	51	6.50	8145	172	....	8320	102	.20
7738	33	193.50	8005	51	6.50	8206	83	1.44	8321	80	.02
7739	33	202.50	8010	131	.40	8207	83	1.20	8322	80	.02
7740	33	207.00	8016	65	2.90	8208	83	.22	8323	102	24.00
7741	33	211.50	8017	65	2.20	8209	83	1.80	8324	102	7.80
7742	33	216.00	8018	65	2.80	8210	83	1.48	8325	102	12.00
7743	33	225.00	8019	65	3.00	8231	275	.80	8326	102	8.00
7744	33	234.00	8020	65	3.30	8232	275	.80	8327	102	14.00
7745	33	243.00	8021	65	14.80	8237	156	.07	8328	102	6.00
7746	33	270.00	8022	65	7.30	8243	75	.10	8329	102	8.00
7764	134	2.00	8023	65	2.50	8246	61	2.12	8333	102	.18
7766	30	6.00	8024	65	1.50	8247	61	2.12	8334	102	14.00
7767	21	.06	8055	51	1.70	8248	61	2.64	8335	102	8.00
7774	27	.60	8056	51	7.20	8249	61	2.64	8336	56	3.08
7779	156	.60	8068	65	2.40	8250	61	3.80	8337	56	3.16
7795	41	7.70	8069	65	1.50	8251	61	3.80	8338	56	4.00
7803	253	88.00	8070	65	4.15	8252	61	3.96	8339	56	3.35
7815	153	1.76	8071	65	5.20	8253	61	3.96	8346	87	.41
7816	153	1.76	8072	65	1.60	8254	61	3.40	8347	56	3.70
7817	47	13.70	8073	65	4.00	8255	61	3.40	8348	56	3.92
7818	47	13.70	8081	56	6.40	8256	61	1.72	8349	87	2.76
7820	43	.60	8082	56	.90	8257	61	1.80	8350	87	2.50
7821	43	1.60	8083	56	4.00	8258	61	3.60	8351	87	.68
7822	43	.40	8084	56	6.84	8259	61	3.60	8352	87	1.00
7825	41	18.80	8085	56	6.20	8260	61	3.50	8355	87	.14
7833	172	14.00	8087	56	7.75	8261	61	3.50	8356	87	2.50
7835	194	44.00	8088	56	2.00	8262	61	3.10	8357	87	....
7852	244	18.00	8089	56	1.70	8263	61	3.10	8358	87	2.00
7853	244	22.00	8090	56	.64	8264	61	2.30	8359	88	1.90
7854	244	42.00	8091	56	2.00	8265	61	.84	8360	88	1.90
7855	244	46.00	8092	56	1.40	8266	61	.84	8361	88	1.80
7856	83	4.40	8093	56	.24	8267	61	1.70	8362	56	1.20
7858	247	382.00	8094	56	4.50	8268	61	1.70	8363	88	1.94
7859	247	450.00	8095	56	3.80	8269	61	1.00	8364	88	1.66
7860	247	484.00	8096	56	4.00	8270	61	2.30	8365	88	1.28
7862	141	6.80	8102	75	....	8271	61	2.20	8366	88	1.04
7863	147	1.20	8104	75	....	8272	62	.84	8367	88	1.90
7864	147	1.10	8105	75	....	8273	62	1.50	8368	88	1.26
7865	147	.10	8106	75	....	8274	62	.10	8369	88	1.84
7870	277	....	8110	113	20.00	8275	62	.10	8370	88	1.20
7902	113	80.00	8120	172	50.00	8276	62	.10	8371	88	1.44
7911	166	30.00	8121	172	....	8277	62	.12	8372	88	2.50
7913	166	11.00	8122	172	....	8278	62	.07	8373	88	2.00
7916	14	124.00	8124	172	....	8279	62	.09	8388	163	41.00
7917	15	80.00	8125	172	....	8280	62	.08	8389	163	47.00
7919	15	60.00	8127	172	....	8281	62	.10	8414	113	14.00
