

The
Union Switch & Signal Co.
Swissvale, Pa.



Volume 2
Electric Interlocking
Catalogue

A CATALOGUE AND PRICE LIST

OF

**Interlocking and
Signaling Devices**

MADE BY

**THE
UNION SWITCH & SIGNAL Co.
OF PITTSBURGH, PA.**

**Owners of the Westinghouse System of Electro-
Pneumatic Block Signaling and Interlocking.**

**Also Designers, Manufacturers and Erectors of Pneumatic,
Electro-Pneumatic, Electric, Electro-Mechanical,
and Purely Mechanical Appliances
for Railway Protection.**

**Automatic, Semi-Automatic and Manually Operated
Block Signals.**

**Electro-Pneumatic, Electric and Mechanical Interlockings
to suit conditions.**

Plans and Estimates on Application.

**General Offices and Works
SWISSVALE, PA.**

**SALES DEPARTMENT
Hudson Terminal Building, 30 Church Street, New York
District Offices**

**New York
Hudson Terminal Building.**

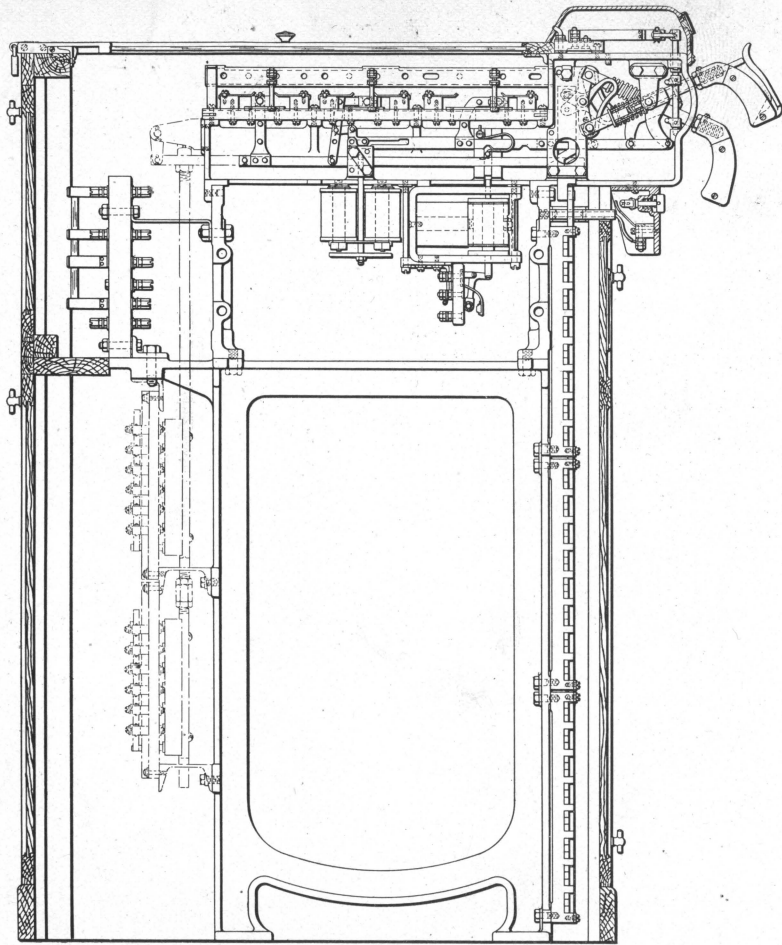
**Chicago
Peoples Gas Building.**

PREFACE

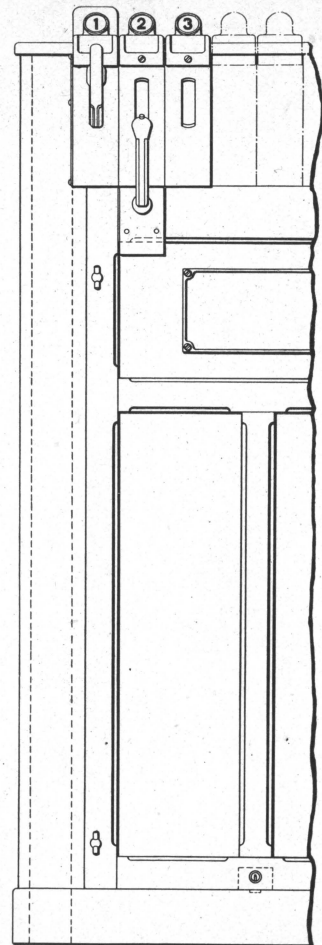
This Catalogue is principally intended to enable our patrons to conveniently order such apparatus as is confined solely to our electric interlocking system. Switch and Signal fittings common to all types of interlocking will be found in our other catalogues.

ORDERS

When ordering material from this Catalogue, the Name, Plate and Figure number should be given in all cases. Also *such other information as may be called for in the notes or lists.*



SECTIONAL SIDE VIEW



PORTION OF FRONT VIEW

MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE

MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE

When ordering Electric Interlocking Machines, a signaled track plan should be furnished, drawn to a scale of not more than one hundred feet to the inch.

The plan must show the location of the tower and the relation of the front of the machine to the track, (the front of a machine is that part occupied by a man when operating the levers), and also the route or routes to be governed by each signal. It must also indicate the switches which are to be controlled by one lever, unless it is preferred to leave this to our judgment. If special mechanical locking or electric appliances are required, which are not ordinarily included, full information concerning these must accompany the order.

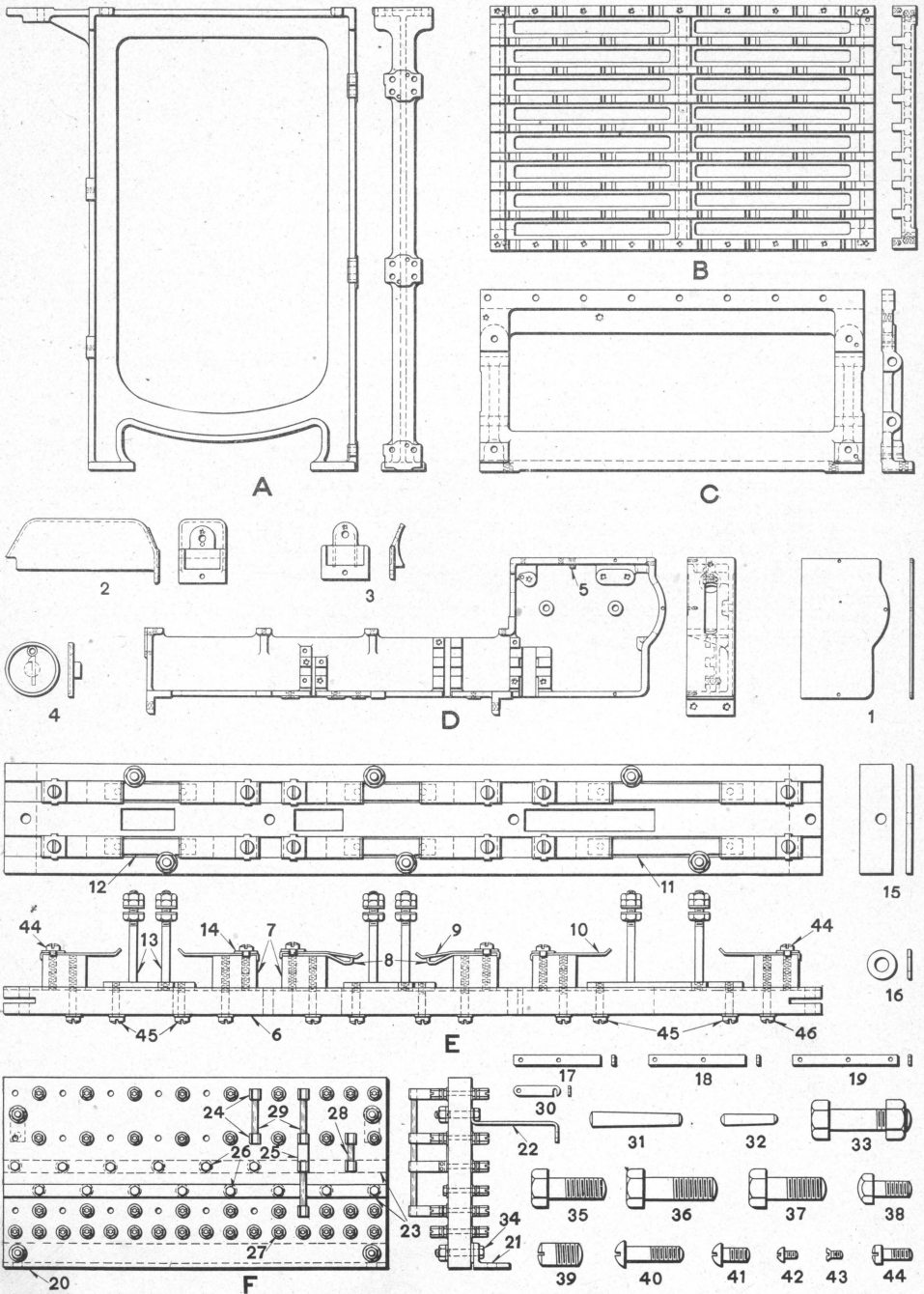
The following list prices are based on machine cases being made of mahogany, and do not include equipment for detector circuits, nor auxiliary circuit controller.

Prices for machines equipped with detector circuit controller will be furnished on application.

Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
1	Eight to sixteen lever frame.....	D-1387	
2	Twenty-four to thirty-two lever frame.....	D-1387	
3	Forty to forty-eight lever frame.....	D-1387	
4	Fifty-six to sixty-four lever frame.....	D-1387	
5	Seventy-two to eighty lever frame.....	D-1387	
6	Eighty-eight to ninety-six lever frame.....	D-1387	



DETAILS FOR MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE

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Order by Name, Plate and Figure

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Fig.		Drawing Reference	List Price
A	Leg, for machine.....	53-C-1382	
B	8-Way Locking Bed, for 8-lever machine.....	1-C-7394	
Ba	8-Way Locking Bed, for 16-lever machine.....	2-C-7394	
Bb	4-Way Locking Bed, for 8-lever machine.....	51-C-7394	
Bc	4-Way Locking Bed, for 16-lever machine.....	52-C-7394	
C	Front and Back Plate, for 4 and 8-lever machines..	33-C-1855	
Ca	Front and Back Plate, for 16-lever machine.....	31-C-1855	
D	Mechanism Case, for switch lever with detector circuits	97-C-7394	
Da	Mechanism Case, for switch lever without detector circuits	112-C-7394	
Db	Mechanism Case, for signal lever.....	111-C-7394	
Dc	Mechanism Case, for spare space.....	113-C-7394	
E	Circuit Controller, as shown, for switch lever unit (1-6, 8-7a, 4-7b, 2-11a, 4-12a, 12-45, 12-46).....	D-1386-3	
Ea	as above, with contact springs, for route locking (1-6, 4-7a, 4-7b, 4-7c, 2-11a, 4-12a, 12-45, 12-46)	D-1386-4	
Eb	Circuit Controller, with spring blocks, contact springs, contact bars, terminal posts, washers and screws for signal lever unit (1-6, 8-7a, 4-7d, 2-11a, 4-12a, 12-45, 12-46).....	D-1386-4	
F	Terminal Board, for 8-lever machine, with supports, bus bars, contact springs, terminal posts, terminal connector, fuses, bolts, washers and nuts (1-20, 1-21, 2-22, 2-23, 8-24, 1-25, 14-26, 42-27, 1-28, 3-29, 2-34).....	D-1387-2	
Fa	Terminal Board, for 16-lever machine, with supports, bus bars, contact springs, terminal posts, terminal connector, fuses, bolts, washers and nuts (1-20a, 1-21a, 2-22, 2-23a, 8-24, 1-25, 28-26, 84-27, 1-28, 3-29, 2-34).....	D-1387-2	
1	Cover, for mechanism case, Fig. D, Da, Db or Dc....	82-C-7394	
2	Cover, for circuit controller for detector circuits....	103-C-7394	
3	Number Plate Bracket, for mechanism case, Fig. Da, Db or Dc.....	65-C-7394	
4	Number Plate, for cover, Fig. 2, and number plate bracket, Fig. 3.....	7-B-8286	
5	Tube, for oil hole in mechanism case, Fig. D, Da, Db or Dc.....	27-B-8161	
6	Circuit Controller Base, for Fig. E, Ea or Eb.....	100-C-7394	

**DETAILS FOR MULTIPLE UNIT ELECTRIC
INTERLOCKING MACHINE**

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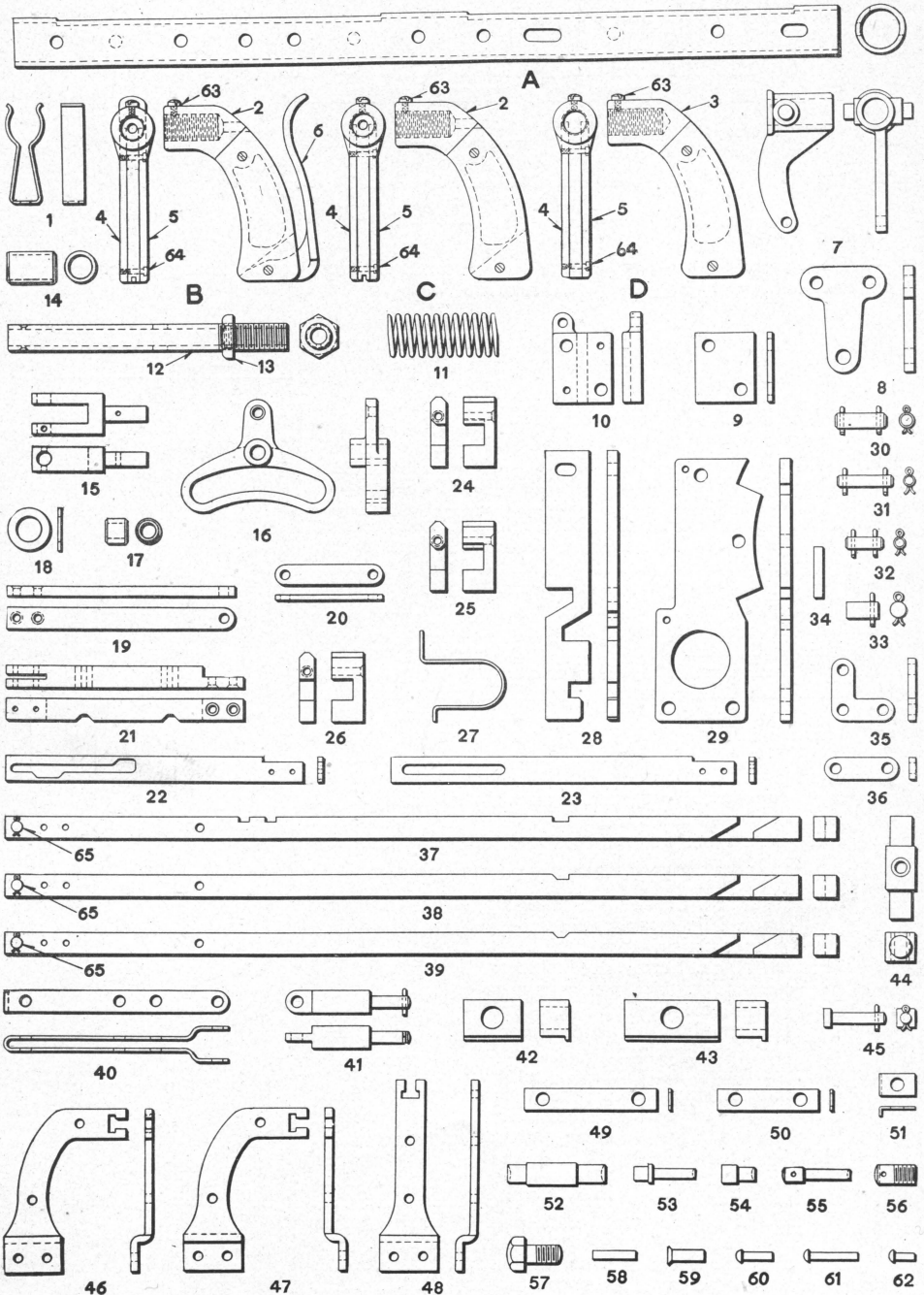
Fig.		Drawing Reference	List Price
7	Spring Block, for Fig. E, Ea or Eb.....		
7a	as above, with contact spring, washer and screw for Fig. E, Ea or Eb, (1-7, 1-10, 1-14, 1-44)	43-C-7394	
7b	as above, with contact spring, washer and screw, for route locking for Fig. E or Ea, (1-7, 1-9, 1-14, 1-44).....		
7c	as above, with contact stop, contact spring, washer and screw for Fig. Ea, (1-7, 1-8, 1-9, 1-14, 1-44).....		
7d	as above, with contact spring, washer and screw for Fig. Eb, (1-7, 1-10, 1-14, 1-44).....		
8	Contact Stop.....	79-C-7394	
9	Contact Spring.....	626-B-8385	
10	Contact Spring.....	626a-B-8385	
11	Contact Bar, for Fig. E, Ea or Eb.....	38-C-7394	
11a	as above, with terminal post, washers and nuts, (1-11, 1-13).....		
12	Contact Bar, for Fig. E, Ea or Eb.....	39-C-7394	
12a	as above, with terminal post, washers and nuts, (1-12, 1-13).....		
13	Terminal Post, with washers and nuts, for Fig. 11 or 12.....	495-B-8094	
14	Washer, for Fig. 7.....	101-B-7828	
15	Cleat, for Fig. E, Ea or Eb.....	101-C-7394	
16	Washer, for screw, Fig. 40.....	6-B-7828	
17	Locking Bed Cap, left hand.....	85-C-7394	
18	Locking Bed Cap, intermediate.....	87-C-7394	
19	Locking Bed Cap, right hand.....	86-C-7394	
20	Terminal Board, for 8-lever machine.....	7-C-6035	
20a	Terminal Board, for 16-lever machine.....	6-C-6035	
21	Support, for terminal board on 8-lever machine....	155-C-7394	
21a	Support, for terminal board on 16-lever machine....	156-C-7394	
22	Terminal Board Support.....	114-C-7394	
23	Bus Bar, for Fig. F.....	116-C-7394	
23a	Bus Bar, for Fig. Fa.....	115-C-7394	
24	Contact Spring, with terminal post, washers and nuts, for holding fuses, Fig. 28 or 29.....	143-B-8385	
25	Terminal Connector, for connecting fuses, Fig. 29...	118-B-8064	
26	Terminal Post, with washers and nuts, for holding bus bar, Fig. 23 or 23a, to terminal board.....	380-B-8094	
27	Terminal Post, with washers and nuts, for Fig. F or Fa	147-B-8094	
28	Fuse, 15 Amp., for Fig. F or Fa.....	8-B-9014	
29	Fuse, 5 Amp., for Fig. F or Fa.....	10-B-9014	
30	Terminal Connector, for connecting terminal posts on bus bar.....	159-B-8064	

DETAILS FOR MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE

Order by Name, Plate and Figure

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Fig.		Drawing Reference	List Price
31	Taper Pin, for locking bed, Fig. Bc.....	4-B-8059	
32	Taper Pin, for front and back plate.....	16-B-8059	
33	Hex. Hd. Mach. Bolt, $\frac{1}{2}$ "x1 $\frac{3}{4}$ ", and nut for fastening terminal board support or angle support to machine		
34	Hex. Hd. Mach. Bolt, $\frac{3}{8}$ "x2", and nut, with washer, Fig. 34b, for fastening terminal board support or angle support to terminal board.....		
34a	as above, with washer, Fig. 34c.....		
34b	Washer, for bolt, Fig. 34 or 34a.....	3-B-7824	
34c	Washer, for bolt, Fig. 34a.....	235-B-8078	
35	Hex. Hd. Mach. Bolt, $\frac{3}{8}$ "x1", for fastening front and back plate to mechanism case and to leg.....		
36	Hex. Hd. Mach. Bolt, $\frac{3}{8}$ "x1 $\frac{1}{4}$ ", for fastening front and back plate to locking bed.....		
37	Hex. Hd. Mach. Bolt, $\frac{1}{2}$ "x1", for fastening front and back plate to leg.....		
38	Hex. Hd. Cap Screw, $\frac{1}{4}$ "x $\frac{5}{8}$ ", for fastening case support to front and back plate.....		
39	Stud, for mechanism case, Fig. D, Da, Db or Dc....	147-B-8114	
40	Rd. Hd. Mach. Screw, No. 14-24x1", for fastening circuit controller base, Fig. 6, and cleat, Fig. 15, to mechanism case.		
41	Rd. Hd. Mach. Screw, No. 12-24x7/16", for fastening cover, Fig. 2, and number plate bracket, Fig. 3, to mechanism case.....		
42	Rd. Hd. Mach. Screw, No. 6-32x3/16", for fastening cover, Fig. 1, to mechanism case.....		
43	Flat Hd. Mach. Screw, No. 4-40x $\frac{1}{4}$ ", for fastening number plate, Fig. 4, to cover, Fig. 2, or to number plate bracket, Fig. 3.....		
44	Fil. Hd. Mach. Screw, No. 10-32x $\frac{1}{2}$ ", for fastening contact stop, Fig. 8, and contact spring, Fig. 9 or 10, to spring block, Fig. 7, and locking bed cap, Fig. 17, 18 or 19, to locking bed.....		
45	Fil. Hd. Mach. Screw, No. 10-32x $\frac{3}{4}$ ", with washer, Fig. 46a, for fastening contact bar, Fig. 11 or 12, to circuit controller base, Fig. 6.....		
46	Fil. Hd. Mach. Screw, No. 10-32x1 $\frac{1}{8}$ ", with washer, Fig. 46a, for fastening spring block, Fig. 7, to circuit controller base, Fig. 6.....		
46a	Washer, for screw, Fig. 45 or 46.....	67-B-7828	



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Fig.		Drawing Reference	List Price
A	Conduit, for circuit controller wires.....	119-C-7394	
B	Handle, as shown, for switch lever with detector circuits, (1-2, 1-4, 1-5, 1-6, 1-63, 2-64).....	70-C-7394	
C	Handle, as shown, for switch lever without detector circuits, (1-2, 1-4, 1-5, 1-63, 2-64).....	71-C-7394	
D	Handle, as shown, for signal lever, (1-3, 1-4, 1-5, 1-63, 2-64).....	72-C-7394	
1	Conduit Support.....	117-C-7394	
2	Handle only, for Fig. B or C.....	59-C-7394	
3	Handle only, for Fig. D.....	67-C-7394	
4	Grip, R. H., for Fig. B, C or D.....	64-C-7394	
5	Grip, L. H., for Fig. B, C or D.....	63-C-7394	
6	Trigger, for Fig. B.....	60-C-7394	
7	Arm, used with lever shaft, Fig. 12 or 12a.....	111-B-8192	
8	Bearing, for arm, Fig. 7.....	120-C-7394	
9	Guide Plate, for locking bar for signal lever unit....	78-C-7394	
10	Guide, for locking bar for switch lever unit.....	104-C-7394	
11	Coil Spring, used with lever shaft, Fig. 12 or 12a...	163-B-7770	
12	Lever Shaft, with nut, Fig. 13.....	53-C-7394	
12a	Lever Shaft, with nut, Fig. 13.....	76-C-7394	
13	Nut, for Fig. 12 or 12a.....	80-B-8265	
14	Sleeve, for Fig. 12 or 12a.....	183-B-8072	
15	Jaw, for Fig. 12 or 12a.....	43-B-8825	
15a	as above, with roller, pin and cotter (1-15, 1-17, 1-33).....		
16	Rocker Link, for switch or signal lever units.....	8-C-7394	
17	Roller, for Fig. 15.....	184-B-8072	
18	Washer, used with jaw, Fig. 15.....	36-B-7826	
19	Operating Bar, used with cam bar, Fig. 22.....	11-C-7394	
20	Link, for connecting arm, Fig. 7, to operating bar, Fig. 19.....	15-C-7394	
21	Locking Bar, for switch or signal lever units.....	45-C-7394	
22	Cam Bar, for switch lever units.....	30-C-7394	
23	Motion Bar, for signal lever unit.....	77-C-7394	
24	Latch, for switch lever unit.....	11-B-8711	
25	Latch, for high and dwarf signal lever units.....	12-B-8711	
26	Latch, for three-position signal lever unit.....	13-B-8711	

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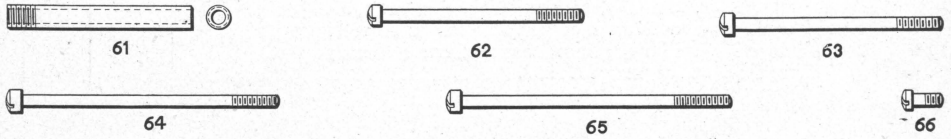
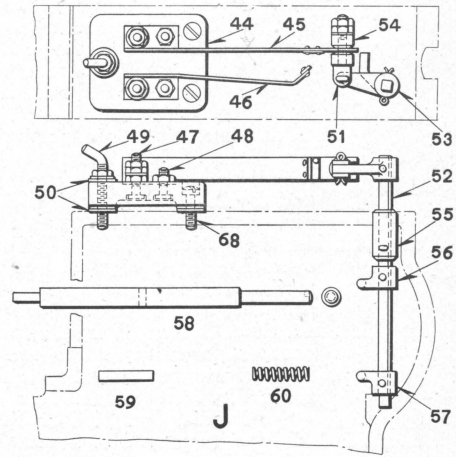
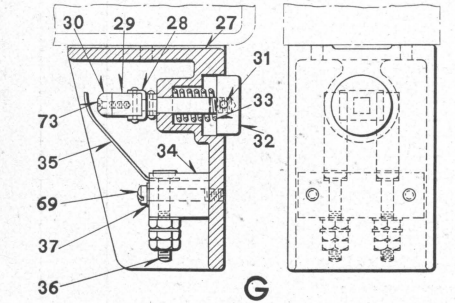
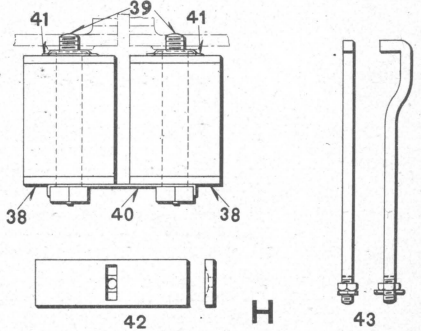
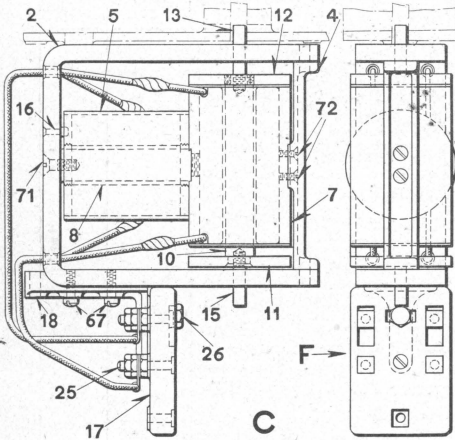
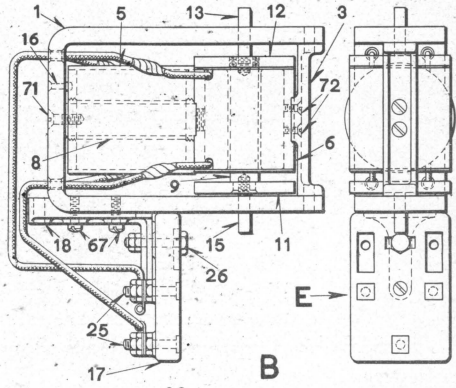
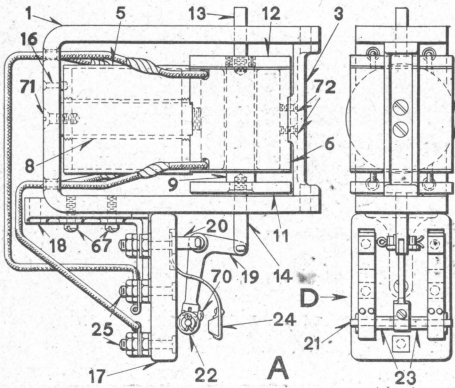
	Drawing Reference	List Price	
Fig.			
27	Spring, for latch, Fig. 24, 25 or 26.....	60-B-8124	
28	Motion Plate, for switch or signal lever units.....	106-C-7394	
29	Guide Plate and Quadrant, for switch or signal lever units	9-C-7394	
30	Pin, with two cotters, 1/16"x5/8", for fastening arm, Fig. 7, and operating bar, Fig. 19, to link, Fig. 20.....	4-B-10203	
31	Pin, with two cotters, 1/16"x3/8", for fastening fork link, Fig. 40, to locking bar, Fig. 37, 38 or 39...	113-B-8097	
32	Pin, with two cotters, 1/16"x3/8", for fastening fork link, Fig. 40, to motion bar, Fig. 23, or to connecting link, Fig. 36.....	114-B-8097	
33	Pin, with one cotter, 1/8"x7/8", for holding roller, Fig. 17, in jaw, Fig. 15.....	72-B-8079	
34	Drill Rod, No. 26x7/8" long (.147), for guide plate, Fig. 9, guide, Fig. 10, and quadrant, Fig. 29....		
35	Rocker Arm, used with cam bar for switch lever unit.	27-C-7394	
36	Connecting Link, for rocker arm and fork link.....	28-C-7394	
37	Locking Bar, with stud, Fig. 65, for switch lever unit.	124-C-7394	
38	Locking Bar, with stud, Fig. 65, for high or dwarf signal lever units.....	125-C-7394	
39	Locking Bar, with stud, Fig. 65, for three position high signal lever unit.....	126-C-7394	
40	Fork Link, for switch or signal lever units.....	31-C-7394	
41	Link Jaw, with one cotter, 1/16"x5/8", for holding trunnion, Fig. 44.....	44-C-7394	
42	Sliding Contact Block, for circuit controller on signal lever unit.....	40-C-7394	
43	Sliding Contact Block, for circuit controller on switch lever unit.....	42-C-7394	
44	Trunnion, for holding sliding contact block, Fig. 42 or 43.....	41-C-7394	
44a	as above, with link jaw, (1-44, 1-41).....		
44b	as above, with pin, (1-44, 1-45).....		
45	Pin, with one cotter, 1/16"x5/8", used with trunnion, Fig. 44.....	286-B-8098	
46	Contact Operating Arm, R. H.....	20-C-7394	
47	Contact Operating Arm, L. H.....	21-C-7394	
48	Contact Operating Arm.....	19-C-7394	

DETAILS FOR MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE

Order by Name, Plate and Figure

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Fig.		Drawing Reference	List Price
49	Lock Washer, used on guide plate, Fig. 9, and guide, Fig. 10.....	52-B-8486	
50	Lock Washer, used on guide plate and quadrant, Fig. 29.....	54-B-8486	
51	Lock Washer, used on guide plate and quadrant, Fig. 29.....	51-B-8486	
52	Stud, for holding rocker link, Fig. 16.....	142-B-8114	
53	Stud, for holding rocker arm, Fig. 35.....	102-B-8114	
54	Stud, for rocker link, Fig. 16.....	109-B-8114	
55	Stud, for holding spring, Fig. 27.....	125-8114	
56	Stud, for holding spring, Fig. 27.....	124-8114	
57	Hex. Hd. Cap Screw, 5/16"x5/8", for fastening bearing, Fig. 8, guide plate, Fig. 9, and guide plate and quadrant, Fig. 29, to mechanism case.....		
58	Steel Pin, No. 30x3/4", for fastening jaw, Fig. 15, to lever shaft, Fig. 12.....		
59	Csk. Hd. Steel Rivet, 3/16"x5/8", for fastening operating bar, Fig. 19, to locking bar, Fig. 21.....		
60	Rd. Hd. Steel Rivet, No. 12x1/2", for fastening rocker arm, Fig. 35, to connecting link, Fig. 36, and for fastening fork link, Fig. 40, to link jaw, Fig. 41.....		
61	Rd. Hd. Steel Rivet, 1/8"x7/8", for fastening contact operating arms, Figs. 46 and 47, to cam bar or motion bar, and for fastening contact operating arm, Fig. 48, to locking bar, Fig. 37, 38 or 39..		
62	Rd. Hd. Steel Rivet, 1/8"x3/8", for fastening contact operating arm, Fig. 46, to contact operating arm, Fig. 47, and for fastening two contact operating arms, Fig. 48, together.....		
63	Screw, for handle, Fig. B, C or D.....	288-B-8098	
64	Fil. Hd. Mach. Screw, No. 6-32x23/32", for fastening grips, Figs. 4 and 5, to handle, Fig. 2 or 3.....		
65	Stud, with one cotter, 1/16"x5/8", for connecting link of auxiliary circuit controller to locking bar, Fig. 37, 38 or 39.....	211-8114	



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Fig.	Description	Drawing Reference	List Price
A	Indication Mechanism, as shown, for switch lever unit, (1-1, 1-3, 1-5, 1-6a, 1-8, 1-13, 1-14, 1-16, 1-D)	27-C-7411	
B	Indication Mechanism, as shown, for signal lever unit, (1-1, 1-3, 1-5, 1-6a, 1-8, 1-13, 1-15, 1-16, 1-E)	28-C-7411	
C	Indication Mechanism, as shown, for dwarf signal lever unit, (1-2, 1-4, 1-5, 1-7a, 1-8, 1-13, 1-15, 1-16, 1-F)	33-C-7411	
D	Terminal Board, with support, terminal posts, contact springs, contact carrier, shaft, contact rollers, separators, screws, washers, nuts and cotters, for Fig. A (1-17, 1-18, 1-19a, 1-20a, 2-24, 2-25a, 3-67, 1-71, 2-72)	27-C-7411	
E	Terminal Board, with support, terminal posts, screws, washers and nuts, for Fig. B, (1-17, 1-18, 3-25a, 1-26a, 3-67, 1-71, 2-72)	28-C-7411	
F	Terminal Board, with support, terminal posts, bolt, screws, washers and nuts, for Fig. C (1-17, 1-18, 4-25a, 1-26a, 3-67, 1-71, 2-72)	33-C-7411	
G	Push Button Circuit Controller, as shown, used on signal lever units (1-27, 1-28a, 1-28d, 1-29, 1-30, 1-31, 1-32, 1-33, 1-34a, 2-37, 2-66, 2-69, 1-73)	8-B-9918	
H	Detector Magnets, as shown, with magnet cores, armature, latch, lock washer and washers, (2-38, 2-39, 1-40, 2-41, 1-42, 1-43)	7-D-1386	
J	Circuit Controller, as shown, for detector circuits, (1-44, 1-45a, 1-46a, 1-49a, 3-50, 1-51a, 1-52a, 1-58, 1-59, 1-60, 2-68)	110-C-7394	
1	Back Strap, for Fig. A or B	113-B-8162	
2	Back Strap, for Fig. C	118-B-8162	
3	Separator, for back strap, Fig. 1	34-C-7411	
4	Separator, for back strap, Fig. 2	35-C-7411	
5	Magnet for Fig. A, B or C	92-B-8133	

DETAILS FOR MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE

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Fig.		Drawing Reference	List Price
6	Magnet, for Fig. A. or B.....	38-B-8342	
6a	as above, with core and armatures, (1-6, 1-9a)		
7	Magnet, for Fig C.....	37-B-8342	
7a	as above, with core and armatures, (1-7, 1-10a)		
8	Core, for magnet, Fig. 5.....	115-B-8101	
9	Core, for magnet, Fig. 6.....	84-B-8101	
9a	as above, with armatures (1-9, 1-11, 1-12) ..		
10	Core, for magnet, Fig. 7.....	87-B-8101	
10a	as above, with armatures (1-10, 1-11, 1-12) ..		
11	Armature, for Fig. A, B or C.....	132-B-8157	
12	Armature, for Fig. A, B or C.....	133-B-8157	
13	Screw, for core, Fig. 9 or 10.....	69-B-8190	
14	Screw, with one cotter, 3/32"x1/2", for core, Fig. 9..	68-B-8190	
15	Screw, for core, Fig. 9 or 10.....	71-B-8190	
16	Pin, for holding magnet, Fig. 5.....	162-B-8097	
17	Terminal Board, for Fig. D, E or F.....	71-B-9968	
18	Support, for terminal board, Fig. 17.....	13-C-7411	
19	Contact Carrier, for Fig. D.....	9-C-7411	
19a	as above, with shaft, contact rollers, washers, separators and screw (1-19, 1-21a, 1-70)		
20	Support, with one cotter, 3/32"x7/8", for contact carrier, Fig. 19.....	4-C-7411	
20a	as above, with nuts (1-20, 2-20b).....		
20b	Nut, for suport, Fig. 20, and screw, Fig. 26 or 49...	4-B-8109	
21	Shaft, with two cotters, 1/16"x1/4", for contact carrier, Fig. 19.....	22-C-7411	
21a	as above, with washers, contact rollers and separators (1-21, 2-21b, 2-22, 2-23)		
21b	Washer, for shaft, Fig. 21.....	100-B-7828	
22	Contact Roller, for shaft, Fig. 21.....	21-C-7411	
23	Separator, for shaft, Fig. 21.....	12-B-10267	
24	Contact Spring, for Fig. D.....	632-B-8385	

DETAILS FOR MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Description	Drawing Reference	List Price
25	Terminal Post, for Fig. D, E or F.....	45-B-8094	
25a	as above, with washer and nuts (1-25, 1-25b, 3-25c).....		
25b	Washer, for Fig. 25, 36, 47, 49 or 51.....	5-B-7828	
25c	Nut, for Fig. 25, 36, 47, 48 or 51.....	3-B-8109	
26	Bolt, for Fig. E or F.....	43-B-8094	
26a	as above, with nuts (1-26, 2-20b).....		
27	Base, for Fig. G.....	1-B-10265	
28	Contact Carrier, for Fig. G.....	3-B-10265	
28a	as above, with insulation, contact piece, screws and pins (1-28, 1-28b, 1-28c, 1-29, 1-30, 1-31, 1-73).....		
28b	Pin, No. 14x9/16", for fastening insulation, Fig. 29, in contact carrier, Fig. 28.....		
28c	Pin, No. 14x7/16", for fastening screw, Fig. 31, in contact carrier, Fig. 28.....		
28d	Pin, No. 12x1-1/16", for fastening knob, Fig. 32, to screw, Fig. 31.....		
29	Insulation, for contact carrier, Fig. 28.....	410-B-8750	
30	Contact Piece, for Fig. G.....	2-B-10265	
31	Screw, for Fig. G.....	282-B-8098	
32	Knob, for Fig. G.....	58-B-8235	
33	Coil Spring, for Fig. G.....	166-B-7770	
34	Spring Support, for Fig. G.....	39-B-9968	
34a	as above, with contact springs, terminal posts, washers and nuts (1-34, 2-35, 2-36a).....		
35	Contact Spring, for Fig. G.....	636-B-8385	
36	Terminal Post, for Fig. G.....	120-B-8094	
36a	as above, with washers and nuts (1-36, 2-25b, 3-25c).....		
37	Washer, for Fig. G.....	67-B-7828	
38	Magnet, for Fig. H.....	87-B-8133	
39	Magnet Core, for Fig. 38.....	113-B-8101	
40	Lock Washer, for Fig. 39.....	92-B-8486	
41	Washer, for magnets, Fig. H.....	126-B-7828	

DETAILS FOR MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE

Order by Name, Plate and Figure

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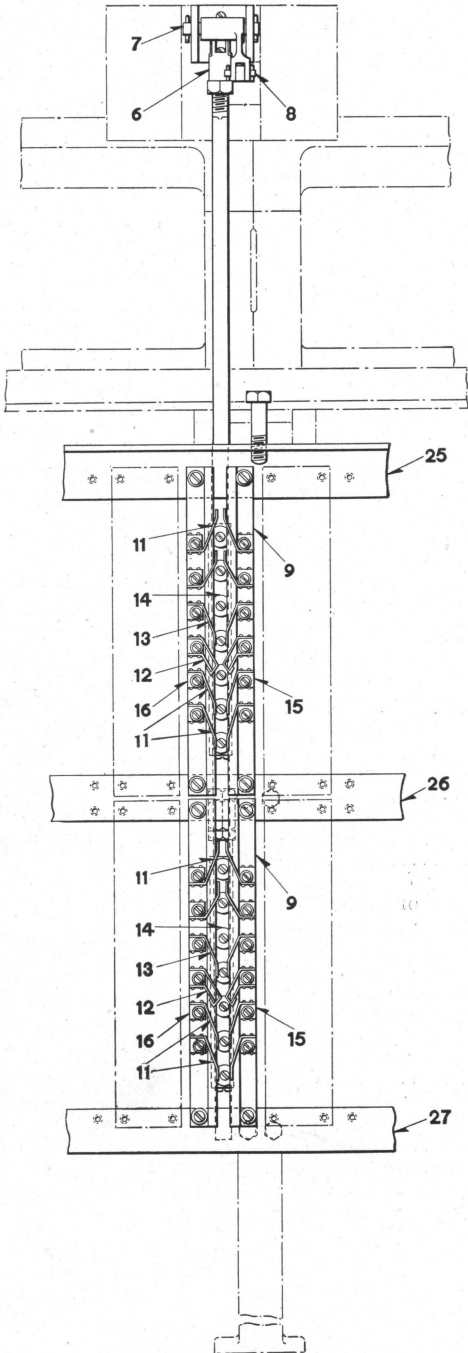
Fig.		Drawing Reference	List Price
42	Armature, used with magnets, Fig. H.....	131-8157	
43	Latch, with 1/4" hex. nut and cotter, 1/16"x1/2", used with magnets, Fig. H.....	102-C-7394	
44	Base, for Fig. J.....	72-B-9968	
45	Contact Spring, for Fig. J.....	750-B-8385	
45a	as above, with terminal posts, washer and nuts (1-45, 1-47a, 1-48a).....		
46	Contact Spring, for Fig. J.....	749-B-8385	
46a	as above, with terminal posts, washer and nuts (1-46, 1-47a, 1-48a).....		
47	Terminal Post, for contact spring, Fig. 45 or 46.....	567-B-8094	
47a	as above, with washer and nuts (1-47, 1-25b, 3-25c).....		
48	Terminal Post, for contact spring, Fig. 45 or 46.....	367-B-8094	
48a	as above, with nut (1-48, 1-25c).....		
49	Screw, for fastening base, Fig. 44, to mechanism case.	338 B-8098	
49a	as above, with washers and nut (1-49, 1-20b, 1-25b, 1-50).....		
50	Insulating Washer, for screw, Fig. 49, and for bottom of base, Fig. 44.....	423-8078	
51	Jaw, with one cotter, 3/32"x1/2", for Fig. J.....	44-B-8825	
51a	as above, with bushings, washer and nuts (1-51, 2-54, 1-25b, 2-25c).....		
52	Shaft, for Fig. J.....	135-8114	
52a	as above, with arms, crank, bushing and drill rods (1-52, 1-53, 1-55, 1-56, 1-57, 2-57a).....		
53	Crank, for shaft, Fig. 52.....	115-B-8192	
54	Bushing, for jaw, Fig. 51.....	232-B-8095	
55	Bushing, with one cotter, 3/32"x5/8", for shaft, Fig. 52.....	28-B-8047	
56	Arm, for shaft, Fig. 52.....	113-B-8192	
57	Arm, for shaft, Fig. 52.....	114-B-8192	
57a	Drill Rod, No. 42x9/16", for fastening arm, Fig. 56 or 57, to shaft, Fig. 52.....		

DETAILS FOR MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE

Order by Name, Plate and Figure

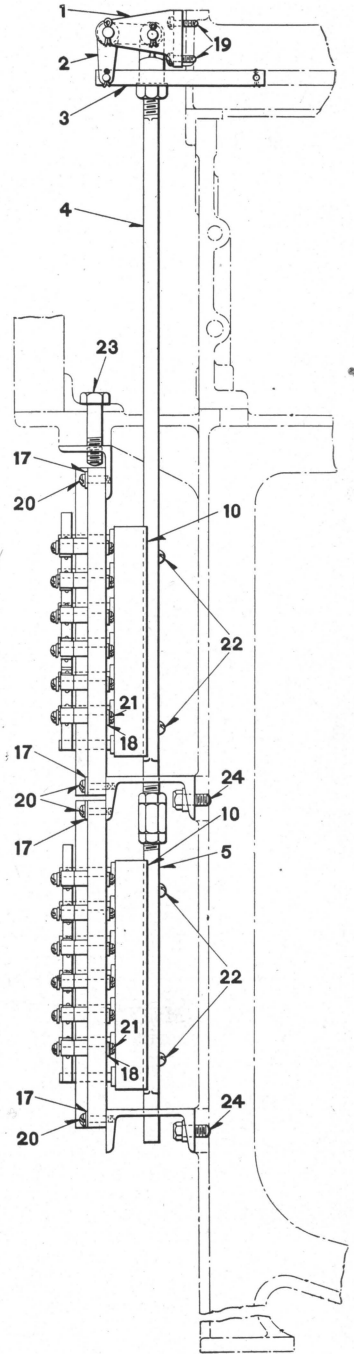
The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
58	Lever Shaft, for Fig. J.....	12-C-7394	
59	Drill Rod, No. 33x1-1/4", for lever shaft, Fig. 58....		
60	Coil Spring, for lever shaft, Fig. 58.....	164-B-7770	
61	Conduit, for wires of push button circuit controller, Fig. G.....	84-C-7394	
62	Fil. Hd. Mach. Screw, for fastening indication mechanism, Fig. A or B, to mechanism case	333-B-8098	
63	Fil. Hd. Mach. Screw, for fastening indication mechanism, Fig. A or B, to mechanism case	334-B-8098	
64	Fil. Hd. Mach. Screw, for fastening indication mechanism, Fig. C, to mechanism case	336-B-8098	
65	Fil. Hd. Mach. Screw, for fastening indication mechanism, Fig. C, to mechanism case	337-B-8098	
66	Fil. Hd. Mach. Screw, No. 10-32x1/2", for fastening push button circuit controller, Fig. G, to mechanism case.....		
67	Fil. Hd. Mach. Screw, No. 10-32x5/8", for fastening support, Fig. 18, to back strap, Fig. 1 or 2, and for fastening terminal board, Fig. 17, to support, Fig. 18.....		
68	Fil. Hd. Mach. Screw, No. 10-32x3/4", for fastening base, Fig. 44, to mechanism case.....		
69	Fil. Hd. Mach. Screw, No. 10-32x1-1/4", for fastening spring support, Fig. 34, to base, Fig. 27.....		
70	Fil. Hd. Mach. Screw, No. 4-40x3/8", for contact carrier, Fig. 10.....		
71	Flat Hd. Mach. Screw, No. 1/4"-20x5/8", for fastening core, Fig. 8, to back strap, Fig. 1 or 2.....		
72	Flat Hd. Mach. Screw, No. 8-32x5/16", for fastening magnet, Fig. 6, to separator, Fig. 3, and magnet, Fig. 7, to separator, Fig. 4.....		
73	Flat Hd. Mach. Screw, No. 6-32x9/16", for fastening contact piece, Fig. 30, to insulation, Fig. 29.....		