7920	15	64.00	8128	172	....	8282	62	1.35	8415	113	15.00
7921	15	156.00	8131	172	....	8288	75	.56	8448	244	34.00
7924	172	1.20	8132	172	....	8310	134	11.20	8462	240	30.00
7925	172	1.50	8135	172	8311	102	24.00	8463	240	36.00
7927	236	27.00	8136	172	8312	102	7.80	8465	91	1.44

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8466	91	.90	8581	84	2.30	8686	56	6.00	8762	80	.12
8479	172	8582	84	3.58	8687	56	6.70	8764	80	.36
8481	91	1.80	8583	84	2.08	8688	51	3.00	8765	80	.08
8482	91	3.40	8584	84	2.58	8697	95	.14	8766	80	.16
8483	91	4.80	8585	84	2.58	8698	95	.45	8767	80	1.20
8484	91	6.00	8586	84	3.90	8699	95	.96	8768	80	.40
8485	91	.40	8587	84	1.48	8700	95	.45	8769	80	.12
8486	91	1.32	8588	84	4.50	8701	95	.31	8770	80	.22
8487	91	2.80	8589	69	....	8702	95	1.02	8771	80	.22
8488	91	4.10	8590	69	....	8704	95	.31	8772	80	.22
8489	91	5.30	8591	69	....	8705	95	.45	8773	80	.22
8490	91	4.10	8592	69	....	8706	95	.19	8774	80	.22
8510	91	.60	8593	69	....	8707	95	.14	8775	80	.22
8512	156	.40	8594	69	....	8708	95	.31	8776	80	.22
8513	156	.24	8595	69	....	8709	95	.45	8777	80	.22
8515	91	1.90	8596	69	....	8710	95	.31	8780	80	.76
8516	91	.92	8597	69	....	8711	95	.86	8781	80	.16
8517	91	1.70	8598	69	....	8712	95	.05	8782	80	1.36
8518	92	1.30	8599	69	....	8713	95	.26	8783	80	.54
8519	92	.10	8600	69	....	8714	95	.05	8784	80	.80
8520	92	2.00	8601	69	....	8716	95	.24	8785	80	.80
8521	92	2.50	8602	84	.22	8717	96	.29	8788	75	.12
8522	92	1.90	8603	92	2.80	8718	96	.29	8790	75	1.56
8523	92	1.44	8604	92	5.40	8719	96	.21	8791	75	1.80
8526	92	2.28	8605	92	7.80	8721	96	....	8792	75	1.80
8527	92	1.60	8606	92	10.00	8722	96	....	8793	75	.36
8528	92	1.05	8607	92	1.80	8723	96	....	8794	75	.36
8531	92	1.60	8608	92	3.70	8724	96	....	8795	75	.36
8532	92	5.50	8609	92	5.50	8725	96	.57	8798	76	.40
8533	92	1.50	8610	92	7.14	8726	96	.91	8799	76	.40
8534	92	1.20	8617	92	2.60	8727	96	1.58	8800	76	.40
8535	92	2.80	8618	92	2.70	8728	96	1.88	8801	76	.40
8536	92	3.56	8619	92	1.50	8729	96	2.14	8804	80	.56
8537	92	2.50	8620	92	1.80	8730	96	2.50	8836	76	.72
8538	92	2.94	8621	92	3.70	8731	96	2.76	8837	76	1.30
8539	92	1.56	8622	92	5.50	8732	96	1.82	8838	76	1.30
8540	92	2.80	8623	92	7.14	8733	96	1.10	8847	76	1.20
8560	83	.27	8624	92	5.00	8734	96	.64	8848	76	.70
8561	83	2.00	8625	102	14.10	8735	96	.34	8849	76	.12
8562	83	1.60	8626	102	.17	8741	99	2.04	8851	76	.36
8563	83	.34	8627	102	28.80	8742	99	2.10	8852	76	.36
8564	83	1.36	8630	92	2.80	8743	99	2.22	8853	76	.36
8565	83	1.36	8631	156	.22	8744	99	2.28	8854	76	.36
8566	83	4.50	8635	102	13.70	8745	99	2.04	8855	76	.36
8567	83	2.84	8645	163	30.00	8746	99	1.64	8856	76	.36
8568	83	2.84	8655	56	4.80	8747	99	2.10	8857	76	.36
8569	83	2.84	8658	65	2.80	8748	99	2.22	8858	76	1.75
8570	83	2.84	8659	65	5.30	8749	99	.60	8859	76	.12
8571	84	1.50	8668	88	.70	8750	99	.17	8860	76	.12
8572	84	1.20	8670	247	306.00	8751	99	.08	8861	76	.12
8573	84	1.12	8674	17	30.00	8752	99	.68	8862	76	.12
8574	84	2.56	8675	65	2.50	8753	99	3.80	8863	76	1.50
8575	84	1.24	8676	66	4.00	8754	99	2.60	8864	76	1.60
8576	84	2.56	8677	66	6.50	8755	99	2.50	8865	76	1.96
8577	84	1.12	8678	56	7.00	8756	99	2.30	8866	76	1.00
8578	84	2.56	8679	56	5.50	8757	99	7.10	8867	76	.84
8579	84	2.56	8680	56	7.70	8760	75	.12	8871	221	14.00
8580	84	1.53	8681	66	2.90	8761	75	.12	8872	221	2.50

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8878	221	2.00	9020	198	5.00	9265	156	1.20	9382	151	4.00
8879	221	10.00	9025	76	9266	156	.64	9383	151	4.00
8880	221	2.00	9026	76	....	9267	156	.72	9384	151	4.00
8885	221	.50	9041	151	1.08	9268	156	.48	9386	151	2.60
8886	221	2.00	9042	151	.96	9269	156	.55	9387	151	2.60
8888	221	2.50	9043	151	.12	9270	156	.50	9388	151	2.60
8890	221	1.00	9045	76	1.84	9271	156	.77	9391	151	1.00
8891	221	.20	9047	76	....	9272	156	.60	9393	169	3.20
8895	221	.10	9056	198	.30	9273	156	1.24	9397	117	2.50
8897	76	.40	9060	137	.12	9274	156	1.50	9402	221	74.00
8898	76	.40	9061	137	.20	9275	156	.70	9446	117	2.50
8899	76	.40	9073	221	.10	9276	156	1.20	9447	117	2.50
8900	76	.40	9078	198	3.00	9277	156	.26	9450	249	....
8909	221	4.50	9079	198	3.00	9278	156	1.50	9461	249	26.30
8910	76	.064	9080	21	15.00	9279	156	1.08	9462	249	....
8917	33	5.00	9126	115	240.00	9280	156	.60	9463	249	....
8919	69	....	9127	113	320.00	9281	156	.33	9464	249	54.00
8920	69	....	9129	169	1.24	9282	156	.16	9465	249	....
8921	76	.40	9130	169	.80	9283	156	.42	9466	249	....
8926	66	.40	9169	156	.07	9284	156	.16	9469	249	....
8947	69	....	9197	205	.60	9285	156	.48	9470	151	1.30
8948	69	....	9198	205	.07	9286	156	.64	9557	76	....
8949	69	....	9199	205	.70	9287	156	1.04	9560	221	140.00
8953	76	1.00	9201	156	.07	9288	156	.76	9561	221	86.00
8954	76	.36	9215	249	30.50	9289	156	1.04	9562	221	54.00
8955	73	7.20	9220	179	.80	9290	156	2.80	9565	131	9.00
8956	73	9.20	9223	88	.09	9292	156	2.40	9622	267	....
8957	73	7.20	9224	88	.12	9294	156	2.40	9623	267	....
8958	73	9.20	9226	210	....	9300	156	2.90	9624	267	....
8959	73	7.20	9227	210	....	9302	156	2.90	9625	267	....