A

B



AUXILIARY CIRCUIT CONTROLLER FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE

**AUXILIARY CIRCUIT CONTROLLER FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price
Fig.		
A	Upper Auxiliary Circuit Controller, with upper rod, jaw, bracket, crank, link, pins, screws, washers and cotters (no supports), as shown.....	1-C-7929
Aa	as above, with lower auxiliary circuit controller (1-A, 1-B)	1-C-7929
B	Lower Auxiliary Circuit Controller, with lower rod, turnbuckle, screws, washers and nuts (no supports), as shown.....	2-C-7929
1	Bracket, for holding crank, Fig. 2.....	4-C-7950
1a	as above, with crank, pins and cotters (1-1, 1-2a, 1-7).....	
2	Crank	154-8192
2a	as above, with pin and cotters (1-2, 1-8)...	
3	Link, for connecting crank, Fig. 2, to locking bar of switch or signal lever	1-C-7950
4	Upper Rod, with 1/2" hex. nut, for operating upper circuit controller.....	5-C-7950
4a	as above, with jaw, pin and cotters (1-4, 1-6)	
4b	as above, with lower rod (1-4a, 1-5).....	
5	Lower Rod, with turnbuckle, Fig. 5a, one nut, Fig. 5b, and one nut, Fig. 5c, for operating lower circuit controller.....	6-C-7950
5a	Turnbuckle, for connecting Fig. 5 to Fig. 4.....	18-B-8231
5b	Nut, for lower rod, Fig. 5.....	108-B-8265
5c	Nut, for upper rod, Fig. 4, when lower auxiliary circuit controller is used.....	14-B-8265
6	Jaw, with pin and cotters, for upper rod, Fig. 4.....	83-7742
7	Pin, with two cotters, 1/8"x3/4", for supporting crank, Fig. 2, in bracket, Fig. 1	11-B-10209
8	Pin, with two cotters, 1/16"x3/4", for connecting link, Fig. 3, to crank, Fig. 2.....	2-B-10209

**AUXILIARY CIRCUIT CONTROLLER FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE**

Order by Name, Plate and Figure

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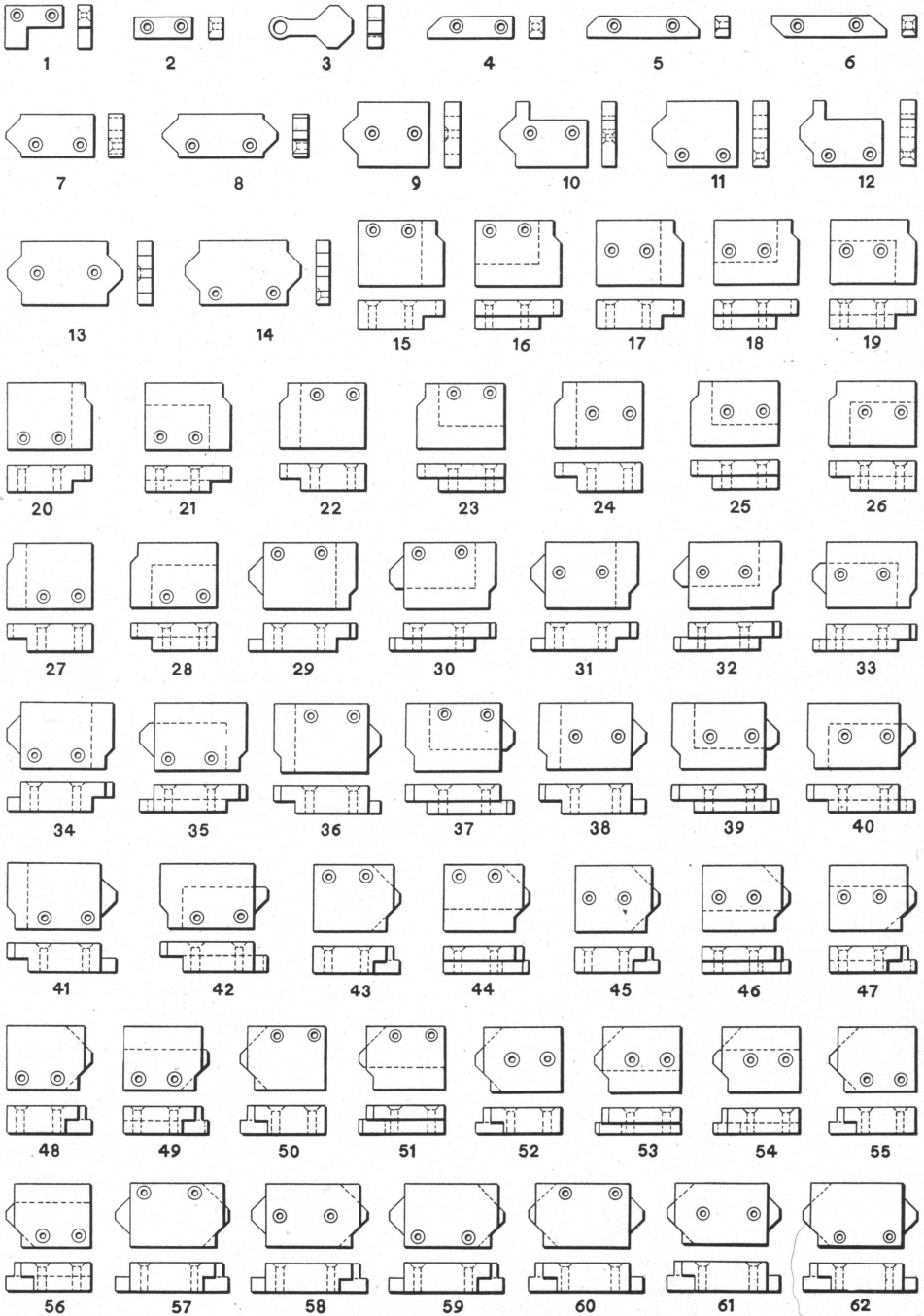
Fig.		Drawing Reference	List Price
9	Contact Spring Board, for upper or lower circuit controller	120-9968	
9a	as above, with contact springs, non-turning blocks, screws and washers, for R. H. contacts (1-9, 3-11, 1-12, 2-13, 6-15, 12-18, 12-21)		
9b	as above, with contact springs, non-turning blocks, screws and washers for L. H. contacts (1-9, 3-11, 1-12, 2-13, 6-16, 12-18, 12-21)		
10	Board, for holding contact studs, for upper or lower circuit controller	113-9968	
10a	as above, with contact studs, washers and nuts (1-10, 7-14)		
11	Contact Spring, with support and rivets, for upper or lower circuit controller	940-8385	
12	Contact Spring, with reinforcing spring, support and rivets, for upper or lower circuit controller	943-8385	
13	Contact Spring, with support and rivets, for upper or lower circuit controller	944-8385	
14	Contact Stud, with washer, Fig. 14a, and nut, Fig. 14b, for upper or lower circuit controller	10-C-7950	
14a	Washer, for contact stud, Fig. 14	56-B-7828	
14b	Nut, for contact stud, Fig. 14	18I-8109	
15	R. H. Non-Turning Block, for upper or lower circuit controller	7-C-7950	
16	L. H. Non-Turning Block, for upper or lower circuit controller	11-C-7950	
17	Washer, for screw, Fig. 20	6-B-7828	
18	Washer, for screw, Fig. 21	67-B-7828	
19	Fil. Hd. Mach. Screw, No. 14-24x11/16", for fastening bracket, Fig. 1, to rear of mechanism case		
20	Fil. Hd. Mach. Screw, No. 14-24x7/8", for fastening contact spring board, Fig. 9, to top, intermediate or bottom support, Fig. 25, 26 or 27		
21	Fil. Hd. Mach. Screw, No. 10-30x13/16", for fastening contact spring, Fig. 11, 12 or 13, to right or left hand non-turning block and for fastening right or left hand non-turning block to contact spring board		

**AUXILIARY CIRCUIT CONTROLLER FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
22	Rd. Hd. Wood Screw, No. 10x1-1/4", for fastening board, Fig. 10, to upper rod, Fig. 4, or lower rod, Fig. 5.....		
23	Hex. Hd. Mach. Bolt, 1/2"-1-3/4", for fastening top support to rear of machine leg		
24	Hex. Hd. Tap Bolt, 3/8"x3/4", for fastening intermediate or bottom support to rear of machine leg		
24a	Washer, for hex. hd. tap bolt, Fig. 24.....	88-7826	
25	Top Support, for auxiliary circuit controller for 8-lever machine.....	44-C-7950	
25a	as above, for 16-lever machine.....	45-C-7950	
25b	as above, for 24-lever machine.....	46-C-7950	
25c	as above, for 32-lever machine.....	48-C-7950	
25d	as above, for 40-lever machine.....	51-C-7950	
25e	as above, for 48-lever machine.....	49-C-7950	
25f	as above, for 56-lever machine.....	47-C-7950	
25g	as above, for 64-lever machine.....	50-C-7950	
26	Intermediate Support, for auxiliary circuit controller for 8-lever machine.....	28-C-7950	
26a	as above, for 16-lever machine.....	30-C-7950	
26b	as above, for 24-lever machine.....	38-C-7950	
26c	as above, for 32-lever machine.....	32-C-7950	
26d	as above, for 40-lever machine.....	42-C-7950	
26e	as above, for 48-lever machine.....	34-C-7950	
26f	as above, for 56-lever machine.....	40-C-7950	
26g	as above, for 64-lever machine.....	36-C-7950	
27	Bottom Support, for auxiliary circuit controller for 8-lever machine.....		
27a	as above, for 16-lever machine.....	29-C-7950	
27b	as above, for 24-lever machine.....	31-C-7950	
27c	as above, for 32-lever machine.....	39-C-7950	
27d	as above, for 40-lever machine.....	43-C-7950	
27e	as above, for 48-lever machine.....	35-C-7950	
27f	as above, for 56-lever machine.....	41-C-7950	
27g	as above, for 64-lever machine.....	37-C-7950	



LOCKING DOGS AND DETAILS FOR MULTIPLE UNIT ELECTRIC INTERLOCKING MACHINE (Continued on Plate 01117)

**LOCKING DOGS AND DETAILS FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
1	Butt Dog.....	1-10386	
2	Butt Dog.....	112-10386	
3	Special Swing Dog.....	2-10386	
4	Locking Dog.....	3-10386	
5	" "	4-10386	
6	" "	5-10386	
7	" "	6-10386	
8	" "	7-10386	
9	" "	8-10386	
10	" "	113-10386	
11	" "	9-10386	
12	" "	114-10386	
13	" "	10-10386	
14	" "	11-10386	
15	" "	12-10386	
16	" "	115-10386	
17	" "	13-10386	
18	" "	61-10386	
19	" "	62-10386	
20	" "	14-10386	
21	" "	63-10386	

**LOCKING DOGS AND DETAILS FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
22	Locking Dog.....	15-10386	
23	" ".....	64-10386	
24	" ".....	16-10386	
25	" ".....	65-10386	
26	" ".....	66-10386	
27	" ".....	17-10386	
28	" ".....	67-10386	
29	" ".....	18-10386	
30	" ".....	68-10386	
31	" ".....	19-10386	
32	" ".....	69-10386	
33	" ".....	70-10386	
34	" ".....	20-10386	
35	" ".....	71-10386	
36	" ".....	21-10386	
37	" ".....	72-10386	
38	" ".....	22-10386	
39	" ".....	73-10386	
40	" ".....	74-10386	
41	" ".....	23-10386	
42	" ".....	75-10386	

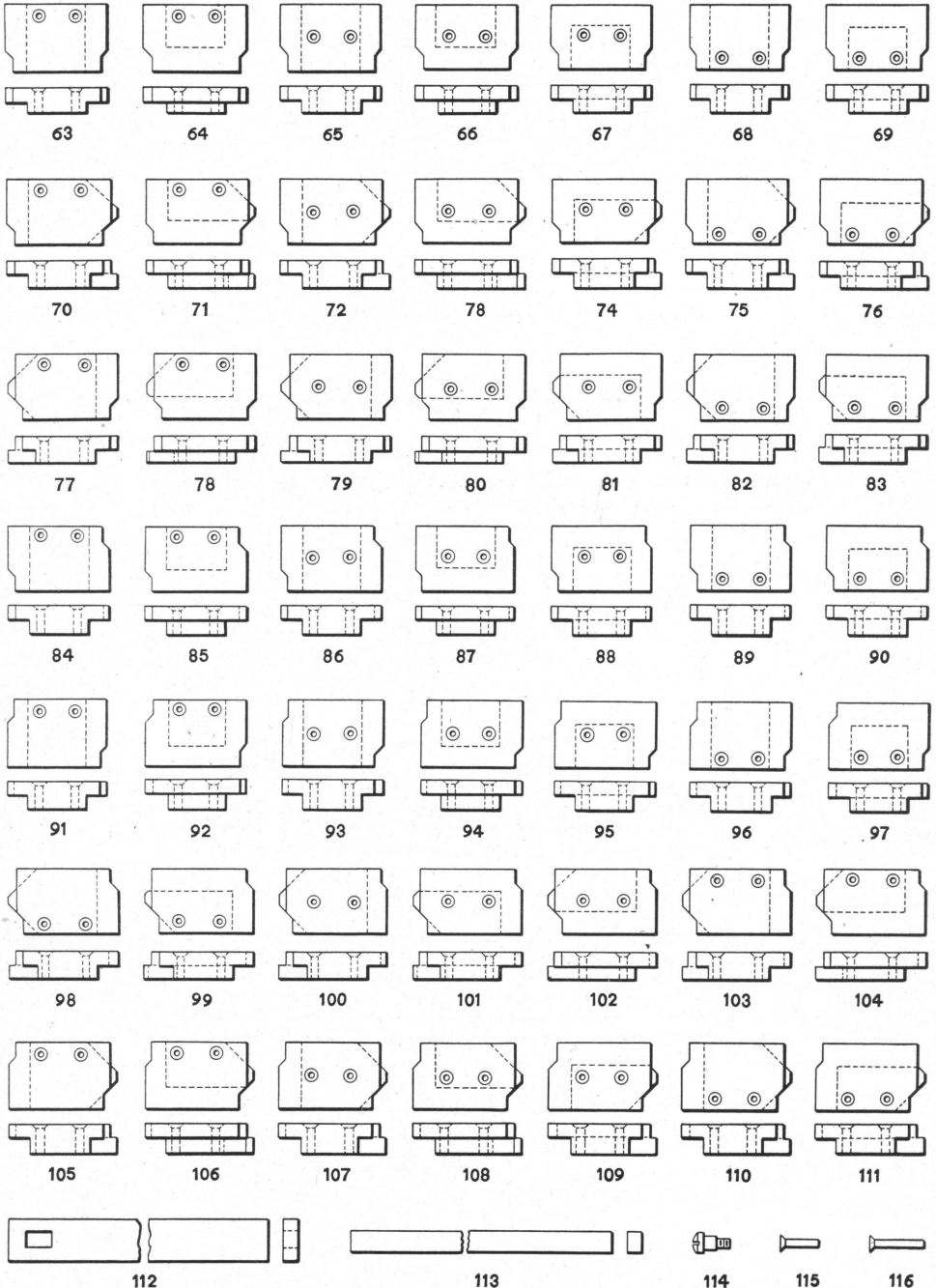
**LOCKING DOGS AND DETAILS FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
43	Locking Dog.....	24-10386	
44	" ".....	76-10386	
45	" ".....	25-10386	
46	" ".....	77-10386	
47	" ".....	78-10386	
48	" ".....	26-10386	
49	" ".....	79-10386	
50	" ".....	27-10386	
51	" ".....	80-10386	
52	" ".....	28-10386	
53	" ".....	81-10386	
54	" ".....	82-10386	
55	" ".....	29-10386	
56	" ".....	83-10386	
57	" ".....	30-10386	
58	" ".....	31-10386	
59	" ".....	32-10386	
60	" ".....	33-10386	
61	" ".....	34-10386	
62	" ".....	35-10386	

Continued on Plate 01117



LOCKING DOGS AND DETAILS FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE

**LOCKING DOGS AND DETAILS FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price	
63	Locking Dog.....	36-10386		
64	" ".....	84-10386		
65	" ".....	37-10386		
66	" ".....	85-10386		
67	" ".....	86-10386		
68	" ".....	38-10386		
69	" ".....	87-10386		
70	" ".....	39-10386		
71	" ".....	88-10386		
72	" ".....	40-10386		
73	" ".....	89-10386		
74	" ".....	90-10386		
75	" ".....	41-10386		
76	" ".....	91-10386		
77	" ".....	42-10386		
78	" ".....	92-10386		
79	" ".....	43-10386		
80	" ".....	93-10386		
81	" ".....	94-10386		

**LOCKING DOGS AND DETAILS FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE**

Order by Name, Plate and Figure

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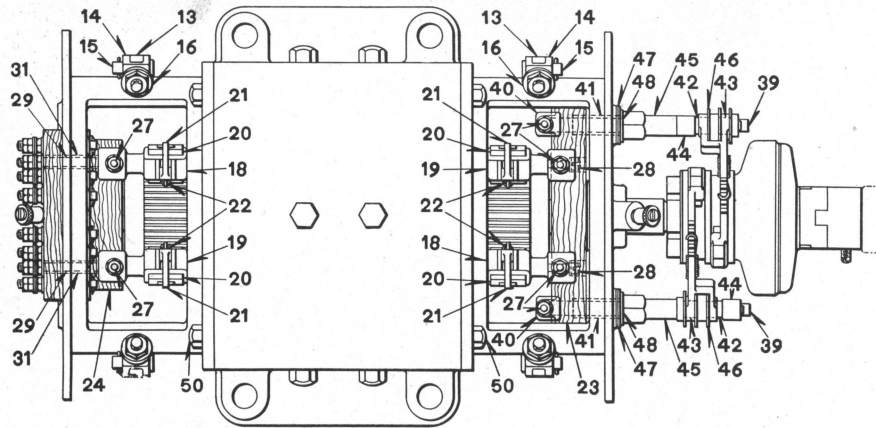
Fig.	Locking Dog.....	Drawing Reference	List Price
82	" "	44-10386	
83	" "	95-10386	
84	" "	45-10386	
85	" "	96-10386	
86	" "	46-10386	
87	" "	97-10386	
88	" "	98-10386	
89	" "	47-10386	
90	" "	99-10386	
91	" "	51-10386	
92	" "	104-10386	
93	" "	52-10386	
94	" "	105-10386	
95	" "	106-10386	
96	" "	53-10386	
97	" "	107-10386	
98	" "	48-10386	
99	" "	100-10386	
100	" "	49-10386	

**LOCKING DOGS AND DETAILS FOR MULTIPLE UNIT
ELECTRIC INTERLOCKING MACHINE**

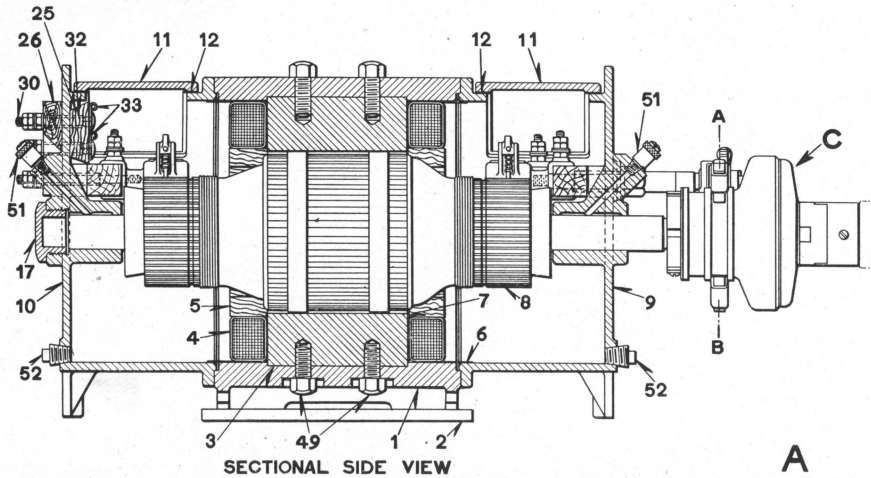
Order by Name, Plate and Figure

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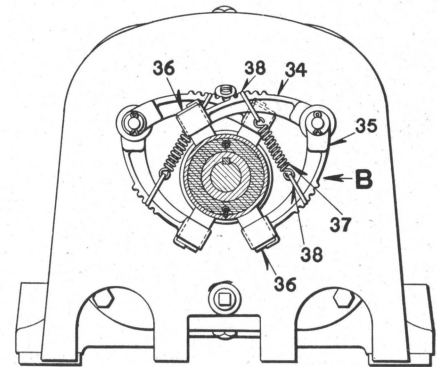
Fig.		Drawing Reference	List Price
101	Locking Dog.....	101-10386	
102	" ".....	102-10386	
103	" ".....	50-10386	
104	" ".....	103-10386	
105	" ".....	54-10386	
106	" ".....	108-10386	
107	" ".....	55-10386	
108	" ".....	109-10386	
109	" ".....	110-10386	
110	" ".....	56-10386	
111	" ".....	111-10386	
112	Tappet.....	105-C-7394	
113	Locking Bar, $\frac{1}{4}$ "x $\frac{3}{8}$ ". When ordering specify number of feet required. Price per foot.....		
114	Special Screw, for fastening swing dog, Fig. 3, to tappets.....	35-B-8099	
115	Csk. Hd. Rivet, $\frac{1}{8}$ "x $\frac{5}{8}$ ", for fastening locking dogs, $\frac{1}{4}$ " thick, to locking bars.....		
116	Csk. Hd. Rivet, $\frac{1}{8}$ "x $\frac{7}{8}$ ", for fastening locking dogs, $\frac{1}{2}$ " thick, to locking bars.....		



PLAN VIEW



SECTIONAL SIDE VIEW



END VIEW
SECTION A-B

SHORT MOTOR, COMMUTATOR ON EACH END, FOR STYLE "B"
ELECTRIC SWITCH AND LOCK MOVEMENT. D. C. INDICATION

**SHORT MOTOR, COMMUTATOR ON EACH END, FOR
STYLE "B" ELECTRIC SWITCH AND LOCK
MOVEMENT. D. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Short Switch Motor, commutator on each end, with electric clutch and electric clutch brushes, as shown, for electric switch and lock movements, (2-B, 1-C, 1-1, 1-2, 4-3, 4-4, 4-5, 4-6, 4-7, 1-8, 1-9a, 1-10a, 2-11, 2-12, 2-18a, 2-19a, 4-20, 1-23, 1-24, 1-25, 1-26, 2-28, 2-29a, 6-30a, 6-33, 8-49, 8-50)	9-D-1051	
B	Brush Holders as shown for electric clutch, Fig. C, (1-34, 1-35, 2-36, 1-37, 2-38, 1-39a, 1-41, 1-42, 1-43, 1-44, 1-45, 3-46, 2-47, 1-48)	1a-B-9534	
C	Electric Clutch, for Fig. A. For details see Plate C1125	29-C-4847	
1	Field	1-C-4830	
2	Riser Plate, for bottom of field, Fig. 1	108-B-8325	
3	Pole Piece	5-C-4830	
4	Field Coil	24-C-5912	
5	Wedge Block, for field coil, Fig. 4	22-C-4991	
6	Insulation, between coil, Fig. 4, and field, Fig. 1	402-B-8750	
7	Insulation, between coil, Fig. 4 and pole piece, Fig. 3	400-B-8750	
8	Armature, commutator on each end	22-C-5912	
9	Front Head	30-C-4830	
9a	as above, with staples, jaws, pins, cotters, washers, oil cup and pipe plug (1-9, 2-13, 2-14a, 1-51, 1-52)		
10	Rear Head	29-C-4830	
10a	as above, with staples, jaws, pins, cotters, washers, nut, oil cup and pipe plug (1-10, 2-13, 2-14a, 1-17, 1-51, 1-52)		
11	Cover, for front head, Fig. 9, or rear head, Fig. 10 ..	2-C-4830	
12	Gasket, for cover, Fig. 11	138-B-8078	
13	Staple, for front head, Fig. 9, or rear head, Fig. 10 ..	7-B-8191	
14	Jaw, with 3/8" hex. nut, for front head, Fig. 9, or rear head, Fig. 10 ..	43-B-7742	
14a	as above, with washer, pin and cotter (1-14, 1-15, 1-16)		
15	Pin, with one cotter, 1/8" x 3/4", for jaw, Fig. 14	1-B-10208	

**SHORT MOTOR, COMMUTATOR ON EACH END, FOR
STYLE "B" ELECTRIC SWITCH AND LOCK
MOVEMENT. D. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

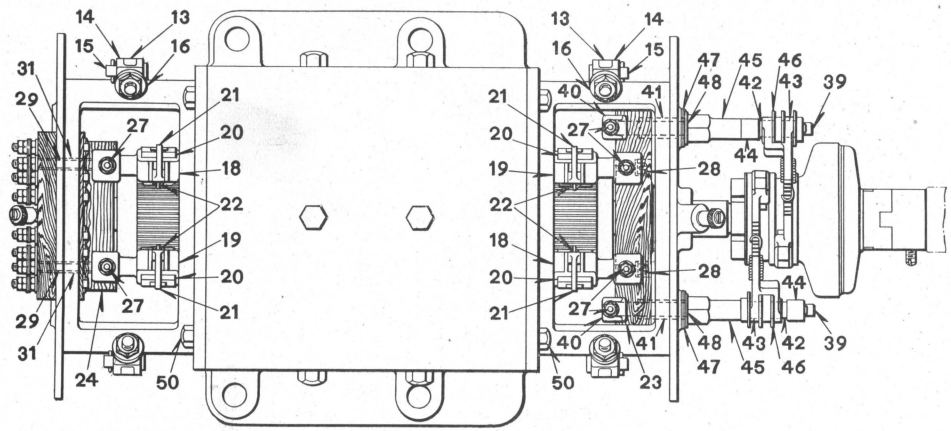
	Drawing Reference	List Price
Fig. 16	Washer, for jaw, Fig. 14.....	4-B-7824
17	Nut, for rear head, Fig. 10.....	21-B-8082
18	Brush Holder, right hand.....	20-C-4834
18a	as above, with brush tension bar, spring, terminal post, washers and nuts (1-18, 1-21, 1-22, 1-27).....	
19	Brush Holder, left hand.....	19-C-4834
19a	as above, with brush tension bar, spring terminal post, washers and nuts (1-19, 1-21, 1-22, 1-27).....	
20	Brush, for brush holder, Fig. 18 or 19.....	4-B-10332
21	Brush Tension Bar, with pin, Fig. 21a, and stub steel pin, No. 52x $\frac{5}{8}$ " for brush holder, Fig. 18 or 19.....	5-C-4834
21a	Pin, for holding brush tension bar, Fig. 21, in brush holder, Fig. 18 or 19.....	24-B-8097
22	Spring, for brush tension bar, Fig. 21.....	52-B-7770
23	Brush Holder Support, for front head, Fig. 9.....	19-C-4991
24	Brush Holder Support, for rear head, Fig. 10.....	18-C-4991
25	Inside Terminal Post Block, for rear head, Fig. 10....	21-C-4991
26	Outside Terminal Post Block, for rear head, Fig. 10.	20-C-4991
27	Terminal Post, with two washers, Fig. 27a, and three nuts, Fig. 27b, for brush holder, Fig. 18 or 19, and for head, Fig. 40.....	108-B-8094
27a	Washer, for terminal post, Fig. 27.....	5-B-7828
27b	Nut, for terminal post, Fig. 27.....	3-B-81c9
28	Terminal Post, with one washer, Fig. 28a, for fastening brush holder, Fig. 18 or 19, to brush holder support, Fig. 23.....	415-B-8094
28a	Washer, for terminal post, Fig. 28, 29 or 30.....	6-B-7828
28b	Nut, for terminal post, Fig. 29 or 30.....	2-B-8109
29	Terminal Post, with three washers, Fig. 28a, and three nuts, Fig. 28b, for fastening brush holder, Fig. 18 or 19, to brush holder support, Fig. 24.	494-B-8094
29a	as above, with bushing (1-29, 1-31).....	

**SHORT MOTOR, COMMUTATOR ON EACH END, FOR
STYLE "B" ELECTRIC SWITCH AND LOCK
MOVEMENT. D. C. INDICATION**

Order by Name, Plate and Figure

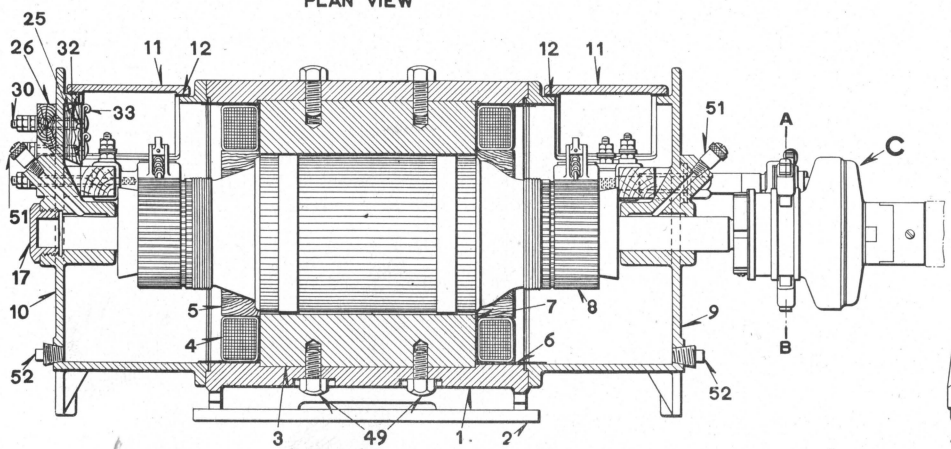
The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
30	Terminal Post, with three washers, Fig. 28a, and three nuts, Fig. 28b, for fastening inside and outside terminal post blocks to rear head, Fig. 10.....	493-B-8094	
30a	as above, with bushing (1-30, 1-32).....		
31	Bushing, for terminal post, Fig. 29.....	20-B-10270	
32	Bushing, for terminal post, Fig. 30.....	18-B-10270	
33	Terminal Connector, for terminal post, Fig. 30.....	22-B-8244	
34	Upper Brush Holder, for Fig. B.....	3-B-9534	
35	Lower Brush Holder, for Fig. B.....	2-B-9534	
36	Brush, for upper or lower brush holder.....	5-B-9534	
37	Coil Spring, for Fig. B.....	43-B-8124	
38	Link, for holding coil spring, Fig. 37.....	4-B-9534	
39	Brush Holder Rod, with one cotter, 3/32"x3/4".....	9-B-9534	
39a	as above, with head, terminal post, washers and nuts (1-39, 1-40a).....		
40	Head, for brush holder rod, Fig. 39.....	2-B-9381	
40a	as above, with terminal post, washers and nuts (1-40, 1-27).....		
41	Insulating Bushing, for brush holder rod, Fig. 39....	13-B-10275	
42	Insulating Bushing, for upper brush holder, Fig. 34.	2-B-10274	
43	Insulating Bushing, for upper brush holder, Fig. 34.	1-B-10274	
44	Collar, for brush holder rod, Fig. 39.....	99-B-8350	
45	Nut, for brush holder rod, Fig. 39.....	94-B-8109	
46	Insulating Washer, between upper and lower brush holder, Fig. 34 or 35.....	197-B-8078	
47	Insulating Washer, between nut, Fig. 45, and front head, Fig. 9.....	174-B-8078	
48	Washer, between nut, Fig. 45, and insulating washer, Fig. 47.....	12-B-7826	
49	Cap Screw, 1/2"x1 1/4", for fastening pole piece, Fig. 3, to field, Fig. 1.....		
50	Cap Screw, 3/8"x1", for fastening front head, Fig. 9, or rear head, Fig. 10, to field, Fig. 1.....		
51	Oil Cup, for front head, Fig. 9, or rear head, Fig. 10.		
52	Pipe Plug, 1/4", for front head, Fig. 9, or rear head, Fig. 10.....		

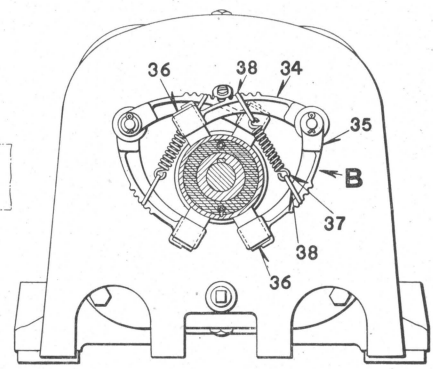


PLAN VIEW

36



SECTIONAL SIDE VIEW



END VIEW SECTION A-B

A
LONG MOTOR, COMMUTATOR ON EACH END, FOR STYLE "B" ELECTRIC SWITCH AND LOCK MOVEMENT. D. C. INDICATION

**LONG MOTOR, COMMUTATOR ON EACH END, FOR
STYLE "B" ELECTRIC SWITCH AND LOCK
MOVEMENT. D. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Long Switch Motor, commutator on each end, electric clutch and electric clutch brushes, as shown, for electric switch and lock movement, (2-B, 1-C, 1-1, 1-2, 4-3, 4-4, 4-5, 4-6, 4-7, 1-8, 1-9a, 1-10a, 2-11, 2-12, 2-18a, 2-19a, 4-20, 1-23, 1-24, 1-25, 1-26, 2-28, 2-29a, 6-30a, 6-33, 8-49, 8-50)	12-D-1051	
B	Brush Holders, as shown, for electric clutch, Fig. C, (1-34, 1-35, 2-36, 1-37, 2-38, 1-39a, 1-41, 1-42, 1-43, 1-44, 1-45, 3-46, 2-47, 1-48)	1a-B-9534	
C	Electric Clutch, for Fig. A. For details see Plate 01125	29-C-4847	
1	Field	15-C-4830	
2	Riser Plate, for bottom of field, Fig. 1	163-B-8325	
3	Pole Piece	16-C-4830	
4	Field Coil	38-C-5912	
5	Wedge Block, for field coil, Fig. 4	18-C-4830	
6	Insulation, between coil, Fig. 4, and field, Fig. 1	517-B-8750	
7	Insulation, between coil, Fig. 4, and pole piece, Fig. 3 ..	516-B-8750	
8	Armature, commutator on each end	37-C-5912	
9	Front Head	30-C-4830	
9a	as above, with staples, jaws, pins, cotters, washers, oil cup and pipe plug (1-9, 2-13, 2-14a, 1-51, 1-52)		
10	Rear Head	29-C-4830	
10a	as above, with staple, jaws, pins, cotters, washers, nut, oil cup and pipe plug (1-10, 2-13, 2-14a, 1-17, 1-51, 1-52)		
11	Cover, for front head, Fig. 9, or rear head, Fig. 10 ..	2-C-4830	
12	Gasket, for cover, Fig. 11	138-B-8078	
13	Staple, for front head, Fig. 9, or rear head, Fig. 10 ..	7-B-8191	
14	Jaw, with $\frac{3}{8}$ " hex. nut, for front head, Fig. 9, or rear head, Fig. 10	43-B-7742	
14a	as above, with washer, pin and cotter (1-14, 1-15, 1-16)		
15	Pin, with one cotter, $\frac{1}{8}$ " x $\frac{3}{4}$ ", for jaw, Fig. 14	1-B-10208	

**LONG MOTOR, COMMUTATOR ON EACH END, FOR
STYLE "B" ELECTRIC SWITCH AND LOCK
MOVEMENT. D. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
16	Washer, for jaw, Fig. 14.....	4-B-7824	
17	Nut, for rear head, Fig. 10.....	21-B-8082	
18	Brush Holder, right hand.....	20-C-4834	
18a	as above, with brush tension bar, spring, terminal post, washers and nuts (1-18, 1-21, 1-22, 1-27).....		
19	Brush Holder, left hand.....	19-C-4834	
19a	as above, with brush tension bar, spring, terminal post, washers and nuts (1-19, 1-21, 1-22, 1-27).....		
20	Brush, for brush holder, Fig. 18 or 19.....	4-B-10332	
21	Brush Tension Bar, with pin, Fig. 21a, and stub steel pin, No. 52x5/8", for brush holder, Fig. 18 or 19.	5-C-4834	
21a	Pin, for holding brush tension bar, Fig. 21, in brush holder, Fig. 18 or 19.....	24-B-8097	
22	Spring, for brush tension bar, Fig. 21.....	52-B-7770	
23	Brush Holder Support, for front head, Fig. 9.....	19-C-4991	
24	Brush Holder Support, for rear head, Fig. 10.....	18-C-4991	
25	Inside Terminal Post Block, for rear head, Fig. 10..	21-C-4991	
26	Outside Terminal Post Block, for rear head, Fig. 10.	20-C-4991	
27	Terminal Post, with two washers, Fig. 27a, and three nuts, Fig. 27b, for brush holder, Fig. 18 or 19, and for head, Fig. 40.....	108-B-8094	
27a	Washer, for terminal post, Fig. 27.....	5-B-7828	
27b	Nut, for terminal post, Fig. 27.....	3-B-8109	
28	Terminal Post, with one washer, Fig. 28a, for fasten- ing brush holder, Fig. 18 or 19, to brush holder support, Fig. 23.....	415-B-8094	
28a	Washer, for terminal post, Fig. 28, 29 or 30.....	6-B-7828	
28b	Nut, for terminal post, Fig. 29 or 30.....	2-B-8109	
29	Terminal Post, with three washers, Fig. 28a, and three nuts, Fig. 28b, for fastening brush holder, Fig. 18 or 19, to brush holder support, Fig. 24.....	494-B-8094	
29a	as above, with bushing (1-29, 1-31).....		

**LONG MOTOR, COMMUTATOR ON EACH END, FOR
STYLE "B" ELECTRIC SWITCH AND LOCK
MOVEMENT. D. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
30	Terminal Post, with three washers, Fig. 28a, and three nuts, Fig. 28b, for fastening inside and outside terminal post blocks to rear head, Fig. 10.	493-B-8094	
30a	as above, with bushing (1-30, 1-32).....		
31	Bushing, for terminal post, Fig. 29.....	20-B-10270	
32	Bushing, for terminal post, Fig. 30.....	18-B-10270	
33	Terminal Connector, for terminal post, Fig. 29.....	22-B-8244	
34	Upper Brush Holder, for Fig. B.....	3-B-9534	
35	Lower Brush Holder, for Fig. B.....	2-B-9534	
36	Brush, for upper or lower brush holder.....	5-B-9534	
37	Coil Spring, for Fig. B.....	43-B-8124	
38	Link, for holding coil spring, Fig. 37.....	4-B-9534	
39	Brush Holder Rod, with one cotter, 3/32"x3/4".....	9-B-9381	
39a	as above, with head, terminal post, washers and nuts (1-39, 1-40a).....		
40	Head, for brush holder rod, Fig. 39.....	2-B-9381	
40a	as above, with terminal post, washers and nuts (1-40, 1-27).....		
41	Insulating Bushing, for brush holder rod, Fig. 39....	13-B-10275	
42	Insulating Bushing, for upper brush holder, Fig. 34.	2-B-10274	
43	Insulating Bushing, for upper brush holder, Fig. 34.	1-B-10274	
44	Collar, for brush holder rod, Fig. 39.....	99-B-8350	
45	Nut, for brush holder rod, Fig. 39.....	94-B-8109	
46	Insulating Washer, between upper and lower brush holder, Fig. 34 or 35.....	197-B-8078	
47	Insulating Washer, between nut, Fig. 45, and front head, Fig. 9.....	174-B-8078	
48	Washer, between nut, Fig. 45, and insulating washer, Fig. 47.....	12-B-7826	
49	Cap Screw, 1/2"x1-1/4", for fastening pole piece, Fig. 3, to field, Fig. 1.....		
50	Cap Screw, 3/8"x1", for fastening front head, Fig. 9, or rear head, Fig. 10, to field, Fig. 1.....		
51	Oil Cup, for front head, Fig. 9, or rear head, Fig. 10.		
52	Pipe Plug, 1/4", for front head, Fig. 9, or rear head, Fig. 10.....		

**LONG MOTOR FOR STYLE "B" ELECTRIC SWITCH
AND LOCK MOVEMENT. A. C. INDICATION**

Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Description	Drawing Reference	List Price
A	Long Switch Motor, with electric clutch and electric clutch brushes as shown, for electric switch and lock movement (2-B, 1-C, 1-1, 1-2, 4-3, 4-4, 4-5, 4-6, 4-7, 4-8, 1-9, 1-10a, 1-11a, 2-12, 2-13, 1-19a, 1-20a, 1-21a, 3-22, 1-26, 1-27, 1-28, 1-29, 2-33a, 6-34a, 8-37, 2-53, 8-54, 8-55).....	11-D-1051	
B	Brush Holders, as shown, for electric clutch, Fig. C, (1-38, 1-39, 2-40, 1-41, 2-42, 1-43a, 1-45, 1-46, 1-47, 1-48, 1-49, 3-50, 2-51, 1-52).....	1-B-9534	
C	Electric Clutch, for Fig. A. For details see Plate 01125	29-C-4847	
1	Field	15-C-4830	
2	Riser Plate, for bottom of field, Fig. 1.....	163-B-8325	
3	Pole Piece.....	16-C-4830	
4	Sleeve, for pole piece, Fig. 3.....	17-C-4830	
5	Field Coil.....	32-C-5912	
6	Wedge Block, for field coil, Fig. 5.....	18-C-4830	
7	Insulation, between coil, Fig. 5, and field, Fig. 1.....	408-B-8750	
8	Insulation, between coil, Fig. 5, and sleeve, Fig. 4....	407-B-8750	
9	Armature	30-C-5912	
10	Front Head.....	30-C-4830	
10a	as above, with staples, jaws, pins, cotters, washers, oil cup and pipe plug (1-10, 2-14, 2-15a, 1-56, 1-57).....		
11	Rear Head.....	29-C-4830	
11a	as above, with staple, jaws, pins, cotters, washers, nut, oil cup and pipe plug (1-11, 2-14, 2-15a, 1-18, 1-56, 1-57).....		
12	Cover, for front head, Fig. 10, or rear head, Fig. 11.	2-C-4830	
13	Gasket, for cover, Fig. 12.....	138-B-8078	
14	Staple, for front head, Fig. 10, or rear head, Fig. 11.	7-B-8191	
15	Jaw, with 3/8" hex. nut, for front head, Fig. 10, or rear head, Fig. 11.....	43-B-7742	
15a	as above, with washer, pin and cotter (1-15, 1-16, 1-17).....		
16	Pin, with one cotter, 1/8"x3/4", for jaw, Fig. 15.....	1-B-10208	
17	Washer, for Jaw, Fig. 15.....	4-B-7824	
18	Nut, for rear head, Fig. 11.....	21-B-8082	
19	Brush Holder, right hand.....	2-C-4834	
19a	as above, with brush tension bar, spring, terminal post, washers and nuts (1-19, 1-23, 1-25, 1-30)		

**LONG MOTOR FOR STYLE "B" ELECTRIC SWITCH
AND LOCK MOVEMENT. A. C. INDICATION**

Order by Name, Plate and Figure.

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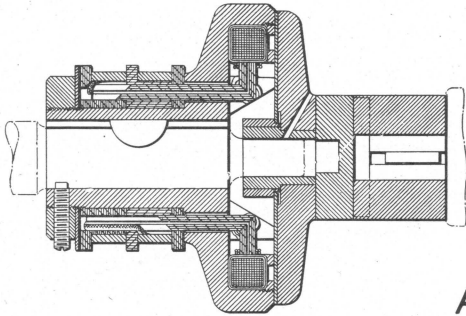
	Drawing Reference	List Price
Fig.		
20	Brush Holder, left hand.....	3-C-4834
20a	as above, with brush tension bar, spring, terminal post, washers and nuts (1-20, 1-23, 1-25, 1-30)	
21	Indication Brush Holder.....	1-C-499I
21a	as above, with brush tension bar, spring, terminal posts, washers and nuts (1-21, 1-24, 1-25, 1-31, 1-32).....	
22	Brush, for brush holder, Fig. 19, 20 or 21.....	4-10332
23	Brush Tension Bar, with pin, Fig. 24a, and stub steel pin, No. 52x5/8", for brush holder, Fig. 19 or 20.	5-C-4834
24	Brush Tension Bar, with pin, Fig. 24a, and stub steel pin, No. 52x5/8", for indication brush holder, Fig. 21.....	2-C-499I
24a	Pin, for holding brush tension bar, Fig. 23, in brush holder, Fig. 19 or 20, and for holding brush tension bar, Fig. 23, in indication brush holder, Fig. 21.....	24-B-8097
25	Spring, for brush tension bar, Fig. 23 or 24.....	52-B-7770
26	Brush Holder Support, for front head, Fig. 10.....	24-C-499I
27	Terminal Block, for rear head, Fig. 11.....	23-C-499I
28	Inside Terminal Post Block, for rear head, Fig. 11...	21-C-499I
29	Outside Terminal Post Block, for rear head, Fig. 11.	20-C-499I
30	Terminal Post, with two washers, Fig. 30a, and three nuts, Fig. 30b, for brush holder, Fig. 19 or 20, and for head, Fig. 44.....	108-B-8094
30a	Washer, for terminal post, Fig. 30, 31 or 32.....	5-B-7828
30b	Nut, for terminal post, Fig. 30, 31 or 32.....	3-B-8109
31	Terminal Post, with two washers, Fig. 30a, and three nuts, Fig. 30b, for fastening indication brush holder, Fig. 21, to brush holder support, Fig. 26.	213-B-8094
32	Terminal Post, with two nuts, Fig. 30b, for fastening indication brush holder, Fig. 21, to brush holder support, Fig. 26.....	24-B-8094
33	Terminal Post, with three washers, Fig. 53a, and three nuts, Fig. 53b, for fastening terminal block, Fig. 27, to rear head, Fig. 11.....	500-B-8094
33a	as above, with bushing (1-33, 1-35).....	

LONG MOTOR FOR STYLE "B" ELECTRIC SWITCH
AND LOCK MOVEMENT. A. C. INDICATION

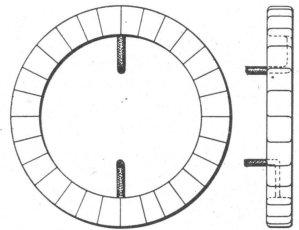
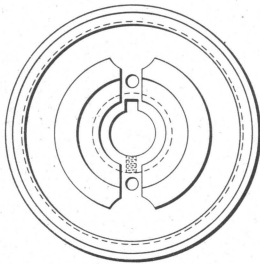
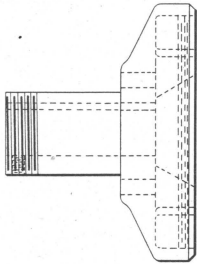
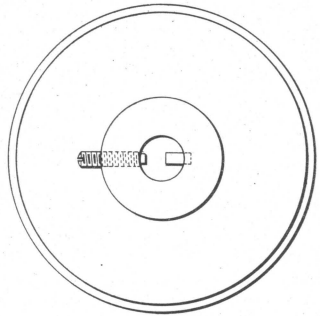
Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
34	Terminal Post, with three washers, Fig. 53a, and three nuts, Fig. 53b, for fastening inside and outside terminal post blocks to rear head, Fig. 11	493-B-8094	
34a	as above, with bushing (1-34, 1-36)		
35	Bushing, for terminal post, Fig. 33	20-B-10270	
36	Bushing, for terminal post, Fig. 34	18-B-10270	
37	Terminal Connector, for terminal post, Fig. 33 or 34	22-B-8244	
38	Upper Brush Holder, for Fig. B	3-B-9534	
39	Lower Brush Holder, for Fig. B	2-B-9534	
40	Brush, for upper or lower brush holder	5-B-9534	
41	Coil Spring, for Fig. B	43-B-8124	
42	Link, for holding coil spring, Fig. 41	4-B-9534	
43	Brush Holder Rod, with one cotter, 3/32"x3/4"	9-B-9381	
43a	as above, with head, terminal post, washers and nuts (1-43, 1-44a)		
44	Head, for brush holder rod, Fig. 43	2-B-9381	
44a	as above, with terminal post, washers and nuts (1-44, 1-30)		
45	Insulating Bushing, for brush holder rod, Fig. 43	13-B-10275	
46	Insulating Bushing, for upper brush holder, Fig. 38	2-B-10274	
47	Insulating Bushing, for upper brush holder, Fig. 38	1-B-10274	
48	Collar, for brush holder rod, Fig. 43	99-B-8350	
49	Nut, for brush holder rod, Fig. 43	94-B-8109	
50	Insulating Washer, between upper and lower brush holder, Fig. 38 or 39	197-B-8078	
51	Insulating Washer, between nut, Fig. 49, and front head, Fig. 10	174-B-8078	
52	Washer, between nut, Fig. 49, and insulating washer, Fig. 51	12-B-7826	
53	Fil. Hd. Mach. Screw, No. 10-32x1-3/8", with one washer, Fig. 53a, for fastening brush holder, Fig. 19 or 20, to brush holder support, Fig. 26		
53a	Washer, for terminal post, Fig. 33 or 34, and for screw, Fig. 53	6-B-7828	
53b	Nut, for terminal post, Fig. 33 or 34	2-B-8199	
54	Cap Screw, 1/2"x1-1/4", for fastening pole piece, Fig. 3, to field, Fig. 1		
55	Cap Screw, 3/8"x1", for fastening front head, Fig. 10, or rear head, Fig. 11, to field, Fig. 1		
56	Oil Cup, for front head, Fig. 10, or rear head, Fig. 11		
57	Pipe Plug, 1/4", for front head, Fig. 10, and rear head, Fig. 11		

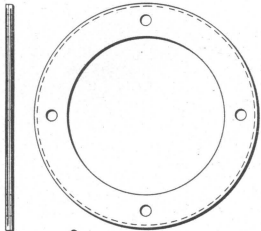


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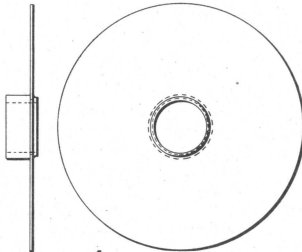


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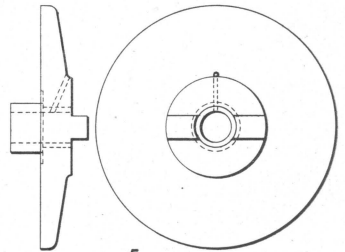
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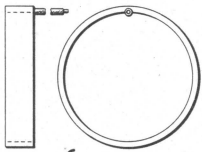
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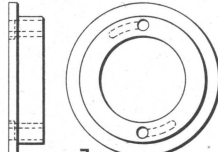
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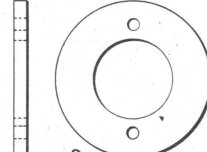
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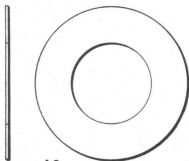
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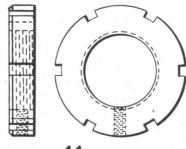
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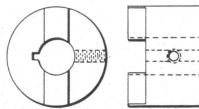
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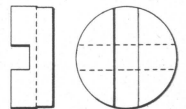
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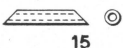
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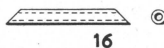
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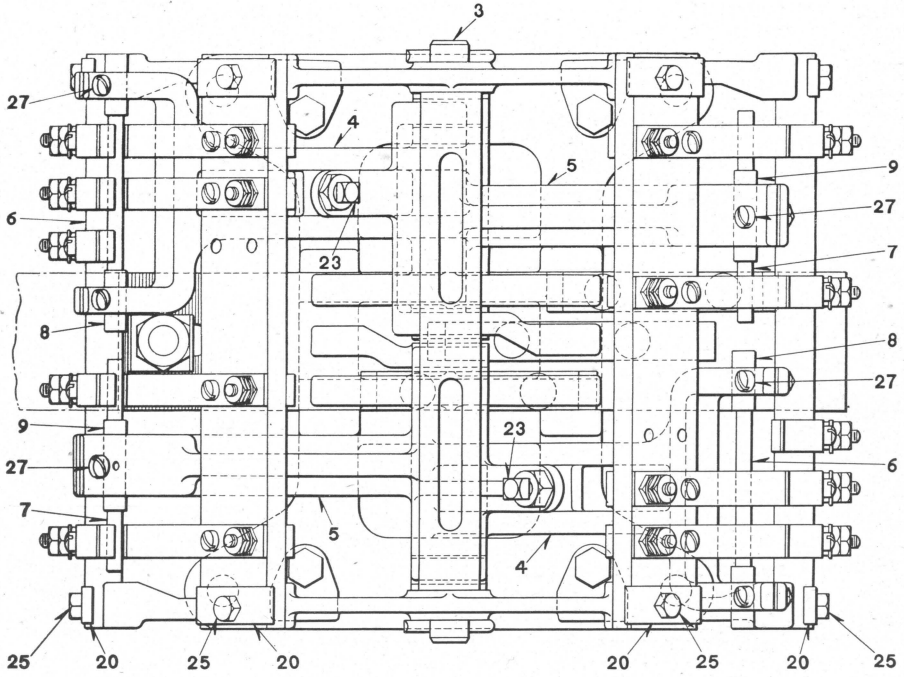
ELECTRIC CLUTCH FOR MOTOR OF ELECTRIC SWITCH AND LOCK MOVEMENT.

ELECTRIC CLUTCH FOR MOTOR OF ELECTRIC SWITCH AND LOCK MOVEMENT

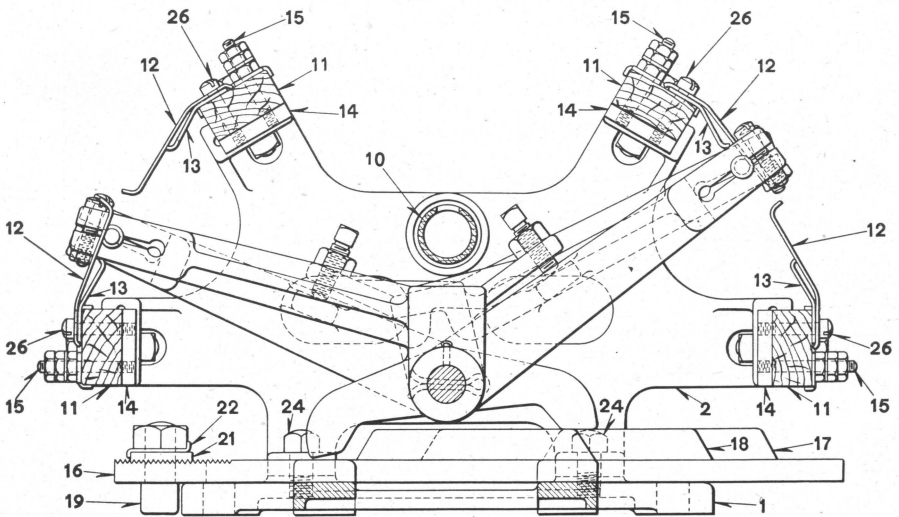
Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Electric Clutch, as shown, for motor for electric switch and lock movement (1-1, 1-2, 1-3, 1-4, 1-5, 2-6, 2-7, 1-8, 1-9, 1-10, 1-11a, 1-12a, 1-13, 2-14, 1-15, 1-16, 1-18, 1-19).....	29-C-4847	
1	Coil Plate.....	30-C-4847	
2	Coil	17-C-4847	
3	Coil Cover Plate.....	6-C-4847	
4	Wearing Plate, with bushing.....	16-C-4847	
5	Armature Plate, with bushing.....	2-C-4847	
6	Contact Ring.....	31-C-4847	
7	Insulation	715-8750	
8	Insulation	716-8750	
9	Insulating Washer, between insulation, Fig. 7, and insulating washer, Fig. 10.....	508-8078	
10	Insulating Washer, between nut, Fig. 11, and insulating washer, Fig. 9.....	506-8078	
11	Nut, for holding contact ring,, Fig. 6, and insulation, Fig. 7, 8, 9 or 10, on coil plate, Fig. 1.....	8-C-4847	
11a	as above, with screw (1-11, 1-17).....		
12	Male Half Coupling.....	3-C-4847	
12a	as above, with screw (1-12, 1-17).....		
13	Female Half Coupling.....	4-C-4847	
14	Insulating Bushing.....	61-B-8095	
15	Insulating Bushing.....	59-B-8095	
16	Insulating Bushing.....	60-B-8095	
17	Pivot Screw, for preventing nut, Fig. 11, from turning on coil plate, Fig. 1, and for holding male half coupling, Fig. 12 on shaft of switch and lock movement	58-B-8378	
18	Woodruff Key No. 15.....		
19	Woodruff Key No. 13.....		



PLAN VIEW



SECTIONAL SIDE VIEW

A

INDICATION CIRCUIT CONTROLLER

INDICATION CIRCUIT CONTROLLER

The Indication Circuit Controllers listed below do not include covers.

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price
Fig.		
A	Indication Circuit Controller (no cover), as shown, for a crossover (1-1a, 1-3, 2-4a, 2-5a, 2-11a, 2-11b, 1-16a, 8-20, 8-25).....	7-C-6727
Aa	Indication Circuit Controller (no cover), for a single switch (1-1a, 1-3, 2-3a, 2-3b, 2-5a, 2-11c, 2-11d, 1-16c, 8-20, 8-25).....	8-C 6727
1	Base, for Fig. A or Aa.....	8-C-6842
1a	as above, with side plates, sleeve and cap screws (1-1, 2-2, 1-10, 4-24).....	
2	Side Plate, for Fig. A or Aa.....	12-C-6842
3	Shaft, with two cotters, 3/16" x 1-1/8", for holding contact arms, Figs. 4 and 5.....	49-B-10216
3a	Separator, for Fig. Aa (not shown) used on center of shaft, Fig. 3.....	211-B-8072
3b	Separator, for Fig. Aa (not shown) used on ends of shaft, Fig. 3.....	212-B-8072
4	Contact Arm, for Fig. A or Aa.....	24-C-6842
4a	as above, with contact finger, sleeves, screws and nuts (1-4, 1-6, 2-8, 2-27).....	
5	Contact Arm, for Fig. A.....	25-C-6842
5a	as above, with contact finger, sleeve, set screw, screw and nut (1-5, 1-7, 1-9, 1-9a, 1-23, 1-27).....	
6	Contact Finger, for contact arm, Fig. 4.....	54-B-8429
7	Contact Finger, for contact arm, Fig. 5.....	56-B-8429

INDICATION CIRCUIT CONTROLLER

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

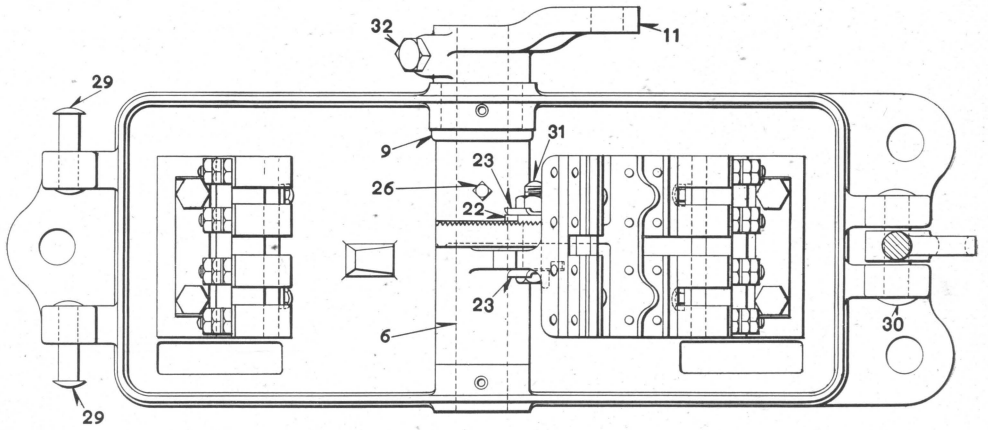
	Drawing Reference	List Price
Fig. 8	Sleeve, for contact finger, Fig. 6.....	250-B-8095
9	Sleeve, for contact finger, Fig. 7.....	251-B-8095
9a	Pin, 3/32"x3/8" for fastening sleeve, Fig. 9, to contact finger, Fig. 7.....	
10	Sleeve, for wires, for Fig. A or Aa.....	227-B-8095
11	Contact Spring Board, for Fig. A or Aa.....	61-B-9 68
11a	as above, with contact springs, reinforcing springs, terminal posts, washers, screws, and nuts for upper front and back end of Fig. A (1-11, 4-12, 4-13, 4-14, 4-15a, 4-26).....	
11b	as above, for lower front and back end of Fig. A (1-11, 5-12, 5-13, 5-14, 5-15a, 5-26).....	
11c	as above, for upper front and back end of Fig. Aa (1-11, 2-12, 2-13, 2-14, 2-15a, 2-26).....	
11d	as above, for lower front and back end of Fig. Aa (1-11, 3-12, 3-13, 3-14, 3-15a, 3-26).....	
12	Contact Spring, for Fig. A or Aa.....	702-B-8385
13	Reinforcing Spring, for Fig. 12.....	153-B-8735
14	Terminal Support, for Fig. A or Aa.....	19-C-6842
15	Terminal Post, for Fig. A or Aa.....	547-B-8094
15a	as above, with washers and nuts (1-15, 1-15b, 3-15c).....	
15b	Washer, for Fig. 15.....	5-B-7828
15c	Nut, for Fig. 15.....	3-B-8109
16	Driving Bar only.....	121-B-9246
16a	as above, with dogs, stud, washers and nut (1-16, 2-17, 1-18, 6-18a, 1-19a).....	121a-B-9246

INDICATION CIRCUIT CONTROLLER

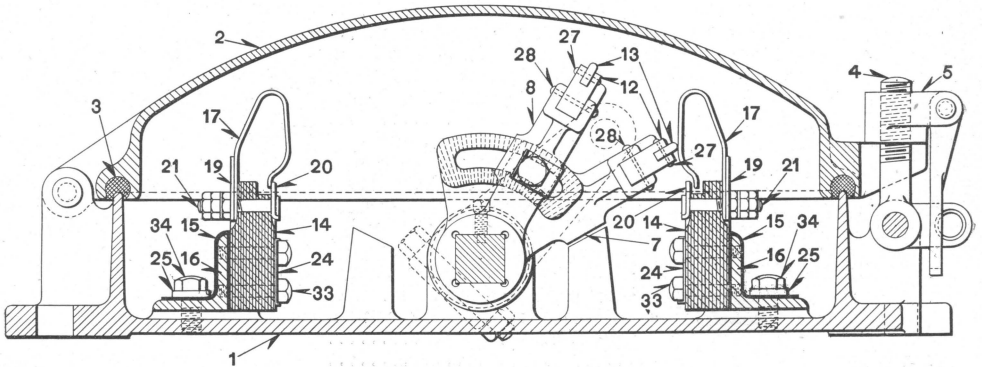
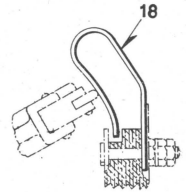
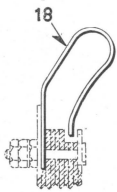
Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
16b	Driving Bar only.....	124-B-9246	
16c	as above, with dogs, stud, washers and nut (1-16b, 2-17, 4-18a, 1-19a).....	124a-B-9246	
17	Dog, for Fig. 16 or 16b.....	3-C-6842	
18	Dog, for Fig. 16.....	20-C-6842	
18a	Csk. Hd. Rivet, $\frac{3}{8}$ "x1- $\frac{1}{8}$ ", for fastening dog, Fig. 17 or 18, to driving bar, Fig. 16 or 16b.....		
19	Stud, for driving bar, Fig. 16 or 16b.....	60-B-8071	
19a	as above, with washers and nut (1-19, 1-19b, 1-21, 1-22).....		
19b	Nut, for Fig. 19.....	5-B-8265	
20	Special Washer, for Fig. A or Aa.....	57-B-7826	
21	Special Washer, for driving bar, Fig. 16 or 16b.....	26-C-6842	
22	Nut Lock Washer, for driving bar, Fig. 16 or 16b...	81-B-8486	
23	Set Screw, $\frac{5}{16}$ "x7/8", with hex. nut for contact arm, Fig. 5.....		
24	Cap Screw, $\frac{3}{8}$ "x $\frac{3}{4}$ ", for fastening side plate, Fig. 2, to base, Fig. 1.....		
25	Hex. Hd. Mach. Bolt, $\frac{1}{4}$ "x1- $\frac{1}{4}$ ", with sq. nut, for fastening contact spring board, Fig. 11, to side plate, Fig. 2.....		
26	Fil. Hd. Mach. Screw, No. 10-32x15/16", for fasten- ing contact spring, Fig. 12, and reinforcing spring, Fig. 13, to contact spring board, Fig. 11.		
27	Fil. Hd. Mach. Screw, No. 12-24x1", with hex. nut, Fig. 27a, for fastening contact finger, Fig. 6, to contact arm, Fig. 4, and for fastening contact finger, Fig. 7, to contact arm, Fig. 5.....		
27a	Hex. Nut, for Fig. 27.....	100-8265	



PLAN VIEW



SECTIONAL SIDE VIEW

ELECTRIC SELECTOR—FOR TWO CIRCUITS IN EACH DIRECTION

**ELECTRIC SELECTOR—FOR TWO CIRCUITS
IN EACH DIRECTION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Electric Selector, for two circuits in each direction, as shown, with lug and connecting rod; Section 15, Plate 1510, Fig. 1; operated from switch point	1E-C-7506	
Aa	as above, with 2 R. H. and 1 L. H. contacts.	1D-C-7506	
Ab	as above, with 2 R. H. contacts.....	1C-C-7506	
Ac	as above, with 1 R. H. and 1 L. H. contacts.	1B-C-7506	
Ad	as above, with 1 R. H. contact.....	1A-C-7506	
Ae	as above, without contacts.....	1-C-7506	
B	Electric Selector, for two circuits in each direction, contact spring, Fig. 18, operated from slide bar of switch and lock movement; no lug or connecting rod	1K-C-7506	
Ba	as above, with 2 R. H. and 1 L. H. contacts.	1J-C-7506	
Bb	as above, with 2 R. H. contacts.....	1H-C-7506	
Bc	as above, with 1 R. H. and 1 L. H. contacts.	1G-C-7506	
Bd	as above, with 1 R. H. contact.....	1F-C-7506	
I	Box only.....	25-C-7513	
1a	as above, with cover, flax packing, eye bolt, hasp, journal and rivets (1-1, 1-2a, 1-4, 1-5, 1-9, 2-29, 1-30)		
2	Cover, for box, Fig 1.....	24-C-7513	
2a	as above, with flax packing, Fig. 3, 3'-5" long		
3	Flax Packing, 3/8" sq. Price per foot.....		
4	Eye Bolt	10-B-8034	

**ELECTRIC SELECTOR—FOR TWO CIRCUITS
IN EACH DIRECTION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

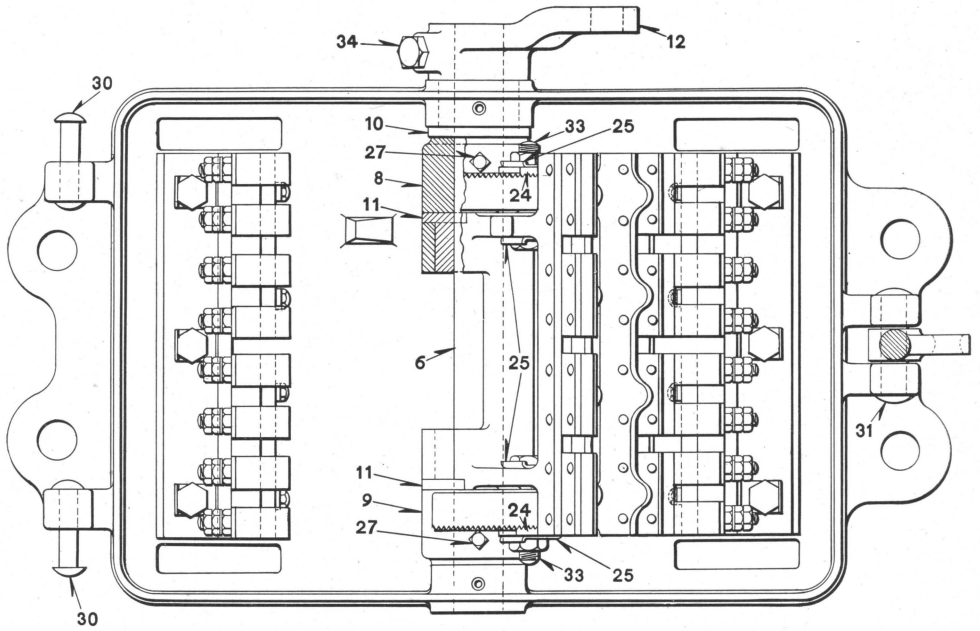
Fig.		Drawing Reference	List Price
5	Hasp, with nut and rivet.....	2-B-9925	
6	Shaft	27-C-7513	
7	Operating Arm, for R. H. contacts.....	28-C-7513	
7a	as above, with contact blocks, contact bars, set screw and rivets (1-7, 2-12, 2-13, 1-26, 4-27, 4-28)		
8	Operating Arm, for L. H. contacts.....	26-C-7513	
8a	as above, with contact blocks, contact bars and rivets (1-8, 2-12, 2-13, 4-27, 4-28).....		
9	Journal, for box, Fig. 1.....	36-B-8093	
10	Separator, not shown, for shaft, Fig. 6, used when operating arm, Fig. 8, is omitted.....	186-B-10330	
11	Operating Crank.....	127-B-8192	
11a	as above, with bolt and nut (1-11, 1-32)....		
12	Contact Block, for operating arm, Fig. 7 or 8.....	13-C-7513	
13	Contact Bar, for contact block, Fig. 12.....	14-C-7513	
14	Contact Spring Board, for R. H. or L. H. contacts..	89-9968	
15	Bracket, for contact spring board, Fig. 14.....	10-C-7513	
16	Insulation, for bracket, Fig. 15.....	509-B-8750	
17	Contact Spring, for R. H. or L. H. contacts, for Figs. A, Aa, Ab, Ac and Ad.....	733-B-8385	
18	Contact Spring, for R. H. or L. H. contacts, for Figs B, Ba, Bb, Bc and Bd.....	796-B-8385	
19	Reinforcing Spring, for contact spring, Fig. 17 or 18.	164-B-8735	
20	Stop, for contact spring, Fig. 17 or 18.....	35-C-7513	

**ELECTRIC SELECTOR—FOR TWO CIRCUITS
IN EACH DIRECTION**

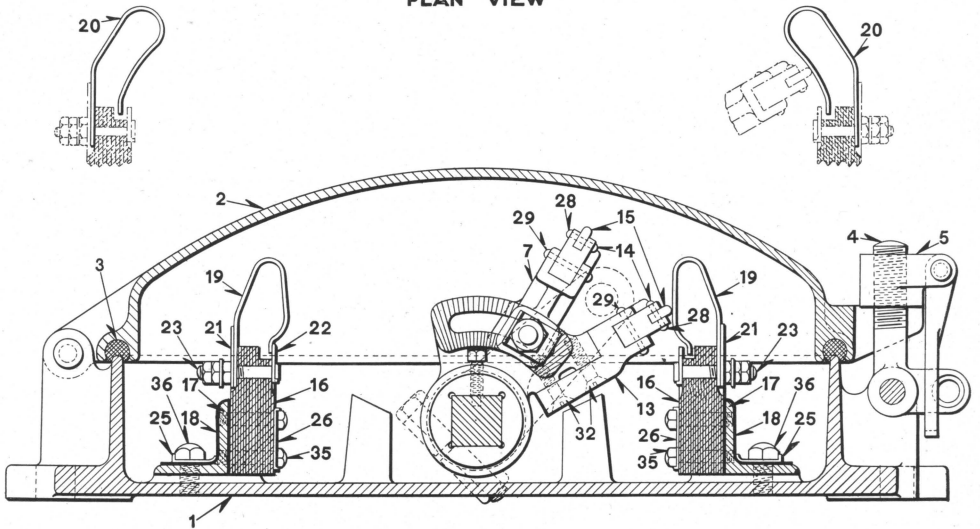
Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
21	Terminal Post, with washers and nuts, for fastening contact spring, Fig. 17 or 18, to contact spring board, Fig. 14.....	593-8094	
22	Washer, for operating arm, Fig. 7.....	11-C-7513	
23	Nut Lock Washer, for bolt, Fig. 31.....	85-B-8486	
24	Nut Lock Washer, for cap screw, Fig. 33.....	86-B-8486	
25	Nut Lock Washer, for cap screw, Fig. 34.....	87-B-8486	
26	Set Screw, for operating arm, Fig. 7.....	40-B-8099	
27	Rd. Hd. Rivet, for fastening contact bar, Fig. 13, to contact block, Fig. 12.....	32-B-10301	
28	Rd. Hd. Rivet, $\frac{1}{8}$ "x1", for fastening contact block, Fig. 12, to operating arm, Fig. 7 or 8.....		
29	Rd. Hd. Rivet, $\frac{3}{8}$ "x1- $\frac{3}{4}$ ", for fastening cover, Fig. 2, to box, Fig. 1.....		
30	Rd. Hd. Rivet, $\frac{1}{2}$ "x2- $\frac{1}{8}$ ", for fastening eye bolt, Fig. 4, to box, Fig. 1.....		
31	Hex. Hd. Bolt, $\frac{3}{8}$ "x1 $\frac{1}{2}$ ", with nut, for fastening operating arm, Fig. 7, to operating arm, Fig. 8....		
32	Hex. Hd. Mach. Bolt, $\frac{3}{8}$ "x2- $\frac{3}{8}$ ", with nut, for fastening crank, Fig. 11, to shaft, Fig. 6.....		
33	Cap Screw, $\frac{1}{4}$ "-20x1- $\frac{1}{8}$ ", for fastening contact spring board, Fig. 14, to bracket, Fig. 15.....		
34	Cap Screw, $\frac{3}{8}$ "x $\frac{5}{8}$ ", for fastening bracket, Fig. 15, to box, Fig. 1.....		



PLAN VIEW



SECTIONAL SIDE VIEW

ELECTRIC SELECTOR—FOR FOUR CIRCUITS IN EACH DIRECTION

**ELECTRIC SELECTOR—FOR FOUR CIRCUITS
IN EACH DIRECTION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Electric Selector, for four circuits in each direction, as shown, with lug and connecting rod; Section 15, Plate 1510, Fig. 1; operated from switch point		
Aa	as above, with 4 R. H. and 3 L. H. contacts...	3J-D-1400	
Ab	as above, with 4 R. H. and 2 L. H. contacts...	3G-D-1400	
Ac	as above, with 4 R. H. and 1 L. H. contacts...	3F-D-1400	
Ad	as above, with 4 R. H. and 0 L. H. contacts...	3E-D-1400	
Ae	as above, with 3 R. H. and 3 L. H. contacts...	3D-D-1400	
Af	as above, with 3 R. H. and 2 L. H. contacts...	3C-D-1400	
Ag	as above, with 3 R. H. and 1 L. H. contacts...	3B-D-1400	
Ah	as above, with 3 R. H. and 0 L. H. contacts...	3A-D-1400	
Aj	as above without contacts.....	3-D-1400	
B	Electric Selector, for four circuits in each direction, contact spring, Fig. 18, operated from slide bar of switch and lock movement; no lug or connecting rod		
Ba	as above, with 4 R. H. and 3 L. H. contacts...	4H-D-1400	
Bb	as above, with 4 R. H. and 2 L. H. contacts...	4G-D-1400	
Bc	as above, with 4 R. H. and 1 L. H. contacts...	4F-D-1400	
Bd	as above, with 4 R. H. and 0 L. H. contacts...	4E-D-1400	
Be	as above, with 3 R. H. and 3 L. H. contacts...	4D-D-1400	
Bf	as above, with 3 R. H. and 2 L. H. contacts...	4C-D-1400	
Bg	as above, with 3 R. H. and 1 L. H. contacts...	4B-D-1400	
Bh	as above, with 3 R. H. and 0 L. H. contacts...	4A-D-1400	
I	Box only.....	4-D-1400	
1a	as above, with cover, flax packing, eye bolt, hasp, journal and rivets (I-1, I-2a, I-4, I-5, I-10, 2-30, I-31)	1-C-7513	
2	Cover, for box, Fig. 1.....		
2a	as above, with flax packing, Fig. 3, 4'-1" long	30-C-7513	
3	Flax Packing, $\frac{3}{8}$ " sq. Price per foot.....		
4	Eye Bolt	10-B-8034	

**ELECTRIC SELECTOR—FOR FOUR CIRCUITS
IN EACH DIRECTION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

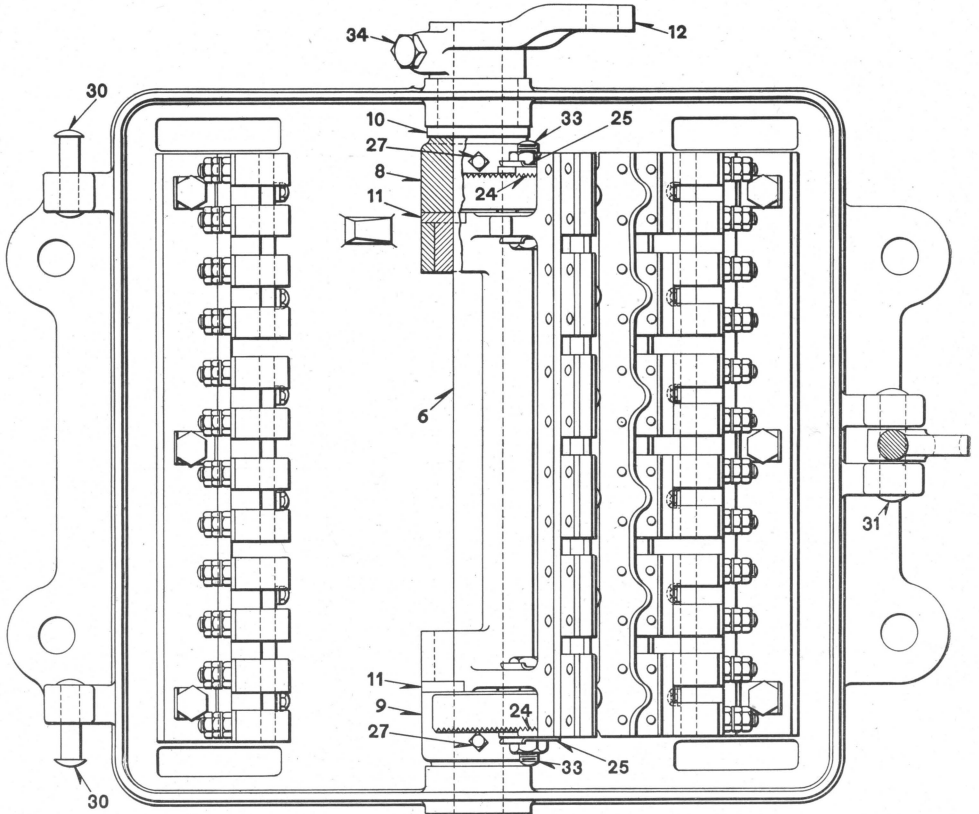
Fig.		Drawing Reference	List Price
5	Hasp, with nut and rivet.....	2-B-9925	
6	Shaft	6-C-7513	
7	Operating Arm, for L. H. contacts.....	33-C-7513	
7a	as above, with journals, contact blocks, contact bars and rivets (1-7, 2-11, 4-14a, 8-29).....		
7b	as above, with operating arms, set screws, washers, bolts and nuts (1-7a, 1-8a, 1-9a, 2-24, 4-25, 2-33)		
7c	as above, with contact carrier, contact blocks, contact bars, rivets and screws (1-7b, 1-13a, 4-32)		
8	Operating Arm, R. H., for Fig. 7 or 13.....	5-C-7513	
8a	as above, with set screw (1-8, 1-27).....		
9	Operating Arm, L. H., for Figs. 7 or 13.....	7-C-7513	
9a	as above, with set screw (1-9, 1-27).....		
10	Journal, for box, Fig. 1.....	36-B-8093	
11	Journal, for operating arm, Fig. 7.....	40-8093	
12	Operating Crank.....	127-B-8192	
12a	as above, with bolt and nut (1-12, 1-34)....		
13	Contact Carrier, for R. H. contacts.....	32-C-7513	
13a	as above, with contact blocks, contact bars and rivets (1-13, 4-14a, 8-29).....		
13b	as above, with operating arms, set screws and screws (1-13a, 1-8a, 1-9a, 4-32).....		
14	Contact Block, for operating arm, Fig. 7, and for contact carrier, Fig. 13.....	13-C-7513	
14a	as above, with contact bar and rivets (1-14, 1-15, 2-28)		
15	Contact Bar, for contact block, Fig. 14.....	14-C-7513	
16	Contact Spring Board, for R. H. or L. H. contacts...	89-9968	
17	Bracket, for contact spring board, Fig. 16.....	2-C-7513	
18	Insulation, for bracket, Fig. 17.....	511-8750	
19	Contact Spring, for R. H. or L. H. contacts, for Figs. A, Aa, Ab, Ac, Ad, Ae, Af, Ag and Ah...	733-B-8385	

**ELECTRIC SELECTOR—FOR FOUR CIRCUITS
IN EACH DIRECTION**

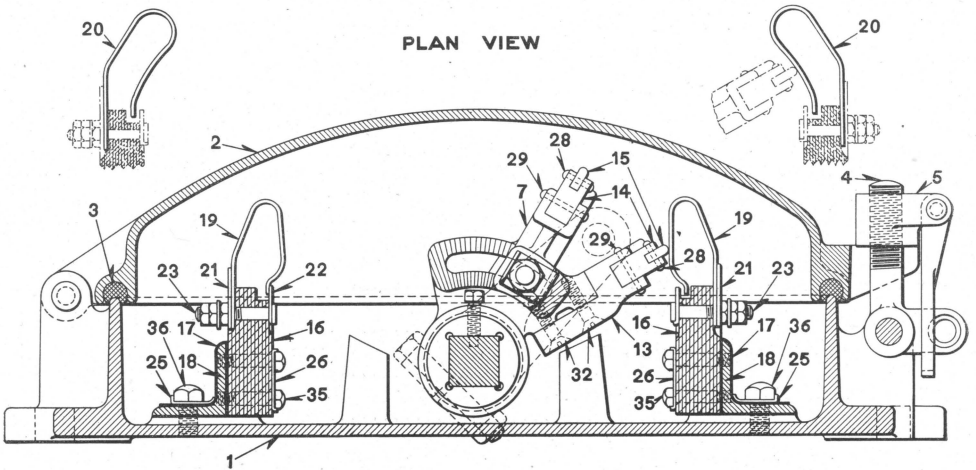
Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
20	Contact Spring, for R. H. or L. H. contacts, for Figs. B, Ba, Bb, Bc, Bd, Be, Bf, Bg and Bh....	796-8385	
21	Reinforcing Spring, for contact spring, Fig. 19 or 20.	164-B-8735	
22	Stop, for contact spring, Fig. 19 or 20.....	35-C-7513	
23	Terminal Post, with washers and nuts, for fastening contact spring, Fig. 19 or 20, to contact spring board, Fig. 16.....	593-8094	
24	Washer, for operating arm, Fig. 8 or 9.....	11-C-7513	
25	Nut Lock Washer, for bolt, Fig. 33, and for cap screw, Fig. 36.....	85-B-8486	
26	Nut Lock Washer, for cap screw, Fig. 35.....	86-B-8486	
27	Set Screw, for operating arm, Fig. 8 or 9.....	41-B-8099	
28	Rd. Hd. Rivet, for fastening contact bar, Fig. 15, to contact block, Fig. 14.....	32-B-10301	
29	Rd. Hd. Rivet, $\frac{1}{8}$ "x1", for fastening contact block, Fig. 14, to operating arm, Fig. 7, and contact carrier, Fig. 13.....		
30	Rd. Hd. Rivet, $\frac{3}{8}$ "x1- $\frac{3}{4}$ ", for fastening cover, Fig. 2, to box, Fig. 1.....		
31	Rd. Hd. Rivet, $\frac{1}{2}$ "x2- $\frac{1}{8}$ ", for fastening eye bolt, Fig. 4, to box, Fig. 1.....		
32	Flat Hd. Mach. Screw, $\frac{1}{4}$ "x $\frac{7}{8}$ ", for fastening contact carrier, Fig. 13, to operating arm, Fig. 7....		
33	Hex. Hd. Bolt, $\frac{3}{8}$ "x2", with nut, for fastening operating arm, Fig. 8 or 9, to operating arm, Fig. 7.....		
34	Hex. Hd. Mach. Bolt, $\frac{3}{8}$ "x2- $\frac{3}{8}$ ", with nut, for fastening crank, Fig. 12, to shaft, Fig. 6.....		
35	Cap Screw, $\frac{1}{4}$ "-20x1- $\frac{1}{8}$ ", for fastening contact spring board, Fig. 16, to bracket, Fig. 17.....		
36	Cap Screw, $\frac{3}{8}$ "x $\frac{5}{8}$ ", for fastening bracket, Fig. 17, to box, Fig. 1.....		



PLAN VIEW



SECTIONAL SIDE VIEW

ELECTRIC SELECTOR—FOR SIX CIRCUITS IN EACH DIRECTION

**ELECTRIC SELECTOR—FOR SIX CIRCUITS
IN EACH DIRECTION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Electric Selector, for six circuits in each direction, as shown, with lug and connecting rod; Section 15, Plate 1510, Fig. 1; operated from switch point...	1N-D-1400	
Aa	as above, with 6 R. H. and 5 L. H. contacts...	1M-D-1400	
Ab	as above, with 6 R. H. and 4 L. H. contacts...	1L-D-1400	
Ac	as above, with 6 R. H. and 3 L. H. contacts...	1K-D-1400	
Ad	as above, with 6 R. H. and 2 L. H. contacts...	1J-D-1400	
Ae	as above, with 6 R. H. and 1 L. H. contacts...	1H-D-1400	
Af	as above, with 6 R. H. and 0 L. H. contacts...	1G-D-1400	
Ag	as above, with 5 R. H. and 5 L. H. contacts...	1F-D-1400	
Ah	as above, with 5 R. H. and 4 L. H. contacts...	1E-D-1400	
Aj	as above, with 5 R. H. and 3 L. H. contacts...	1D-D-1400	
Ak	as above, with 5 R. H. and 2 L. H. contacts...	1C-D-1400	
Am	as above, with 5 R. H. and 1 L. H. contacts...	1B-D-1400	
An	as above, with 5 R. H. and 0 L. H. contacts...	1A-D-1400	
Ap	as above, without contacts.....	1-D-1400	
B	Electric Selector, for six circuits in each direction, contact spring, Fig. 18, operated from slide bar of switch and lock movement; no lug or connecting rod	2M-D-1400	
Ba	as above, with 6 R. H. and 5 L. H. contacts...	2L-D-1400	
Bb	as above, with 6 R. H. and 4 L. H. contacts...	2K-D-1400	
Bc	as above, with 6 R. H. and 3 L. H. contacts...	2J-D-1400	
Bd	as above, with 6 R. H. and 2 L. H. contacts...	2H-D-1400	
Be	as above, with 6 R. H. and 1 L. H. contacts...	2G-D-1400	
Bf	as above, with 6 R. H. and 0 L. H. contacts...	2F-D-1400	
Bg	as above, with 5 R. H. and 5 L. H. contacts...	2E-D-1400	
Bh	as above, with 5 R. H. and 4 L. H. contacts...	2D-D-1400	
Bj	as above, with 5 R. H. and 3 L. H. contacts...	2C-D-1400	
Bk	as above, with 5 R. H. and 2 L. H. contacts...	2B-D-1400	
Bm	as above, with 5 R. H. and 1 L. H. contacts...	2A-D-1400	
Bn	as above, with 5 R. H. and 0 L. H. contacts...	2-D-1400	
1	Box only.....	16-C-7513	
1a	as above, with cover, flax packing, eye bolt, hasp, journal and rivets (1-1, 1-2a, 1-4, 1-5, 1-10, 2-30, 1-31).....		
2	Cover, for box. Fig. 1.....	21-C-7513	
2a	as above, with flax packing, Fig. 3, 4'-9" long		

**ELECTRIC SELECTOR—FOR SIX CIRCUITS
IN EACH DIRECTION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

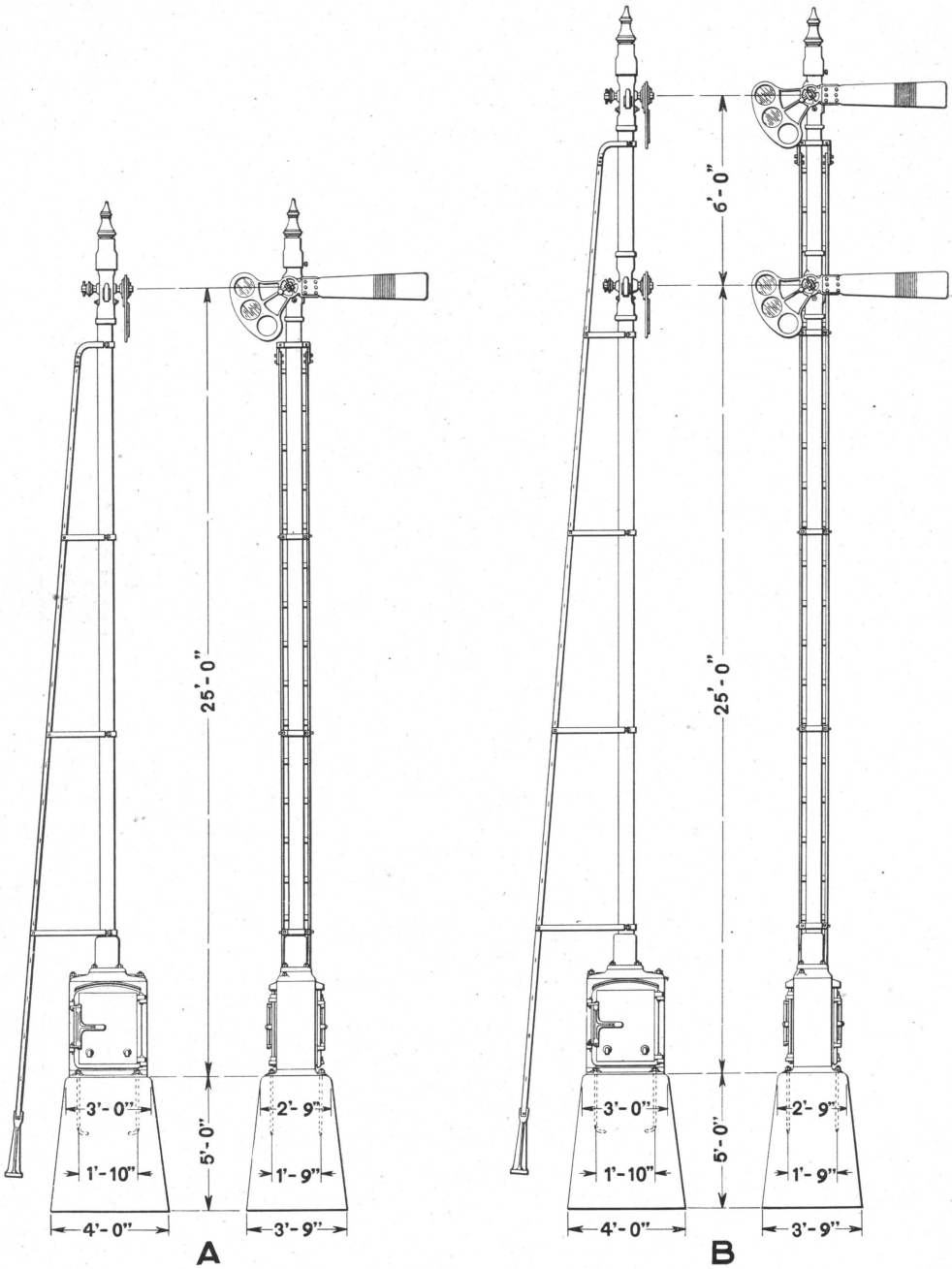
Fig.		Drawing Reference	List Price
3	Flax Packing, 3/8" sq. Price per foot.....		
4	Eye Bolt	10-B-8034	
5	Hasp, with nut and rivet.....	2-B-9925	
6	Shaft	19-C-7513	
7	Operating Arm, for L. H. contacts.....	17-C-7513	
7a	as above, with journals, contact blocks, contact bars and rivets (1-7, 2-11, 6-14a, 12-29)....		
7b	as above, with operating arms, set screws, washers, bolts and nuts (1-7a, 1-8a, 1-9a, 2-24, 4-25, 2-33)		
7c	as above, with contact carrier, contact blocks, contact bars, rivets and screws (1-7b, 1-13a, 4-32).....		
8	Operating Arm, R. H., for Fig. 7 or 13.....	5-C-7513	
8a	as above, with set screw (1-8, 1-27).....		
9	Operating Arm, L. H., for Fig. 7 or 13.....	7-C-7513	
9a	as above, with set screw (1-9, 1-27).....		
10	Journal, for box, Fig. 1.....	36-B-8093	
11	Journal, for operating arm, Fig. 7.....	40-8093	
12	Operating Crank.....	127-B-8192	
12a	as above, with bolt and nut (1-12, 1-34)....		
13	Contact Carrier, for R. H. contacts.....	31-C-7513	
13a	as above, with contact blocks, contact bars and rivets (1-13, 6-14a, 12-29).....		
13b	as above, with operating arms, set screws and screws (1-13a, 1-8a, 1-9a, 4-32).....		
14	Contact Block for operating arm, Fig. 7, and for contact carried, Fig. 13.....	13-C-7513	
14a	as above, with contact bar and rivets (1-14, 1-15, 2-28).....		
15	Contact Bar, for contact block, Fig. 14.....	14-C-7513	
16	Contact Spring Board, for R. H. or L. H. contacts..	89-9968	
17	Bracket, for contact spring board, Fig. 16.....	22-C-7513	
18	Insulation, for bracket, Fig. 17.....	537-8750	

**ELECTRIC SELECTOR—FOR SIX CIRCUITS
IN EACH DIRECTION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
19	Contact Spring, for R. H. or L. H. contacts, for Figs. A, Aa, Ab, Ac, Ad, Ae, Af, Ag, Ah, Aj, Ak, Am and An.....	733-B-8385	
20	Contact Spring, for R. H. or L. H. contacts, for Figs. B, Ba, Bb, Bc, Bd, Be, Bf, Bg, Bh, Bj, Bk, Bm and Bn.....	796-8385	
21	Reinforcing Spring, for contact spring, Fig. 19 or 20.	164-B-8735	
22	Stop, for contact spring, Fig. 19 or 20.....	35-C-7513	
23	Terminal Post, with washers and nuts, for fastening contact spring, Fig. 19 or 20, to contact spring board, Fig. 16.....	593-8094	
24	Washer, for operating arm, Fig. 8 or 9.....	11-C-7513	
25	Nut Lock Washer, for bolt, Fig. 33, and for cap screw, Fig. 36.....	85-B-8486	
26	Nut Lock Washer, for cap screw, Fig. 35.....	86-B-8486	
27	Set Screw, for operating arm, Fig. 8 or 9.....	41-B-8099	
28	Rd. Hd. Rivet, for fastening contact bar, Fig. 15, to contact block, Fig. 14.....	32-B-10301	
29	Rd. Hd. Rivet, 1/8"x1", for fastening contact block, Fig. 14, to operating arm, Fig. 7, and contact carrier, Fig. 13.....		
30	Rd. Hd. Rivet, 3/8"x1-3/4", for fastening cover, Fig. 2, to box, Fig. 1.....		
31	Rd. Hd. Rivet, 1/2"x2-1/8", for fastening eye bolt, Fig. 4, to box, Fig. 1.....		
32	Flat Hd. Mach. Screw 1/4"x7/8", for fastening contact carrier, Fig. 13, to operating arm, Fig. 7.....		
33	Hex. Hd. Bolt, 3/8"x2", with nut, for fastening operating arm, Fig. 8 or 9, to operating arm, Fig. 7.		
34	Hex. Hd. Mach. Bolt, 3/8"x2-3/8", with nut, for fastening crank, Fig. 12, to shaft, Fig. 6.....		
35	Cap Screw, 1/4"-20x1-1/8", for fastening contact spring board, Fig. 16, to bracket, Fig. 17.....		
36	Cap Screw, 3/8"x5/8", for fastening bracket, Fig. 17, to box, Fig. 1.....		



ELECTRIC GROUND SIGNALS GIVING INDICATIONS IN LOWER QUADRANT. STYLE "S" MECHANISM

**ELECTRIC GROUND SIGNALS
 GIVING INDICATIONS IN LOWER QUADRANT
 STYLE "S" MECHANISM**

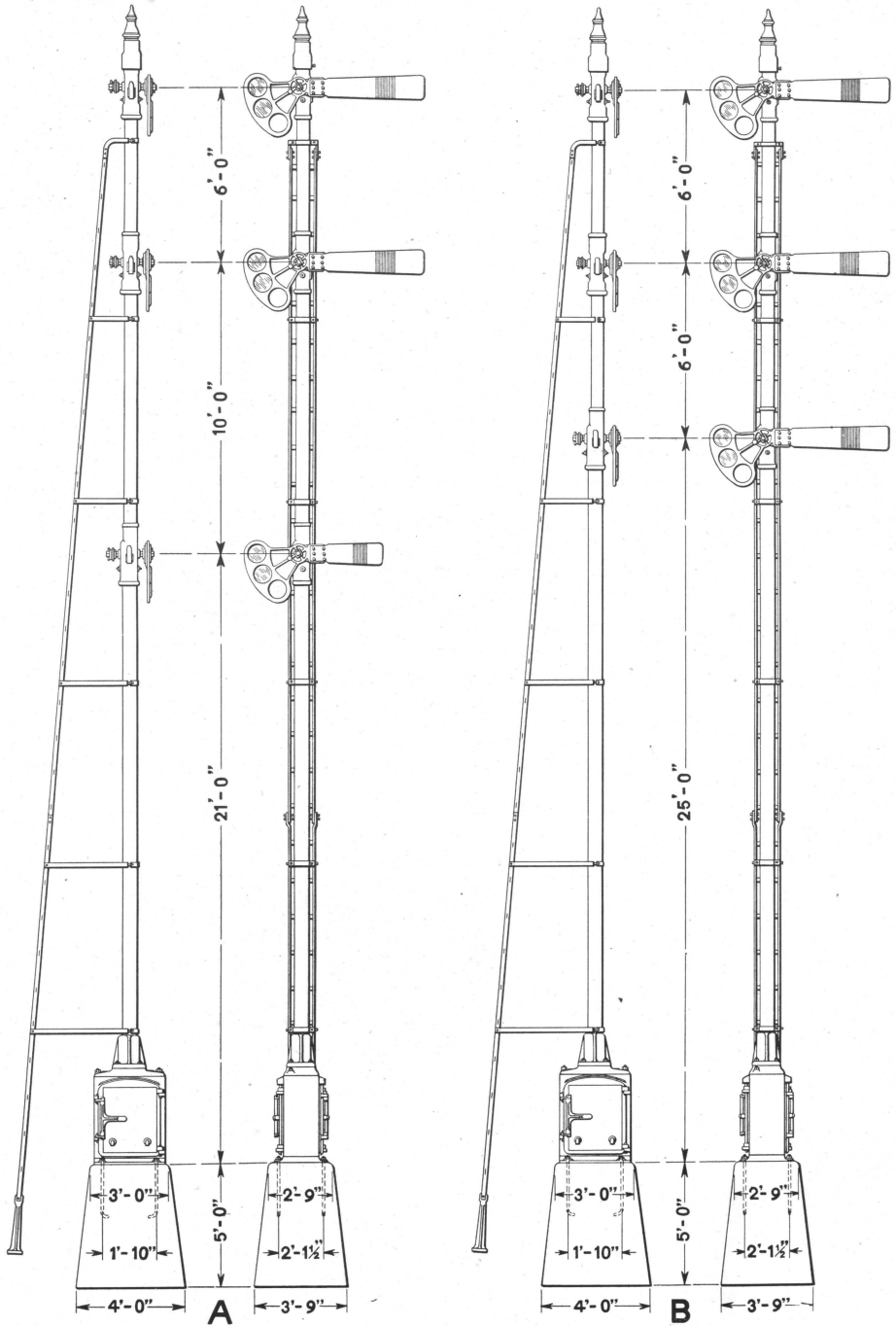
Signals listed below include post, mechanism case, mechanism, front and back spectacles, glass, blades, ladder, ladder foundation, foundation bolts and all other fittings shown on the opposite plate.

They do not include lamps, number plates, safety signal circuit controllers or foundations, which must be ordered separately when required. Any variation from the general dimensions shown must be specifically called for when ordering.

Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	One-Arm, 60 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	E-2949	
Aa	as above, electrically lighted.....	E-2949	
B	Two-Arm, 60 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	E-2949	
Ba	as above, electrically lighted.....	E-2949	



ELECTRIC GROUND SIGNALS GIVING INDICATIONS IN LOWER QUADRANT. STYLE "S" MECHANISM

**ELECTRIC GROUND SIGNALS
 GIVING INDICATIONS IN LOWER QUADRANT
 STYLE "S" MECHANISM**

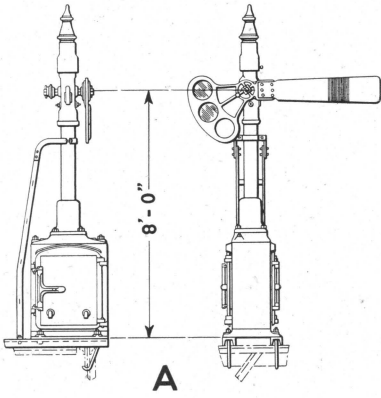
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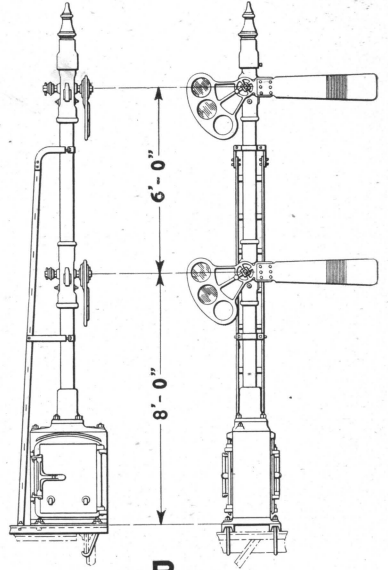
Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

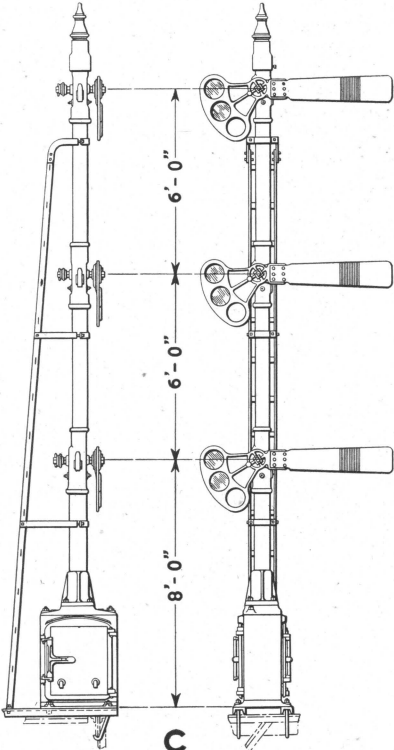
	Drawing Reference	List Price
Fig.		
A	Two-Arm and Low Speed, 60 deg., (oil lighted) Two-Position Home Signal, complete.....	E-2949
Aa	as above, electrically lighted.....	E-2949
B	Three-Arm, 60 deg., (oil lighted) Two-Position Home Signal, complete.....	E-2949
Ba	as above, electrically lighted.....	E-2949



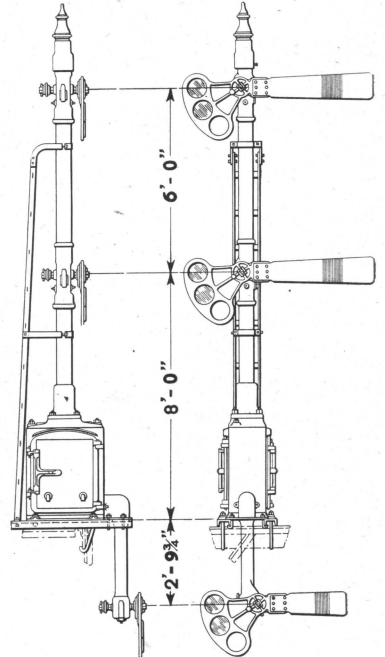
A



B



C



D

ELECTRIC BRIDGE OR BRACKET SIGNALS GIVING INDICATIONS
IN LOWER QUADRANT. STYLE "S" MECHANISM

**ELECTRIC BRIDGE OR BRACKET SIGNALS
 GIVING INDICATIONS IN LOWER QUADRANT
 STYLE "S" MECHANISM**

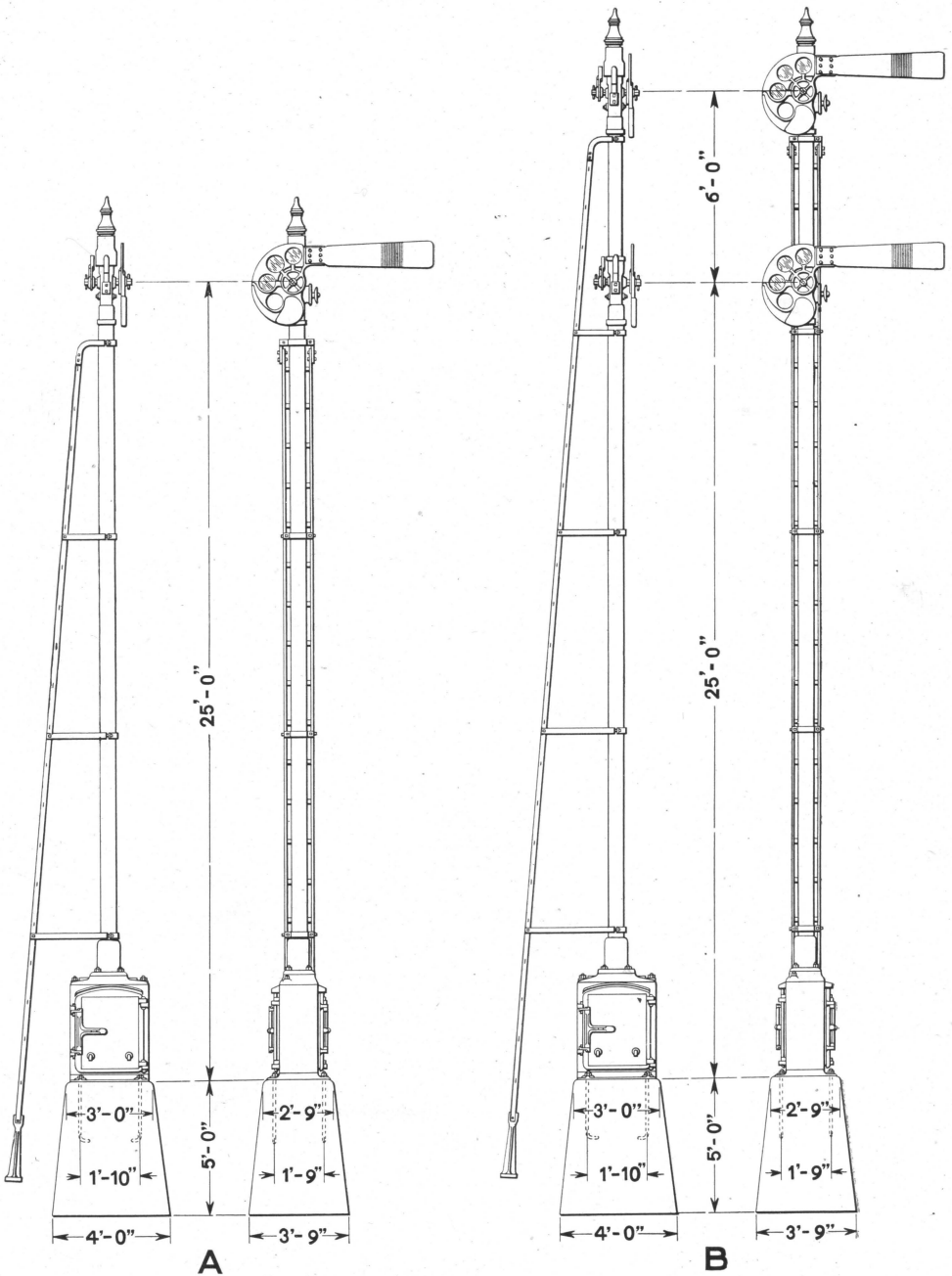
Signals listed below include post, mechanism case, mechanism, front and back spectacles, glass, blades, ladder; bolts, hook bolts, channel irons and all other fittings shown on the opposite plate.