8960	73	9.20	9228	210	....	9304	156	3.48	9629	275	.40
8961	73	7.20	9229	210	....	9306	156	3.48	9630	275	.02
8962	73	8.00	9230	210	....	9341	134	1.30	9632	117	.50
8963	73	9.20	9231	210	....	9342	134	1.36	9633	117	6.00
8964	73	2.40	9232	210	....	9343	134	1.44	9634	141	5.00
8965	73	3.60	9233	210	....	9344	134	1.50	9635	141	4.80
8966	73	3.00	9234	210	....	9345	134	2.10	9636	141	4.80
8967	73	4.60	9235	210	....	9346	134	2.40	9637	143	8.40
8969	73	.36	9236	210	....	9347	163	4.00	9638	143	7.80
8970	73	.48	9237	210	....	9348	163	4.00	9639	143	5.60
8978	76	.36	9238	210	....	9349	163	6.00	9640	145	4.80
8979	76	.36	9239	210	....	9350	163	6.00	9650	221	190.00
8981	76	.36	9240	210	....	9351	117	5.70	9651	221	116.00
8982	76	.36	9241	210	....	9352	117	6.00	9652	221	7.00
8989	76	.36	9242	210	....	9353	117	1.20	9653	221	18.00
8994	76	.12	9243	210	....	9355	177	45.00	9654	221	6.00
9008	134	1.40	9244	210	....	9361	179	5.00	9655	221	3.00
9009	134	3.30	9245	210	....	9362	180	5.80	9656	221	2.00
9010	198	160.00	9246	210	....	9363	180	3.50	9657	221	.40
9011	198	2.50	9247	210	....	9364	180	5.00	9658	221	3.00
9012	198	1.00	9248	210	....	9365	180	3.00	9659	221	1.00
9013	201	2.00	9249	210	....	9366	180	.20	9660	145	6.00
9014	205	.90	9250	156	.70	9367	180	.50	9671	137	4.10
9015	201	.20	9259	156	.36	9368	180	.50	9672	137	4.10
9016	205	.10	9261	156	.90	9369	180	4.00	9673	137	3.70
9017	198	2.50	9262	156	.70	9376	183	.80	9674	137	4.80
9018	198	5.00	9263	156	.90	9378	117	5.70	9675	137	4.80

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9677	137	5.80	9750	147	1.68	10236	117	5.40	12346	108	395.00
9678	139	4.40	9751	147	1.60	10247	273	5.00	12347	108	515.00
9679	139	4.40	9752	147	1.70	10248	273	3.00	12348	172	1.50
9680	139	6.60	9753	147	1.30	10261	88	1.00	12349	251	.....
9681	139	4.20	9754	147	1.40	10278	117	5.50	12350	251	.....
9682	145	4.60	9755	147	1.40	10279	117	5.40	12351	251	.....
9683	145	8.00	9756	147	1.68	10311	148	1.00	12352	251	.....
9684	145	4.80	9757	147	.20	10312	148	1.16	12353	251	.....
9685	145	5.60	9758	151	4.00	10313	148	1.30	12354	251	.....
9700	137	5.40	9759	151	2.60	10314	148	1.44	12357	131	68.00
9701	247	372.00	9760	147	1.68	10315	148	.20	12358	131	70.00
9702	137	4.10	9761	148	1.60	10316	148	.06	12359	131	92.00
9703	137	4.50	9762	151	4.00	10317	153	1.00	12360	131	84.00
9704	137	4.50	9763	151	2.60	10318	153	.12	12361	131	17.00
9705	137	5.40	9764	148	1.00	10319	153	.30	12379	117	5.40
9706	137	6.50	9765	148	1.16	10320	153	.50	12380	117	5.50
9707	137	6.60	9766	151	1.20	10321	153	.50	12383	145	6.00
9708	139	6.40	9767	151	1.40	10322	137	.20	12384	145	5.40
9709	139	6.40	9768	151	1.20	10323	137	.20	12388	148	1.00
9710	139	7.60	9769	151	3.00	10324	137	.20	12389	148	1.16
9711	139	6.20	9770	151	1.50	10325	137	.20	12390	198	1.00
9712	141	8.00	9781	151	.70	10326	137	.30	12391	251	.....
9713	141	5.40	9782	148	1.32	10327	139	.60	12392	251	.....
9714	141	5.40	9783	148	.....	10328	139	.16	12393	251	.....
9715	143	9.00	9784	148	.....	10329	139	.30	12394	251	.....
9716	143	8.60	9785	148	.....	10330	139	.16	12395	251	.....
9717	143	6.60	9786	151	1.30	10331	139	.30	12396	251	.....