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Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price
Fig.		
A	One-Arm, 60 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	C-693I
Aa	as above, electrically lighted.....	C-693I
B	Two-Arm, 60 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	C-693I
Ba	as above, electrically lighted.....	C-693I
C	Three-Arm, 60 deg., (oil lighted) Two-Position Home Signal, complete.....	C-693I
Ca	as above, electrically lighted.....	C-693I
D	Two-Arm and Low Speed, 60 deg., (oil lighted) Two-Position Home Signal, complete.....	C-693I
Da	as above, electrically lighted.....	C-693I



A **B**
 ELECTRIC GROUND SIGNALS GIVING INDICATIONS IN LOWER QUADRANT. STYLE "S" MECHANISM

**ELECTRIC GROUND SIGNALS
GIVING INDICATIONS IN LOWER QUADRANT
STYLE "S" MECHANISM**

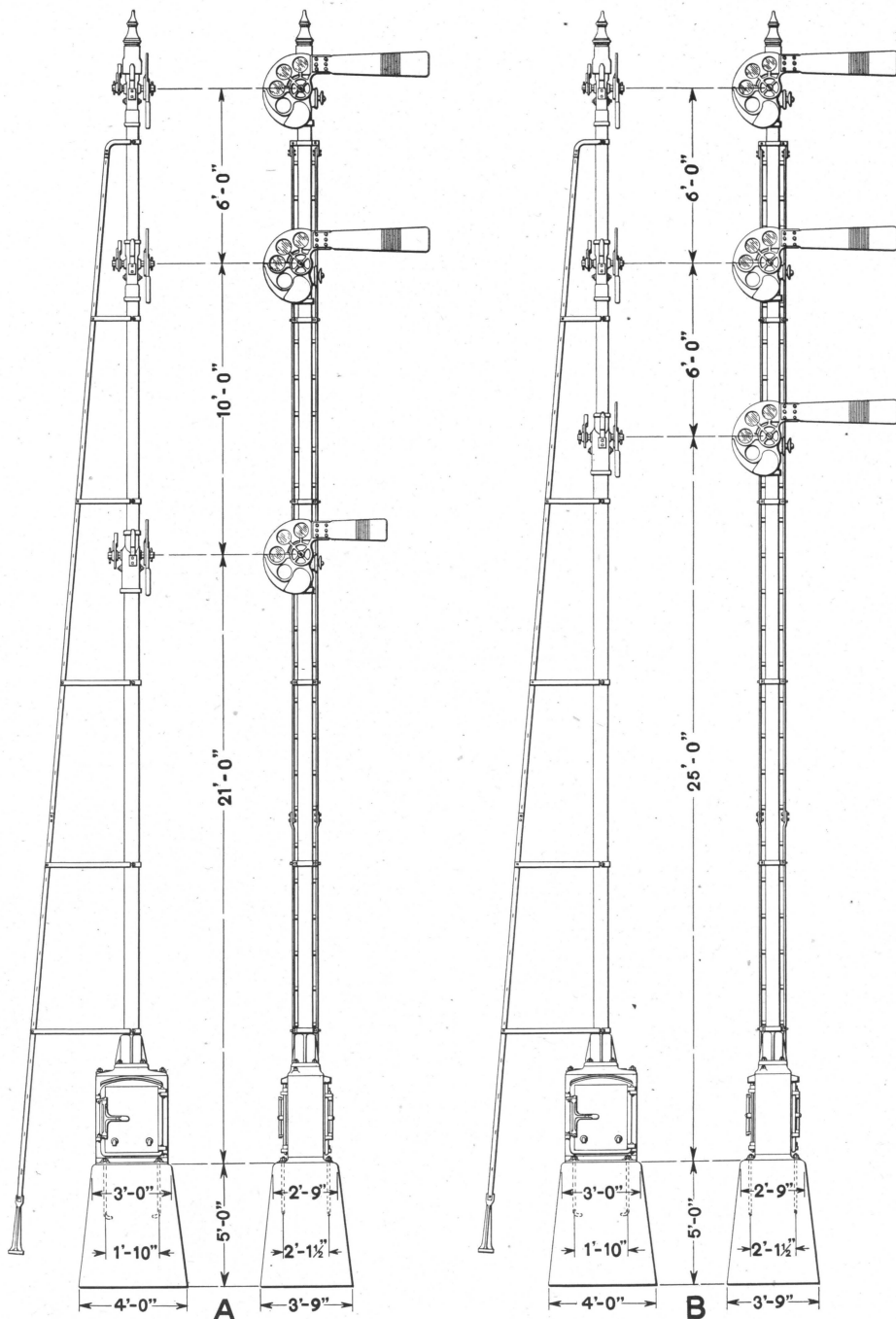
Signals listed below include post, mechanism case, mechanism, front and back spectacles, glass, blades, ladder, ladder foundation, foundation bolts and all other fittings shown on the opposite plate.

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Order by Name, Plate, Figure and Instructions given above

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		Drawing Reference	List Price
Fig.			
A	One-Arm, 90 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	E142I	
Aa	as above, electrically lighted.....	E142I	
Ab	One-Arm, 90 deg., (oil lighted) Three-Position Signal, complete.....	E142I	
Ac	as above, electrically lighted.....	E142I	
B	Two-Arm, 90 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	E142I	
Ba	as above, electrically lighted.....	E142I	
Bb	Two-Arm, 90 deg., (oil lighted) Signal, complete; one arm three-position; the other, two-position.....	E142I	
Bc	as above, electrically lighted.....	E142I	
Bd	Two-Arm, 90 deg., (oil lighted) Three-Position Signal, complete.....	E142I	
Be	as above, electrically lighted.....	E142I	



ELECTRIC GROUND SIGNALS GIVING INDICATIONS IN LOWER QUADRANT. STYLE "S" MECHANISM

ELECTRIC GROUND SIGNALS GIVING INDICATIONS IN LOWER QUADRANT STYLE "S" MECHANISM

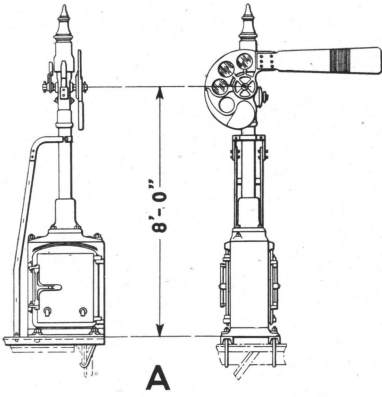
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They do not include lamps, number plates, safety signal circuit controllers of foundations, which must be ordered separately when required. Any variation from the general dimensions shown must be specifically called for when ordering.

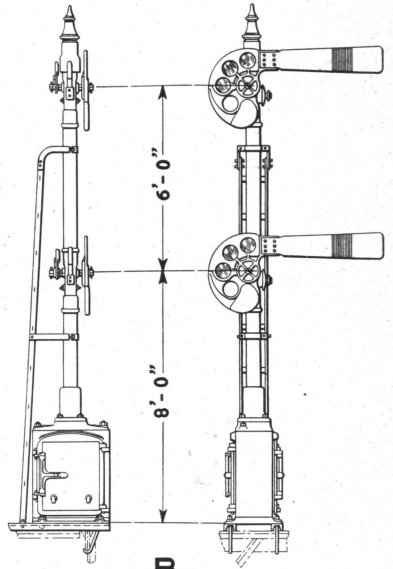
Order by Name, Plate, Figure and Instructions given above.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

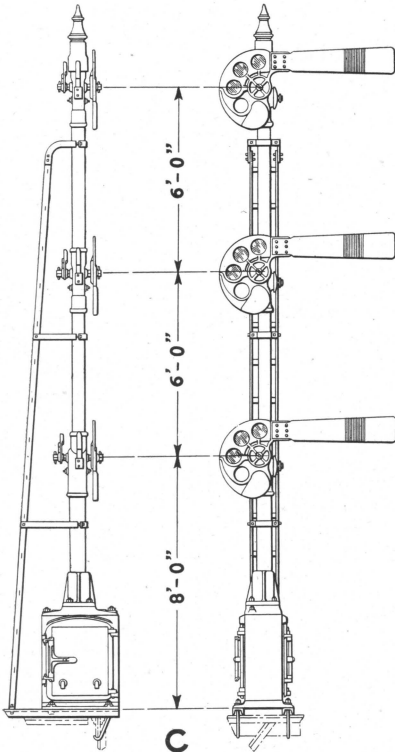
Fig.		Drawing Reference	List Price
A	Two-Arm and Low Speed, 90 deg., (oil lighted) Home Signal, complete; all arms two-position.....	E-142I	
Aa	as above, electrically lighted.....	E-142I	
Ab	Two-Arm and Low Speed, 90 deg., (oil lighted) Home Signal, complete; top and low speed arms two-position and middle arm three-position.....	E-142I	
Ac	as above, electrically lighted.....	E-142I	
Ad	Two-Arm and Low Speed, 90 deg., (oil lighted) Home Signal, complete; top arm three-position and middle and low speed arms two-position.....	E-142I	
Ae	as above, electrically lighted.....	E-142I	
Af	Two-Arm and Low Speed, 90 deg., (oil lighted) Home Signal, complete; all arms three-position.....	E-142I	
Ag	as above, electrically lighted.....	E-142I	
B	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; all arms two-position.....	E-142I	
Ba	as above, electrically lighted.....	E-142I	
Bb	Three-Arm, 90 deg., (oil lighted) Signal, complete; top and low speed arms three-position and middle arm two-position.....	E-142I	
Bc	as above, electrically lighted.....	E-142I	
Bd	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; top arm three-position and middle and low speed arms two-position.....	E-142I	
Be	as above, electrically lighted.....		
Bf	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; all arms three-position.....	E-142I	
Bg	as above, electrically lighted.....	E-142I	



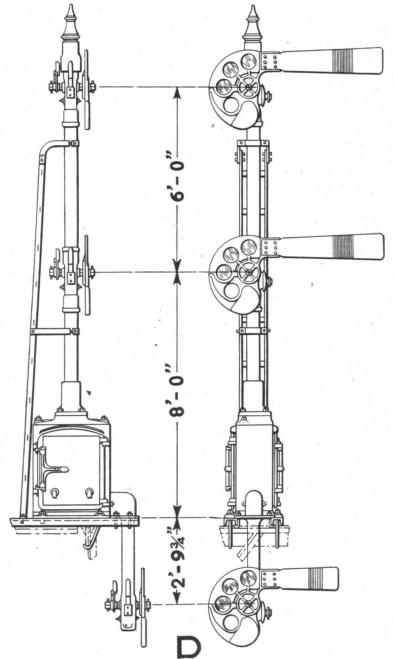
A



B



C



D

ELECTRIC BRIDGE OR BRACKET SIGNALS GIVING INDICATIONS IN LOWER QUADRANT. STYLE "S" MECHANISM

**ELECTRIC BRIDGE OR BRACKET SIGNALS
 GIVING INDICATIONS IN LOWER QUADRANT
 STYLE "S" MECHANISM**

Signals listed below include post, mechanism case, mechanism, front and back spectacles, glass, blades, ladder, bolts, hook bolts, channel irons and all other fittings shown on the opposite plate.

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Order by Name, Plate, Figure and Instructions given above.

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Fig.	Description	Drawing Reference	List Price
A	One-Arm, 90 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	C-693I	
Aa	as above, electrically lighted.....	C-693I	
Ab	One-Arm, 90 deg., (oil lighted) Three-Position, Signal, complete.....	C-693I	
Ac	as above, electrically lighted.....	C-693I	
B	Two-Arm, 90 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	C-693I	
Ba	as above, electrically lighted.....	C-693I	
Bb	Two-Arm, 90 deg., (oil lighted) Signal, complete; one arm three-position; the other, two-position.....	C-693I	
Bc	as above, electrically lighted.....	C-693I	
Bd	Two-Arm, 90 deg., (oil lighted) Three-Position Signal, complete.....	C-693I	
Be	as above, electrically lighted.....	C-693I	

**ELECTRIC BRIDGE OR BRACKET SIGNALS
GIVING INDICATIONS IN LOWER QUADRANT
STYLE "S" MECHANISM**

Order by Name, Plate and Figure.

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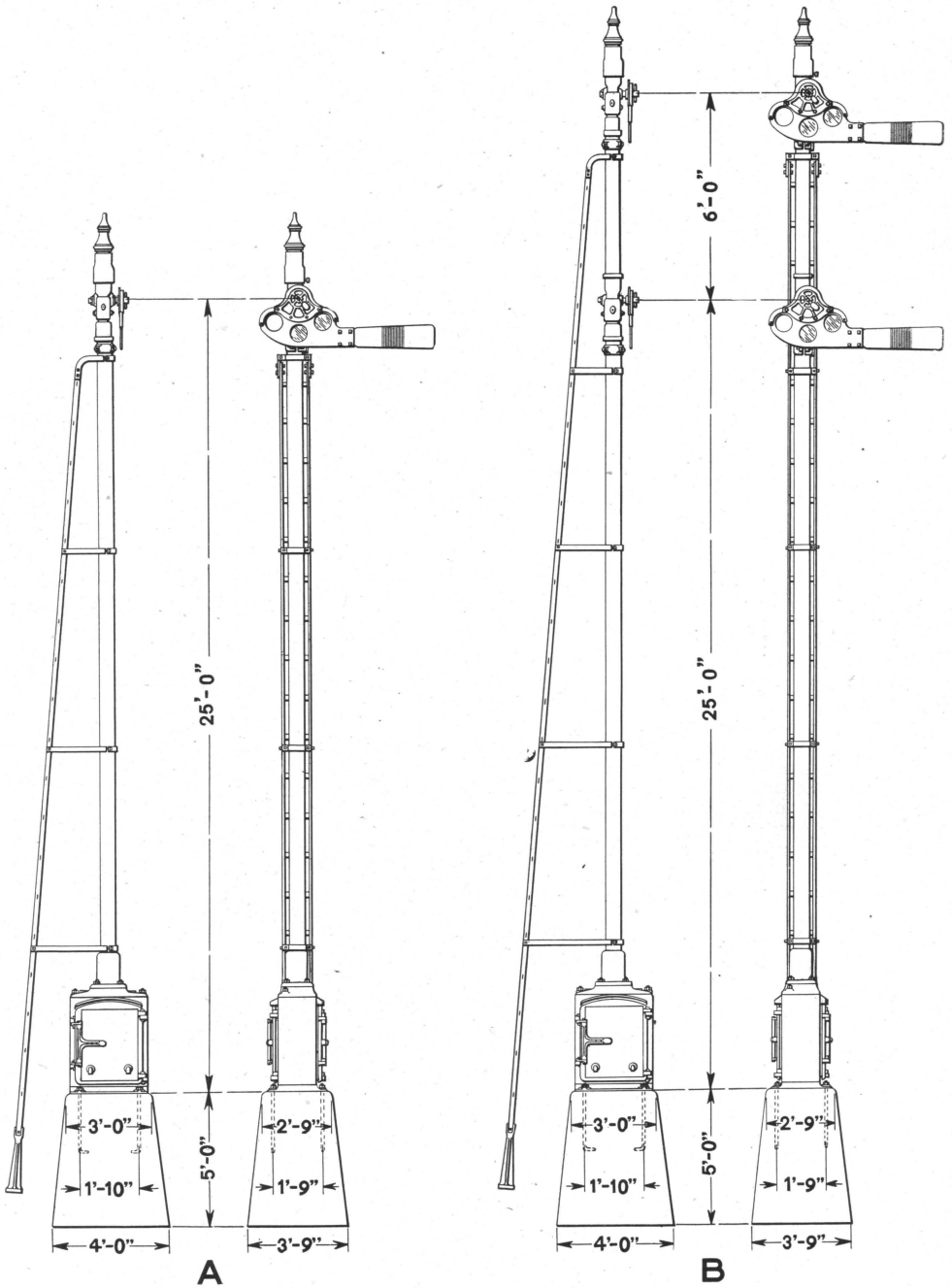
Fig.		Drawing Reference	List Price
C	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; all arms two-position.....	C-693I	
Ca	as above, electrically lighted.....	C-693I	
Cb	Three-Arm, 90 deg., (oil lighted) Signal, complete; top and low speed arms three-position and middle arm two-position.....	C-693I	
Cc	as above, electrically lighted.....	C-693I	
Cd	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; top arm three-position and middle and low speed arms two-position.....	C-693I	
Ce	as above, electrically lighted.....	C-693I	
Cf	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; all arms three-position.....	C-693I	
Cg	as above, electrically lighted.....	C-693I	

**ELECTRIC BRIDGE OR BRACKET SIGNALS
GIVING INDICATIONS IN LOWER QUADRANT
STYLE "S" MECHANISM**

Order by Name, Plate and Figure.

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Fig.		Drawing Reference	List Price
D	Two-Arm and Suspended Route, 90 deg., (oil lighted) Home Signal, complete; all arms two-position..	C-6931	
Da	as above, electrically lighted.....	C-6931	
Db	Two-Arm and Suspended Route, 90 deg., (oil lighted) Home Signal, complete; top and suspended route arms two-position and middle arm three-position	C-6931	
Dc	as above, electrically lighted.....	C-6931	
Dd	Two-Arm and Suspended Route, 90 deg., (oil lighted) Home Signal, complete; top arm three-position and middle and suspended route arms two-position	C-6931	
De	as above, electrically lighted.....	C-6931	
Df	Two-Arm and Suspended Route, 90 deg., (oil lighted) Home Signal, complete; all arms three-position.	C-6931	
Dg	as above, electrically lighted.....	C-6931	



ELECTRIC GROUND SIGNALS GIVING INDICATIONS IN UPPER QUADRANT. STYLE "S" MECHANISM.

ELECTRIC GROUND SIGNALS GIVING INDICATIONS IN UPPER QUADRANT. STYLE "S" MECHANISM

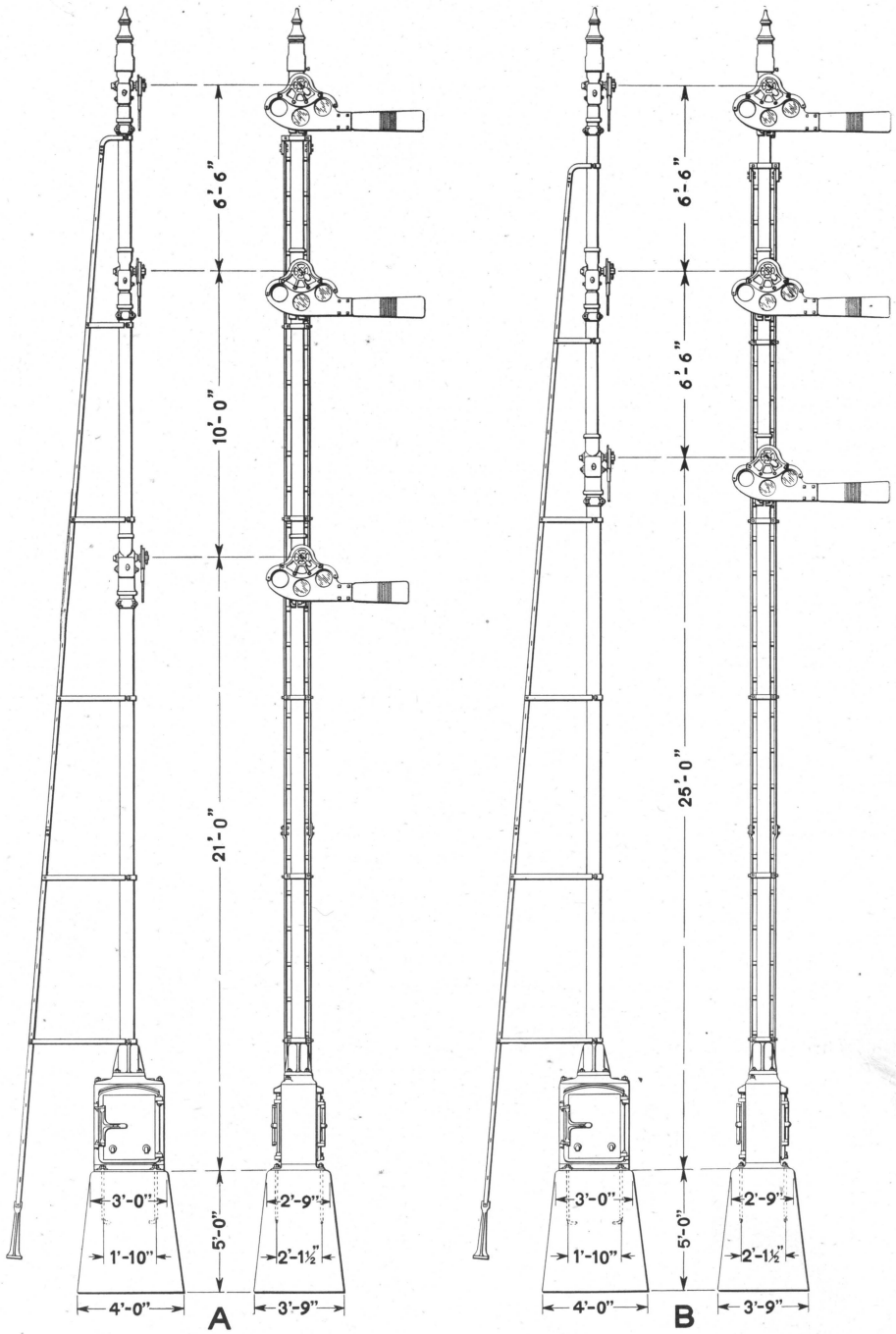
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Order by Name, Plate, Figure and Instructions given above.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price
Fig.		
A	One-Arm, 90 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	E-2944
Aa	as above, electrically lighted.....	E-2944
Ab	One-Arm, 90 deg., (oil lighted) Three-Position Signal, complete.....	E-2944
Ac	as above, electrically lighted.....	E-2944
B	Two-Arm, 90 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	E-2944
Ba	as above, electrically lighted.....	E-2944
Bb	Two-Arm, 90 deg., (oil lighted) Signal, compete; one arm three-position; the other, two-position....	E-2944
Bc	as above, electrically lighted.....	E-2944
Bd	Two-Arm, 90 deg., (oil lighted) Three-Position Signal, complete.....	E-2944
Be	as above, electrically lighted.....	E-2944



ELECTRIC GROUND SIGNALS GIVING INDICATIONS IN UPPER QUADRANT. STYLE "S" MECHANISM

**ELECTRIC GROUND SIGNALS
 GIVING INDICATIONS IN UPPER QUADRANT
 STYLE "S" MECHANISM**

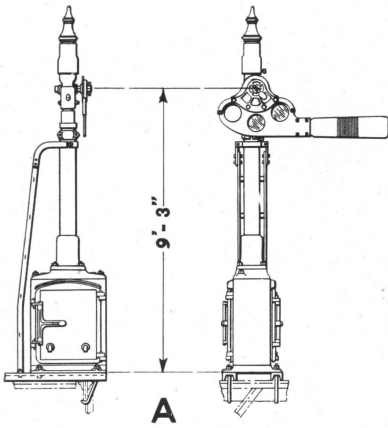
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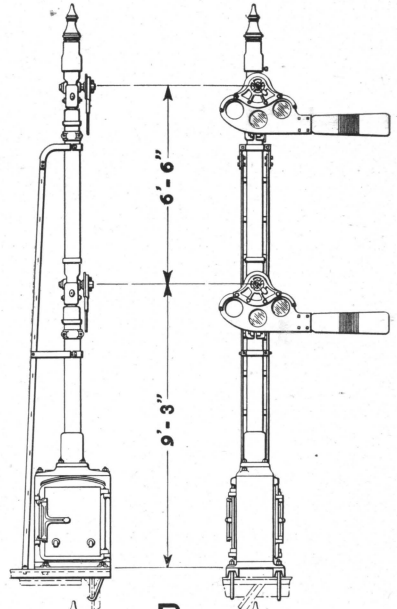
Order by Name, Plate, Figure and Instructions given above

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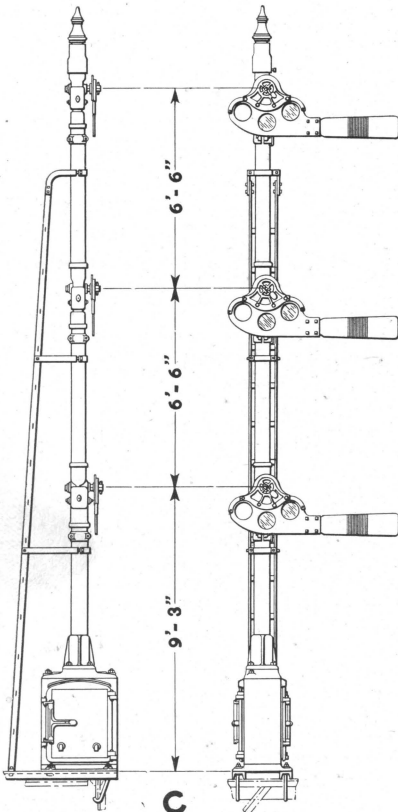
Fig.		Drawing Reference	List Price
A	Two-Arm and Low Speed, 90 deg., (oil lighted) Home Signal, complete; all arms two-position.....	E-2944	
Aa	as above, electrically lighted.....	E-2944	
Ab	Two-Arm and Low Speed, 90 deg. (oil lighted) Home Signal, complete; top and low speed arms two-position and middle arm three-position.....	E-2944	
Ac	as above, electrically lighted.....	E-2944	
Ad	Two-Arm and Low Speed, 90 deg., (oil lighted) Home Signal, complete; top arm three-position and middle and low speed arms two-position.....	E-2944	
Ae	as above, electrically lighted.....	E-2944	
Af	Two-Arm and Low Speed, 90 deg., (oil lighted) Home Signal, complete; all arms three-position.....	E-2944	
Ag	as above, electrically lighted.....	E-2944	
B	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; all arms two-position.....	E-2944	
Ba	as above, electrically lighted.....	E-2944	
Bb	Three-Arm, 90 deg., (oil lighted) Signal, complete; top and low speed arms three-position and middle arm two-position.....	E-2944	
Bc	as above, electrically lighted.....	E-2944	
Bd	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; top arm three-position and middle and low speed arms two-position.....	E-2944	
Be	as above, electrically lighted.....	E-2944	
Bf	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; all arms three-position.....	E-2944	
Bg	as above, electrically lighted.....	E-2944	



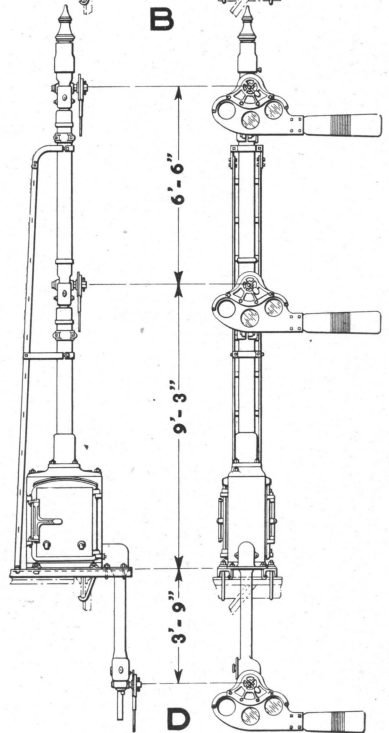
A



B



C



D

**ELECTRIC BRIDGE OR BRACKET SIGNALS GIVING INDICATIONS
IN UPPER QUADRANT STYLE "S" MECHANISM.**

ELECTRIC BRIDGE OR BRACKET SIGNALS GIVING INDICATIONS IN UPPER QUADRANT. STYLE "S" MECHANISM

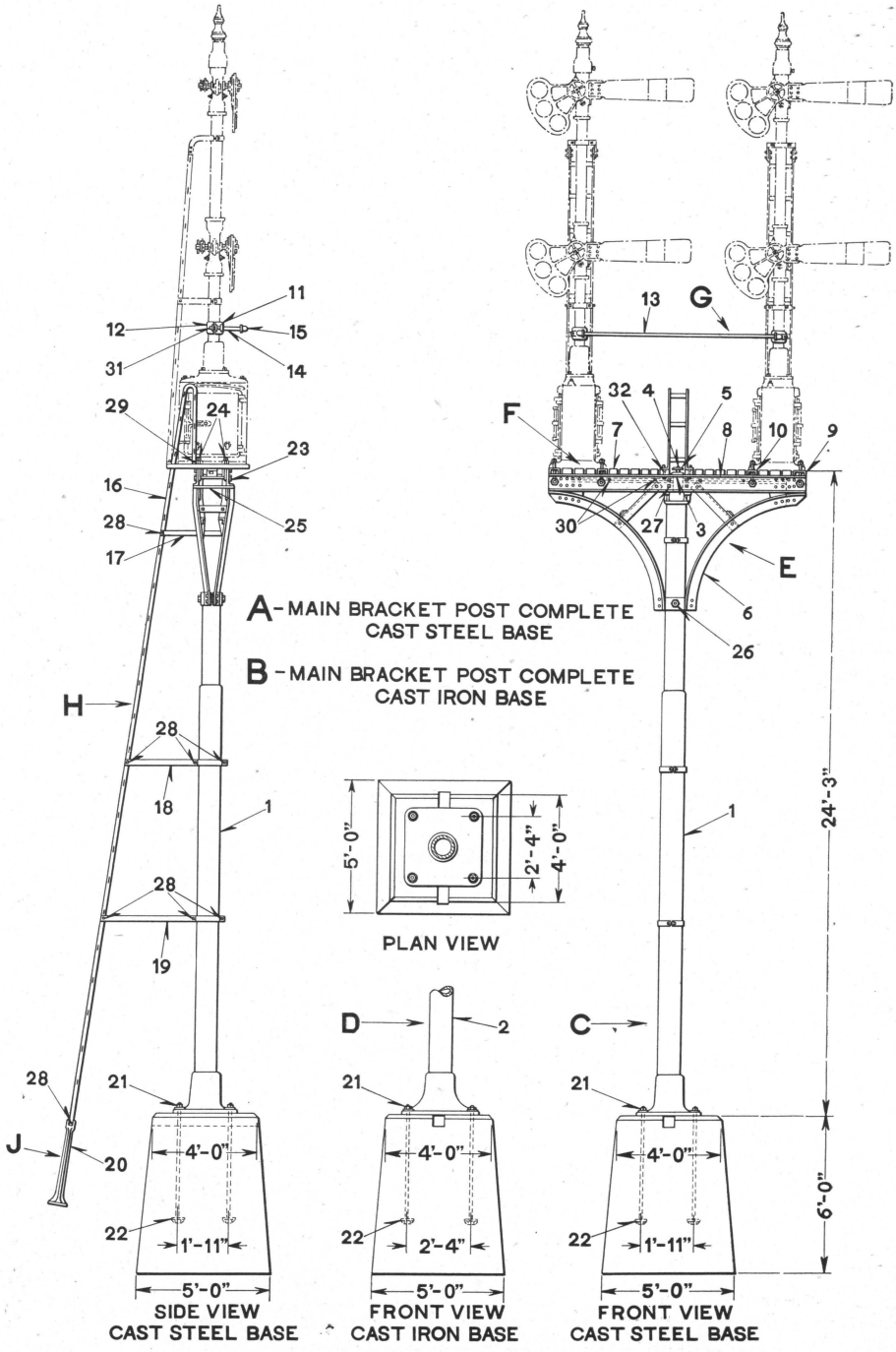
Signals listed below include post, mechanism case, mechanism, front and back spectacles, glass, blades, ladder, bolts, hook bolts, channel irons and all other fittings shown on the opposite plate.

They do not include lamps, number plates or safety signal circuit controllers, which must be ordered separately when required. Any variation from the general dimensions shown must be specifically called for when ordering.

Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	One-Arm, 90 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	C-7368	
Aa	as above, electrically lighted.....	C-7368	
Ab	One-Arm, 90 deg., (oil lighted) Three-Position Signal, complete.....	C-7368	
Ac	as above, electrically lighted.....	C-7368	
B	Two-Arm, 90 deg., (oil lighted) Two-Position Home or Distant Signal, complete.....	C-7368	
Ba	as above, electrically lighted.....	C-7368	
Bb	Two-Arm, 90 deg., (oil lighted) Signal, complete; one arm three-position; the other, two-position.....	C-7368	
Bc	as above, electrically lighted.....	C-7368	
Bd	Two-Arm, 90 deg., (oil lighted) Three-Position Signal, complete.....	C-7368	
Be	as above, electrically lighted.....	C-7368	
C	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; all arms two-position.....	C-7368	
Ca	as above, electrically lighted.....	C-7368	
Cb	Three-Arm, 90 deg., (oil lighted) Signal, complete; top and low speed arms three-position and middle arm two-position.....	C-7368	
Cc	as above, electrically lighted.....	C-7368	
Cd	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; top arm three-position and middle and low speed arms two-position.....	C-7368	
Ce	as above, electrically lighted.....	C-7368	
Cf	Three-Arm, 90 deg., (oil lighted) Home Signal, complete; all arms three-position.....	C-7368	
Cg	as above, electrically lighted.....	C-7368	
D	Two-Arm and Suspended Route, 90 deg., (oil lighted) Home Signal, complete; all arms two-position..	C-7368	
Da	as above, electrically lighted.....	C-7368	
Db	Two-Arm and Suspended Route, 90 deg., (oil lighted) Home Signal, complete; top and suspended route arms two-position and middle arm three-position...	C-7368	
Dc	as above, electrically lighted.....	C-7368	
Dd	Two-Arm and Suspended Route, 90 deg., (oil lighted) Home Signal, complete; top arm three-position and middle and suspended route arms two-position	C-7368	
De	as above, electrically lighted.....	C-7368	
Df	Two-Arm and Suspended Route, 90 deg., (oil lighted) Home Signal, complete; all arms three-position.	C-7368	
Dg	as above, electrically lighted.....	C-7368	



MAIN BRACKET POST FOR STYLE "S" ELECTRIC SIGNALS

MAIN BRACKET POST FOR STYLE "S" ELECTRIC SIGNALS

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Drawing Reference	List Price
A	Main Bracket Post, with cast steel base, for two, one-arm or two, two-arm signals (1-C, 1-E, 1-F, 1-G, 1-H, 1-J, 4-21a).....	B-10288
Aa	as above, for two, three-arm signals (1-C, 1-Ea, 1-Fa, 1-Ga, 1-H, 1-J, 4-21a).....	B-10288
Ab	as above, for two, one-arm and suspended route signals (1-C, 1-Eb, 1-Fb, 1-G, 1-H, 1-J, 4-21a).....	B-10288
Ac	as above, for two, two-arm and suspended route signals (1-C, 1-Ec, 1-Fc, 1-G, 1-H, 1-J, 4-21a).....	B-10288
B	Main Bracket Post, with cast iron base, for two, one-arm or two, two-arm signals (1-D, 1-E, 1-F, 1-G, 1-H, 1-J, 4-21a).....	B-10288
Ba	as above, for two, three-arm signals (1-D, 1-Ea, 1-Fa, 1-Ga, 1-H, 1-J, 4-21a).....	B-10288
Bb	as above, for two, one-arm and suspended route signals (1-D, 1-Eb, 1-Fb, 1-G, 1-H, 1-J, 4-21a).....	B-10288
Bc	as above, for two, two-arm and suspended route signals (1-D, 1-Ec, 1-Fc, 1-G, 1-H, 1-J, 4-21a).....	B-10288
C	Pipe Post, with cast steel base, crosstree support, hand hole plate, clamp and handle, for Figs. A, Aa, Ab and Ac (1-1, 1-3, 1-4a).....	B-10288
D	Pipe Post, with cast iron base, crosstree support, hand hole plate, clamp and handle, for Figs. B, Ba, Bb and Bc (1-2, 1-3, 1-4a).....	B-10288

MAIN BRACKET POST FOR STYLE "S" ELECTRIC SIGNALS

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Fig.		Drawing Reference	List Price
E	Crosstree, with separator, bolts and nuts, for Figs. A and B (1-6, 4-23a, 1-26, 4-27)	22-B-8853	
Ea	Crosstree, with separator, bolts and nuts, for Figs. Aa and Ba (1-6a, 4-23a, 1-26, 4-27)	21-B-8853	
Eb	Crosstree, with separator, bolts and nuts, for Figs. Ab and Bb (1-6b, 4-23a, 1-26, 4-27)	23-B-8853	
Ec	Crosstree, with separator, bolts and nuts, for Figs. Ac and Bc (1-6c, 4-23a, 1-26, 4-27)	B-8853-17	
F	Platform, with channel iron bolts and nuts, for cross-tree, Fig. E (1-7, 2-9, 2-10, 2-32, 12-30)	40-B-8861	
Fa	Platform, with channel iron bolts and nuts, for cross-tree, Fig. Ea (1-7a, 2-9a, 2-10a, 2-10d, 2-32, 16-30, 4-31-b)	53-B-8861	
Fb	Platform, with channel iron bolts and nuts, for cross-tree, Fig. Eb (1-7b, 2-9b, 4-9c, 2-10b, 2-32, 20-30)	60-B-8861	
Fc	Platform, with channel iron bolts and nuts, for cross-tree, Fig. Ec (1-7c, 2-9a, 2-9d, 2-10a, 2-10c, 2-32, 12-30)	B-8861	
G	Hand Rail, used with main bracket post, Fig. A, Ab, Ac, B, Bb or Bc (1-11a, 1-13, 2-14, 2-15)	43-B-9279	
Ga	Hand Rail, used with main bracket post, Fig. Aa or Ba (1-11c, 1-13, 2-14, 2-15)	B-9279	
H	Ladder, with stays, bolts and nuts, for Figs. A, Aa, Ab, Ac, B, Ba, Bb and Bc (1-16, 1-17, 1-18, 1-19, 2-29)	150-B-8363 22-B-8848	
J	Ladder Foundation, with bolts and nuts (1-20, 2-28)		
I	Pipe Post, with cast steel base and crosstree support only, for Figs. A, Aa, Ab and Ac		

MAIN BRACKET POST FOR STYLE "S" ELECTRIC SIGNALS

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Fig.		Drawing Reference	List Price
2	Pipe Post, with cast iron base and crosstree support only, for Figs. B, Ba, Bb and Bc.....		
3	Hand Hole Plate, used on top of crosstree support of pipe post, Fig. C or D.....	1-C-5931	
4	Clamp, for hand hole plate, Fig. 3.....	3-B-8074	
4a	as above, with handle (1-4, 1-5).....		
5	Handle, for clamp, Fig. 4.....	22-B-8311	
6	Crosstree only, for Fig. A or B.....	27-B-8853	
6a	Crosstree only, for Fig. Aa or Ba.....	21-B-8853	
6b	Crosstree only, for Fig. Ab or Bb.....	23-B-8853	
6c	Crosstree only, for Fig. Ac or Bc.....	B-8853-17	
7	Platform only, for crosstree, Fig. E.....	40-B-8861	
7a	Platform only, for crosstree, Fig. Ea.....	52-B-8861	
7b	Platform only, for crosstree, Fig. Eb.....	60-B-8861	
7c	Platform only, for crosstree, Fig. Ec.....	B-8861-30	
8	Trunking, for wires. Price per foot.....	1-3568	
9	Channel, R. H., for platform, Fig. F.....	85-B-9906	
9a	Channel, R. H., for platform, Fig. Fa or Fc.....	82-B-9906	
9b	Channel, R. H., for platform, Fig. Fb.....	101-B-9906	
9c	Channel, for platform, Fig. Fb, for suspended route signal.....	98-B-9906	
9d	Channel, R. H., for platform, Fig. Fc, for suspended route signal.....	80-B-9906	
10	Channel, L. H., for platform, Fig. F.....	84-B-9906	
10a	Channel, L. H., for platform, Fig. Fa or Fc.....	81-B-9906	
10b	Channel, L. H., for platform, Fig. Fb.....	97-B-9906	
10c	Channel, L. H., for platform, Fig. Fc, for suspended route signal.....	79-B-9906	

MAIN BRACKET POST FOR STYLE "S" ELECTRIC SIGNALS

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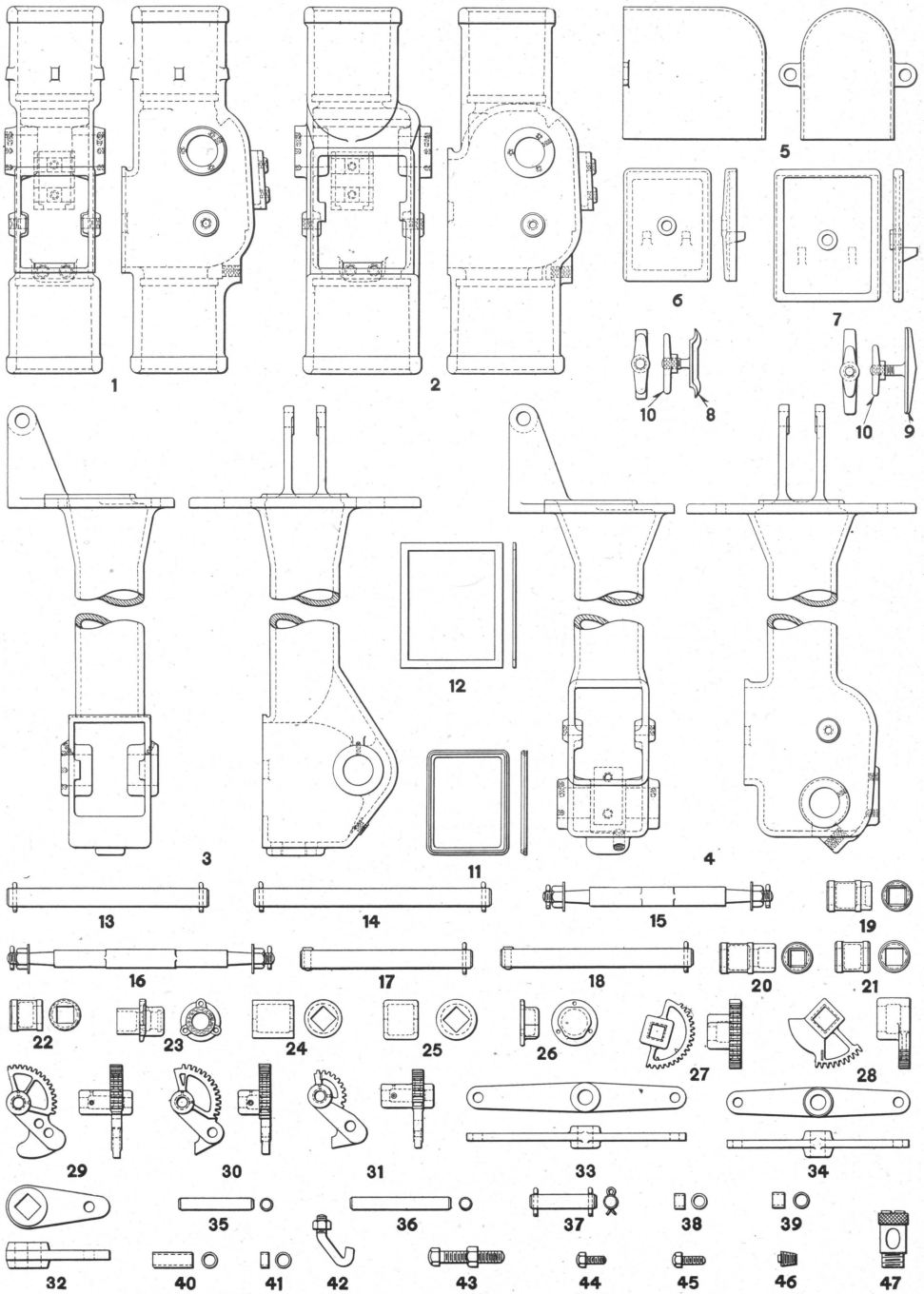
	Drawing Reference	List Price
Fig 10d	Channel, for platform, Fig. Fa	87-B-9906
11	Socket, for hand rail, Fig. G.....	2-B-6481
11a	as above, with cap, bolts and nuts (1-11, 1-12, 2-31).....	
11b	Socket, for hand rail, Fig. Ga.....	2-A-2144
11c	as above, with cap, bolts and nuts (1-11b, 1-12a, 2-31a).....	
12	Cap, for socket, Fig. 11.....	2-B-6035
12a	Cap, for socket, Fig. 11b.....	2-B-9616
13	1" Pipe, 7'3" long, for hand rail, Fig. G or Ga.....	
14	1" Pipe, 6' long, for hand rail, Fig. G or Ga.....	
15	1" Std. Ell, for hand rail, Fig. G or Ga.....	
16	Ladder only, for Figs. A, Aa, Ab, Ac, B, Ba, Bb and Bc.....	150-B-8365
17	Top Ladder Stay, 21-3/4", with four bolts, Fig. 28....	6-B-7501
18	Middle Ladder Stay, 2'-11", with four bolts, Fig. 28.	17-B-7501
19	Bottom Ladder Stay, 3'-11-7/16", with four bolts, Fig. 28.....	17-B-7501
20	Ladder Foundation only.....	22-B-8848
21	Foundation Bolt, with washer and 1-1/2" hex. nut, for Figs. A, Aa, Ab, Ac, B, Ba, Bb and Bc.....	59-B-7913
21a	as above, with foundation plate (1-21, 1-22).....	
22	Foundation Plate, for bolt, Fig. 21.....	1-B-7065
23	Hex. Hd. Bolt, 7/8"x14-1/4", and nut, for fastening eye bolt, Fig. 24, to crosstree, Fig. E, Ea, Eb or Ec.	
23a	as above, with eye bolts and separator (1-23, 2-24, 1-25).....	

MAIN BRACKET POST FOR STYLE "S" ELECTRIC SIGNALS

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Fig.		Drawing Reference	List Price
24	Eye Bolt, with 1" hex. nut, for holding mechanism case of signal to crosstree.....	7-B-8034 173-B-10333	
25	Separator, for bolt, Fig. 23.....		
26	Hex. Hd. Bolt, $\frac{3}{4}$ "x11", and nut, for fastening crosstree, Fig. E, Ea, Eb or Ec, to pipe post, Fig. C or D.....		
27	Hex. Hd. Bolt, $\frac{3}{4}$ "x2", and nut for fastening crosstree, Fig. E, Ea, Eb or Ec, to crosstree support on pipe post, Fig. C or D.....		
28	Sq. Hd. Bolt, $\frac{1}{2}$ "x1- $\frac{1}{4}$ ", and hex. nut, for ladder stay, Fig. 17, 18 or 19, and for ladder foundation, Fig. J.....		
29	Hex. Hd. Bolt, $\frac{1}{2}$ "x2- $\frac{5}{8}$ ", and nut for fastening top of ladder, Fig. H, to crosstree, Fig. E, Ea, Eb or Ec.....		
30	Hex. Hd. Bolt, $\frac{1}{2}$ "x3", and nut, for platform, Fig. F, Fa, Fb or Fc, and for fastening channel Fig. 9c, 9d or 10c to crosstree.....		
31	Sq. Hd. Bolt, $\frac{1}{2}$ "x4- $\frac{1}{2}$ ", and hex. nut, for fastening socket, Fig. 11, and cap, Fig. 12, to pipe post of signal		
31a	Sq. Hd. Bolt, $\frac{3}{4}$ "x6", and hex. nut, for fastening socket, Fig. 11b, and cap, Fig. 12a, to pipe post of signal.....		
31b	Sq. Hd. Bolt, $\frac{1}{2}$ "x3- $\frac{1}{4}$ ", and hex. nut, for fastening channel, Fig. 10d, to platform, Fig. Fa.....		
32	Hex. Hd. Bolt, $\frac{1}{2}$ "x2- $\frac{1}{4}$ ", and nut, for platform, Fig. F, Fa, Fb or Fc.....		



SEMAPHORE BEARINGS AND FITTINGS FOR STYLE "S" ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS

**SEMAPHORE BEARINGS AND FITTINGS FOR STYLE "S"
ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
1	Semaphore Bearing, with press fit sockets, for one, two or three-arm 60 deg. lower quadrant or for 90 deg. upper quadrant, ground, bridge or bracket signal.....	17-C-6993	
1a	Semaphore Bearing, with press fit sockets, for one, two or three-arm 90 deg. lower quadrant ground, bridge or bracket signal.....	6-C-6993	
1b	Semaphore Bearing, with leaded sockets, for one, two or three-arm 60 deg. lower quadrant or for 90 deg. upper quadrant, ground, bridge or bracket signal	15-C-3512	
1c	Semaphore Bearing, with leaded sockets, for one, two or three-arm 90 deg. lower quadrant, ground, bridge or bracket signal.....	26-C-3512	
2	Semaphore Bearing, with press fit sockets, for bottom arm of a three-arm 60 deg. lower quadrant or for 90 deg. upper quadrant, ground, bridge or bracket signal	23-C-6993	
2a	Semaphore Bearing, with press fit sockets, for bottom arm of a three-arm 90 deg. lower quadrant, ground, bridge or bracket signal.....	15-C-6993	
2b	Semaphore Bearing, with leaded sockets, for bottom arm of a three-arm 90 deg. lower quadrant, ground, bridge or bracket signal.....	1-C-4452	
3	Combined Post and Bearing, with studs and cotters, for one-arm 60 deg. lower quadrant suspended route signal	1-C-6399	

**SEMAPHORE BEARINGS AND FITTINGS FOR STYLE "S"
ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS**

Order by Name, Plate and Figure

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Fig.		Drawing Reference	List Price
4	Combined Post and Bearing, with studs and cotters, for one-arm 90 deg. upper quadrant suspended route signal	8-C-6399	
4a	Combined Post and Bearing, with studs and cotters, for one-arm 45 deg. upper quadrant suspended route signal	7-C-6399	
4b	Combined Post and Bearing, with studs and cotters, for one-arm 90 deg. lower quadrant suspended route signal	1-C-6399	
5	Cover, for top of combined post and bearing, Fig. 3, 4, 4a or 4b.....	2-C-6399	
6	Hand Hole Plate, for semaphore bearing, Fig. 1, 1a, 1b or 1c, and for combined post and bearing, Fig. 3, 4, 4a or 4b.....	1-B-8074	
7	Hand Hole Plate, for semaphore bearing, Fig. 2, 2a or 2b.....	5-B-8074	
8	Clamp only, for hand hole plate, Fig. 6.....	3-B-8074	
8a	as above, with handle (1-8, 1-10).....		
9	Clamp only, for hand hole plate, Fig. 7.....	7-B-8074	
9a	as above, with handle (1-9, 1-10).....		
10	Handle only, for clamp, Fig. 8 or 9.....	22-B-8311	
11	Gasket, for hand hole plate, Fig. 8.....	262-B-8078	
12	Gasket, for hand hole plate, Fig. 9.....	9-B-8074	
13	Semaphore Shaft, with two cotters, 7/16"x2-1/2", for semaphore bearings, Figs. 1 and 1b, or for combined post and bearing, Fig. 3, for 60 deg. lower quadrant signal	75-B-8026	
14	Semaphore Shaft, with two cotters, 7/16"x2-1/2", for semaphore bearing, Fig. 2, for 60 deg. lower quadrant signal	186-8026	

**SEMAPHORE BEARINGS AND FITTINGS FOR STYLE "S"
ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS**

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Fig.		Drawing Reference	List Price
15	Semaphore Shaft, with two cotters, 3/16"x1-7/8", two 3/4" hex. nuts and two washers, for semaphore bearing, Fig. 1a, or for combined post and bearing, Fig. 4b, for 90 deg. lower quadrant signal..	14-B-8026	
16	Semaphore Shaft, with two cotters, 3/16"x1-7/8", two 3/4" hex. nuts and two washers, for semaphore bearings, Figs. 2a and 2b, for 90 deg. lower quadrant signal	45-B-8026	
17	Semaphore Shaft, with one cotter, 7/16"x2-1/2", and pin, for semaphore bearings, Figs. 1 and 1b, or for combined post and bearing, Fig. 4 or 4a, for 90 deg. upper quadrant signal.....	179-B-8026	
18	Semaphore Shaft, with one cotter, 7/16"x2-1/2", and pin, for semaphore bearing, Fig. 2, for 90 deg. upper quadrant signal.....	105-B-8026	
19	Front Journal, for semaphore shaft, Fig. 13, 14 or 17.	32-8093	
20	Front Journal, for semaphore shaft, Fig. 18.....	45-8093	
21	Rear Journal, for semaphore shaft, Fig. 13 or 14.....	22-8093	
22	Rear Journal, for semaphore shaft, Fig. 17 or 18.....	1-8093	
23	Bushing, for semaphore shaft, Fig. 15 or 16.....	6-B-8092	
24	Separator, for semaphore shaft, Fig. 16.....	8-B-8047	
25	Separator, for semaphore shaft, Fig. 14 or 18.....	20-B-8047	
26	Cap, for semaphore bearing, Fig. 1, 1b or 2, for 90 deg. upper quadrant signal.....	9-B-9649	
27	Right Hand Segment, for bottom arm of a two-arm or middle arm of a three-arm 60 or 90 deg. lower quadrant or 90 deg. upper quadrant signal	30-C-3903	
27a	Left Hand Segment, for one-arm or top arm of a two or three-arm 60 or 90 deg. lower quadrant or 90 deg. upper quadrant signal.....	29-C-3903	

**SEMAPHORE BEARINGS AND FITTINGS FOR STYLE "S"
ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS**

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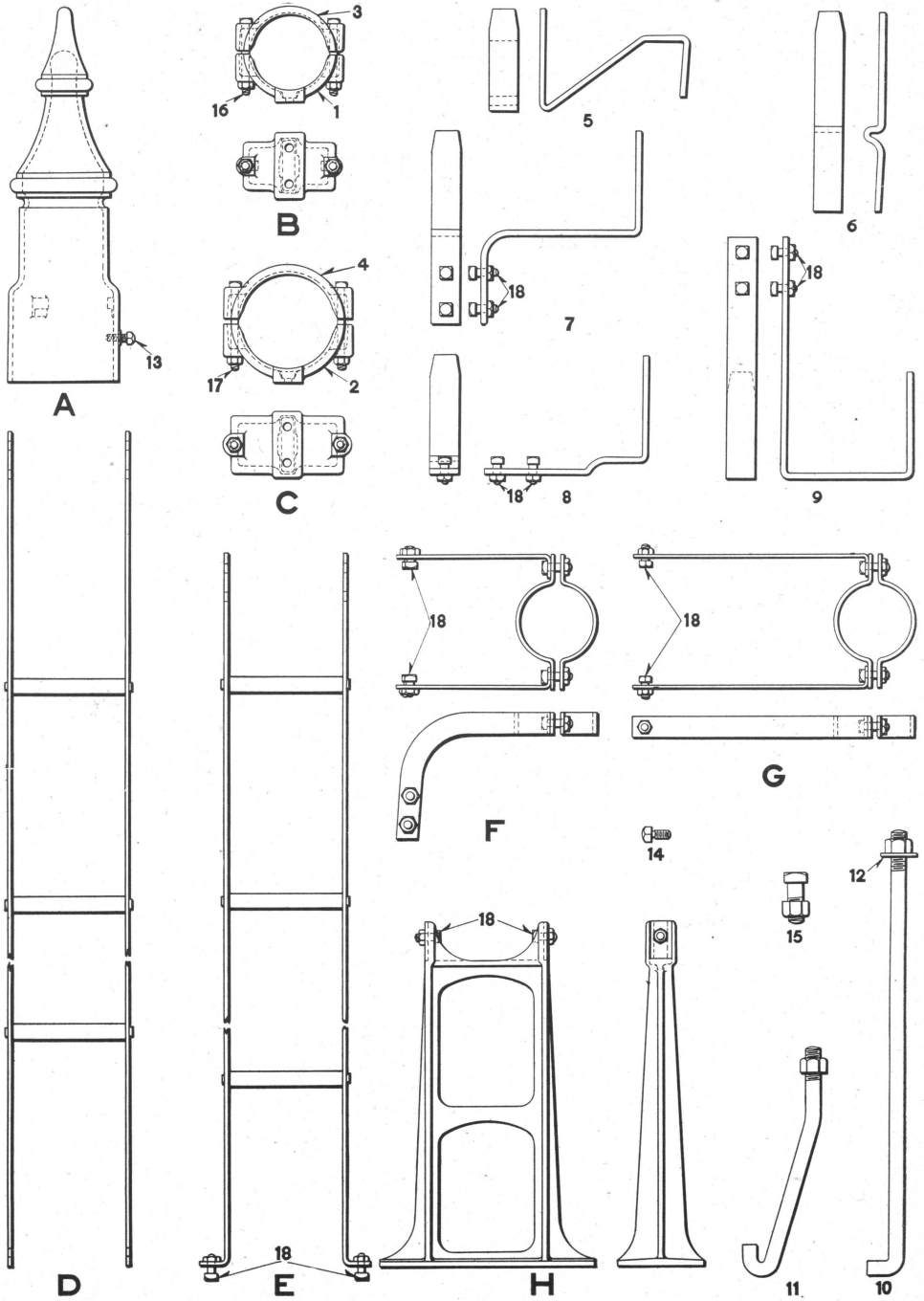
Fig.		Drawing Reference	List Price
28	Right Hand Segment, for bottom arm of a two-arm or middle arm of a three-arm 45 deg. signal....	10-C-3903	
28a	Left Hand Segment, for a one-arm or top arm of a two or three-arm 45 deg. signal.....	11-C-3903	
29	Right Hand Combined Operating Arm and Segment, for bottom arm of a two-arm or middle arm of a three-arm 60 or 90 deg. lower quadrant signal.	20-C-3903	
29a	Left Hand Combined Operating Arm and Segment, for a one-arm or top arm of a two or three-arm 60 or 90 deg. lower quadrant signal.....	21-C-3903	
30	Right Hand Combined Operating Arm and Segment, for bottom arm of a two-arm or middle arm of a three-arm 90 deg. upper quadrant signal.....	18-C-3903	
30a	Left Hand Combined Operating Arm and Segment, for a one-arm or top arm of a two or three-arm 90 deg. upper quadrant signal.....	19-C-3903	
31	Right Hand Combined Operating Arm and Segment, for bottom arm of a two-arm or middle arm of a three-arm 45 deg. signal.....	12-C-3903	
31a	Left Hand Combined Operating Arm and Segment, for a one-arm or top arm of a two or three-arm 45 deg. signal.....	13-C-3903	
32	Semaphore Crank, for one-arm 60 deg. lower quadrant suspended route signal.....	7-B-8103	
33	Operating Lever, for 60 deg. lower quadrant suspended route signal.....	43-B-8120	

**SEMAPHORE BEARINGS AND FITTINGS FOR STYLE "S"
ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS**

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Fig.	Description	Drawing Reference	List Price
34	Operating Lever, for 90 deg. lower quadrant or 90 deg. upper quadrant suspended route signal....	66-B-8120	
35	Pin, for supporting combined operating arm and segment in semaphore bearing, Fig. 1, 1a or 1b, and in combined post and bearing, Fig. 1c, 4, 4a or 4b.	1-B-10222	
36	Pin, for supporting combined operating arm and segment in semaphore bearing, Fig. 2, 2a or 2b....	3-B-10222	
37	Pin, with two cotters, $\frac{1}{4} \times 1 - \frac{1}{2}$ ", for supporting operating lever, Fig. 33 or 34, for suspended route signal	18-B-10233	
38	Separator, for pin, Fig. 35.....	128-B-10333	
39	Separator, for pin, Fig. 35.....	131-B-10333	
40	Separator, for pin, Fig. 36.....	129-B-10333	
41	Separator, for pin, Fig. 36.....	130-B-10333	
42	Hook Bolt, with $\frac{5}{8}$ " hex. nut, for fastening combined post and bearing, Fig. 3, 4, 4a or 4b to signal bridge	126-B-7913	
43	Cap Screw, with one $\frac{3}{4}$ " thin hex. nut, for stopping operating arm or crank in semaphore bearing...	20-B-8099	
44	Cap Screw, $\frac{1}{4} \times \frac{5}{8}$ ", for fastening bushing, Fig. 23, to semaphore bearing.....		
45	Cap Screw, $\frac{1}{4} \times \frac{3}{4}$ ", for fastening cap, Fig. 26, to semaphore bearing.....		
46	Pipe Plug, $\frac{1}{2}$ ", for holding pin, Fig. 35 or 36, in semaphore bearing or in combined post and bearing.		
47	Oil Cup, for semaphore bearings and for combined post and bearings.....		



PINNACLE, CLAMPS, LADDERS, LADDER STAYS AND DETAILS FOR STYLE "S" ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS

**PINNACLE, CLAMPS, LADDERS, LADDER STAYS AND
DETAILS FOR STYLE "S" ELECTRIC GROUND,
BRIDGE OR BRACKET SIGNALS.**

Order by Name, Plate and Figure.

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Fig.		Drawing Reference	List Price
A	Pinnacle, with one set screw, Fig. 13, as shown, for ground, bridge or bracket signals.....	14-B-8121	
B	Clamp, as shown, for holding lamp bracket, Fig. 7, (1-1, 1-3, 2-16).....	B-6035	
C	Clamp, as shown, for holding lamp bracket, Fig. 7a, (1-2, 1-4, 2-17).....	B-6517	
D	Ladder, for one-arm ground signal.....	1-B-10313	
Da	as above, with top clamp, stays, bolts and nuts (1-D, 1-F, 1-G, 1-Ga, 1-Gd).....	1a-B-10313	
Db	Ladder, for two-arm ground signal.....	2-B-10313	
Dc	as above, with top clamp, stays, bolts and nuts (1-Db, 1-F, 1-G, 1-Ga, 1-Gd, 1-Ge).....	2a-B-10313	
Dd	Ladder, for three-arm ground signal.....	13-B-10313	
De	as above, with top clamp, stays, bolts and nuts (1-Dd, 1-F, 1-G, 1-Gg, 1-Gh, 1-Gj, 1-Gk).....	14-B-10313	
E	Ladder, for one-arm bridge or bracket signal.....	171-B-8363	
Ea	as above, with top clamp, bolts and nuts (1-E, 1-Fa, 2-18).....	171-B-8363	
Eb	Ladder, for two-arm bridge or bracket signal.....	58-B-8363	
Ec	as above, with top clamp, stay, bolts and nuts (1-Eb, 1-Fa, 1-Gb, 2-18).....	58-B-8363	
Ed	Ladder, for three-arm bridge or bracket signal.....	225-B-8363	
Ee	as above, with top clamp, stays, bolts and nuts (1-Ed, 1-Fa, 1-Gc, 1-Gf, 2-18).....	225-B-8363	
F	Top Clamp, with bolt and nuts, as shown for ladder, Fig. D, Db or Dd.....	77-B-7501	

**PINNACLE, CLAMPS, LADDERS, LADDER STAYS AND
DETAILS FOR STYLE "S" ELECTRIC GROUND,
BRIDGE OR BRACKET SIGNALS.**

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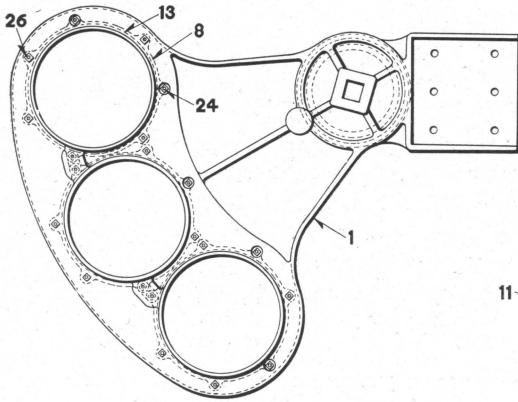
Fig.		Drawing Reference	List Price
Fa	Top Clamp, with bolts and nuts, for ladder, Fig E, Eb or Ed.....	13-B-7501	
G	Top Ladder Stay, with bolts and nuts, as shown, for ladder, Fig. D, Db or Dd.....	78-B-7501	
Ga	Middle Ladder Stay, with bolts and nuts, for ladder, Fig. D, and second ladder stay, for ladder, Fig. Db	79-B-7501	
Gb	Middle Ladder Stay, (15½"), with bolts and nuts, for ladder, Fig. Eb.....	11-B-7501	
Gc	Middle Ladder Stay, (14-5/16"), with bolts and nuts, for ladder, Fig. 1d.....	11-B-7501	
Gd	Bottom Ladder Stay, with bolts and nuts, for ladder, Fig. D, and third ladder stay, for ladder, Fig. Db	80-B-7501	
Ge	Bottom Ladder Stay, with bolts and nuts, for ladder, Fig. Db.....	81-B-7501	
Gf	Bottom Ladder Stay, (16-5/16"), with bolts and nuts, for ladder, Fig. Ed.....	4-B-7501	
Gg	Second Ladder Stay, with bolts and nuts, for ladder, Fig. Dd.....	86-B-7501	
Gh	Third Ladder Stay, with bolts and nuts, for ladder, Fig. Dd.....	76-B-7501	
Gj	Fourth Ladder Stay, with bolts and nuts, for ladder, Fig. Dd.....	82-B-7501	
Gk	Bottom Ladder Stay, with bolts and nuts, for ladder, Fig. Dd.....	83-B-7501	
H	Ladder Foundation, with bolts, Fig. 18, as shown, for ladder, Fig. D, Db or Dd.....	22-B-8848	
1	Front Half of Clamp only, for Fig. B.....	1-B-6035	
2	Front Half of Clamp only, for Fig. C.....	1-B-6517	
3	Back Half of Clamp only, for Fig. B.....	2-B-6035	
4	Back Half of Clamp only, for Fig. C.....	2-B-6517	

**PINNACLE, CLAMPS, LADDERS, LADDER STAYS AND
DETAILS FOR STYLE "S" ELECTRIC GROUND,
BRIDGE OR BRACKET SIGNALS.**

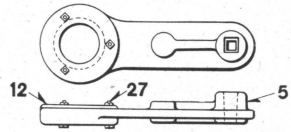
Order by Name, Plate and Figure.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

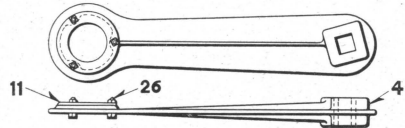
Fig.		Drawing Reference	List Price
5	Lamp Bracket, for one and two-arm and for top and middle arms of a three-arm 60 deg. lower quadrant signal	268-B-8069	
5a	Lamp Bracket, for lower arm of a three-arm 60 deg. lower quadrant signal.....	273-B-8069	
6	Lamp Bracket, for 90 deg. lower quadrant signal....	71-B-8069	
7	Lamp Bracket, with two bolts and nuts, Fig. 18, for one and two-arm and for top and middle arms of a three-arm 90 deg. upper quadrant signal...	214-B-8069	
7a	Lamp Bracket, with two bolts and nuts, Fig. 18, for lower arm of a three-arm 90 deg. upper quadrant signal	84-B-8069	
8	Lamp Bracket, with two bolts and nuts, Fig. 18, for one-arm 60 deg. lower quadrant suspended route signal	340-B-8069	
9	Lamp Bracket, with two bolts and nuts, Fig. 18, for one-arm 90 deg. upper quadrant suspended route signal	296-B-8069	
10	Hook Bolt, with washer, Fig. 12, and 1" hex. nut, for ground signal foundation.....	53-B-7913	
11	Hook Bolt, with 1" hex. nut, for fastening bridge signal to bridge.....	56-B-7913	
11a	Hook Bolt, with 1" hex. nut, for fastening channel signal bridge	55-B-7913	
12	Washer, for hook bolt, Fig. 10.....	11-B-7824	
13	Set Screw, 1/2"x1-1/4", for pinnacle, Fig. A.....		
14	Set Screw, 1/2"x1", for fastening lamp bracket, Fig. 5, 5a, or 6, in semaphore bearing.....		
15	Sq. Bolt, 1"x2-3/4", and hex. nut, for fastening bridge signal to bridge.....		
16	Sq. Bolt, 1/2"x4-1/2", and hex. nut, for clamp, Fig. B.		
17	Sq. Hd. Bolt, 5/8"x6", and hex. nut, for clamp, Fig. C.		
18	Sq. Hd. Bolt, 1/2"x1-1/4", and hex. nut, for top clamp, Fig. F or Fa, for ladder stays or ladder foundation.		



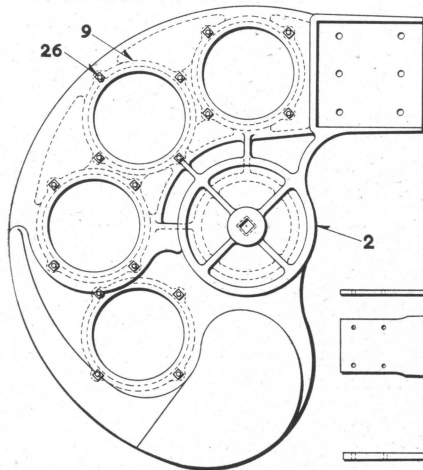
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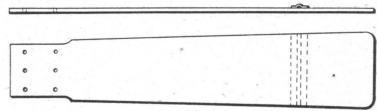
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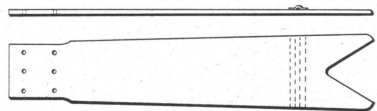
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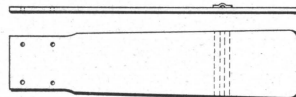
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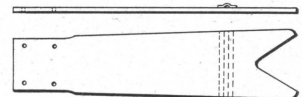
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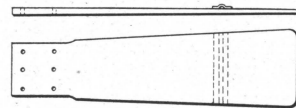
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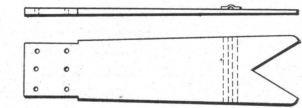
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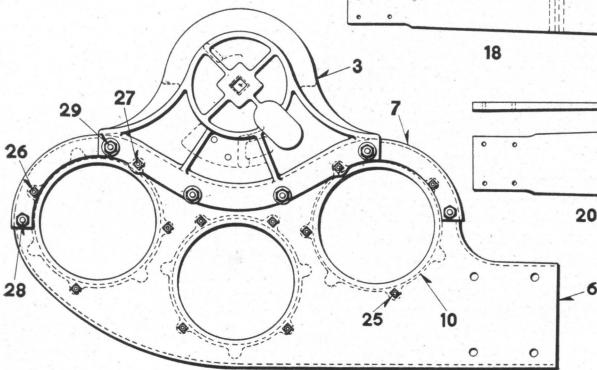
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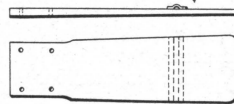
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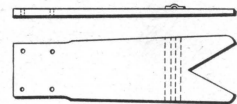
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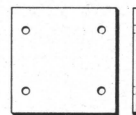
C



20



21



22



23



30

FRONT AND BACK SPECTACLES AND SIGNAL BLADES FOR
STYLE "S" ELECTRIC GROUND, BRIDGE
OR BRACKET SIGNALS.

**FRONT AND BACK SPECTACLES AND SIGNAL BLADES
FOR STYLE "S" ELECTRIC GROUND, BRIDGE
OR BRACKET SIGNALS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Three-Light 60 deg. lower quadrant Front Spectacle (8- $\frac{3}{8}$ " glass), with roundel rings, bolts and nuts, as shown (1-1, 3-8, 3-13, 9-24, 12-26).....	30-C-7230	
B	Four-Light 90 deg. lower quadrant Front Spectacle (6- $\frac{1}{2}$ " glass), with roundel rings, bolts and nuts, as shown (1-2, 4-9, 16-26).....	38-C-7231	
C	Three-Light 90 deg. upper quadrant Front Spectacle (8- $\frac{3}{8}$ " glass), with rounded support brace, roundel rings, bolts and nuts, as shown (1-3, 1-6, 1-7, 3-10, 8-25, 2-26, 2-27, 2-28, 4-29).....	122-C-7298	
D	Back Spectacle (3" glass), with roundel ring, bolts and nuts, as shown, used with front spectacle, Fig. A (1-4, 1-11, 3-26).....	50-B-7601	
E	Back Spectacle (3" glass), with roundel ring, bolts and nuts, as shown, used with front spectacle, Fig. B (1-5, 1-12, 3-27).....	6-B-7601	
1	Three-Light 60 deg. Front Spectacle only, for Fig. A.	29-C-7230	
2	Four-Light 90 deg. Front Spectacle only for Fig. B.	37-C-7231	
3	Three-Light 90 deg. Front Spectacle only, for Fig. C.	121-C-7298	
4	Back Spectacle only, for Fig. D.....	49-B-7601	
5	Back Spectacle only, for Fig. E.....	5-B-7601	
6	Roundel Support, for Fig. C.....	41-C-7296	
7	Brace, for roundel support, Fig. 6.....	68-C-7296	
8	Roundel Ring, for Fig. A.....	94-B-7632	
8a	as above, with sheet steel ring, bolts and nuts (1-8, 1-13, 3-24, 4-26).....		

**FRONT AND BACK SPECTACLES AND SIGNAL BLADES
FOR STYLE "S" ELECTRIC GROUND, BRIDGE
OR BRACKET SIGNALS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

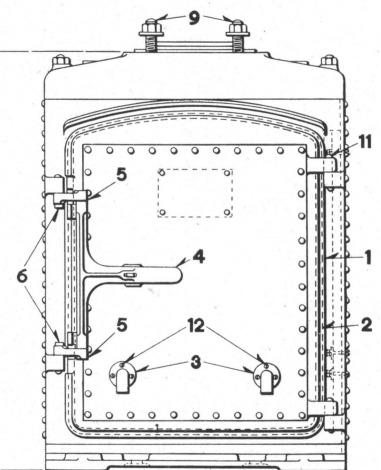
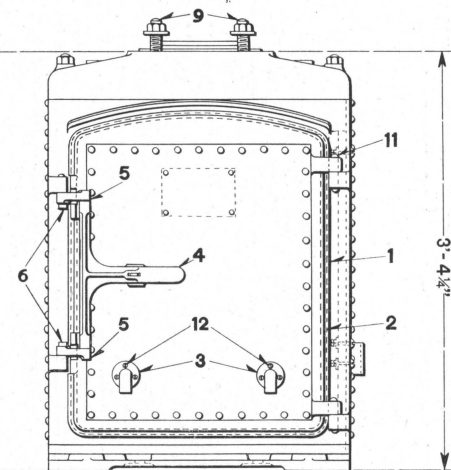
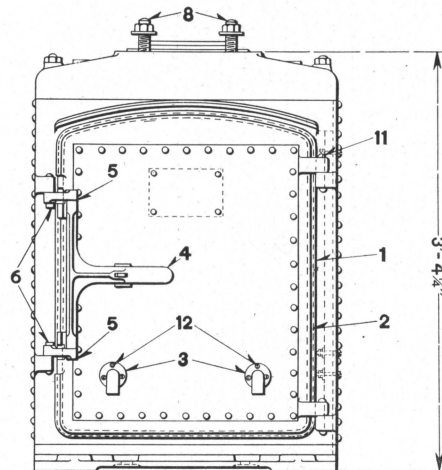
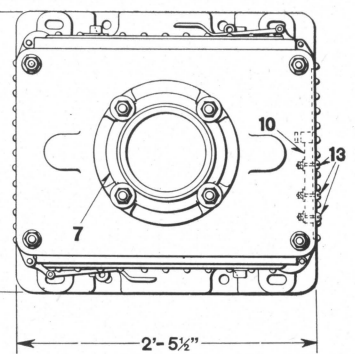
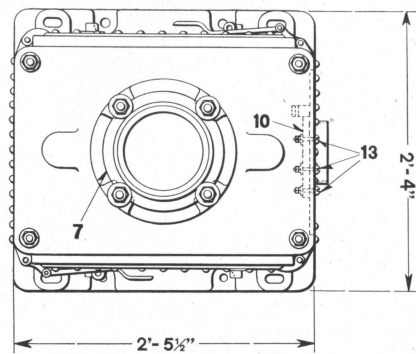
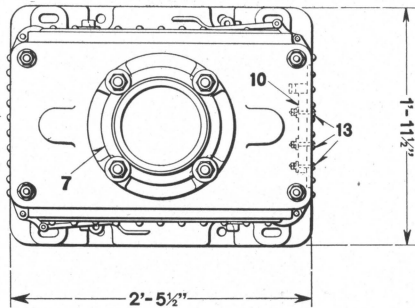
Fig.		Drawing Reference	List Price
9	Roundel Ring, for Fig. B.....	46-B-7632	
9a	as above, with bolts and nuts (I-9, 4-26)....		
10	Roundel Ring, for Fig. C.....	94-I-B-7632	
10a	as above, with bolts and nuts (I-10, 4-25)..		
11	Roundel Ring, for Fig. D.....	4-B-7436	
11a	as above, with bolts and nuts (I-11, 3-26)..		
12	Roundel Ring, for Fig. E.....	66-B-7632	
12a	as above, with bolts and nuts (I-12, 3-27)..		
13	Sheet Steel Ring, for Fig. A.....	42-B-7436	
14	Home Signal Blade, for 60 or 90 deg. lower quadrant signal	25a-5672	
14a	as above, with bolts and nuts (I-14, 6-23)..		
15	Distant Signal Blade, for 60 or 90 deg. lower quadrant signal	145a-5672	
15a	as above, with bolts and nuts (I-15, 6-23)..		
16	Home Signal Blade, for 90 deg. upper quadrant signal	125a 5672	
16a	as above, with grip plate, bolts and nuts (I-16, I-22, 4-30).....		
17	Distant Signal Blade, for 90 deg. upper quadrant signal	129a-5672	
17a	as above, with grip plate, bolts and nuts (I-17, I-22, 4-30).....		
18	Home Signal Blade, for 60 or 90 deg. lower quadrant route or suspended route signal.....	5a-5672	
18a	as above, with bolts and nuts (I-18, 6-23)..		
19	Distant Signal Blade, for 60 or 90 deg. lower quadrant route or suspended route signal.....	51a-5672	
19a	as above, with bolts and nuts (I-19, 6-23)..		
20	Home Signal Blade, for 90 deg. upper quadrant route or suspended route signal.....	114a-5672	
20a	as above, with grip plate, bolts and nuts (I-20, I-22, 4-30).....		

**FRONT AND BACK SPECTACLES AND SIGNAL BLADES
FOR STYLE "S" ELECTRIC GROUND, BRIDGE
OR BRACKET SIGNALS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Description	Drawing Reference	List Price
21	Distant Signal Blade, for 90 deg. upper quadrant route or suspended route signal.....	5672	
21a	as above, with grip plate, bolts and nuts (1-21, 1-22, 4-30).....		
22	Grip Plate, for blade, Fig. 16, 17, 20 or 21.....	7-B-8466	
23	Carriage Bolt, with $\frac{3}{8}$ " sq. nut, for fastening blade, Fig. 14, 15, 18 or 19, to front spectacle, Fig. A or B.....	1-B-8469	
24	Sq. Hd. Mach. Bolt, $\frac{1}{4}$ "x $\frac{5}{8}$ ", and nut, for fastening sheet steel ring, Fig. 13, to roundel ring, Fig. 8.		
25	Sq. Hd. Mach. Bolt, $\frac{1}{4}$ "x $\frac{3}{4}$ ", and nut, for fastening roundel ring, Fig. 10, to roundel support, Fig. 6.		
26	Sq. Hd. Mach. Bolt, $\frac{1}{4}$ "x1", and nut, for front spectacle, Fig 1, 2 or 3, and for back spectacle, Fig. 4.....		
27	Sq. Hd. Mach. Bolt, $\frac{1}{4}$ "x1- $\frac{1}{4}$ ", and nut, for fastening roundel ring, Fig. 10, and roundel support, Fig. 6, to front Spectacle, Fig. 3, also for fastening roundel ring, Fig. 12, to back spectacle, Fig. 5.....		
28	Sq. Hd. Mach. Bolt, $\frac{3}{8}$ "x $\frac{3}{4}$ ", and hex. nut, for fastening brace, Fig. 7, to roundel support, Fig. 6..		
29	Sq. Hd. Mach. Bolt, $\frac{3}{8}$ "x1", and hex. nut, for fastening brace, Fig. 7, and roundel support, Fig. 6, to front spectacle, Fig. 3.....		
30	Sq. Hd. Mach. Bolt, $\frac{1}{2}$ "x1- $\frac{3}{4}$ ", and nut, for fastening blade, Fig. 16, 17, 20 or 21, to front spectacle, Fig. C.....		



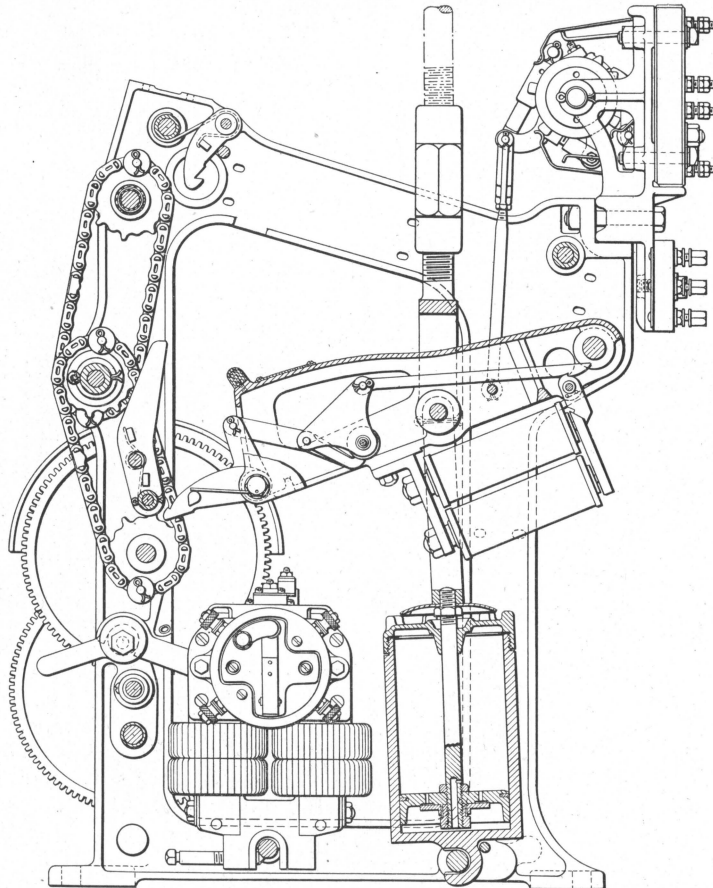
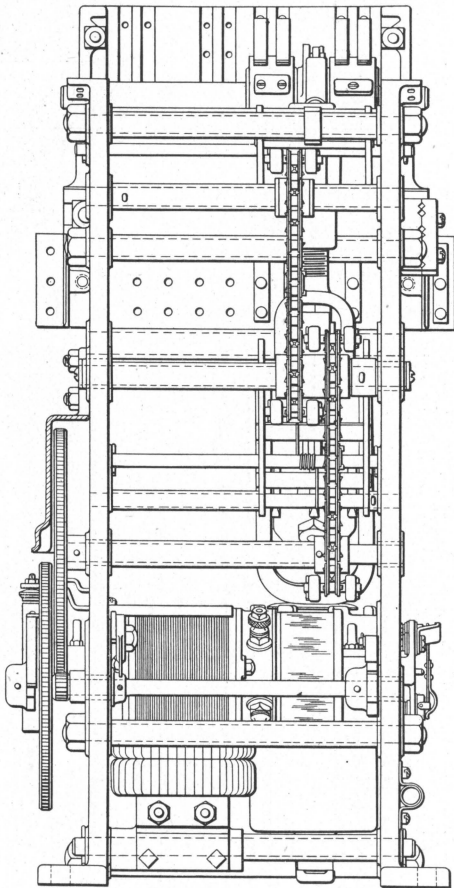
A **B** **C**
**MECHANISM CASES FOR ONE, TWO AND THREE ARM STYLE "S" ELECTRIC
 GROUND, BRIDGE OR BRACKET SIGNALS**

**MECHANISM CASES FOR ONE, TWO AND THREE ARM
STYLE "S" ELECTRIC GROUND, BRIDGE
OR BRACKET SIGNALS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Mechanism Case, as shown, for one or two-arm ground, bridge or bracket signal.....	C-7439	
B	Mechanism Case, as shown, for two-arm and suspended route bridge or bracket signal.....	C-7439	
C	Mechanism Case, as shown, for three-arm ground, bridge or bracket signal.....	30-C-7439	
1	Door, with staple, sheet steel plate and rivets, for Fig. A, B or C.....	1-B-9733	
1a	as above, with ventilators and rivets (1-I, 2-3, 2-II)		
2	Tubing, with wire and cotters used between door and case on front and rear side.....	13-B-9835	
3	Ventilator, as shown, for Fig. 1 (1-3a, 1-3b, 1-3c, 3-12)	14-B-7318	
3a	Ventilator Hood, for Fig. 3.....	11-B-7318	
3b	Screen, for Fig. 3.....	13-B-7318	
3c	Holder, for Fig. 3.....	40-7828	
4	Hasp, for Fig. A, B or C.....	4-B-8299	
5	Link, for holding hasp, Fig. 4, to mechanism case, Fig. A, B or C.....	15-C-2989	
6	Pin, for fastening link, Fig. 5, to mechanism case, Fig. A, B or C.....	46-B-8058	
7	Gasket, for top of mechanism case, Fig. A, B or C...	468-8078	
8	Stud, with two $\frac{7}{8}$ " hex. nuts and one washer, Fig. 8a, for mechanism case, Fig. A.....	3-B-8301	
8a	Washer, for stud, Fig. 8 or 9.....	10-B-7824	
9	Stud, with two $\frac{7}{8}$ " hex. nuts and one washer, Fig. 8a, for mechanism case, Fig. B or C.....	5-B-8301	
10	Board, on inside of mechanism case, Fig. A, B or C, for lightning arresters.....	2-B-6541	
10a	as above, with screws and nuts (1-10, 3-13).		
11	Rd. Hd. Rivet, for fastening door, Fig. 1, to mechanism case, Fig. A, B or C.....	8-B-10207	
12	Rd. Hd. Mach. Screw, No. 10-32x $\frac{3}{8}$ ", for fastening ventilator, Fig. 3, to door, Fig. 1.....		
13	Rd. Hd. Mach. Screw, $\frac{1}{4}$ "x1- $\frac{1}{2}$ ", with two hex. nuts and one washer, Fig. 13a, for fastening board, Fig. 10, in mechanism case, Fig. A, B or C.....		
13a	Washer, for screw, Fig. 13.....		



A

MECHANISM FOR ONE ARM STYLE "S" ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS. A. C. INDICATION

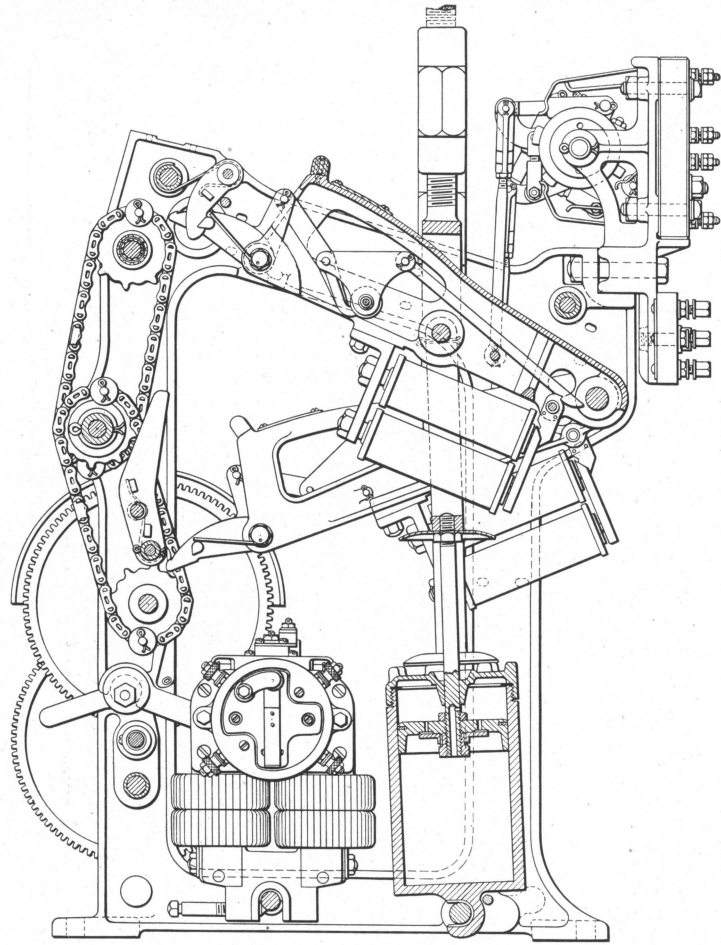
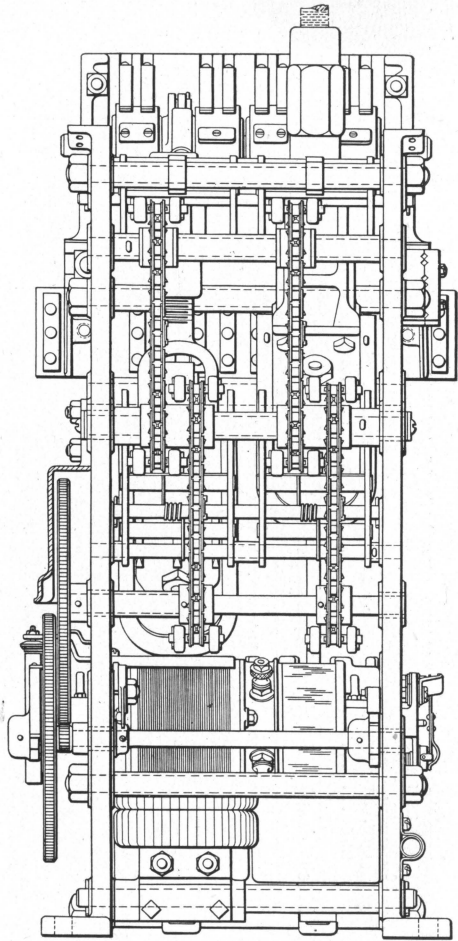
**MECHANISM FOR ONE ARM STYLE "S" ELECTRIC
GROUND, BRIDGE OR BRACKET SIGNALS
A. C. INDICATION**

All orders for mechanisms should specify to what resistance slot-arm magnets are to be wound, also whether or not the slow releasing feature is desired. For details of mechanism see Plates 01179, 01181, 01183 and 01185, for motor and details, Plate 01187; for circuit controller, Plate 01191.

Order by Name, Plate, Figure and Instructions given above.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Mechanism, with circuit controller, as shown, for one-arm 90 deg. three-position ground, bridge or bracket signal	17-C-7446	
Aa	as above, without circuit controller.....	16-C-7446	
Ab	Mechanism, with circuit controller, for one-arm 90 deg. two-position ground, bridge or bracket signal	C-7446-5	
Ac	as above, without circuit controller.....	C-7446-5	
Ad	Mechanism, with circuit controller, for one-arm 60 deg. two-position ground, bridge or bracket signal	C-7446-5	
Ae	as above, without circuit controller.....	C-7446-5	



A

MECHANISM FOR TWO ARM STYLE "S" ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS. A. C. INDICATION

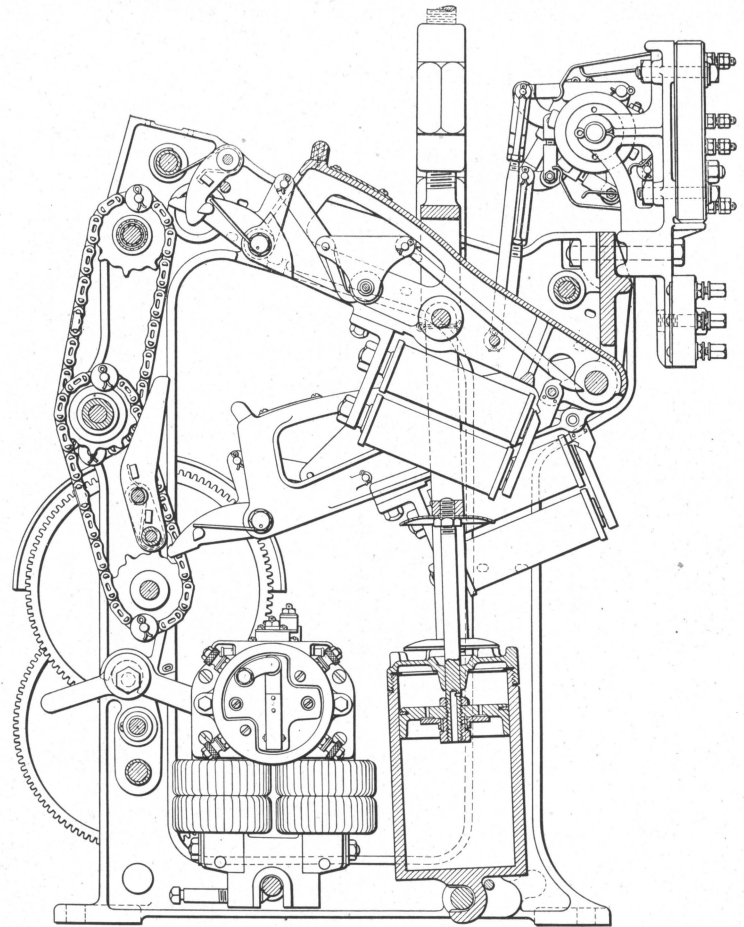
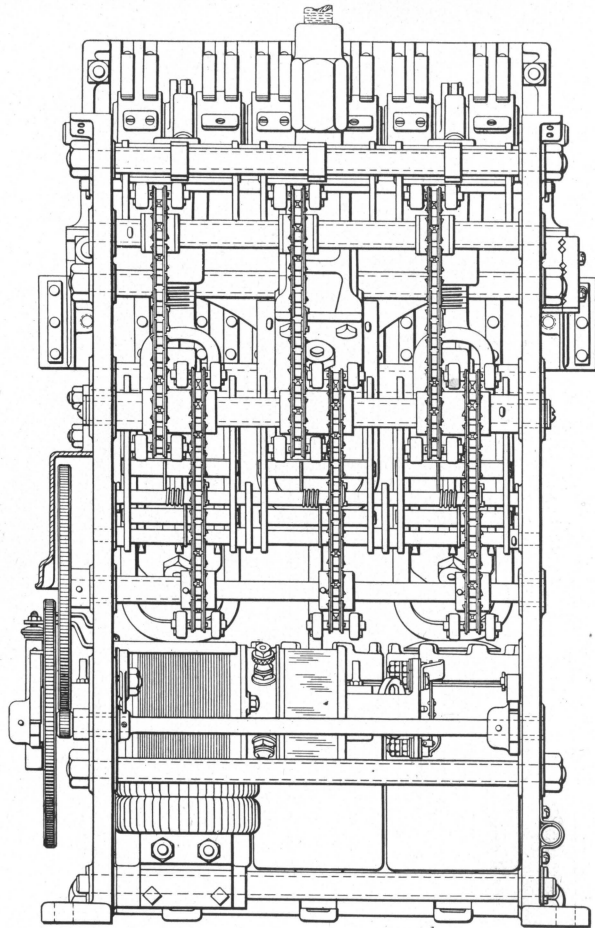
**MECHANISM FOR TWO ARM STYLE "S" ELECTRIC
GROUND, BRIDGE OR BRACKET SIGNALS
A. C. INDICATION**

All orders for mechanisms should specify to what resistance slot-arm magnets are to be wound, also whether or not the slow releasing feature is desired. For details of mechanism see Plates 01179, 01181, 01183 and 01185, for motor and details, Plate 01187; for circuit controller, Plate 01191.

Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices

	Drawing Reference	List Price	
Fig.			
A	Mechanism, with circuit controller, as shown, for two-arm 90 deg. three-position ground, bridge or bracket signal.....	18-C-7446	
Aa	as above, without circuit controller.....	19-C-7446	
Ab	Mechanism, with circuit controller, for two-arm 90 deg. two position ground, bridge or bracket signal	C-7446-5	
Ac	as above, without circuit controller.....	C-7446-5	
Ad	Mechanism, with circuit controller, for two-arm 90 deg. ground, bridge or bracket signal, top arm three-position and bottom arm two-position....	C-7446-5	
Ae	as above, without circuit controller.....	C-7446-5	
Af	Mechanism, with circuit controller, for two-arm 60 deg. two-position ground, bridge or bracket signal	C-7446-5	
Ag	as above, without circuit controller.....	C-7446-5	



A

MECHANISM FOR THREE ARM STYLE "S" ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS. A. C. INDICATION

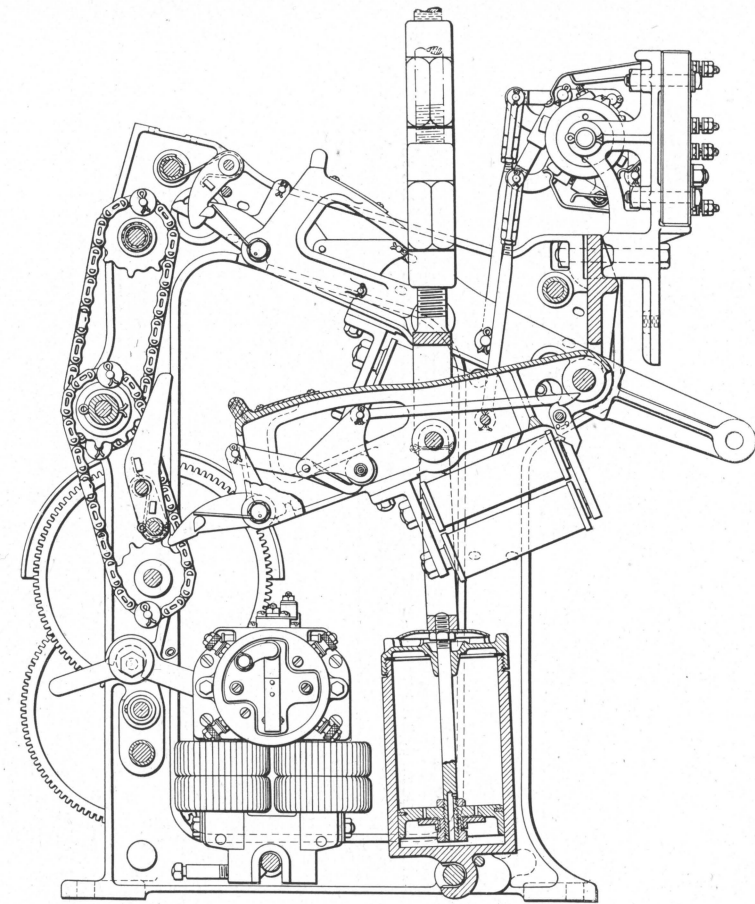
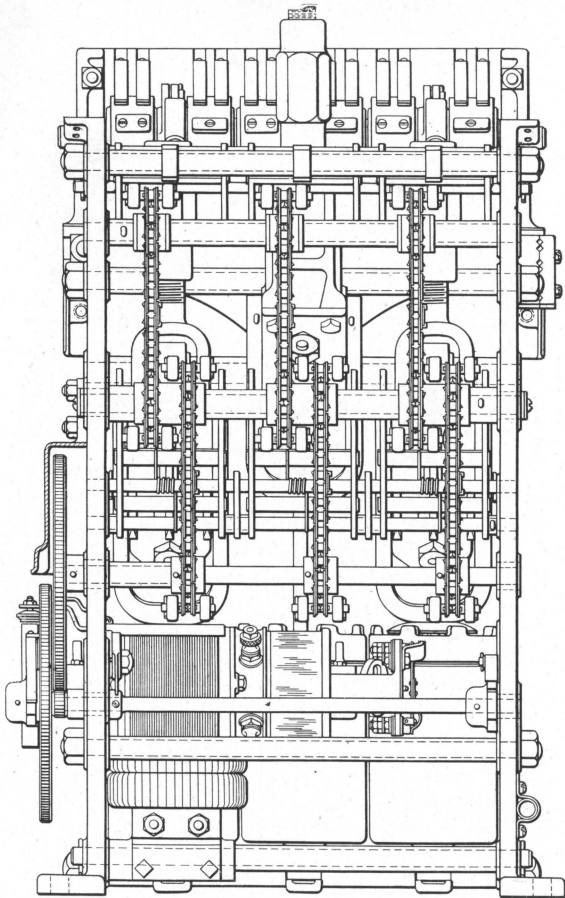
MECHANISM FOR THREE ARM STYLE "S" ELECTRIC GROUND, BRIDGE OR BRACKET SIGNALS A. C. INDICATION

All orders for mechanisms should specify to what resistance slot-arm magnets are to be wound, also whether or not the slow releasing feature is desired. For details of mechanism see Plates 01179, 01181, 01183 and 01185, for motor and details, Plate 01187; for circuit controller, Plate 01191.

Order by Name, Plate, Figure and Instructions given above.

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Mechanism, with circuit controller, as shown, for three-arm 90 deg. three-position ground, bridge or bracket signal.....	15-C-7446	
Aa	as above, without circuit controller.....	14-C-7446	
Ab	Mechanism, with circuit controller, for three-arm 90 deg. ground, bridge or bracket signal, top and middle arms three-position, lower arm two-position	13-C-7446	
Ac	as above, without circuit controller.....	C-7446-5	
Ad	Mechanism, with circuit controller, for three-arm 90 deg. two-position ground, bridge or bracket signal	C-7446-5	
Ae	as above, without circuit controller.....	C-7446-5	
Af	Mechanism, with circuit controller, for three-arm ground, bridge or bracket signal, top and bottom arms three-position, middle arm two-position..	C-7446-5	
Ag	as above, without circuit controller.....	C-7446-5	
Ah	Mechanism, with circuit controller, for three-arm 60 deg. two-position ground, bridge or bracket signal	C-7446-5	
Aj	as above, without circuit controller.....	C-7446-5	



A

MECHANISM FOR TWO ARM AND SUSPENDED ROUTE STYLE "S" ELECTRIC BRIDGE OR BRACKET SIGNALS. A. C. INDICATION

**MECHANISM FOR TWO ARM AND SUSPENDED ROUTE
STYLE "S" ELECTRIC BRIDGE OR BRACKET SIGNALS
A. C. INDICATION**

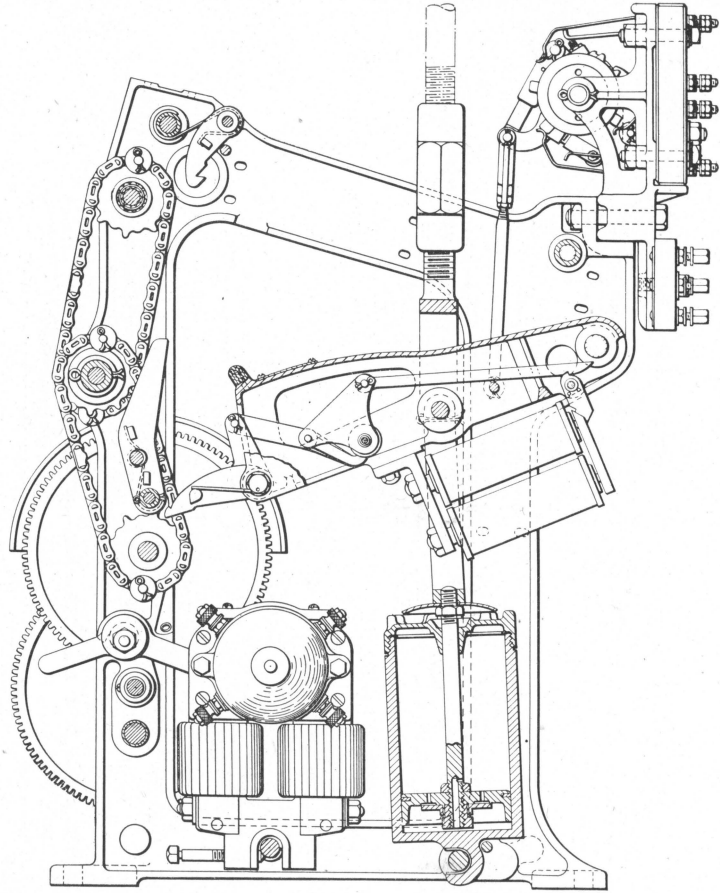
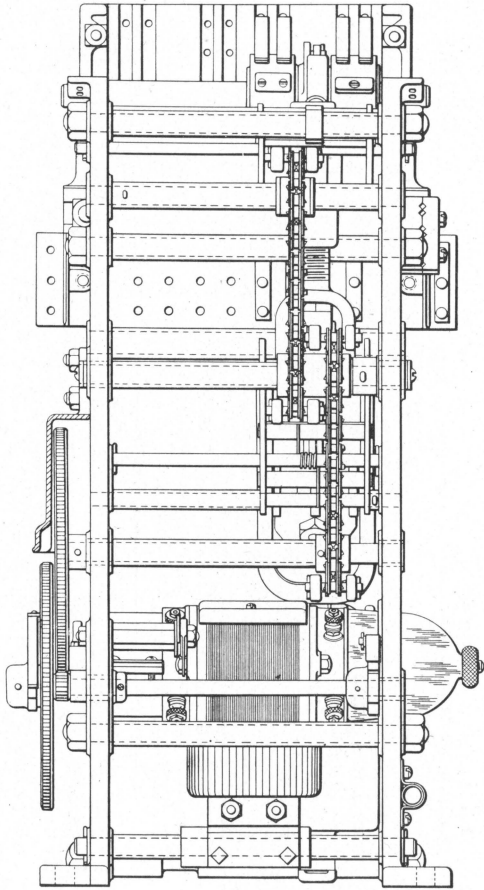
All orders for mechanisms should specify to what resistance slot arm magnets are to be wound, also whether or not the slow releasing feature is desired.