9718	145	5.20	9787	148	1.00	10332	139	.60	12400	172	57.50
9719	145	6.70	9788	148	1.16	10333	139	1.00	12407	172	7.50
9720	145	5.00	9789	148	1.00	10334	141	.24	12408	172	7.50
9721	145	8.50	9790	148	1.16	10335	143	.30	12431	244	.....
9722	145	5.40	9791	148	1.00	10336	141	1.00	12449	198	.....
9724	139	4.20	9792	148	1.16	10337	141	.30	12450	198	.....
9725	139	6.40	9793	153	1.76	10338	141	.70	12470	253	.18
9726	139	4.00	9794	153	1.76	10339	141	.14	12502	172	.....
9727	139	6.00	9795	153	1.76	10340	141	.80	12503	172	7.50
9728	143	5.60	9796	153	1.76	10341	139	.60	12504	172	.....
9729	143	6.15	9797	153	1.76	10342	143	.16	12506	172	.....
9730	141	4.80	9798	153	1.76	10343	145	2.00	12507	172	.....
9731	141	5.40	9802	117	2.00	10344	153	1.50	12508	172	.....
9732	143	6.60	9830	172	6.00	10345	153	.32	12705	120	260.00
9733	143	7.50	9856	153	1.76	10346	108	375.00	12706	120	270.00
9734	141	4.80	9857	153	1.76	10347	108	495.00	12707	120	350.00
9735	141	6.00	9866	148	1.60	10348	108	360.00	12708	120	370.00
9736	143	2.00	9867	148	1.68	10349	108	480.00	12709	120	480.00
9737	143	1.28	10090	117	5.50	10350	251	.....	12710	120	250.00
9738	145	10.50	10122	172	1.50	11299	148	1.60	12711	120	260.00
9739	145	14.00	10126	172	1.50	11341	153	1.60	12712	120	340.00
9740	137	3.70	10179	113	2.00	11403	213	.....	12713	120	360.00
9741	137	4.10	10201	108	370.00	11435	143	.30	12714	120	470.00
9742	151	4.40	10202	108	490.00	11436	143	.30	12715	120	250.00
9743	151	1.50	10203	108	600.00	11485	148	1.00	12716	120	260.00
9744	151	2.40	10204	108	355.00	12339	131	60.00	12717	120	340.00
9745	151	4.00	10205	108	475.00	12341	108	360.00	12718	120	360.00
9746	151	2.60	10206	108	585.00	12342	108	365.00	12719	148	1.16
9747	147	1.60	10218	273	.30	12343	108	480.00	12720	148	1.50
9748	147	1.68	10219	273	.30	12344	108	485.00	12721	120	470.00

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12723	120	350.00	13021	233	13912	264	13.00	17867	213
12724	120	250.00	13022	233	13913	264	12.50	17868	213
12725	120	170.00	13023	233	....	13914	264	16.00	17869	213	....
12726	120	300.00	13024	233	....	13915	264	80.00	17870	213	....
12727	120	310.00	13896	264	....	13916	264	80.00	17871	213	....
12728	120	400.00	13897	264	200.00	13917	264	90.00	17940	209	170.00
12729	120	420.00	13898	264	210.00	13918	264	90.00	17941	209	....
12730	120	540.00	13899	264	240.00	13919	264	....	17942	209	....
12731	120	300.00	13900	264	256.00	13920	264	....	17943	209	....
12732	120	310.00	13903	264	420.00	17356	92	.12	17944	209	....
12733	120	400.00	13904	264	430.00	17389	209	.04	17947	209	....
12734	120	420.00	13905	264	460.00	17590	76	.064	17948	209	....
12735	120	540.00	13906	264	480.00	17591	76	.064	18000	233	....
12736	120	330.00	13907	264	500.00	17860	213	....	18001	233	....
12737	120	430.00	13908	264	516.00	17861	213	....	18002	233	....
12738	120	15.00	13909	264	564.00	17864	213	18003	233
12739	120	20.00	13910	264	584.00	17865	213			

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A- 20.....	1230	20-F K.....	8848	38-B B.....	9768	38-S G.....	9636
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C : 11.....	1099	20-H F.....	8766	38-G J.....	9281	361.....	796
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