For details of mechanism see Plates 01179, 01181, 01183 and 01185, for motor and details, Plate 01187; for circuit controller, Plate 01191.

Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Mechanism, with circuit controller, for two-arm and suspended route 90 deg. three-position bridge or bracket signal	C-7446-5	
Aa	as above, without circuit controller.....	C-7446-5	
Ab	Mechanism, with circuit controller, for two-arm and suspended route 90 deg. bridge or bracket signal, top arm three-position, middle and suspended route two-position.....	C-7446-5	
Ac	as above, without circuit controller.....	C-7446-5	
Ad	Mechanism, with circuit controller, for two-arm and suspended route 60 deg. two-position bridge or bracket signal	C-7446-5	
Ae	as above, without circuit controller.....	C-7446-5	
Af	Mechanism, with circuit controller, for one-arm and suspended route 90 deg. three-position bridge or bracket signal	C-7446-5	
Ag	as above, without circuit controller.....	C-7446-5	
Ah	Mechanism, with circuit controller, for two-arm and suspended route 90 deg. bridge or bracket signal, top and suspended route arms two position and middle arm three-position.....	C-7446-5	
Aj	as above, without circuit controller.....	C-7446-5	
Ak	Mechanism, with circuit controller, for one-arm and suspended route 60 deg. two-position bridge or bracket signal	C-7446-5	
Am	as above, without circuit controller.....	C-7446-5	



A
**MECHANISM FOR ONE ARM STYLE "S" ELECTRIC GROUND
BRIDGE OR BRACKET SIGNALS. D. C. INDICATION**

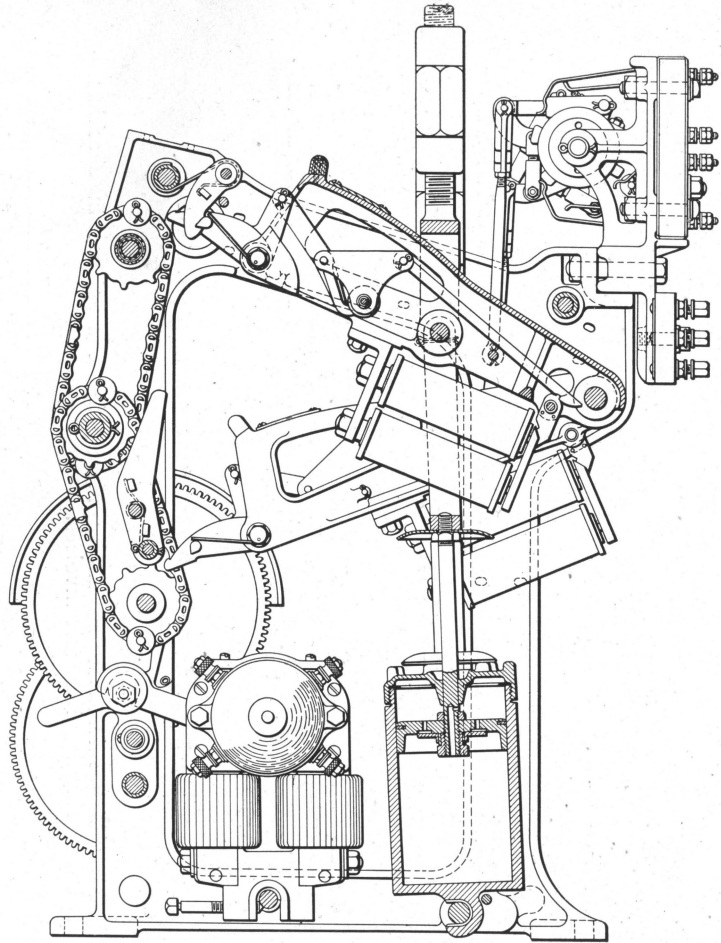
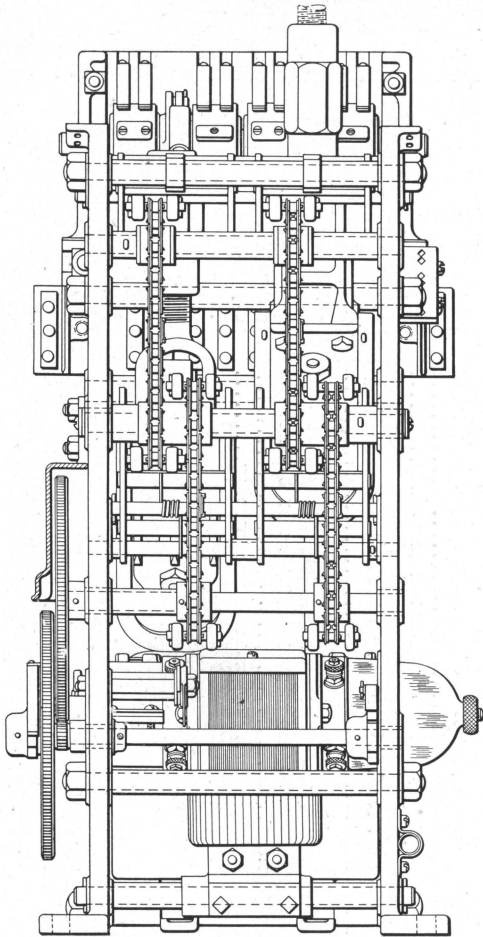
**MECHANISM FOR ONE ARM STYLE "S" ELECTRIC GROUND,
BRIDGE OR BRACKET SIGNALS
D. C. INDICATION**

All orders for mechanisms should specify to what resistance slot-arm magnets are to be wound, also whether or not the slow releasing feature is desired. For details of mechanism see Plates 01179, 01181, 01183 and 01185, for motor and details, Plate 01189; for circuit controller, Plate 01191.

Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Drawing Reference	List Price	
A	Mechanism, with circuit controller, as shown, for one-arm 90 deg. three-position ground, bridge or bracket signal	25g-C-7446	
Aa	as above, without circuit controller.....	22-C-7446	
Ab	Mechanism, with circuit controller, for one-arm 90 deg. two-position ground, bridge or bracket signal	25a-C-7446	
Ac	as above, without circuit controller.....	C-7446-6	
Ad	Mechanism, with circuit controller, for one-arm 60 deg. two-position ground, bridge or bracket signal	25c-C-7446	
Ae	as above, without circuit controller.....	C-7446-6	



A

MECHANISM FOR TWO ARM STYLE "S" ELECTRIC GROUND
BRIDGE OR BRACKET SIGNALS. D. C. INDICATION

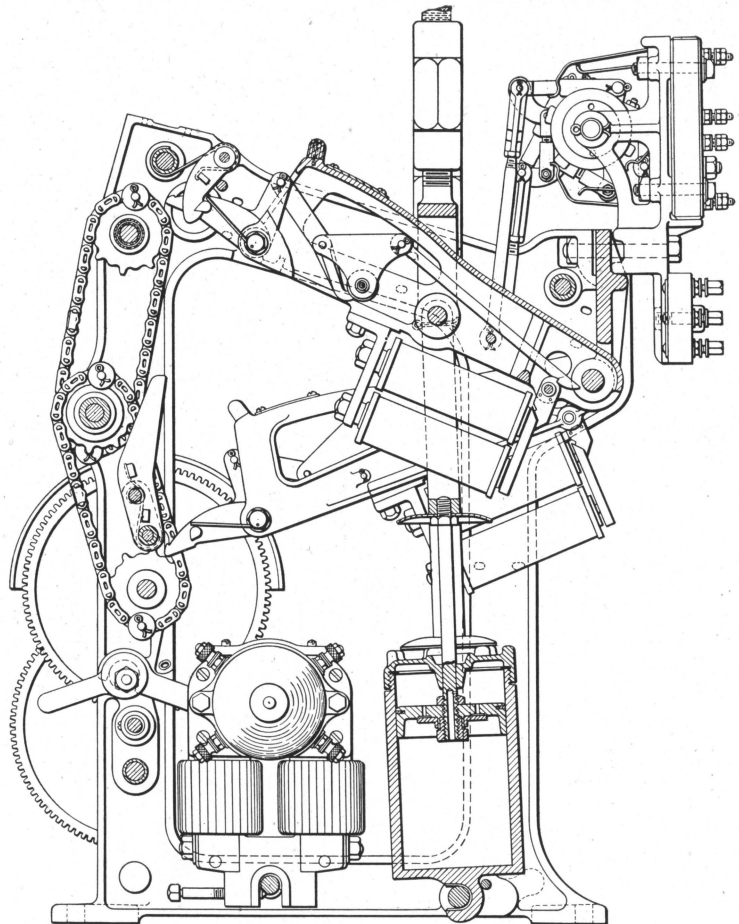
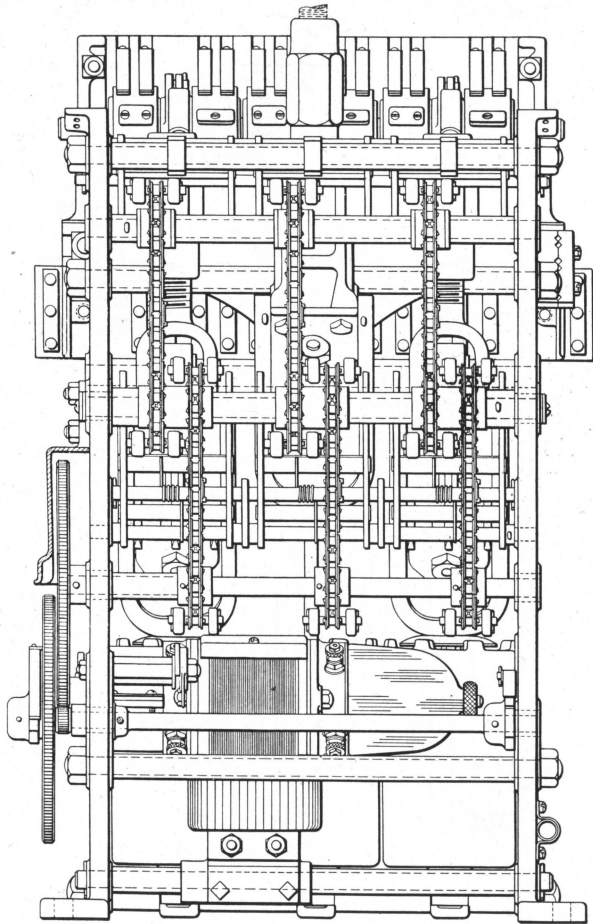
**MECHANISM FOR TWO ARM STYLE "S" ELECTRIC
GROUND, BRIDGE OR BRACKET SIGNALS
D. C. INDICATION**

All orders for mechanisms should specify to what resistance slot-arm magnets are to be wound, also whether or not the slow releasing feature is desired. For details of mechanism see Plates 01179, 01181, 01183 and 01185, for motor and details, Plate 01189; for circuit controller, Plate 01191.

Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price
Fig.		
A	Mechanism, with circuit controller, as shown, for two-arm 90 deg. three-position ground, bridge or bracket signal	C-7446-6
Aa	as above, without circuit controller.....	21-C-7446-6
Ab	Mechanism, with circuit controller, for two-arm 90 deg. two-position ground, bridge or bracket signal	24-C-7446-6
Ac	as above, without circuit controller.....	C-7446-6
Ad	Mechanism, with circuit controller, for two-arm 90 deg. ground, bridge or bracket signal, top arm three-position and bottom arm two-position....	C-7446-6
Ae	as above, without circuit controller.....	C-7446-6
Af	Mechanism, with circuit controller, for two-arm 60 deg. two-position ground, bridge or bracket signal	25e-C-7446
Ag	as above, without circuit controller.....	C-7446



A
**MECHANISM FOR THREE ARM STYLE "S" ELECTRIC GROUND,
BRIDGE OR BRACKET SIGNALS. D. C. INDICATION**

**MECHANISM FOR THREE ARM STYLE "S" ELECTRIC
GROUND, BRIDGE OR BRACKET SIGNALS
D. C. INDICATION**

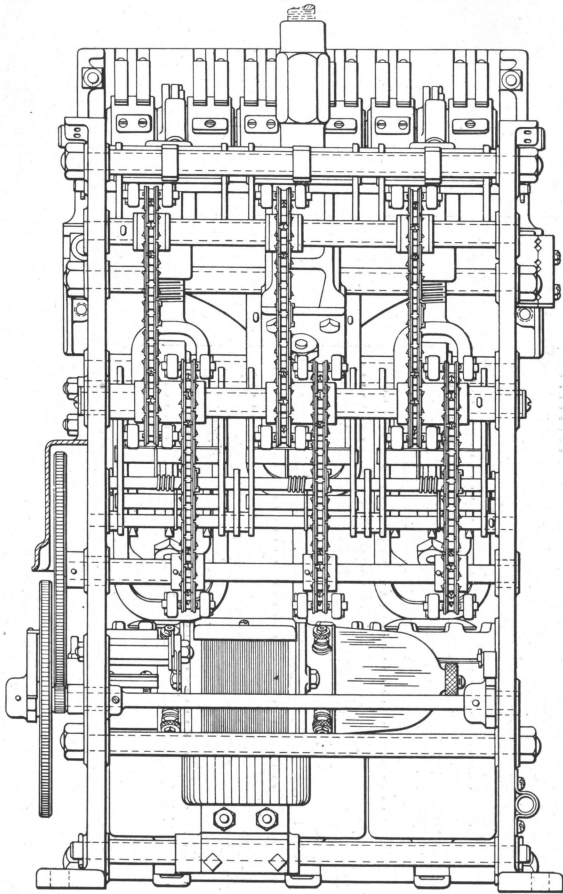
All orders for mechanisms should specify to what resistance slot-arm magnets are to be wound, also whether or not the slow releasing feature is desired.

For details of mechanism see Plates 01179, 01181, 01183 and 01185, for motor and details, Plate 01189; for circuit controller, Plate 01191.

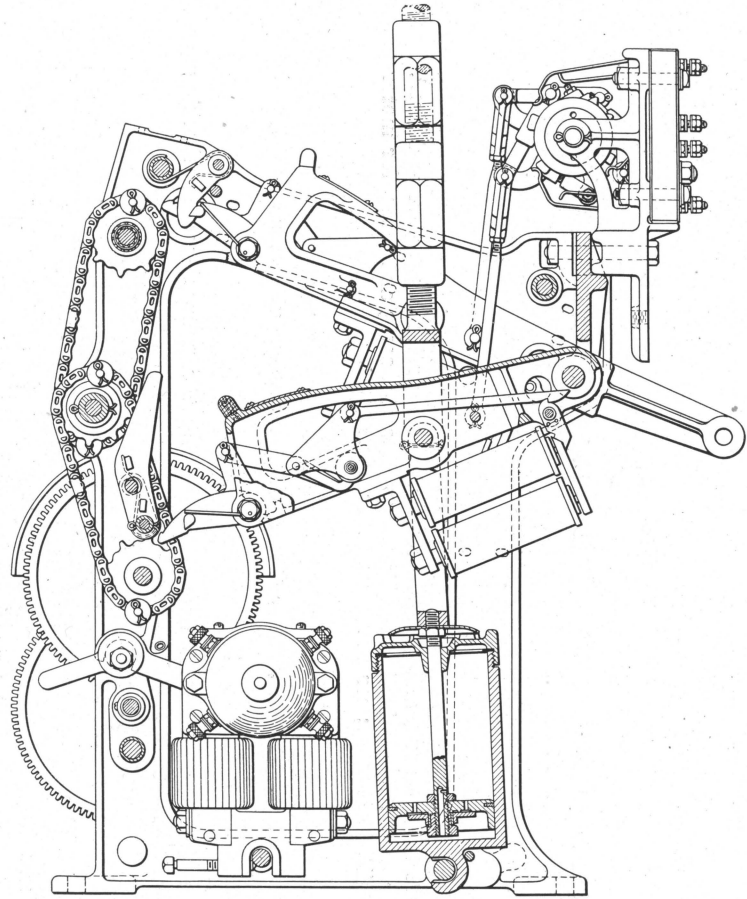
Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Mechanism, with circuit controller, as shown, for three-arm 90 deg. three-position ground, bridge or bracket signal.....	C-7446-6	
Aa	as above, without circuit controller.....	L-C-7446-6	
Ab	Mechanism, with circuit controller, for three-arm 90 deg. ground, bridge or bracket signal, top and middle arms three-position, lower arm two-position	C-7446-6	
Ac	as above, without circuit controller.....	C-7446-6	
Ad	Mechanism, with circuit controller, for three-arm 90 deg. two-position ground, bridge or bracket signal	23-C-7446	
Ae	as above, without circuit controller.....	C-7446-6	
Af	Mechanism, with circuit controller, for three-arm ground, bridge or bracket signal, top and bottom arms three-position, middle arm two-position	C-7446-6	
Ag	as above, without circuit controller.....	C-7446-6	
Ah	Mechanism, with circuit controller, for three-arm 60 deg. two-position ground, bridge or bracket signal	25d-C-7446	
Aj	as above, without circuit controller.....	C-7446-6	



A



MECHANISM FOR TWO ARM AND SUSPENDED ROUTE STYLE "S" ELECTRIC BRIDGE
OR BRACKET SIGNALS. D. C. INDICATION

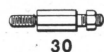
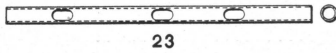
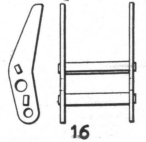
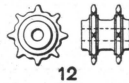
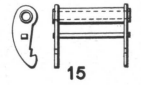
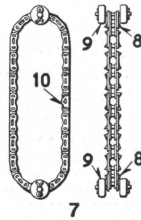
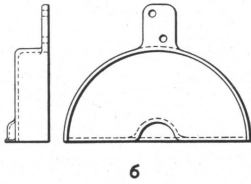
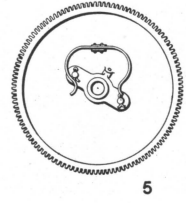
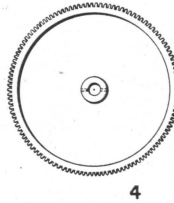
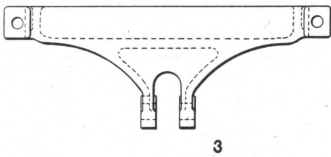
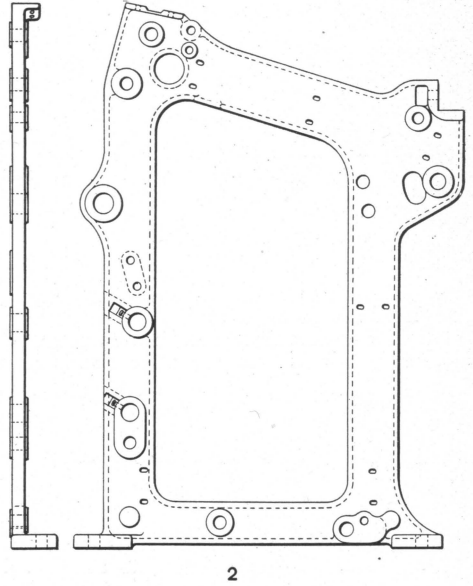
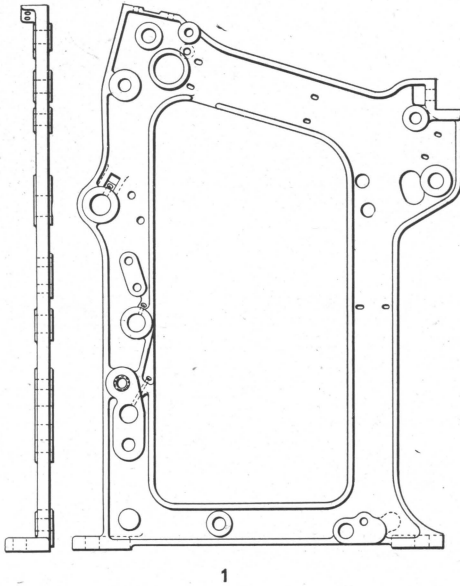
**MECHANISM FOR TWO ARM AND SUSPENDED ROUTE
SYYLE "S" ELECTRIC BRIDGE OR BRACKET SIGNALS
D. C. INDICATION**

All orders for mechanisms should specify to what resistance slot-arm magnets are to be wound, also whether or not the slow releasing feature is desired. For details of mechanism see Plates 01179, 01181, 01183 and 01185, for motor and details, Plate 01189; for circuit controller, Plate 01191.

Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Mechanism, with circuit controller, for two-arm and suspended route 90 deg. three-position bridge or bracket signal	C-7446-5	
Aa	as above, without circuit controller.....	C-7446-5	
Ab	Mechanism, with circuit controller, for two-arm and suspended route 90 deg. bridge or bracket signal, top arm three-position, middle and suspended route two-position	C-7446-5	
Ac	as above, without circuit controller.....	C-7346-5	
Ad	Mechanism, with circuit controller, for two-arm and suspended route 60 deg. two-position bridge or bracket signal	C-7446-5	
Ae	as above, without circuit controller.....	C-7446-5	
Af	Mechanism, with circuit controller, for one-arm and suspended route 90 deg. three-position bridge or bracket signal	C-7446-5	
Ag	as above, without circuit controller.....	C-7446-5	
Ah	Mechanism, with circuit controller, for two-arm and suspended route 90 deg. bridge or bracket signal, top and suspended route arms two position and middle arm three-position.....	C-7446-5	
Aj	as above, without circuit controller.....	C-7446-5	
Ak	Mechanism, with circuit controller, for one-arm and suspended route 60 deg. two-position bridge or bracket signal	C-7446-5	
Am	as above, without circuit controller.....	C-7446-5	



DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
ONE, TWO OR THREE SLOT ARMS

(Continued on Plate 01181)

**DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
ONE, TWO OR THREE SLOT ARMS**

Unless otherwise specified in the list below, the parts illustrated on the opposite plate are interchangeable for mechanisms of 1, 2 or 3 slot arms.

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
1	Rear Side Frame, for one or two-arm mechanism..	89-C-7443	
1a	Rear Side Frame, for three-arm mechanism.....	126-C-7443	
2	Front Side Frame, for one or two-arm mechanism..	90-C-7443	
2a	Front Side Frame, for three-arm mechanism.....	127-C-7443	
3	Support, for middle arm of a three-arm mechanism..	93-C-7443	
4	Gear, used on lower sprocket shaft for one, two or three-arm mechanism.....	66-B-8425	
5	Gear, with studs, cotters, spring and rivets, used on pinion, for one, two or three-arm mechanism..	73-B-8425	
6	Gear Cover, for gears, Figs. 4 and 5.....	6-C-7443	
7	Chain, with lifting links, Fig. 8, rollers, Fig. 9, pins, Fig. 9a, and lock link, Fig. 10, for one, two or three-arm three-position mechanism.....	17-C-7443	
7a	Chain, with lifting links, Fig. 8, rollers, Fig. 9, pins, Fig. 9a, and lock link, Fig. 10, for one, two or three-arm two-position mechanism.....	128-C-7443	
8	Lifting Link, with one cotter, 1/16" x 1/2", for chain, Fig. 7 or 7a.....	8-C-3636	
8a	as above, with roller (1-8, 1-9).....		
9	Roller, for lifting link, Fig. 8.....	194-B-8072	
9a	Pin, for fastening lifting link, Fig. 8, to chain, Fig. 7 or 7a.....	41-B-8097	
10	Lock Link, for connecting ends of chain, Fig. 7 or 7a.	27-C-3636	
11	Upper Sprocket, for one or two-arm mechanism.....	126-C-3636	
11a	Upper Sprocket, for a three-arm mechanism.....	110-C-7393	

**DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
ONE, TWO OR THREE SLOT ARMS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Description	Drawing Reference	List Price
12	Middle Sprocket, for one or two-arm mechanism...	51-C-7443	
12a	Middle Sprocket, for three-arm mechanism.....	51a-C-7443	
13	Lower Sprocket, for one, two or three-arm mechanism	22-C-3636	
14	Roller Bearing, for upper sprocket, Fig. 11 and for middle sprocket shaft, Fig. 44, Plate 01181.....	14-C-7490	
14a	Roller Bearing, for upper sprocket, Fig. 11a, and for middle sprocket shaft, Fig. 45, Plate 01181.....	15-B-7490	
15	Upper Latch, for one or two-arm mechanism.....	9-C-7443	
15a	Upper Latch, for three-arm mechanism.....	92-C-7443	
16	Middle Latch, for one, two or three-arm, three-position mechanism.....	7-C-7443	
17	Reinforcing Strap, for middle latch shaft, Fig. 51, Plate 01181	12-C-7443	
18	Flat Spring, for upper latch, Fig. 15.....	140-B-8735	
18a	Flat Spring, for upper latch, Fig. 15a.....	163-B-8735	
19	Coil Spring, for middle latch, Fig. 16.....	65-B-8124	
20	Eccentric Handle, for adjusting motor to frame of one, two or three-arm mechanism.....	21-C-7443	
21	Lower Wire Cleat, for one, two or three-arm mechanism	29-C-7443	
21a	as above, with cap, screws and nuts (1-21, 1-22, 2-96, Plate 01181).....	53-C-7393	
22	Cap, for lower wire cleat, Fig. 21.....	62-C-7393	
23	Tube, for motor wires for one, two or three-arm mechanism	19-C-7443	
24	Clip, for holding tube, Fig. 23.....		
24a	as above, with screws and nuts (1-24, 2-97, Plate 01181)		

**DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
ONE, TWO OR THREE SLOT ARMS**

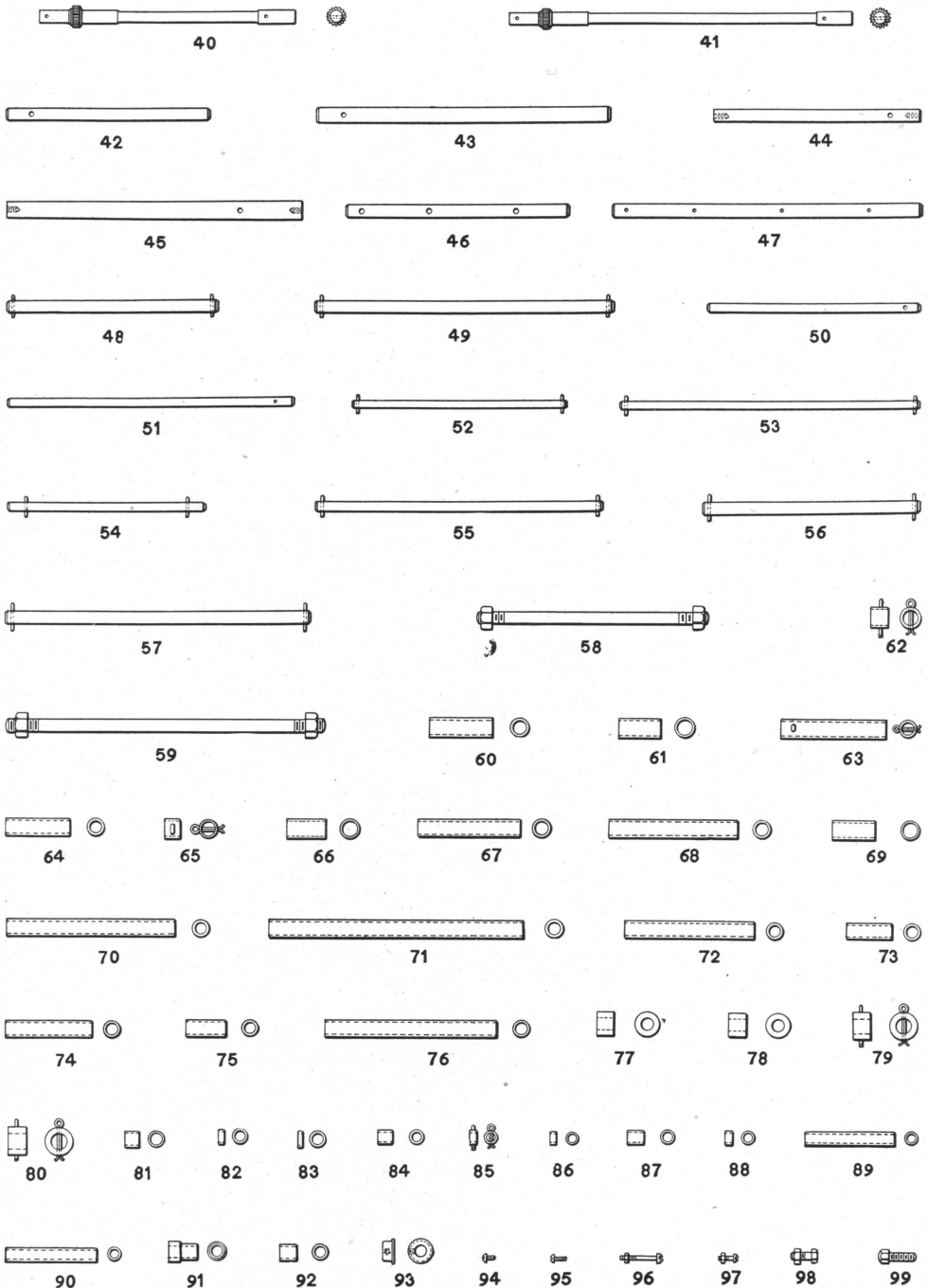
Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

		Drawing Reference	List Price
Fig.			
25	Ratchet Wheel for front end of pinion, Fig. 40 or 41, Plate 01181	29-B-9121	
26	Ratchet Wheel, for rear end of pinion, Fig. 40 or 41, Plate 01181	30-B-9121	
27	Pawl, for ratchet wheel, Fig. 25.....	26-B-9121	
28	Pawl, for ratchet wheel, Fig. 26.....	24-B-9121	
29	Stop Spring, for pawl, Fig. 27.....	77-8124	
30	Stud, with one 1/2" hex. nut, for fastening eccentric handle, Fig. 20, to rear side frame of one, two or three-arm mechanism with D. C. indication..	79-B-8261	
30a	as above, with washer and nut (1-30, 1-37, 1-39)		
31	Stud, with cotter, 1/16" x 1/2", for holding pawl, Fig. 27, to front side frame of one, two or three-arm mechanism	150-8114	
31a	as above, with washer (1-31, 1-38).....		
32	Pin, for fastening lower sprocket, Fig. 13, or gear, Fig. 4, to lower sprocket shaft, Fig. 46 or 47, Plate 01181; also for fastening ratchet wheel, Fig. 25 or 26, to pinion, Fig. 40 or 41, Plate 01181.	92-B-8097	
33	Washer, for upper sprocket shaft, Fig. 42, Plate 01181.	33-B-7826	
34	Washer, for upper sprocket shaft, Fig. 43, Plate 01181.	61-B-7826	
35	Washer, for middle sprocket shaft, Fig. 44, Plate 01181	42-B-7826	
36	Washer, for middle sprocket shaft, Fig. 45, Plate 01181	72-B-7826	
37	Washer, for stud, Fig. 30.....	6-B-7824	
38	Washer, for stud, Fig. 31.....	19-B-8332	
39	Hex. Nut, for stud, Fig. 30.....	82-B-8265	

(Continued on Plate 01181)

PLATE 01181



DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
ONE, TWO OR THREE SLOT ARMS

**DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
ONE, TWO OR THREE SLOT ARMS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
40	Pinion, for two slot arm frame.....	86-B-8424	
41	Pinion, for three slot arm frame.....	87-B-8424	
42	Upper Sprocket Shaft for two slot arm frame.....	54-C-7443	
43	Upper Sprocket Shaft, for three slot arm frame....	64-C-7443	
44	Middle Sprocket Shaft, for two slot arm frame....	60-C-7443	
45	Middle Sprocket Shaft, for three slot arm frame...	65-C-7443	
46	Lower Sprocket Shaft, for two slot arm frame.....	62-C-7443	
47	Lower Sprocket Shaft, for three slot arm frame....	88-C-7443	
48	Upper Latch Shaft, with two cotters, $\frac{1}{8}$ "x $\frac{3}{4}$ ", for two slot arm frame.....	56-C-7443	
49	Upper Latch Shaft, with two cotters, $\frac{1}{8}$ "x $\frac{3}{4}$ ", for three slot arm frame.....	87-C-7443	
50	Middle Latch Shaft, for two slot arm frame.....	58-C-7443	
51	Middle Latch Shaft, for three slot arm frame.....	59-C-7443	
52	Pin, with two cotters, $\frac{1}{8}$ "x $\frac{3}{4}$ ", for stopping upper latch, Fig. 15, Plate 01179, and for stopping oil buffer in two slot arm frame.....	25-B-10209	
53	Pin, with two cotters, $\frac{1}{8}$ "x $\frac{3}{4}$ ", for stopping upper latch, Fig. 15a, Plate 01179, and for stopping oil buffer in three slot arm frame.....	26-B-10209	
54	Pin, with two cotters, $\frac{1}{8}$ "x $\frac{3}{4}$ ", for stopping middle latch, Fig 16, Plate 01179, in two slot arm frame.	32-C-7443	
55	Pin, with two cotters, $\frac{1}{8}$ "x $\frac{3}{4}$ ", for stopping middle latch, Fig. 16, Plate 01179, in three slot arm frame	33-C-7443	
56	Pin, with two cotters, $\frac{3}{16}$ "x1- $\frac{1}{8}$ ", for supporting motor with A. C. or D. C. indication in two slot arm frame	52-B-10216	
57	Pin, with two cotters, $\frac{3}{16}$ "x1- $\frac{1}{8}$ ", for supporting motor with A. C. or D. C. indication in three slot arm frame	54-B-10216	
58	Connecting Bolt, with two hex. nuts, Fig. 59a, for two slot arm frame.....	8-C-7393	

**DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
ONE, TWO OR THREE SLOT ARMS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

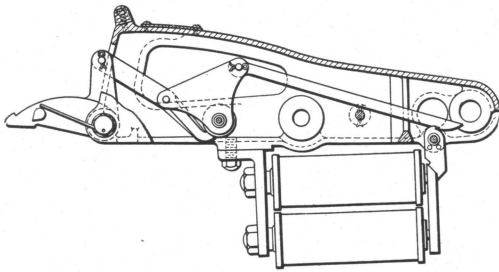
Fig.	Description	Drawing Reference	List Price
59	Connecting Bolt, with two hex. nuts, Fig. 59a, for three slot arm frame.....	9-C-7393	
59a	Nut, for connecting bolt, Fig. 58 or 59.....	94 B-8265	
60	Separator, for upper sprocket shaft, Fig. 43.....	4-B-10330	
61	Separator, for upper sprocket shaft, Fig. 43, and for middle sprocket shaft, Fig. 45.....	14-B-10330	
62	Separator, with one cotter, 3/16"x1-1/2", for upper sprocket shaft, Fig. 43.....	13-B-10330	
63	Separator, with one cotter, 3/16"x1-1/4", for upper sprocket shaft, Fig. 42, when used for one slot arm	19-B-10329	
64	Separator, for upper sprocket shaft, Fig. 42.....	14-B-10329	
65	Separator, with one cotter, 3/16"x1-1/4", for upper sprocket shaft, Fig. 42.....	11-B-10329	
66	Separator, for upper sprocket shaft, Fig. 42, and for middle sprocket shaft, Fig. 44.....	12-B-10329	
67	Separator, for middle sprocket shaft, Fig. 44, when used for one slot arm.....	22-B-10329	
68	Separator, for lower sprocket shaft, Fig. 46, when used for one slot arm.....	20-B-10329	
69	Separator, for lower sprocket shaft, Fig. 46 or 47...	13-B-10329	
70	Separator, for connecting bolt, Fig. 58.....	2-B-10329	
71	Separator, for connecting bolt, Fig. 59.....	4-B-10329	
72	Separator, for pin, Fig. 57, when used for motor with D. C. indication.....	17-B-10329	
73	Separator, for pin, Fig. 56, when used for motor with D. C. indication.....	18-B-10329	
74	Separator, for pin, Fig. 56, when used for motor with A. C. indication.....	19-B-10329	
75	Separator, for pin, Fig. 57, when used for motor with D. C. indication.....	16-B-10329	
76	Separator, for pin, Fig. 57, when used for motor with A. C. indication.....	9-B-10329	
77	Separator, with one cotter, 3/16"x1-5/8", for middle sprocket shaft, Fig. 44, when used for one or two slot arms.....	207-B-8072	
78	Separator, for middle sprocket shaft, Fig. 44, when used for two slot arms.....	208-B-8072	

**DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
ONE, TWO OR THREE SLOT ARMS**

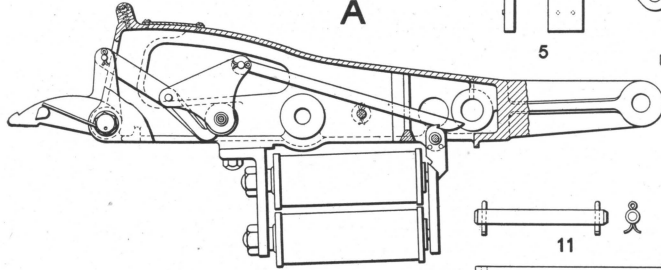
Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

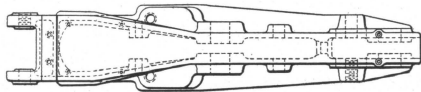
Fig.	Description	Drawing Reference	List Price
79	Separator, with one cotter, 3/16"x1-5/8", for middle sprocket shaft, Fig. 45.....	237-B-8072	
80	Separator, for middle sprocket shaft, Fig. 45.....	238-B-8072	
81	Separator, for upper latch shaft, Fig. 49.....	2-B-10328	
82	Separator, for upper latch shaft, Fig. 49.....	1-B-10328	
83	Separator, for upper latch shaft, Fig. 48, when used for one or two slot arms.....	17-B-10327	
84	Separator, for upper latch shaft, Fig. 48.....	18-B-10327	
85	Separator, with one cotter, 1/8"x1-1/8", for middle latch shaft, Fig. 50 or 51.....	15-B-10327	
86	Separator, for middle latch shaft, Fig. 50 or 51.....	16-B-10327	
87	Separator, for middle latch shaft, Fig. 50, when used for two slot arm.....	1-B-10327	
88	Separator, for middle latch shaft, Fig. 51.....	19-B-10327	
89	Separator, for middle latch shaft, Fig. 50, when used for one slot arm.....	20-B-10327	
90	Separator, for upper latch shaft, Fig. 48, when used for one slot arm.....	21-B-10327	
91	Bushing, for pinion, Fig. 40 or 41.....	204-B-8350	
92	Bushing, for lower sprocket shaft, Fig. 46 or 47 and for pinion, Fig. 40 or 41.....	206-B-8350	
93	Collar, for pinion, Fig. 40 or 41.....	28-B-8350	
93a	as above, with screw (1-93, 1-94).....		
94	Screw, for collar, Fig. 93.....	294-B-8098	
95	Rd. Hd. Mach. Screw, No. 10-32x5/8", for fastening washer, Fig. 35, Plate 01179, to middle sprocket shaft, Fig. 44, and for fastening washer, Fig. 36, Plate 01179 to middle sprocket shaft, Fig. 45....		
96	Fil. Hd. Mach. Screw, No. 10-32x1-7/8", and Hex. Nut, for fastening lower wire cleat, Fig. 21, and cap, Fig. 22, Plate 01179 to frame.....		
97	Fil. Hd. Mach. Screw, No. 10-32"x5/8", and Hex. Nut, for fastening clip, Fig. 24, Plate 01179 to front side frame		
98	Hex. Hd. Mach. Bolt, 3/8"x1", and Nut, for fastening gear cover, Fig. 6, Plate 01179, to rear side frame.		
99	Hex. Hd. Cap Screw, 1/2"x1-5/16", for fastening eccentric handle, Fig. 20, Plate 01179, to rear side frame of one, two or three-arm mechanism....		



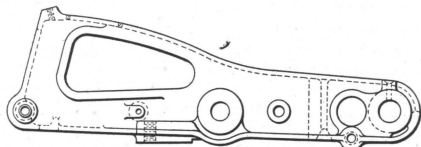
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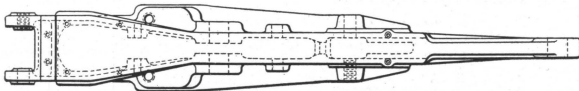
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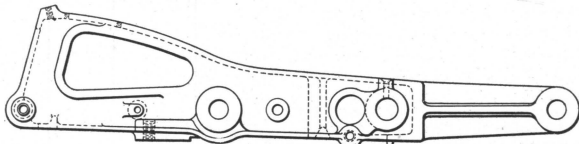
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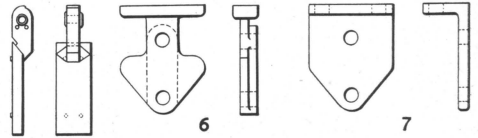


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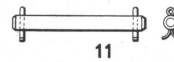
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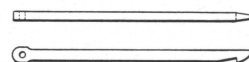
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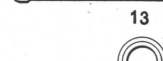
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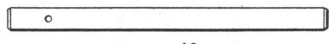
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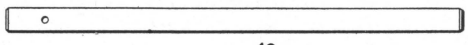
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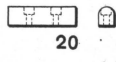
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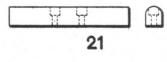
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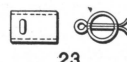
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SLOT ARMS AND DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS

SLOT ARMS AND DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Slot Arm, with ordinary releasing magnets, for one, two or three-arm mechanisms (1-1, 1-3, 1-5, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-16, 1-17, 1-20, 1-22, 1-28, 2-29, 1-30, 1-31, 2-32, 1-33, 4-34, 2-35)	11-C-6500	
Aa	as above, with slow releasing magnets (1-1, 1-4, 1-5, 1-6, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-17, 1-20, 1-22, 1-28, 2-29, 1-30, 1-21, 2-32, 1-33, 4-34, 2-35)	11-C-6500	
B	Slot Arm, with ordinary releasing magnets, for suspended route signal mechanism (1-2, 1-3, 1-5, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-16, 1-17, 1-20, 1-22, 1-28, 2-29, 1-30, 1-31, 2-32, 1-33, 4-34, 2-35)	21-C-6500	
Ba	as above, with slow releasing magnets (1-2, 1-4, 1-5, 1-6, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-17, 1-20, 1-22, 1-28, 2-29, 1-30, 1-31, 2-32, 1-33, 4-34, 2-35)	23-C-6500	
1	Slot Arm only, for Fig. A or Aa	46-C-3572	
2	Slot Arm only, for Fig. B or Ba	82-C-3572	
3	Ordinary Releasing Magnets	14a-B-8133	
4	Slow Releasing Magnets	91-B-8133	
5	Armature, for Fig. A, Aa, B or Ba	45-B-8157	
6	Back Strap, for magnets, Fig. 4	98-B-8162	
7	Back Strap, for magnets, Fig. 3	97-B-8162	
8	Lifting Crank, for Fig. A, Aa, B or Ba	52-C-3572	

SLOT ARMS AND DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS

Order by Name, Plate and Figure

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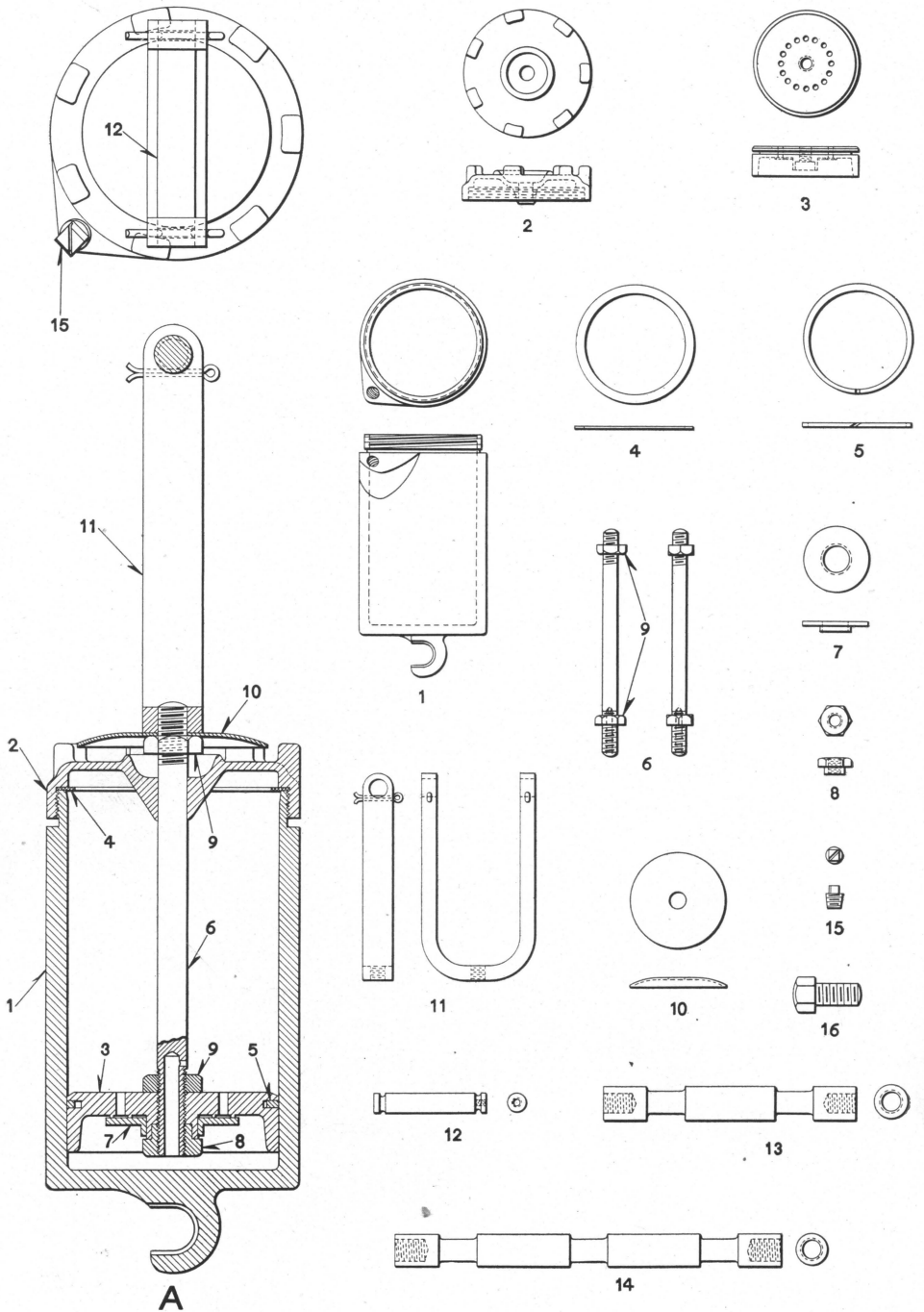
Fig.		Drawing Reference	List Price
9	Toggle, for Fig. A, Aa, B or Ba.....	60-C-3572	
10	Pin, with two cotters, $3/32" \times 1/2"$, for fastening lifting crank, Fig. 8, to toggle, Fig. 9.....	4-B 8097	
11	Pin, with two cotters, $1/16" \times 5/8"$, for fastening latch, Fig. 13, to toggle, Fig. 9.....	75-B-8097	
12	Pin, with two cotters, $3/32" \times 3/4"$, for fastening toggle, Fig. 9, in slot arm, Fig. 1 or 2.....	3-B-8097	
13	Latch, for engaging armature, Fig. 5.....	61-C-3572	
14	Spring, for lifting crank, Fig. 8.....	64-B-8124	
15	Name Plate, for slot arm, Fig. Aa or Ba.....	29-B-8225	
16	Name Plate, for slot arm, Fig. A or B.....	30-B-8225	
17	Pin, for supporting armature, Fig. 5.....	74-B-8097	
18	Shaft, for supporting slot arm, Fig. 1 or 2, in two-arm frame	17-C-7393	
19	Shaft, for supporting slot arm, Fig. 1 or 2, in three-arm frame	18-C-7393	
20	Insulation, for top of Fig. 1 or 2, used when contact spring base has 3 sets of springs.....	4-C-7393	
21	Insulation, for top of Fig. 1 or 2, used when contact spring base has 5 sets of springs.....	76-C-7443	
22	Pin, with two cotters, $1/8" \times 3/4"$, for stopping latch, Fig. 13, and for connecting circuit controller operating arm to slot arm.....	20-B-10209	

**SLOT ARMS AND DETAILS FOR STYLE "S" ELECTRIC
SIGNAL MECHANISMS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
23	Separator, with one cotter, 3/16"x1-1/2", for shaft, Fig. 18 or 19.....	1-B-10330	
24	Separator, for shaft, Fig. 18 or 19.....	3-B-10330	
25	Separator, for shaft, Fig. 18, when used for two slot arms	4-B-10330	
26	Separator, for shaft, Fig. 19	15-B-10330	
27	Separator, for shaft, Fig. 18, when used for one slot arm	6-B-10330	
28	Bolt, for fastening lifting crank, Fig. 8, and spring, Fig. 14, to slot arm, Fig. 1 or 2.....	29-B-8709	
29	Cap Screw, 3/8"x1", for fastening back strap, Fig. 6 or 7, to slot arm, Fig. 1 or 2.....		
30	Trunnion, for supporting pin, Fig. 17.....	77-B-8378	
31	Trunnion, for supporting pin, Fig. 17.....	78-B-8378	
32	Nut, for fastening magnets, Fig. 3, to back strap, Fig. 7, and magnets, Fig. 4, to back strap, Fig. 6....	5-B-8265	
33	Nut, for bolt, Fig. 28.....	87-B-8265	
34	Rd. Hd. Mach. Screw, No. 4-40x1/4", for fastening name plate, Fig. 15 or 16, to slot arm, Fig. 1 or 2.....		
35	Fil. Hd. Mach. Screw, No. 8-32x5/8", for fastening insulation, Fig. 20 or 21, to slot arm, Fig. 1 or 2..		
36	Turnbuckle, for connecting jaw, Fig. 37, to signal operating rod	5-B-8313	
37	Jaw, for connecting slot arm, Fig. 1 or 2; to up and down rod of signal.....	32-B-8025	



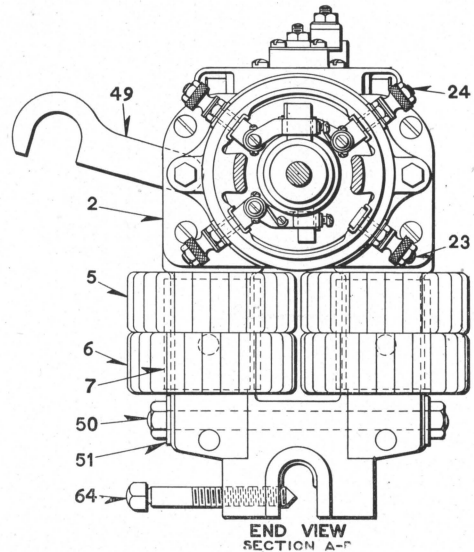
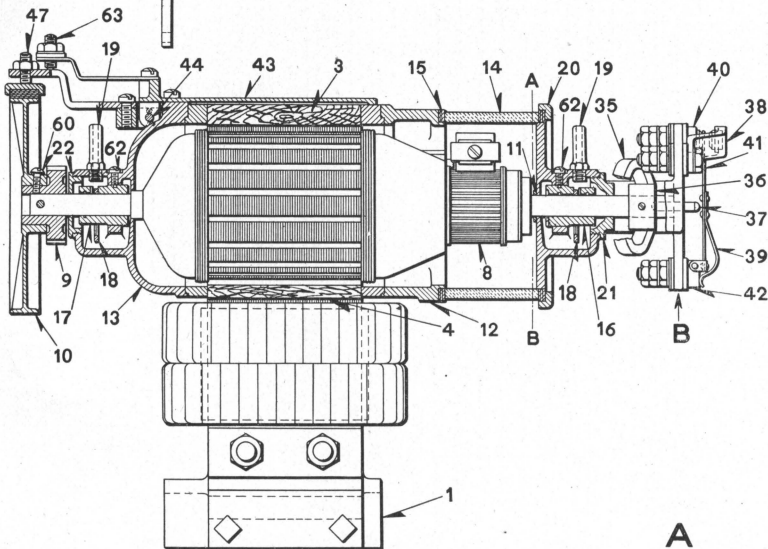
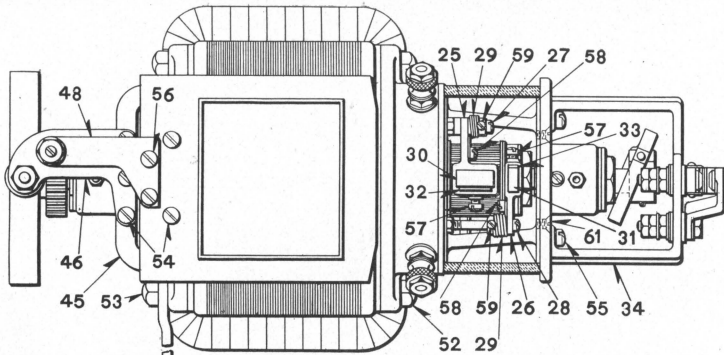
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OIL BUFFER AND DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS

OIL BUFFER AND DETAILS FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

		Drawing Reference	List Price
Fig.			
A	Oil Buffer, as shown, for one, two or three-arm mechanisms (I-1, I-2, I-3, I-4, I-5, I-6a, I-7, I-8, I-15)	5-B-10251	
Aa	as above, with shaft and cap screws, for one or two-arm mechanism (I-A, I-13a).....		
Ab	as above, with shaft and cap screws, for three-arm mechanism (I-A, I-14a).....		
1	Cylinder, for Fig. A.....	18-C-7427	
2	Cylinder Head.....	19-C-7427	
3	Piston	9-C-7427	
4	Gasket	40-B-8274	
5	Piston Ring	20-B-8197	
6	Piston Rod, with two hex. nuts, Fig. 9.....	10-C-7427	
6a	as above, with shield, yoke, pin and cotters (I-6, I-10, I-11a).....		
7	Valve	5-C-7427	
8	Nut, for fastening piston, Fig. 3, and valve, Fig. 7, to piston rod, Fig. 6.....	6-C-7427	
9	Hex. Nut, for piston rod, Fig. 6.....	14-B-8265	
10	Shield, for oil buffer.....	21-C-7427	
11	Yoke, with two cotters, 1/8"x1-1/4", for connecting oil buffer to slot arm.....	20-C-7427	
11a	as above, with pin (I-11, I-12).....		
12	Pin, for yoke, Fig. 11.....	167-B-8057	
13	Shaft, for supporting oil buffer in two-arm mechanism frame	63-C-7443	
13a	as above, with two cap screws (I-13, 2-16).....		
14	Shaft, for supporting oil buffer in three-arm mechanism frame	13-C-7443	
14a	as above, with cap screws (I-14, 2-16).....		
15	Screw Plug, for cylinder, Fig. 1.....	14-B-9511	
16	Cap Screw, 3/4"x1-1/2", for fastening shaft, Fig. 13 or 14, in mechanism frame.....		



MOTOR FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS. A. C. INDICATION

**MOTOR FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
A. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices

	Drawing Reference	List Price
Fig.		
A	Motor, as shown, for one, two or three-arm mechanism with A. C. indication.....	11-C-6497
B	Centrifugal Circuit Controller, (1-34, 1-35, 1-36, 1-37, 1-38, 1-39, 1-40, 1-41, 1-42a, 2-55).....	15-C-5042
1	Motor Base.....	32-C-6498
2	Laminated Field.....	10-C-6498
3	Top Wood Filler.....	2-B-9667
4	Bottom Wood Filler.....	3-B-9667
5	Operation Field Coil.....	2-C-5911
6	Indication Field Coil.....	1-C-5911
7	Copper Sleeve.....	16-C-4839
8	Armature.....	6-C-5911
9	Pinion, with pin, Fig. 9a.....	84-B-8424
9a	Pin Stub Wire, No. 28x13/16", for fastening pinion, Fig. 9, to armature shaft.....	
10	Brake Wheel.....	
10a	as above, with screw (1-10, 1-60).....	
11	Wearing Ring, for front end of armature, Fig. 8....	7-C-4839
12	Front Armature Shaft Bearing.....	11-C-6498
13	Rear Armature Shaft Bearing.....	3-C-6498
14	Glass Commutator Shield.....	7-B-8163
15	Leather Washer, for glass commutator shield, Fig. 14.	28-B-8078
16	Bushing, for front armature shaft bearing, Fig. 12..	84-B-8350
17	Bushing, for rear armature shaft bearing, Fig. 13...	86-B-8350
18	Oil Ring, for front or rear armature shaft bearing..	6-C-4839
19	Oil Cup, for front or rear armature shaft bearing....	11-C-4839
20	Shield Holder, for glass commutator shield, Fig. 14..	12-C-5042
20a	as above, with screws (1-20, 2-61).....	

**MOTOR FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
A. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices

		Drawing Reference	List Price
Fig.			
21	Nut, for front armature shaft bearing, Fig. 12.....	47-B-8082	
22	Nut, for rear armature shaft bearing, Fig. 13.....	129-B-8109	
23	Terminal Post, with plate washer, nuts, insulating washers and insulating bushing for front armature shaft bearing, Fig. 12.....	120-B-8094	
24	Terminal Post, with plate washers, nuts, insulating washers and insulating bushing for brush holder, Fig. 25 or 26.....	140-B-8094	
25	Brush Holder, for operation brush.....	16-C-4840	
25a	as above, with bracket, spring, operation brush, binding plate, terminal post, collar, screws and nut (I-25, I-25b, I-27a, I-29, I-30, I-32, I-57, I-58).....		
25b	Bracket only, for brush holder, Fig. 25 or 26.....	12-C-2819	
26	Brush Holder, for indication brush.....	15-C-4840	
26a	as above, with bracket, spring, indication brush, binding plate, terminal post, collar, screws and nut (I-26, I-25b, I-28a, I-29, I-31, I-33, I-57, I-58).....		
27	Terminal Post, with hex. nut, Fig. 27c, for fastening brush holder, Fig. 25, to bracket, Fig. 25b.....	172-B-8094	
27a	as above, with collars and screws (I-27, I-27b, I-28b, 2-59).....		
27b	Collar, for terminal post, Fig. 27.....	319-8350	
27c	Hex. Nut, for terminal post, Fig. 27 or 28.....	12-B-8109	
28	Terminal Post, with hex. nut, Fig. 27c, for fastening brush holder, Fig. 26, to bracket, Fig. 25b.....	173-B-8094	
28a	as above, with collar and screws (I-28, I-28b, 2-59).....		

**MOTOR FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
A. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices

	Drawing Reference	List Price	
Fig.			
28b	Collar, for terminal post, Fig. 27 or 28.....	53-B-8350	
29	Spring, for brush holder, Fig. 25 or 26.....	69-B-7770	
30	Operation Brush, for brush holder, Fig. 25.....	1-B-10332	
31	Indication Brush, for brush holder, Fig. 26.....	2-B-10332	
32	Binding Plate, for operation brush, Fig. 30.....	17-C-4840	
33	Binding Plate, for indication brush, Fig. 31.....	18-C-4840	
34	Bracket, for Fig. B.....	1-C-5042	
35	Ring, with arm, Fig. 35a, and two pins, Fig. 35b, for Fig. B	19-C-5042	
35a	Arm, for ring, Fig. 35.....	20-C-5042	
35b	Pin, for fastening arm, Fig. 35a, to ring, Fig. 35....	31-B-10301	
36	Clamp, with set screw, Fig. 36a, for Fig. B.....	17-C-5042	
36a	Set Screw, for clamp, Fig. 36.....	453-8098	
37	Pin, with fibre tip for front end of armature shaft..	9-C-5042	
38	Contact Piece, with carbon tip for Fig. B.....	2-C-5042	
39	Contact Spring, with hinge, Fig. 39a, spring, Fig. 39b, and rivets, for Fig. B.....	164-B-8385	
39a	Hinge, for contact spring, Fig. 39.....	13-C-5042	
39b	Spring, for contact spring, Fig. 39.....	165-B-8385	
40	Terminal Post, with carbon tip, washers, nuts, insulating washers and insulating bushing for Fig. B.	142-B-8094	
41	Terminal Post, with washers, nuts, insulating washers and insulating bushing, for fastening contact piece, Fig. 38, to bracket, Fig. 34.....	42-B-8094	

**MOTOR FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
A. C. INDICATION**

Order by Name, Plate and Figure

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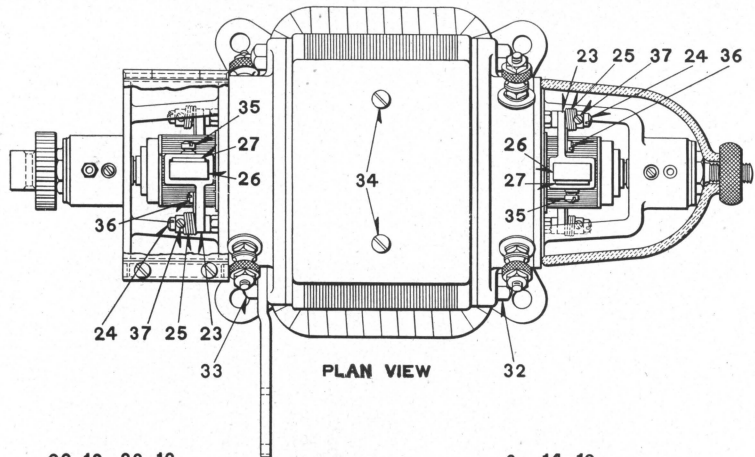
Fig.		Drawing Reference	List Price
42	Terminal Post, with washers, nuts, insulating washers and insulating bushing for holding contact spring, Fig. 39.....	189-B-8094	
42a	as above, with contact spring and one stub steel pin, No. 52x $\frac{3}{8}$ ", (I-42, I-39).....		
43	Name Plate and Shield, for armature, Fig. 45.....	22-B-8225	
43a	as above, with pin, armature, brake shoe support, brake shoe, spring and screws (I-43, I-44, I-45, I-46, I-47, I-48, 3-54, 2-56, I-63).....		
44	Pin, with two cotters, 1/16" x 1/2", for fastening armature, Fig. 45, to name plate and shield, Fig. 43..	28-B-8097	
45	Armature, with pins for brake shoe support, Fig. 46.	56-B-8157	
46	Brake Shoe Support	22-C-2692	
47	Brake Shoe, with pad and nut.....	272-B-8098	
48	Spring, for brake shoe support.....	147-B-8735	
49	Adjusting Hook, for meshing pinion of motor and main gear of mechanism.....	30-C-6498	
50	Stay Bolt, with two $\frac{3}{8}$ " hex. nuts, for fastening laminated field, Fig. 2, to base, Fig. 1.....	59-B-8114	
51	Plate Washer, for stay bolt, Fig. 50.....	60-7826	
52	Cap Screw, 5/16" x 3/4", for fastening front or rear armature shaft bearing to laminated field, Fig. 2.		
53	Special Cap Screw, for fastening adjusting hook, Fig. 49, and rear armature shaft bearing, Fig. 13, to laminated field, Fig. 2.....	28-B-8709	
54	Fil. Hd. B. Mach. Screw, No. 10-32x $\frac{1}{2}$ ", for fastening name plate and shield, Fig. 43, to rear armature shaft bearing, Fig. 13, and for fastening brake shoe support, Fig. 46, to armature, Fig. 45.		

MOTOR FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS
A. C. INDICATION

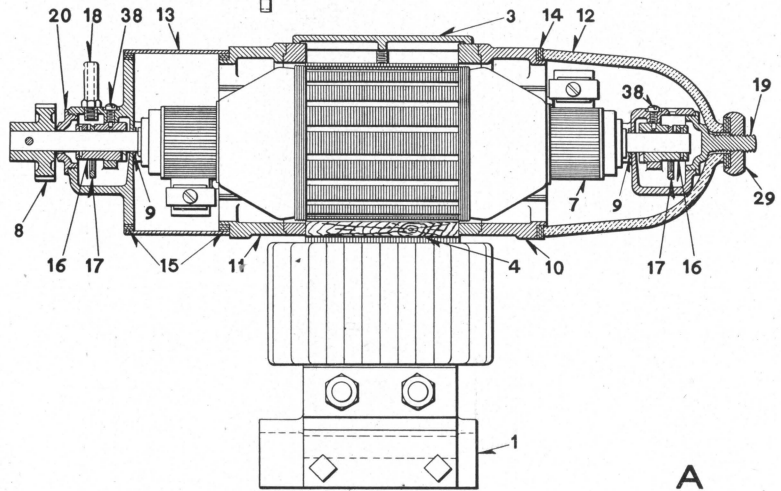
Order by Name, Plate and Figure

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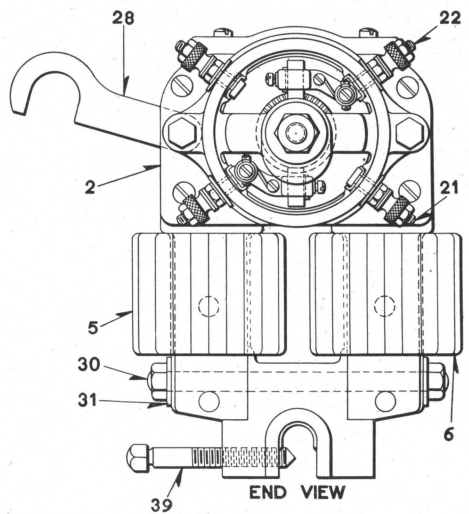
Fig.		Drawing Reference	List Price
55	Fil. Hd. S. Mach. Screw, No. 10-32x $\frac{3}{8}$ ", for fastening bracket, Fig. 34, to front armature shaft bearing, Fig. 12.....		
56	Fil. Hd. B. Mach. Screw, No. 10-32x $\frac{1}{4}$ ", for fastening spring, Fig. 48, to name plate and shield, Fig. 43.....		
57	Fil. Hd. S. Mach. Screw, No. 8-32x $\frac{3}{8}$ ", for holding operation brush, Fig. 30, in brush holder, Fig. 25, and for holding indication brush, Fig. 31, in brush holder, Fig. 26.....		
58	Fil. Hd. B. Mach. Screw, No. 6-32x $\frac{1}{4}$ ", for fastening spring, Fig. 29, to brush holder, Fig. 25 or 26....		
59	Fil. Hd. S. Mach. Screw, No. 4-40x $\frac{1}{8}$ ", for fastening spring, Fig. 29, to collar, Fig. 28b; also for fastening collar, Fig. 28b, to terminal post, Fig. 27 or 28.....		
60	Rd. Hd. S. Mach. Screw, No. 10-32x $\frac{3}{8}$ ", for fastening brake wheel, Fig. 10, to pinion, Fig. 9.....		
61	Flat Hd. B. Mach. Screw, No. 10-32x $\frac{3}{8}$ ", for fastening shield holder, Fig. 20, to front armature shaft bearing, Fig. 12.....		
62	Fil. Hd. Pivot Screw, for holding bushing, Fig. 16, in front armature shaft bearing, Fig. 12; also for holding bushing, Fig. 17, in rear armature shaft bearing, Fig. 13.....		
63	Headless Screw, with nut for spring, Fig. 48.....	37-B-8378	
64	Set Screw, cone point, $\frac{3}{8}$ "x2- $\frac{3}{4}$ ", for fastening motor to supporting pin in one, two or three-arm mechanism frame.....	66-B-8098	



PLAN VIEW



SECTIONAL SIDE VIEW



END VIEW

MOTOR, COMMUTATOR ON EACH END, FOR STYLE "S" ELECTRIC SIGNAL MECHANISMS. D. C. INDICATION

140

A

**MOTOR, COMMUTATOR ON EACH END, FOR
STYLE "S" SIGNAL MECHANISMS
D. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
Λ	Motor, as shown, for one, two or three-arm mechanism with D. C. indication.....	14-C-6497	
1	Motor Base.....	32-C-6498	
2	Laminated Field.....	24-C-6498	
3	Cover, for top of laminated field, Fig. 2.....	25-C-6498	
4	Bottom Wood Filler.....	3-B-9667	
5	Low Resistance Field Coil.....	10-C-5911	
6	High Resistance Field Coil.....	11-C-5911	
7	Armature, commutator on each end.....	12-C-5911	
8	Pinion, with pin, Fig. 8a.....	84-B-8424	
8a	Pin Stub Wire, No. 28x13/16", for fastening pinion, Fig. 8, to armature shaft.....		
9	Wearing Ring, for front and rear end of armature, Fig. 7.....	7-C-4839	
10	Front Armature Shaft Bearing.....	4-C-6498	
11	Rear Armature Shaft Bearing.....	17-C-6498	
12	Glass Commutator Shield, for front end of armature.	4-B-8163	
13	Commutator Shield, with hinge pin and filler for rear end of armature.....	26-C-6498	
14	Leather Washer, for glass commutator shield, Fig. 12.	28-B-8078	
15	Felt Washer, cemented to rear armature shaft bearing, Fig. 11, for commutator shield, Fig. 13....	369-B-8078	
16	Bushing, for front or rear armature shaft bearing...	84-B-8350	
17	Oil Ring, for front or rear armature shaft bearing..	6-C-4839	
18	Oil Cup, for rear armature shaft bearing.....	11-C-4839	

**MOTOR, COMMUTATOR ON EACH END, FOR STYLE
"S" ELECTRIC SIGNAL MECHANISMS
D. C. INDICATIONS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

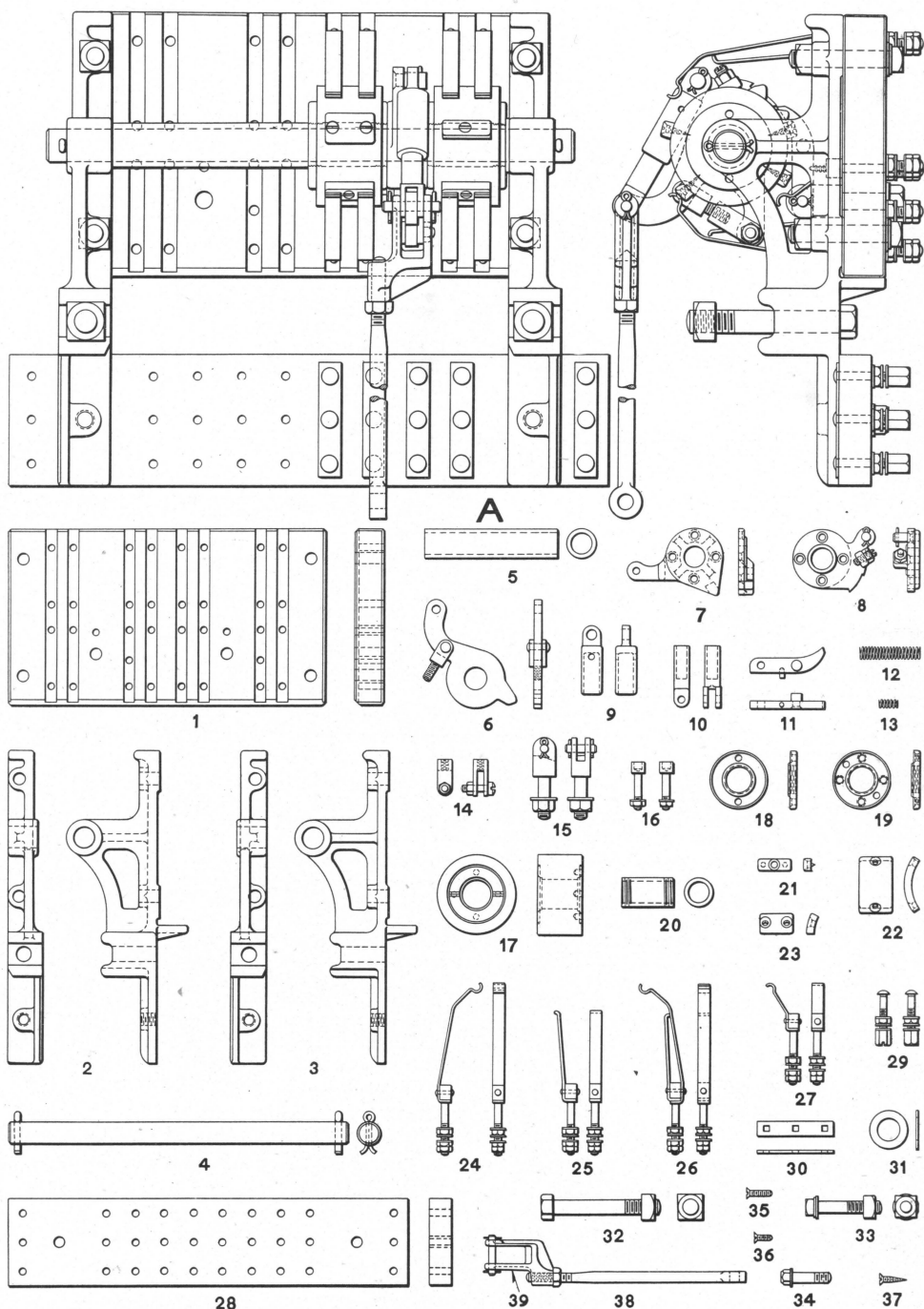
Fig.		Drawing Reference	List Price
19	Stud, for front armature shaft bearing, Fig. 10.....	7-C-6498	
20	Nut, for rear armature shaft bearing, Fig. 11.....	47-B-8082	
21	Terminal Post, with plate washers, nuts, insulating washers and insulating bushing for front armature shaft bearing, Fig. 10.....	120-B-8094	
22	Terminal Post, with plate washers, nuts, insulating washers and insulating bushing for brush holder, Fig. 23.....	140-B-8094	
23	Brush Holder, for brush, Fig. 26.....	16-C-4840	
23a	as above, with bracket, spring, brush, binding plate, terminal post, collars, screws and nut (I-23, I-23b, I-24a, I-25, I-26, I-27, I-35, I-36) ..		
23b	Bracket only, for brush holder, Fig. 23.....	12-C-2819	
24	Terminal Post, with hex. nut, Fig. 24d, for fastening brush holder, Fig. 23, to bracket, Fig. 23b.....	172-B-8094	
24a	as above, with collars and screws (I-24, I-24b, I-24c, 2-37).....		
24b	Collar, for terminal post, Fig. 24.....	319-8350	
24c	Collar, for terminal post, Fig. 24.....	53-B-8350	
24d	Hex. Nut, for terminal post, Fig. 24.....	12-B-8109	
25	Spring, for brush holder, Fig. 23.....	69 B-7770	
26	Brush, for brush holder, Fig. 23.....	1-B-10332	
27	Binding Plate, for brush, Fig. 26.....	17-C-4840	
28	Adjusting Hook, for meshing pinion of motor and main gear of mechanism.....	30-C-6498	

**MOTOR, COMMUCATOR ON EACH END, FOR STYLE
"S" ELECTRIC SIGNAL MECHANISMS
D. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
29	Nut, with gasket, Fig. 29a, for fastening glass commutator shield, Fig. 12, to front armature shaft bearing, Fig. 10.....	57-B-8109 87-B-8078	
29a	Gasket, for nut, Fig. 29.....		
30	Stay Bolt, with two 3/8" hex. nuts, for fastening laminated field, Fig. 2, to motor base, Fig. 1.....	59-B-8114 60-B-7826	
31	Plate Washer, for stay bolt, Fig. 30.....		
32	Cap Screw, 5/16"x3/4", for fastening front or rear armature shaft bearing to laminated field, Fig. 2.....		
33	Special Cap Screw, for fastening adjusting hook, Fig. 28, and rear armature shaft bearing, Fig. 11, to laminated field, Fig. 2.....	28-B-8709	
34	Fil. Hd. S. Mach. Screw, No. 10-32x3/8", for fastening cover, Fig. 3, to laminated field, Fig. 2.....		
35	Fil. Hd. S. Mach. Screw, No. 8-32x3/8", for holding brush, Fig. 26, in brush holder, Fig. 23.....		
36	Fil. Hd. B. Mach. Screw, No. 6-32x1/4", for fastening spring, Fig. 25, to brush holder, Fig. 23.....		
37	Fil. Hd. B. Mach. Screw, No. 4-40x1/8", for fastening spring, Fig. 25, to collar, Fig. 24c; also for fastening collar, Fig. 24c, to terminal post, Fig. 24.....		
38	Fil. Hd. Pivot Screw, for holding bushing, Fig. 16, in front of rear armature shaft bearing.....	37-B-8378	
39	Set Screw, cone point, 3/8"x2-3/4", for fastening motor to supporting pin in one, two or three-arm mechanism frame.....		



CIRCUIT CONTROLLER AND DETAILS, DRUM TYPE, FOR
STYLE "S" ELECTRIC SIGNAL MECHANISM

**CIRCUIT CONTROLLER AND DETAILS, DRUM TYPE, FOR
STYLE "S" ELECTRIC SIGNAL MECHANISMS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Drawing Reference	List Price
A	Circuit Controller, Drum Type, as shown, for one-arm three-position signal mechanism with D. C. indication (1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 2-17, 2-18, 2-19, 2-20, 6-21, 1-23, 1-24, 1-25, 7-26, 4-27, 1-28, 15-29, 5-30, 1-31, 2-32, 4-33, 2-34, 4-35, 4-36, 8-37, 1-38a)	36-C-7533
Aa	Circuit Controller, Drum Type, for one-arm two-position signal mechanism with D. C. indication (1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 2-17, 2-18, 2-19, 2-20, 3-21, 1-24, 1-25, 3-26, 2-27, 1-28, 16-29, 5-30, 1-31, 2-32, 4-33, 2-34, 4-35, 4-36, 3-37, 1-38a)	28-C-7533
Ab	Circuit Controller, Drum Type, for one-arm three-position signal mechanism with A. C. indication (1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 2-17, 2-18, 2-19, 2-20, 4-21, 1-23, 8-26, 2-27, 1-28, 15-29, 5-30, 1-31, 2-32, 4-33, 2-34, 4-35, 4-36, 6-37, 1-38a)	10-C-7533
Ac	Circuit Controller, Drum Type, for one-arm two-position signal mechanism with A. C. indication (1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 2-17, 2-18, 2-19, 2-20, 3-21, 3-25, 4-26, 2-27, 1-28, 15-29, 5-30, 1-31, 2-32, 4-33, 2-34, 4-35, 4-36, 3-37, 1-38a)	C-7533-2

**CIRCUIT CONTROLLER AND DETAILS, DRUM TYPE, FOR
STYLE "S" ELECTRIC SIGNAL MECHANISMS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price
Fig. B	Circuit Controller, Drum Type, for two-arm three-position signal mechanism with D. C. indication (1-1, 1-2, 1-3, 1-4, 2-6, 2-7, 2-8, 2-9, 2-10, 2-11, 2-12, 2-13, 2-14, 2-15, 2-16, 4-17, 4-18, 4-19, 4-20, 12-21, 2-23, 2-24, 2-25, 14-26, 8-27, 1-28, 30-29, 10-30, 3-31, 2-32, 4-33, 2-34, 8-35, 8-36, 16-37, 2-38a)	C-7533-4
Ba	Circuit Controller, Drum Type, for two-arm two-position signal mechanism with D. C. indication (1-1, 1-2, 1-3, 1-4, 2-6, 2-8, 2-9, 10-30, 2-10, 2-11, 2-12, 2-13, 2-14, 2-15, 2-16, 4-17, 4-18, 4-19, 4-20, 6-21, 2-24, 2-25, 6-26, 4-27, 1-28, 30-29, 3-31, 2-32, 4-33, 2-34, 8-35, 8-36, 6-37, 2-38a)....	29-C-7533
Bb	Circuit Controller, Drum Type, for two-arm three-position signal mechanism with A. C. indication (1-1, 1-2, 1-3, 1-4, 2-6, 2-7, 2-8, 2-9, 2-10, 2-11, 2-12, 2-13, 2-14, 2-15, 2-16, 4-17, 4-18, 4-19, 4-20, 8-21, 2-23, 16-26, 4-27, 1-28, 30-29, 1-30, 3-31, 2-32, 4-33, 2-34, 8-35, 8-36, 12-37, 2-38a)	7-C-7533
Bc	Circuit Controller, Drum Type, for two-arm two-position signal mechanism with A. C. indication (1-1, 1-2, 1-3, 1-4, 2-6, 2-7, 2-8, 2-9, 2-10, 2-11, 2-12, 2-13, 2-14, 2-15, 2-16, 4-17, 4-18, 4-19, 4-20, 6-21, 8-26, 4-27, 1-28, 30-29, 10-30, 3-31, 2-32, 4-33, 2-34, 8-35, 8-36, 6-37, 2-38a)....	C-7533-2

**CIRCUIT CONTROLLER AND DETAILS, DRUM TYPE, FOR
STYLE "S" ELECTRIC SIGNAL MECHANISMS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Drawing Reference	List Price
C	Circuit Controller, Drum Type, for three-arm three-position signal mechanism with D. C. indication (1-1a, 1-2, 1-3, 1-4a, 3-6, 3-7, 3-8, 3-9, 3-10, 3-11, 3-12, 3-13, 3-14, 3-15, 3-16, 6-17, 6-18, 6-19, 6-20, 18-21, 3-23, 3-24, 3-25, 21-26, 12-27, 1-28a, 51-29, 17-30, 4-31, 2-32, 4-33, 2-34, 12-35, 12-36, 24-37, 3-38a).....	17-C-7533
Ca	Circuit Controller, Drum Type, for three-arm two-position signal mechanism with D. C. indication (1-1a, 1-2, 1-3, 1-4a, 3-6, 3-7, 3-8, 3-9, 3-10, 3-11, 3-12, 3-13, 3-14, 3-15, 3-16, 6-17, 6-18, 6-19, 6-20, 9-21, 3-24, 3-25, 9-26, 6-27, 1-28a, 51-29, 17-30, 4-31, 2-32, 4-33, 2-34, 12-35, 12-36, 19-37, 3-38a)	15-C-7533
Cb	Circuit Controller, Drum Type, for three-arm three-position signal mechanism with A. C. indication (1-1a, 1-2, 1-3, 1-4a, 3-6, 3-7, 3-8, 3-9, 3-10, 3-11, 3-12, 3-13, 3-14, 3-15, 3-16, 6-17, 6-18, 6-19, 6-20, 12-21, 3-23, 24-26, 6-27, 1-28a, 51-29, 17-30, 4-31, 2-32, 4-33, 2-34, 12-35, 12-36, 18-37, 3-38a)	C-7533-I
Cc	Circuit Controller, Drum Type, for three-arm two-position signal mechanism with A. C. indication (1-1a, 1-2, 1-3, 1-4a, 3-6, 3-7, 3-8, 3-9, 3-10, 3-11, 3-12, 3-13, 3-14, 3-15, 3-16, 6-17, 6-18, 6-19, 6-20, 10-21, 12-26, 6-27, 1-28a, 51-29, 17-30, 4-31, 2-32, 4-33, 2-34, 12-35, 12-36, 10-37, 3-38a) ..	C-7533-I

**CIRCUIT CONTROLLER AND DETAILS, DRUM TYPE, FOR
STYLE "S" ELECTRIC SIGNAL MECHANISMS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
1	Contact Spring Base, for one or two-arm circuit controller	23-C-7423	
1a	Contact Spring Base, for three-arm circuit controller.	17-C-7423	
2	Front Bracket, for contact spring base, Fig. 1 or 1a..	2-C-7534	
3	Rear Bracket, for contact spring base, Fig. 1 or 1a...	1-C-7534	
4	Shaft, with two cotters, $3/16" \times 1-1/8"$, for one or two-arm circuit controller.....	18-C-7423	
4a	Shaft, with two cotters, $3/16" \times 1-1/8"$, for three-arm circuit controller.....	9-C-7423	
5	Separator, for one-arm circuit controller.....	19-C-7423	
6	Operating Arm, 90 deg. with jaw, Fig. 6a, and rd. hd. rivet, Fig. 6b, for one, two or three-arm circuit controller	3-C-7534	
6a	Jaw, for operating arm, Fig. 6.....	40-B-8025	
6b	Rd. Hd. I. Rivet, $1/4" \times 11/16"$, for fastening jaw, Fig. 6a, to operating arm, Fig. 6.....		
7	Operating Arm, 45 deg., for one, two or three-arm circuit controller	5-C-7534	
8	Ratchet, with stud, Fig. 8a, headless screw, Fig. 8b, and nut, Fig. 8c, for one, two or three-arm circuit controller	4-C-7534	
8a	Stud, with cotter, $1/8" \times 3/4"$, for ratchet, Fig. 8.....	75-B-8114	
8b	Headless Screw, $1/4" \times 32 \times 3/4"$, for ratchet, Fig. 8.....		
8c	Nut, for headless screw, Fig. 8b.....	130-B-8109	
9	Outside Shell of Spring Guide, for one, two or three-arm circuit controller.....	15-C-7423	
10	Inside Shell of Spring Guide, for one, two or three-arm circuit controller.....	16-C-7423	

**CIRCUIT CONTROLLER AND DETAILS, DRUM TYPE, FOR
STYLE "S" ELECTRIC SIGNAL MECHANISMS**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
11	Pawl, with stud, Fig. 11a, and pin, Fig. 11b, for one, two or three-arm circuit controller.....	6-C-7534	
11a	Stud, for pawl, Fig. 11.....	109-B-8114	
11b	Pin, 1/8"x5/16", C. R. S., for pawl, Fig. 11.....		
12	Coil Spring, for spring guide of one, two or three-arm circuit controller.....	168-7770	
13	Coil Spring, for pawl, Fig. 11.....	134-7770	
14	Jaw, with screw, Fig. 14a, for operating arm, Fig. 7.....	41-B-8025	
14a	Fil. Hd. Mach. Screw, 1/4"x7/8", and hex. nut for jaw, Fig. 14.....		
15	Jaw, with 5/8" hex. nut, pin, Fig. 15a, and for washer, Fig. 15b, for holding pawl, Fig. 11.....	29-B-8025	
15a	Pin, with two cotters, 1/16"x3/4", for jaw, Fig. 15.....	19-B-10203	
15b	Washer, for jaw, Fig. 15.....	3-B-7824	
16	Spring Socket, with washer, Fig. 16a, and nut, Fig. 16b, for holding coil spring, Fig. 13.....	31-B-8084	
16a	Washer, for spring socket, Fig. 16, and for terminal post, Fig. 24a or 29.....	5-B-7828	
16b	Nut, for spring socket, Fig. 16, and for terminal post, Fig. 24a or 29.....	3-B-8109	
17	Contact Support Drum, for one, two or three-arm circuit controller.....	7-C-7423	
18	Drum Head, for contact support drum, Fig. 17.....	5-C-7423	
19	Drum Head, for contact support drum, Fig. 17.....	6-C-7423	
20	Sleeve, for contact support drum, Fig. 17.....	14-C-7423	
21	Contact Block, used on contact support drum, Fig. 17, for two or three position signal.....	11-C-7423	
22	Contact Block, used on contact support drum, Fig. 17, for two or three-position signal.....	13-C-7423	
23	Contact Block, used on contact support drum, Fig. 17, for three-position signal.....	27-C-7423	

**CIRCUIT CONTROLLER AND DETAILS, DRUM TYPE, FOR
STYLE "S" ELECTRICAL SIGNAL MECHANISMS**

Order by Name, Plate and Figure

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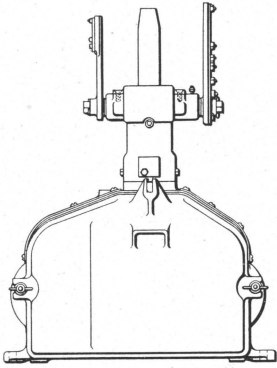
Fig.		Drawing Reference	List Price
24	Contact Spring, with terminal post, Fig. 24a, and rivets, for one, two or three-arm circuit controller when used for signal mechanism with D. C. indication.....	654-B-8385	
24a	Terminal Post, with three washers, Fig. 16a, and three nuts, Fig. 16b, for contact spring, Fig. 24..	504-B-8094	
25	Contact Spring, with terminal post, Fig. 24a, and rivets, for one, two or three-arm circuit controller when used for signal mechanism with D. C. indication	655-B-8385	
26	Contact Spring, with reinforcing spring, Fig. 26a, terminal post, Fig. 24a, and rivets, for one, two or three-arm circuit controller when used for signal mechanism with D. C. or A. C. indication..	653-B-8385	
26a	Reinforcing Spring, for contact spring, Fig. 26.....	137-B-8735	
27	Contact Spring, with terminal post, Fig. 24a, and rivets, for one, two or three-arm circuit controller when used for signal mechanism with D. C. or A. C. indication.....	652-B-8385	
28	Terminal Board, for one or two-arm circuit controller	50-C-7393	
28a	Terminal Board, for three-arm circuit controller....	116-C-7393	
29	Terminal Post, with three washers, Fig. 16a, nut, Fig. 16b, and nut, Fig. 29a, for terminal board, Fig. 28 or 28a.....	230-B-8098	
29a	Lock Nut, for terminal post, Fig. 29.....	9-B-8109	
30	Terminal Connector, for terminal board, Fig. 28 or 28a	105-B-8064	
31	Washer, for shaft, Fig. 4 or 4a.....	9-B-8332	

**CIRCUIT CONTROLLER AND DETAILS, DRUM TYPE, FOR
STYLE "S" ELECTRIC SIGNAL MECHANISMS**

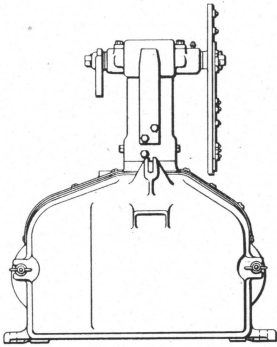
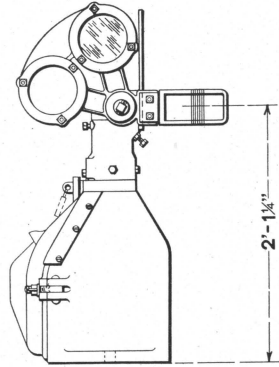
Order by Name, Plate and Figure

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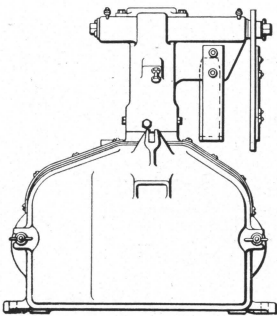
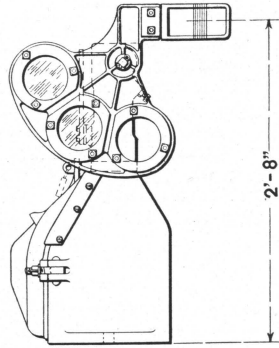
Fig.		Drawing Reference	List Price
32	Hex. Hd. Mach. Bolt, $\frac{1}{2}$ "x3- $\frac{5}{8}$ ", and sq. nut, for fastening circuit controller, one, two or three-arm, to signal mechanism frame.....		
33	Sq. Hd. Mach. Bolt, $\frac{3}{8}$ "x2- $\frac{1}{4}$ ", and nut, with one washer, Fig. 33a, and one washer, Fig. 33b, for fastening front or rear bracket, to contact spring base, Fig. 1 or 1a.....		
33a	Steel Washer, for bolt, Fig. 33.....		
33b	Leather Washer, for bolt, Fig. 33.....	56-7828	
34	Hex. Hd. Tap Bolt, $\frac{3}{8}$ "x1- $\frac{5}{16}$ ", with washer, Fig. 34a, for fastening terminal board, Fig. 28 or 28a, to front or rear brackets.....	320-B-8078	
34a	Washer, for tap bolt, Fig. 34.....		
35	Flat Hd. Mach. Screw, No. 10-32x $\frac{3}{4}$ ", for fastening ratchet, Fig. 8, to drum head, Fig. 19, on quick acting contact support drum.....	4-B-7824	
36	Flat Hd. Mach. Screw, No. 10-32x $\frac{1}{2}$ ", for fastening operating arm, Fig. 7, to drum head, Fig. 19, on slow acting contact support drum.....		
37	Flat Hd. Wood Screw, No. 10x $\frac{3}{4}$ ", for fastening contact block, Fig. 21, 22 or 23, to contact support drum		
38	Operating Rod, with nut, Fig. 38b, for one, two or three-arm circuit controller.....		
38a	as above, with jaw, pin and cotters (1-38, 1-39)	10-B-9996	
38b	Nut, for operating rod, Fig. 38.....		
39	Jaw, with pin, Fig. 39a, for operating rod, Fig. 38....	81-B-8265	
39a	Pin, with two cotters, $\frac{1}{16}$ "x $\frac{3}{4}$ ", for fastening inside shell of spring guide, Fig. 10, and jaw, Fig. 39, to operating arm, Fig. 6.....	80-7742	
		6-B-10203	



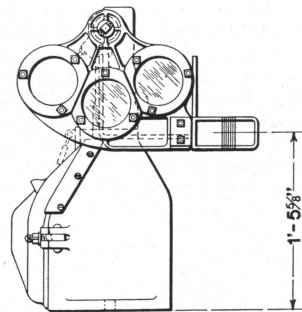
A



B



C



ONE ARM DWARF SIGNALS
SLOT ARM TYPE

ONE ARM DWARF SIGNALS

Slot Arm Type

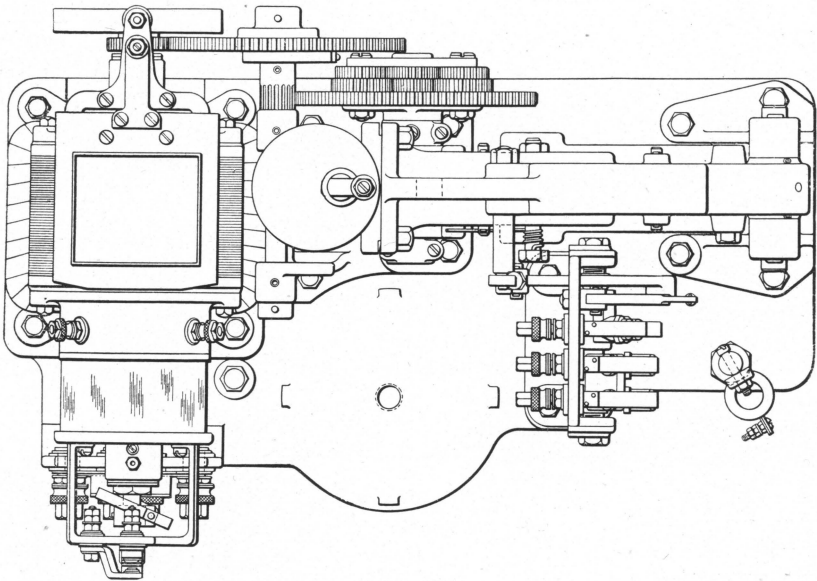
Order by Name, Plate and Figure

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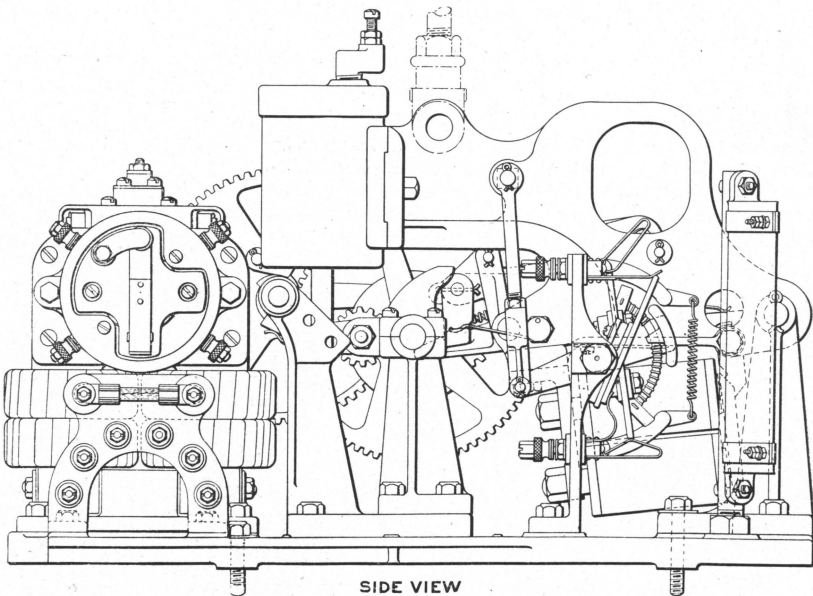
Fig.

- A One-Arm 60 Deg. Lower Quadrant Dwarf Signal....
- B One-Arm 90 Deg. Lower Quadrant Dwarf Signal....
- C One-Arm 90 Deg. Upper Quadrant Dwarf Signal....
- Ca One-Arm 45 Deg. Upper Quadrant Dwarf Signal....

Drawing Reference	List Price	
5-C-7333		
3-C-7333		
10-C-7333		
13-C-7333		



PLAN VIEW



SIDE VIEW

**MECHANISM FOR MOTOR DRIVEN DWARF SIGNAL
SLOT ARM TYPE. A. C. INDICATION**

**MECHANISM FOR MOTOR DRIVEN DWARF SIGNAL
SLOT ARM TYPE. A. C. INDICATION**

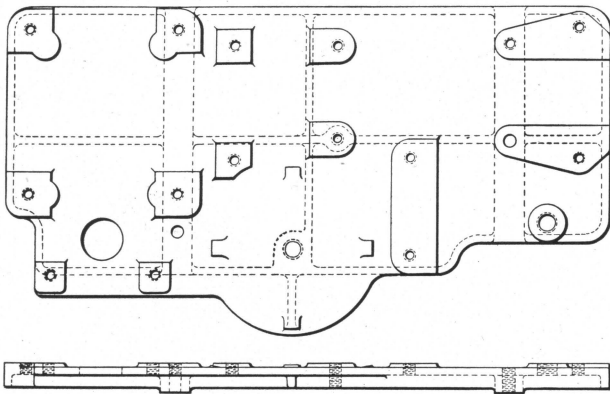
All orders for mechanisms should specify to what resistance slot-arm magnets are to be wound, also whether or not the slow releasing feature is desired.

For details of mechanism see Plates 01197, 01199 and 01201; for motor and details, Plate 01203; for circuit controller, Plate 01205.

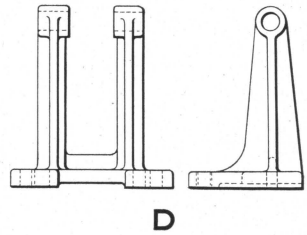
Order by Name, Plate, Figure and Instructions given above

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

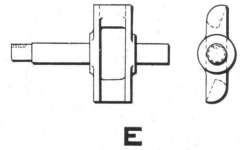
	Drawing Reference	List Price	
Fig. A Mechanism, for motor driven dwarf signal slot arm type, with A. C. indication.....	2-D-1362		
Aa as above, with one hex. hd. tap bolt, $\frac{3}{8}$ "x $2\frac{1}{4}$ "; one hex. hd. tap bolt, $\frac{3}{8}$ "x $1\frac{1}{2}$ ", and two washers, for fastening mechanism in case..	2-D-1362		



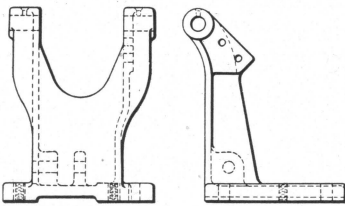
A



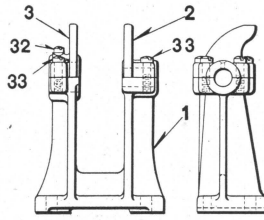
D



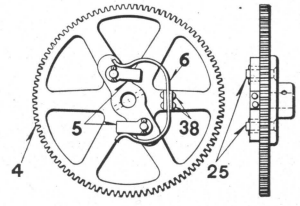
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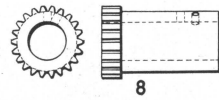
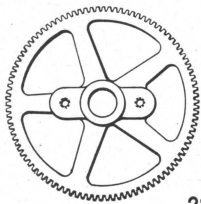
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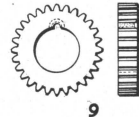
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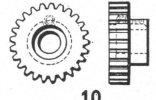
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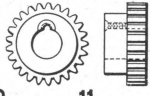
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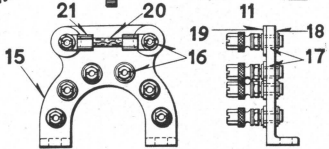
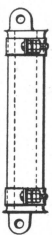
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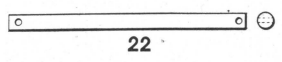
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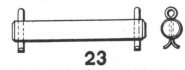
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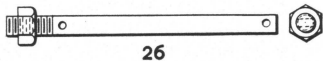
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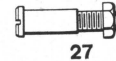
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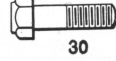
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DETAILS FOR MOTOR DRIVEN DWARF SIGNAL MECHANISM
SLOT ARM TYPE

**DETAILS FOR MOTOR DRIVEN DWARF SIGNAL MECHANISM
SLOT ARM TYPE**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price	
Fig.			
A	Base, for mechanism.....	15-C-7318	
B	Main Gear Bearing, for holding shaft, Fig. 22.....	13-C-7318	
Ba	as above, with main crank bearing, main crank and screws (1-B, 1-Ca, 2-31).....		
C	Main Crank Bearing, with caps and screws (1-1, 1-2, 1-3, 1-32, 4-33).....		
Ca	as above, with main crank, (1-C, 1-E).....		
D	Slot Arm Bracket.....	14-C-7318	
Da	as above, with shaft and cotters (1-D, 1-23).		
E	Main Crank.....	11-C-7318	
F	Main Gear, with pawls, studs, spring, cotters and pins (1-4, 2-5, 1-6, 2-25, 2-38).....		
G	Terminal Board, with terminal bracket, insulating bushings, washers, contact spring, terminal posts and fuse (1-15, 6-16a, 2-16b, 1-20, 2-21).....	1-B-9854	
1	Main Crank Bearing only, for Fig. C.....	12-C-7318	
2	Cap, R. H., for crank bearing, Fig. C.....	3-C-7318	
3	Cap, L. H., for crank bearing, Fig. C.....	10-C-7318	
4	Main Gear only, for Fig. F.....	63-B-8425	
5	Pawl, for gear, Fig. F.....	24-B-9121	
6	Spring, for gear, Fig. F.....	234-8735	
7	Gear.....	64-B-8425	
8	Pinion, used with gear, Fig. 7.....	60-B-8424	
9	Pinion, used with gear, Fig. 7.....	58-B-8424	
10	Pinion, used with gear, Fig. 7.....	68-B-8424	
10a	as above, with pinion, Fig. 9, and two screws, Fig. 36.....	113-8424	

**DETAILS FOR MOTOR DRIVEN DWARF SIGNAL MECHANISM
SLOT ARM TYPE**

Order by Name, Plate and Figure

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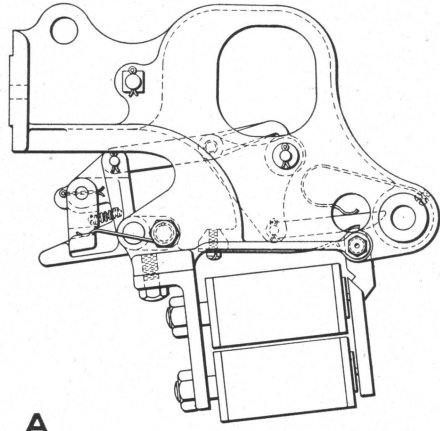
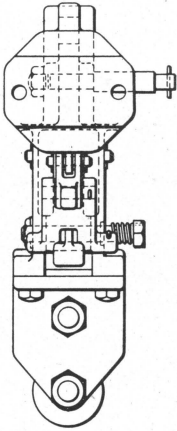
Fig.		Drawing Reference	List Price
11	Pinion, used with gear, Fig. 7.....	61-B-8424	
12	Ratchet Pinion, used with gear, Fig. 7.....	57-B-8424	
13	Plate, used as shield, for pinions, Figs. 10 and 11....	22-C-7318	
14	Resistance Tube, with bands, screws and nuts.....	17-B-9005	
15	Terminal Bracket, for Fig. G.....	2-B-9014	
16	Terminal Post, with washers and nuts, for Fig. G....	22-B-8094	
16a	as above, with insulating bushings and washers (1-16, 1-17, 2-18).....		
16b	Terminal Post, with insulating bushing and washers, for fastening contact spring, Fig. 21, to terminal bracket, Fig. 15 (1-16, 1-17, 1-18, 1-19).		
17	Insulating Bushing, for terminal post, Fig. 16.....	53-B-8095	
18	Insulating Washer, for terminal post, Fig. 16.....	159-B-8078	
19	Insulating Washer, for terminal post, Fig. 16b.....	125-B-8078	
20	Fuse, for Fig. G.....	4-B-9014	
21	Contact Spring, for holding fuse, Fig. 20.....	445-B-8385	
22	Shaft, for gear bearing, Fig. B.....	16-C-7318	
22a	as above, with collar and pin (1-22, 1-24, 1-39)		
23	Shaft, with two cotters, 3/16" x 1-1/8", for slot arm bracket, Fig. D.....	36-B-10216	
24	Collar, for shaft, Fig. 22.....	201-B-8350	
25	Stud, with one cotter, 3/32" x 3/4", for Fig. F.....	71-B-8063	
26	Stud, with one 5/8" hex. nut, for holding resistance tube, Fig. 14.....	49-B-8071	
27	Bolt, with nut, Fig. 27a, for fastening pinion, Fig 10, and plate, Fig. 13, to gear, Fig. 7.....	32-B-8099	

**DETAILS FOR MOTOR DRIVEN DWARF SIGNAL MECHANISM
SLOT ARM TYPE**

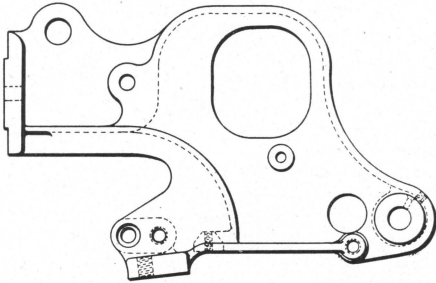
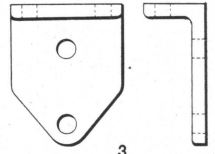
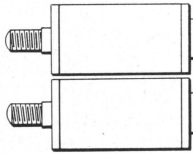
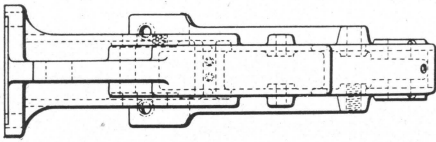
Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

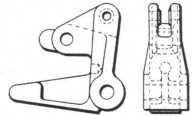
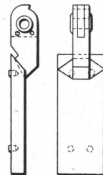
Fig.	Description	Drawing Reference	List Price
27a	Nut, for bolt, Fig. 27.....	75-B-8265	
28	Tap Bolt, $5/16" \times 3/8"$, for fastening terminal bracket, Fig. 15, to base, Fig. A.....		
29	Tap Bolt, $3/8" \times 1"$, for fastening main gear bearing, Fig. B, or slot arm bracket, Fig. D, to base, Fig. A.....		
30	Tap Bolt, $3/8" \times 1-3/8"$, for fastening main crank bearing, Fig. C, and main gear bearing, Fig. B, to base, Fig. A.....	28-B-8378	
31	Cap Screw, $1/4" \times 7/8"$, for fastening main crank bearing, Fig. C, to main gear bearing, Fig. B.....		
32	Pivot Screw, for main crank bearing, Fig. C.....		
33	Fil. Hd. Mach. Screw, $1/4"-20 \times 1"$, for fastening cap, Fig. 2 or 3, to main crank bearing, Fig. C.....	40-B-8097	
34	Fil. Hd. Mach. Screw, No. 14-24 $\times 1-1/8"$, and hex. nut, for fastening resistance tube, Fig. 14, to stud, Fig. 26.....		
35	Flat Hd. Mach. Screw, No. 10-32 $\times 3/8"$, for fastening pinion, Fig. 11, to main crank, Fig. E.....		
36	Flat Hd. Mach. Screw, No. 8-32 $\times 3/8"$, for fastening pinion, Fig. 9, to pinion, Fig. 10.....	40-B-8097	
37	Pin, for fastening main gear, Fig. F, to shaft, Fig. 22.		
38	Brass Esc. Pin, No. 14 $\times 3/8"$, for Fig. F.....		
39	S. S. Pin, No. 12 $\times 7/8"$, for fastening collar, Fig. 24, to shaft, Fig. 22.....		



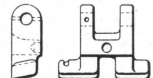
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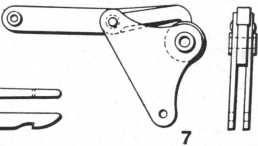
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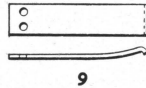
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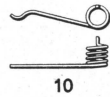
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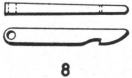
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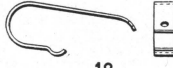
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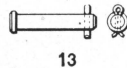
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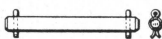
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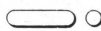
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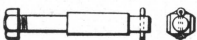
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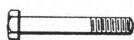
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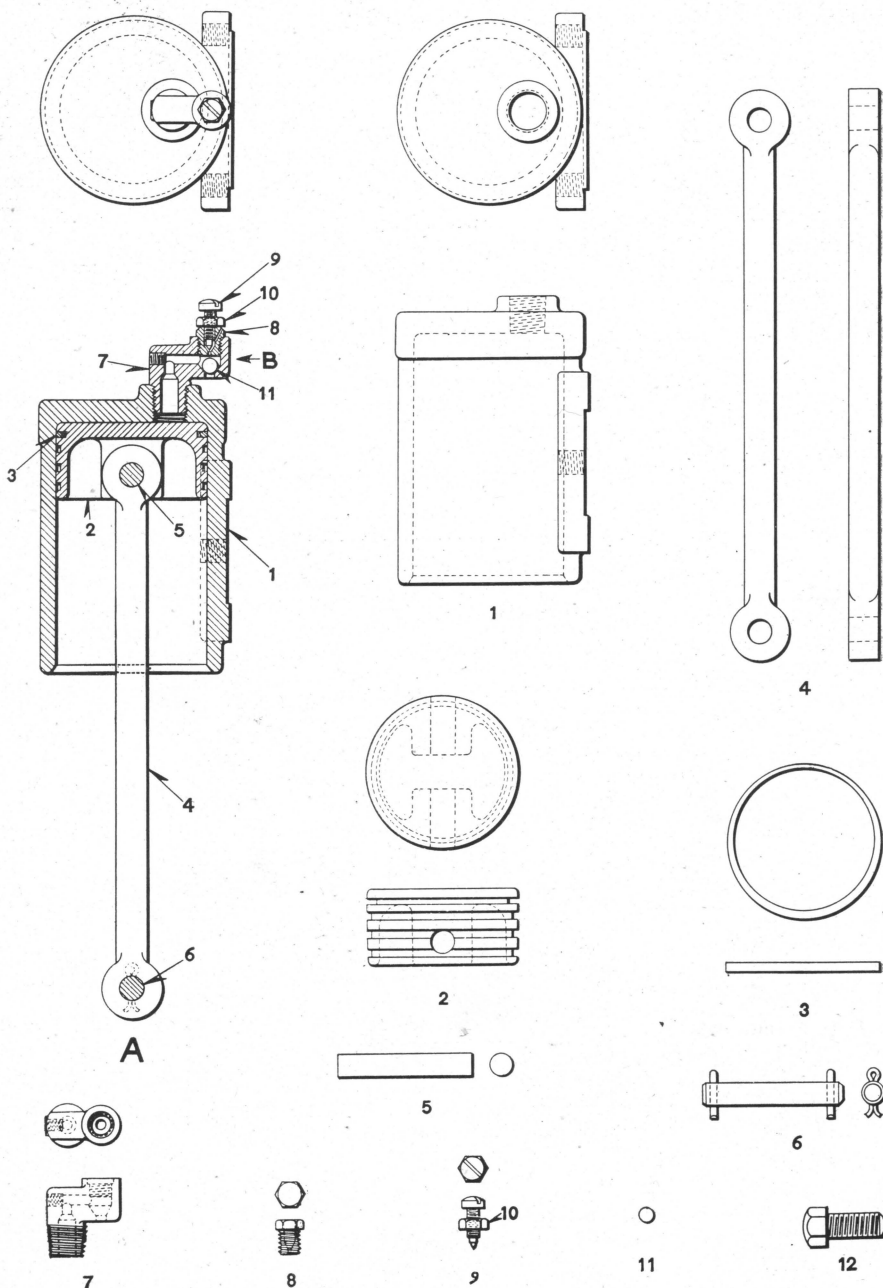
SLOT ARM AND DETAILS FOR MOTOR DRIVEN DWARF SIGNAL MECHANISM. SLOT ARM TYPE

SLOT ARM AND DETAILS FOR MOTOR DRIVEN DWARF SIGNAL MECHANISM. SLOT ARM TYPE

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Slot Arm, as shown, for motor driven dwarf signal mechanism, slot arm type, (1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 1-10, 1-11, 1-12, 1-13, 1-14, 1-15, 1-16, 1-17, 1-18, 1-19, 1-20, 1-21, 1-22, 2-23, 2-24, 1-25, 2-26, 1-27).....	5-C-6500	
1	Slot Arm only.....	27-C-3572	
2	Magnets.....	67a-B-8133	
3	Back Strap, for holding magnets, Fig. 2.....	97-B-8162	
4	Armature.....	45-B-8157	
5	Lifting Crank.....	29-C-3572	
5a	as above, with latch, coil spring, pin and cotter (1-5, 1-6a, 1-11).....		
6	Latch, for lifting crank, Fig. 5.....	30-C-3572	
6a	as above, with pin and cotter (1-6, 1-14)....		
7	Toggle.....	12-C-3572	
8	Latch, for engaging armature, Fig. 4.....	31-C-3572	
9	Latch Support.....	32-C-3572	
10	Spring, for lifting crank, Fig. 5.....	50-B-8124	
11	Coil Spring, for lifting crank, Fig. 5.....	28-B-8124	
12	Flat Spring, for latch, Fig. 8.....	116-B-8735	
13	Pin, with one cotter, 1/8"x3/4", for holding lifting crank, Fig. 5, in slot arm.....	9-B-10208	
14	Pin, with cotter, 1/16"x1", for fastening latch Fig. 6, to lifting crank, Fig. 5.....	18-B-8184	
15	Pin, with two cotters, 3/32"x3/4", for fastening toggle, Fig. 7, to lifting crank, Fig. 5.....	4-B-8097	
16	Pin, with two cotters, 3/32"x3/4", for holding toggle, Fig. 7, in slot arm.....	3-B-8097	
17	Pin, with two cotters, 1/16"x5/8", for fastening latch, Fig. 8, to toggle, Fig. 7.....	75-B-8097	
18	Pin, for supporting armature, Fig. 4.....	74-B-8097	
19	Trunnion, for holding pin, Fig. 18.....	78-B-8378	
20	Trunnion, for holding pin, Fig. 18.....	77-B-8378	
21	Stud, with one cotter, 3/32"x3/4", and 3/8" hex. nut, for fastening operating arm of circuit controller to slot arm.....	92-B-8114	
22	Bolt, for holding spring, Fig. 10.....	25-B-8709	
22a	as above, with nut (1-22, 1-27).....		
23	Cap Screw, 3/8"x13/16", for fastening back strap, Fig. 3, to slot arm.....		
24	Fil. Hd. Mach. Screw, No. 10-32x1/2", for fastening latch support, Fig. 9, to slot arm.....		
25	Fil. Hd. Mach. Screw, No. 10-32x3/16", for fastening flat spring, Fig. 12, to slot arm.....		
26	Nut, for fastening magnets, Fig. 2, to back strap, Fig. 3.....	5-B-8265	
27	Nut, for bolt, Fig. 22.....	86-B-8265	



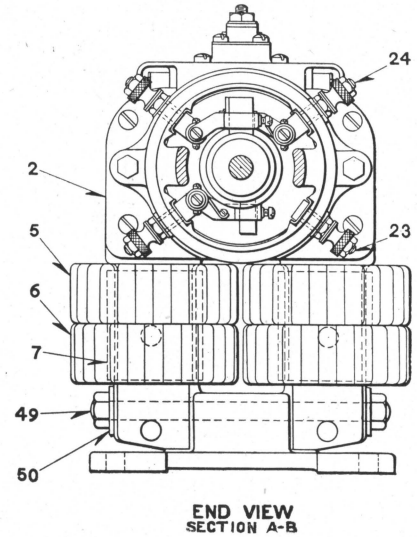
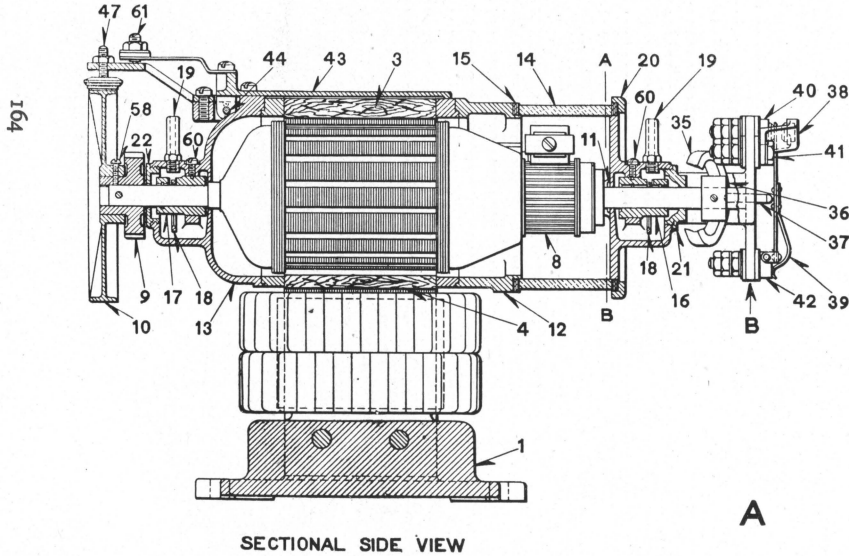
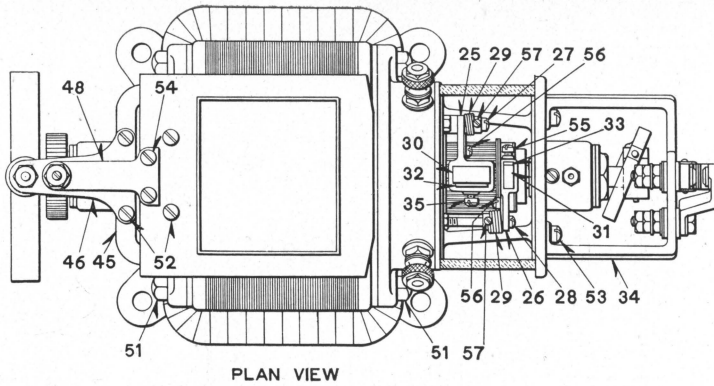
BUFFER CYLINDER FOR MOTOR DRIVEN DWARF SIGNAL MECHANISM. SLOT ARM TYPE

BUFFER CYLINDER FOR MOTOR DRIVEN DWARF SIGNAL MECHANISM. SLOT ARM TYPE

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

		Drawing Reference	List Price
Fig.			
A	Buffer Cylinder, as shown, for motor driven dwarf signal mechanism, slot arm type, (1-B, 1-1, 1-2, 1-3, 1-4, 1-5, 1-6).....	D-1362-2	
Aa	as above, with two cap screws, Fig. 12.....		
B	Check Valve, for Fig. A (1-7, 1-8, 1-9a, 1-11).....	2-A-2454	
1	Cylinder, for Fig. A.....	8-C-7318	
2	Piston	45-B-8328	
3	Piston Ring	16-B-8197	
4	Piston Rod	38-B-8195	
5	Pin, for fastening piston rod to piston.....	1-B-10207	
6	Pin, with two cotters, $\frac{7}{8}$ "x $\frac{3}{4}$ ", for fastening piston rod to gear bearing of motor driven dwarf signal mechanism	2-B-10209	
7	Valve Body, for Fig. B.....		
8	Valve Seat, for Fig. B.....		
9	Screw only, for Fig. B.....	27-B-8098	
9a	as above, with nut (1-9, 1-10).....		
10	Nut, for screw, Fig. 9.....	3-B-8109	
11	Steel Ball, $\frac{1}{4}$ " dia., for Fig. B.....		
12	Cap Screw, $\frac{3}{8}$ "x $\frac{7}{8}$ ", for fastening buffer cylinder, Fig. A, to slot arm of motor driven dwarf signal mechanism		



MOTOR FOR DWARF SIGNAL MECHANISM, SLOT ARM TYPE. A. C. INDICATION

**MOTOR FOR DWARF SIGNAL MECHANISM, SLOT ARM TYPE
A. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price
Fig. A	Motor, with laminated field, brake, centrifugal circuit controller and commutator shield, as shown, for dwarf signal mechanism, slot arm type, A. C. indication	6-C-6497
Aa	as above, with four hex. hd. tap bolts, $\frac{3}{8}$ "x $\frac{3}{4}$ ", for fastening motor to mechanism base.	
B	Centrifugal Circuit Controller, (1-34, 1-35, 1-36, 1-37, 1-38, 1-39, 1-40, 1-41, 1-42a, 2-53)	15-C-5042
1	Motor Base	22-C-4839
2	Laminated Field	10-C-6498
3	Top Wood Filler	2-B-9667
4	Bottom Wood Filler	3-B-9667
5	Operating Field Coil	2-C-5911
6	Indication Field Coil	1-C-5911
7	Copper Sleeve	16-C-4839
8	Armature	6-C-5911
9	Pinion, with pin, Fig. 9a	55-B-8424
9a	Pin, Stub Wire, No. 28x13/16", for fastening pinion, Fig. 9, to armature shaft	
10	Brake Wheel	19-C-4840
10a	as above, with screw (1-10, 1-58)	
11	Wearing Ring, for front end of armature, Fig. 8....	7-C-4839
12	Front Armature Shaft Bearing	11-C-6498
13	Rear Armature Shaft Bearing	3-C-6498
14	Glass Commutator Shield	7-B-8163
15	Leather Washer, for glass commutator, shield, Fig. 14.	28-B-8078
16	Bushing, for front armature shaft bearing, Fig. 12....	84-B-8350
17	Bushing, for rear armature shaft bearing, Fig. 13....	86-B-8350
18	Oil Ring, for front or rear armature shaft bearing....	6-C-4839

**MOTOR FOR DWARF SIGNAL MECHANISM, SLOT ARM TYPE
A. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
19	Oil Cup, for front or rear armature shaft bearing....	11-C-4839	
20	Shield Holder, for glass commutator shield, Fig. 14..	12-C-5042	
20a	as above, with screws (1-20, 2-59).....		
21	Nut, for front armature shaft bearing, Fig. 12.....	47-B-8082	
22	Nut, for rear armature shaft bearing, Fig. 13.....	129-B-8109	
23	Terminal Post, with plate washers, nuts, insulating washers and insulating bushing for front armature shaft bearing, Fig. 12.....	120-B-8094	
24	Terminal Post, with plate washers, nuts, insulating washers and insulating bushing for brush holder, Fig. 25 or 26.....	140-B-8094	
25	Brush Holder, for operation brush.....	16-C-4840	
25a	as above, with bracket, spring, operation brush, binding plate, terminal post, collars, screws and nut (1-25, 1-25b, 1-27a, 1-29, 1-30, 1-32, 1-55, 1-56).....		
25b	Bracket only, for brush holder, Fig. 25 or 26.....	12-C-2819	
26	Brush Holder, for indication brush.....	15-C-4840	
26a	as above, with bracket, spring, indication brush, binding plate, terminal post, collar, screws and nut (1-26, 1-25b, 1-28a, 1-29, 1-31, 1-33, 1-55, 1-56).....		
27	Terminal Post, with hex. nut, Fig. 27c, for fastening brush holder, Fig. 25, to bracket, Fig. 25b.....	172-B-8094	
27a	as above, with collars and screws (1-27, 1-27b, 1-28b, 2-57).....		
27b	Collar, for terminal post, Fig. 27.....	319-8350	
27c	Nut, for terminal post, Fig. 27 or 28.....	12-B-8109	

**MOTOR FOR DWARF SIGNAL MECHANISM, SLOT ARM TYPE
A. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Description	Drawing Reference	List Price
28	Terminal Post, with hex. nut, Fig. 27c for fastening brush holder, Fig. 26, to bracket, Fig. 25b.....	173-B-8094	
28a	as above, with collar and screws (1-28, 1-28b, 2-57).....		
28b	Collar, for terminal post, Fig. 27 or 28.....	53-B-8350	
29	Spring, for brush holder, Fig. 25 or 26.....	69-B-7770	
30	Operation Brush, for brush holder, Fig. 25.....	1-B-10332	
31	Indication Brush, for brush holder, Fig. 26.....	2-B-10332	
32	Binding Plate, for operation brush, Fig. 30.....	17-C-4840	
33	Binding Plate, for indication brush, Fig. 31.....	18-C-4840	
34	Bracket for Fig. B.....	1-C-5042	
35	Ring, with arm, Fig. 35a, and two pins, Fig. 35b, for Fig. B.....	19-C-5042	
35a	Arm, for ring, Fig. 35.....	20-C-5042	
35b	Pin, for fastening arm, Fig. 35a, to ring, Fig. 35....	31-B-10301	
36	Clamp, with set screw, Fig. 36a, for Fig. B.....	17-C-5042	
36a	Set Screw, for clamp, Fig. 36.....	453-8098	
37	Pin, with fibre tip for front end of armature shaft...	9-C-5042	
38	Contact Piece, with carbon tip, for Fig. B.....	2-C-5042	
39	Contact Spring, with hinge, Fig. 39a, spring, Fig. 39b, and rivets, for Fig. B.....	164-B-8385	
39a	Hinge, for contact spring, Fig. 39.....	13-C-5042	
39b	Spring, for contact spring, Fig. 39.....	165-B-8385	
40	Terminal Post, with carbon tip, washers, nuts, insulating washers and insulating bushing, for Fig. B.	142-B-8094	

**MOTOR FOR DWARF SIGNAL MECHANISM, SLOT ARM TYPE
A. C. INDICATION**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

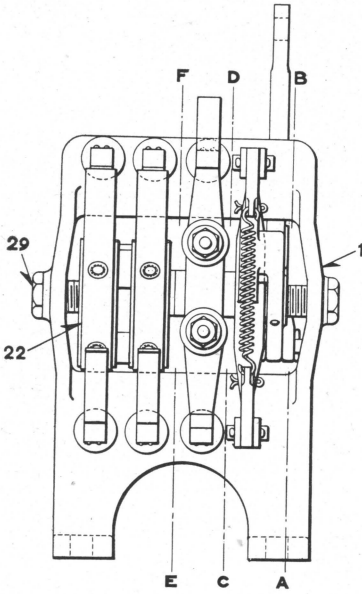
Fig.		Drawing Reference	List Price
41	Terminal Post, with washers, nuts, insulating washers and insulating bushing, for fastening contact piece, Fig. 38, to bracket, Fig. 34.....	42-B-8094	
42	Terminal Post, with washers, nuts, insulating washers and insulating bushing, for holding contact spring, Fig. 39.....	189-B-8094	
42a	as above, with contact spring and one stub steel pin, No. 52x5/8", (I-42, I-39).....		
43	Name Plate and Shield, for armature, Fig. 45.....	22-B-8225	
43a	as above, with pin, armature, brake shoe support, brake shoe, spring and screws (I-43, I-44, I-45, I-46, I-47, I-48, 5-52, 2-54, I-61).....		
44	Pin, with two cotters, 1/16"x1/2", for fastening armature, Fig. 45, to name plate and shield, Fig. 43..	28-B-8097	
45	Armature, with pins for brake shoe support, Fig. 46.	56-B-8157	
46	Brake Shoe Support	16-C-2819	
47	Brake Shoe, with pad and nut.....	272-B-8098	
48	Spring, for brake shoe support.....	10-B-8735	
49	Stay Bolt, with two 3/8" hex. nuts, for fastening laminated field, Fig. 2, to motor base, Fig. 1.....	59-B-8114	
50	Plate Washer, for stay bolt, Fig 49.....	60-7826	
51	Cap Screw, 5/16"x3/4", for fastening front or rear armature shaft bearing to laminated field, Fig. 2.		

**MOTOR FOR DWARF SIGNAL MECHANISM, SLOT ARM TYPE
A. C. INDICATION**

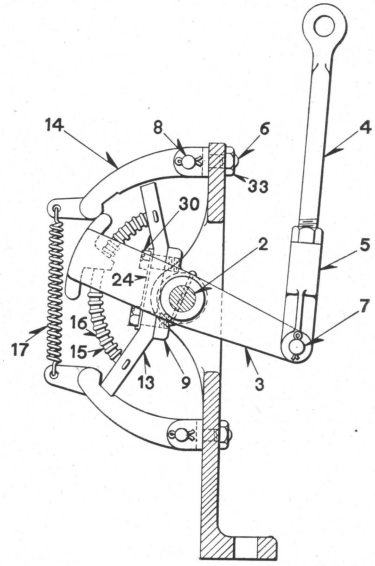
Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

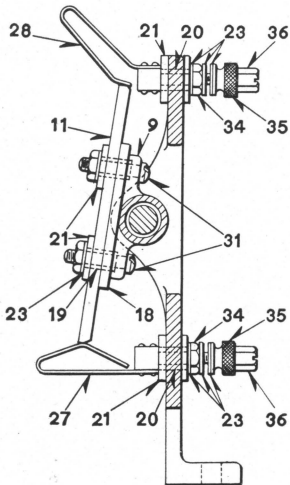
Fig.		Drawing Reference	List Price
52	Fil. Hd. B. Mach. Screw, No. 10-32x $\frac{1}{2}$ " , for fastening name plate and shield, Fig. 43, to rear armature shaft bearing, Fig. 13, and for fastening brake shoe support, Fig. 46, to armature, Fig. 45.		
53	Fil. Hd. S. Mach. Screw, No. 10-32x $\frac{3}{8}$ " , for fastening bracket, Fig. 34, to front armature shaft bearing, Fig. 12.....		
54	Fil. Hd. B. Mach. Screw, No. 10-32x $\frac{1}{4}$ " , for fastening spring, Fig. 48, to name plate and shield, Fig. 43		
55	Fil. Hd. S. Mach. Screw, No. 8-32x $\frac{3}{8}$ " , for holding operation brush, Fig. 30, in brush holder, Fig. 25, and for holding indication brush, Fig. 31, in brush holder, Fig. 26.....		
56	Fil. Hd. B. Mach. Screw, No. 6-32x $\frac{1}{4}$ " , for fastening spring, Fig. 29, to brush holder, Fig. 25 or 26..		
57	Fil. Hd. S. Mach. Screw, No. 4-40x $\frac{1}{8}$ " , for fastening spring, Fig. 29, to collar, Fig. 28b, also for fastening collar, Fig. 28b, to terminal post, Fig. 27 or 28.....		
58	Rd. Hd. S. Mach. Screw, No. 10-32x $\frac{3}{8}$ " , for fastening brake wheel, Fig. 10, to pinion, Fig. 9.....		
59	Flat Hd. B. Mach. Screw, No. 10-32x $\frac{3}{8}$ " (not shown), for fastening shield holder, Fig. 20, to front armature shaft bearing, Fig. 12.....		
60	Fil. Hd. Pivot Screw, for holding bushing, Fig. 16, in front armature shaft bearing, Fig. 12, also for holding bushing, Fig. 17, in rear armature shaft bearing, Fig. 13.....		
61	Headless Screw, with nut, for spring, Fig. 48.....	37-B-8378 66-B-8098	



FRONT VIEW

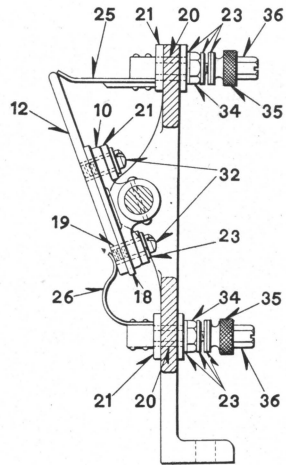


SIDE VIEW
SECTION A-B



SIDE VIEW
SECTION C-D

A



SIDE VIEW
SECTION E-F

QUICK ACTING CIRCUIT CONTROLLER, FOR MOTOR
DRIVEN DWARF SIGNAL MECHANISM. SLOT ARM TYPE

**QUICK ACTING CIRCUIT CONTROLLER FOR MOTOR
DRIVEN DWARF SIGNAL MECHANISM
SLOT ARM TYPE**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.	Description	Drawing Reference	List Price
A	Quick Acting Circuit Controller, as shown, for motor driven dwarf signal mechanism, slot arm type, (I-1, I-2, I-3, I-4a, I-6a, I-9a, I-10a, 2-14, I-17, 2-22, 2-25b, 2-26b, I-27b, I-28b, 2-29).....	20-C-5047	
Aa	as above, with two tap bolts, $\frac{3}{8}$ "x $\frac{3}{4}$ ", for fastening circuit controller to base of mechanism.		
1	Base	28-C-5047	
2	Shaft	27-C-5047	
3	Operating Arm, with one steel pin, No. 30x $\frac{7}{8}$ ", for fastening to shaft, Fig. 2.....	13-B-9823	
4	Eye Bolt, with 5/16" hex. nut, for operating circuit controller	76-B-8034	
4a	as above, with jaw, pin and cotters (I-4, I-5a)		
5	Jaw, for eye bolt, Fig. 4.....	18-B-7742	
5a	as above, with pin and cotters (I-5, I-7)...		
6	Jaw, for latch arm, Fig. 14.....	8-B-8025	
6a	as above, with pin, cotters and nut (I-6, I-8, I-33).....		
7	Pin, with two cotters, 1/16"x $\frac{3}{4}$ ", for jaw, Fig. 5....	2-B-10203	
8	Pin, with two cotters, 1/16"x $\frac{3}{4}$ ", for jaw, Fig. 6....	30-B-10203	
9	Bracket, for Fig A.....	4-B-9365	
9a	as above, with latch, spring rod, coil springs, contact arm, insulating strip, insulating bushings, washers, insulating washers, nut lock washer, screws, nut and cotters (I-9, I-11, I-13a, I-18, 2-19, 2-21, I-24, 2-30, 2-31a).....		
10	Bracket, with one steel pin, No. 30x $\frac{7}{8}$ ", for fastening to shaft, Fig. 2.....	25-C-5047	
10a	as above, with contact arms, insulating strips, insulating bushings, insulating washers, washers, and screws (I-10, 2-12, 2-18, 4-19, 4-21, 4-23, 4-32)		

**QUICK ACTING CIRCUIT CONTROLLER FOR MOTOR
DRIVEN DWARF SIGNAL MECHANISM
SLOT ARM TYPE**

Order by Name, Plate and Figure

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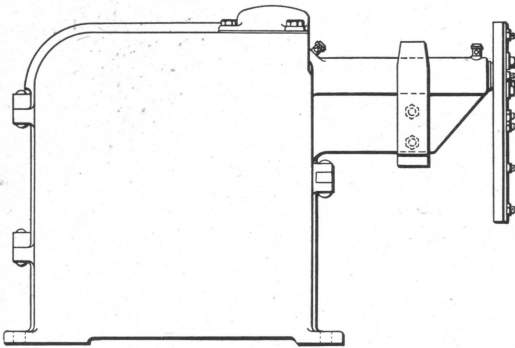
Fig.	Description	Drawing Reference	List Price
11	Contact Arm, for bracket, Fig. 9.....	6-B-9365	
12	Contact Arm, for bracket, Fig. 10.....	7-B-9365	
13	Latch, with two cotters, 1/16"x5/8", for bracket, Fig. 9	6-C-4675	
13a	as above, with spring rod and coil springs (1-13, 1-15, 2-16).....		
14	Latch Arm, for Fig. A.....	5-C-4675	
14a	as above, with jaw, pin, cotters and nut (1-14, 1-6a).....		
15	Spring Rod, for latch, Fig. 13.....	10-C-4675	
16	Coil Spring, for spring rod, Fig. 15.....	45-B-7770	
17	Coil Spring, for latch arm, Fig. 14.....	46-B-7770	
18	Insulating Strip, for contact arm, Fig. 11 or 12.....	74-B-8750	
19	Insulating Bushing, for bracket, Fig. 9 or 10.....	15-B-10269	
20	Insulating bushing, for terminal post of contact spring, Fig. 25, 26, 27 or 28.....	1-B-10269	
21	Insulating Washer, for terminal post of contact spring, Fig. 25, 26, 27 or 28, and for bracket, Fig. 9 or 10.....	166-B-8078	
22	Washer, for shaft, Fig. 2.....	8-B-7828	
23	Washer, for terminal post of contact spring, Fig. 25, 26, 27 or 28, and for screw, Fig. 31 or 32.....	5-B-7828	
24	Nut Lock Washer, for screw, Fig. 30.....	60-B-8486	
25	Contact Spring, with terminal post, reinforcing spring and rivets	480-B-8385	
25a	as above, with washers and nuts (1-25, 3-23, 1-34, 1-35, 1-36).....		
25b	as above, with insulating bushing and insulating washers (1-25a, 1-20, 2-21).....		
26	Bent Contact Spring, with terminal post and rivets..	481-B-8385	
26a	as above, with washers and nuts (1-26, 3-23, 1-34, 1-35, 1-36).....		

**QUICK ACTING CIRCUIT CONTROLLER FOR MOTOR
DRIVEN DWARF SIGNAL MECHANISM
SLOT ARM TYPE**

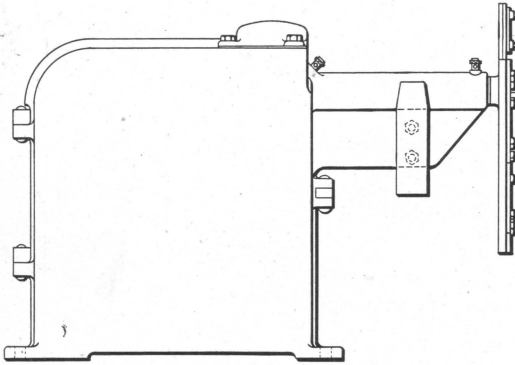
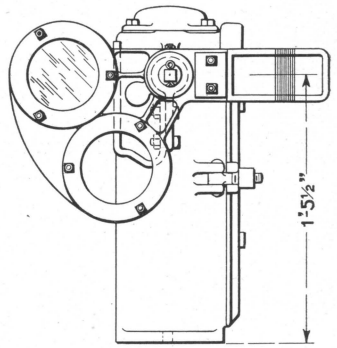
Order by Name, Plate and Figure

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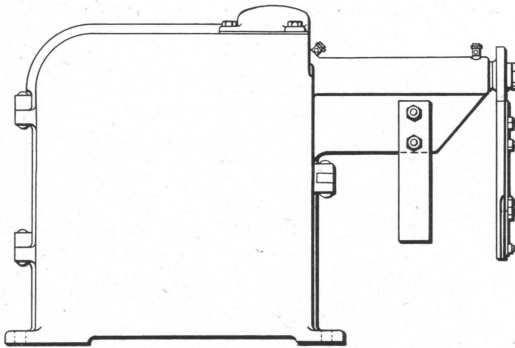
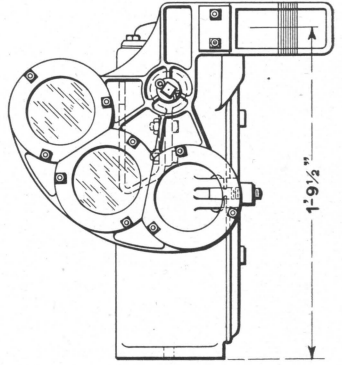
Fig.		Drawing Reference	List Price
26b	as above, with insulating bushing and insulating washers (I-26a, I-20, 2-21)		
27	Contact Spring, with terminal post and rivets.....	270-B-8385	
27a	as above, with washers and nuts (I-27, 3-23, I-34, I-35, I-36)		
27b	as above, with insulating bushing and insulating washers (I-27a, I-20, 2-21)		
28	Bent Contact Spring, with terminal post and rivets..	271-B-8385	
28a	as above, with washers and nuts (I-28, 3-23, I-34, I-35, I-36)		
28b	as above, with insulating bushing and insulating washers (I-28a, I-20, 2-21)		
29	Trunnion Screw, for holding shaft, Fig. 2, in base, Fig. 1	74-B-8378	
30	Screw, for fastening latch, Fig. 13, to bracket, Fig. 9.	289-B-8098	
31	Fil. Hd. Mach. Screw, No. 10-32x15/16", for fastening contact arm, Fig. 11, to bracket, Fig. 9.....		
31a	as above, with washer and nut, (I-31, I-23, I-34)		
32	Fil. Hd. Mach. Screw, No. 10-32x5/8", for fastening contact arm, Fig. 12, to bracket, Fig. 10.....		
33	Nut, for fastening jaw, Fig. 6, to base, Fig. 1.....	24-B-8109	
34	Nut, for terminal post of contact spring, Fig. 25, 26, 27 or 28, and for screw, Fig. 31.....	3-B-8109	
35	Thumb Nut, for terminal post of contact spring, Fig. 25, 26, 27 or 28.....	18-B-8109	
36	Lock Nut, for terminal post of contact spring, Fig. 25, 26, 27 or 28.....	17-B-8109	



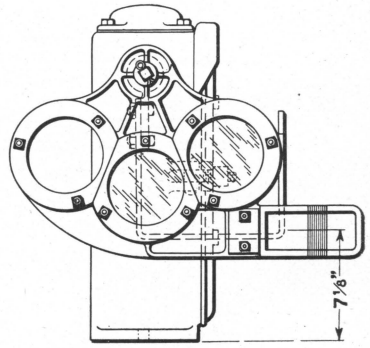
A



B



C



ONE ARM SOLENOID DWARF SIGNAL

ONE ARM SOLENOID DWARF SIGNAL

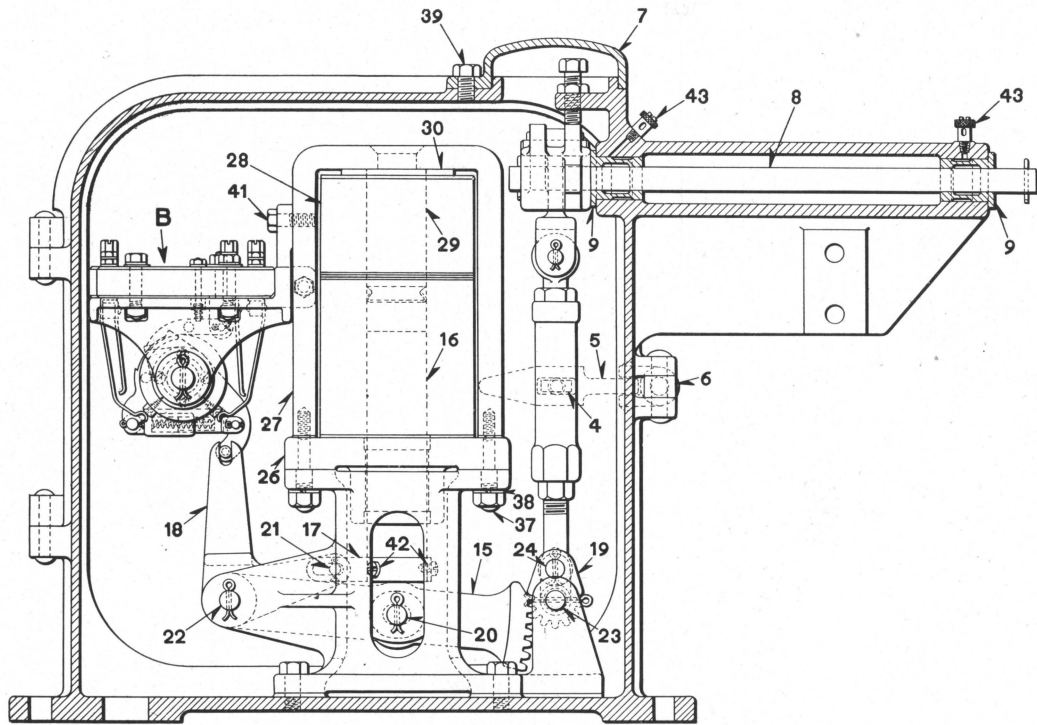
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Fig.

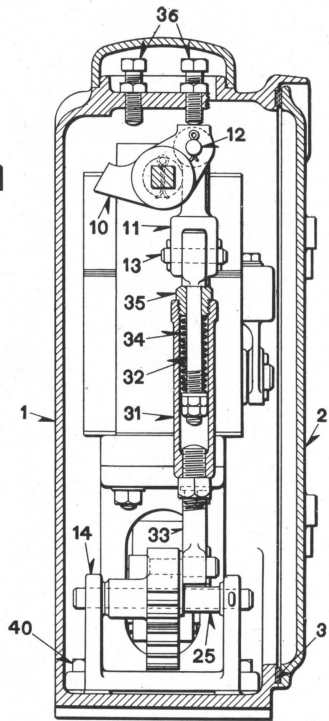
- A One-Arm 60 Deg. Lower Quadrant Solenoid Dwarf Signal
- B One-Arm 90 Deg. Lower Quadrant Solenoid Dwarf Signal
- C One-Arm 90 Deg. Upper Quadrant Solenoid Dwarf Signal
- Ca One-Arm 45 Deg. Upper Quadrant Solenoid Dwarf Signal

Drawing Reference	List Price
1-C-7426	
4-C-7426	
3-C-7426	
2-C-7426	



SECTIONAL SIDE VIEW

A



SECTIONAL END VIEW

MECHANISM FOR ONE ARM SOLENOID DWARF SIGNAL

MECHANISM FOR ONE ARM SOLENOID DWARF SIGNAL

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price
Fig.		
A	Mechanism, as shown, for one-arm 60 deg. lower quadrant solenoid dwarf signal (1-B, 1-1a, 1-8a, 1-10a, 1-11a, 1-14, 1-15, 1-16a, 1-18, 1-19a, 1-22, 1-23, 1-25, 1-26, 1-27a, 1-28, 1-31a, 2-36, 4-37, 4-38, 4-49)	2-C-7400
Aa	Mechanism, for one-arm 90 deg. lower quadrant solenoid dwarf signal (1-B, 1-1a, 1-8c, 1-10c, 1-11a, 1-14, 1-15, 1-16a, 1-18, 1-19c, 1-22, 1-23, 1-25, 1-26, 1-27a, 1-28, 1-31a, 2-36, 4-37, 4-38, 4-40)	4-C-7400
Ab	Mechanism, for one-arm 45 deg. upper quadrant solenoid dwarf signal (1-B, 1-1a, 1-8c, 1-10c, 1-11a, 1-14, 1-15, 1-16a, 1-18, 1-19a, 1-22, 1-23, 1-25, 1-26, 1-27a, 1-28, 1-31b, 2-36, 4-37, 4-38, 4-40)	3-C-7400
Ac	Mechanism, for one-arm 90 deg. upper quadrant solenoid dwarf signal (1-B, 1-1a, 1-8c, 1-10g, 1-11a, 1-14, 1-15, 1-16a, 1-18, 1-19c, 1-22, 1-23, 1-25, 1-26, 1-27a, 1-28, 1-31a, 2-36, 4-37, 4-38, 4-40)	1-C-7400
B	Circuit Controller, Drum Type, with three tap bolts, Fig. 4t, for mechanism, Fig. A, Aa, Ab or Ac. For details see Plate 01211	1-C-7410
I	Case, for mechanism, Fig. A, Aa, Ab or Ac	1-C-7398
1a	as above, with felt, Fig. 3, 5'-8-5/8" long, door, hasp, eye bolt, cap, oil cups, bolts and rivets (1-1, 1-2a, 2-2b, 1-5, 1-6, 1-6a, 1-7, 3-39, 2-43)	16-C-7398
2	Door, for case, Fig. 1	
2a	as above, with staple (1-2, 1-4)	
2b	Rd. Hd. Rivet, 3/8"x2-1/8", for fastening door, Fig. 2, to case, Fig. 1	
3	Felt, 3/16"x1/2", price per foot	
4	Staple, for door, Fig. 2	1-B-8191
5	Hasp, with nut and rivet	1-B-9925
6	Eye Bolt	55-B-8034
6a	Rd. Hd. Rivet, 1/2"x2-1/8", for fastening eye bolt, Fig. 6, to case, Fig. 1	
7	Cap, for top of case, Fig. 1	2-C-7398
8	Semaphore Shaft, with two cotters, 1/8"x1-1/8", for Fig. A	151-B-8026
8a	as above, with journals (1-8, 2-9)	

MECHANISM FOR ONE ARM SOLENOID DWARF SIGNAL

Order by Name, Plate and Figure

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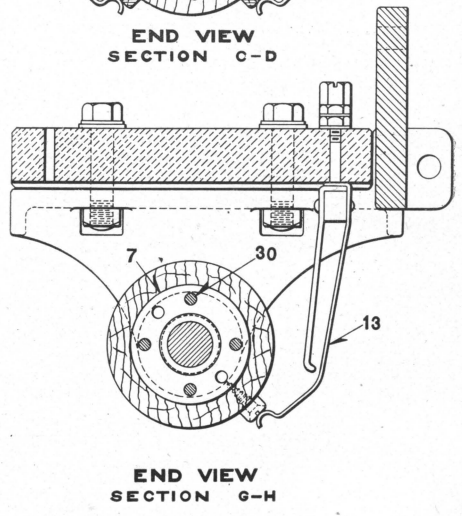
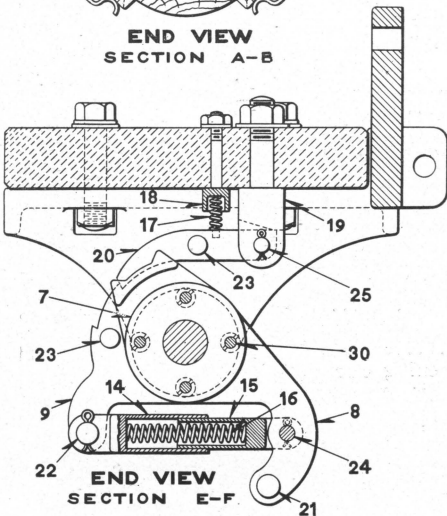
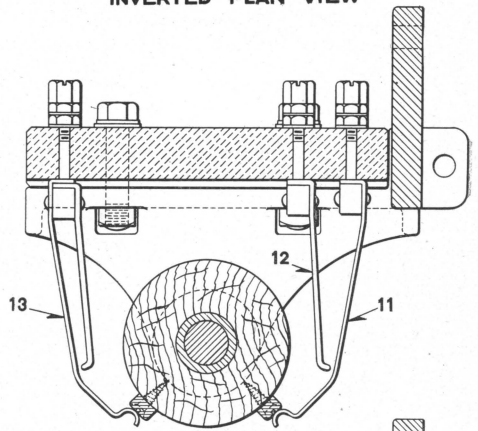
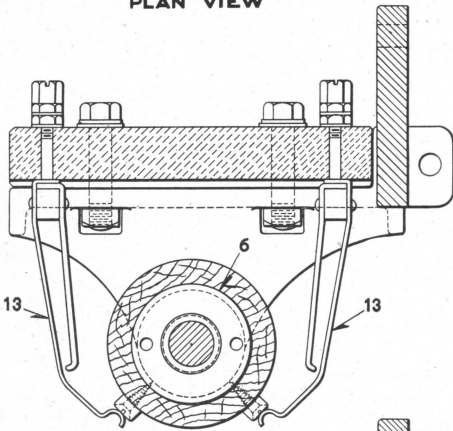
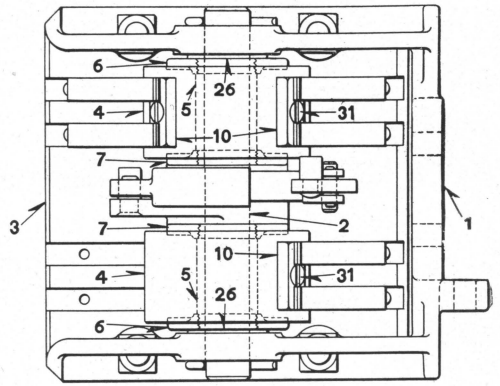
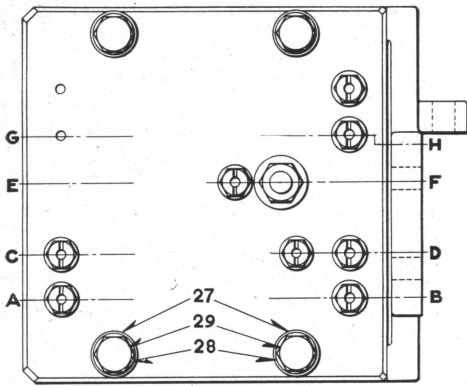
Fig.	Description	Drawing Reference	List Price
8b	Semaphore Shaft, with two cotters, $\frac{1}{8}$ "x1- $\frac{1}{8}$ ", for Fig. Aa, Ab or Ac.....	150-B-8026	
8c	as above, with journals (1-8b, 2-9).....		
9	Journal, for semaphore shaft, Fig. 8 or 8b.....	5-B-8093	
10	Semaphore Crank, for Fig. A.....	42-B-8102	
10a	as above, with pin and cotters (1-10, 1-12)..		
10b	Semaphore Crank, for Fig. Aa.....	47-B-8102	
10c	as above, with pin and cotters (1-10b, 1-12)..		
10d	Semaphore Crank, for Fig. Ab.....	41-B-8102	
10e	as above, with pin and cotters (1-10d, 1-12)..		
10f	Semaphore Crank, for Fig. Ac.....	46-B-8102	
10g	as above, with pin and cotters (1-10f, 1-12)..		
11	Link, for Fig. A, Aa, Ab or Ac.....	5-C-7398	
11a	as above, with pin and cotters (1-11, 1-13)..		
12	Pin, with two cotters, $\frac{1}{8}$ "x $\frac{3}{4}$ ", for semaphore crank, Fig. 10, 10b, 10d or 10f.....	20-B-10215	
13	Pin, with two cotters, $\frac{1}{8}$ "x $\frac{3}{4}$ ", for link, Fig. 11.....	5-B-10215	
14	Bearing Bracket, for Fig. A, Aa, Ab or Ac.....	3-C-7398	
15	Operating Segment, for Fig. A, Aa, Ab or Ac.....	4-C-7398	
16	Plunger, for Fig. A, Aa, Ab or Ac.....	6-C-7398	
16a	as above, with arm, pins, screws and cotters (1-16, 1-17a, 1-20, 3-42).....		
17	Arm, for plunger, Fig. 16.....	10-C-7398	
17a	as above, with pin and cotters (1-17, 1-21)..		
18	Arm, for operating circuit controller, Fig. B.....	119-B-8192	
19	Combined Segment and Operating Crank, for Fig. A or Ab.....	11-C-7398	
19a	as above, with stud and cotter (1-19, 1-24)..		
19b	Combined Segment and Operating Crank, for Fig. Aa or Ac.....	7-C-7398	
19c	as above, with stud and cotter (1-19b, 1-24)..		
20	Pin, with two cotters, $\frac{3}{16}$ "x $\frac{1}{8}$ ", for plunger, Fig. 16.	22-B-10216	
21	Pin, with two cotters, $\frac{1}{8}$ "x $\frac{3}{4}$ ", for arm, Fig. 17.....	17-B-10209	
22	Pin, with two cotters, $\frac{3}{16}$ "x1- $\frac{1}{8}$ ", for holding arm, Fig. 18, in bearing bracket, Fig. 14.....	29-B-10216	
23	Pin, with one cotter, $\frac{3}{16}$ "x2- $\frac{1}{4}$ ", for holding combined segment and operating arm, Fig. 19 or 19b, in bearing bracket, Fig. 14.....	129-B-8057	
24	Stud, with one cotter, $\frac{3}{16}$ "x1- $\frac{1}{8}$ ", for combined segment and operating arm, Fig. 19 or 19b.....	53-B-8071	
25	Separator, for pin, Fig. 23.....	216-B-8350	

MECHANISM FOR ONE ARM SOLENOID DWARF SIGNAL

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

	Drawing Reference	List Price
Fig. 26	Magnet Yoke Support, for mechanism, Fig. A, Aa, Ab or Ac.....	9-C-7398
27	Magnet Yoke, for mechanism, Fig. A, Aa, Ab or Ac. as above, with magnet core, residual disc and washer (I-27, I-29a, I-30).....	9I-B-8162
27a		
28	Magnet, for mechanism, Fig. A, Aa, Ab or Ac.....	16-B-8713
29	Magnet Core, for magnet, Fig. 28.....	86-B-8101
29a	as above, with residual disc (I-29, I-29b)....	
29b	Residual Disc, for magnet core, Fig. 29.....	15-C-7398
30	Washer, for magnet core, Fig. 29.....	62-B-7826
31	Sleeve, for Fig. A, Aa, Ab or Ac.....	17-C-7398
31a	as above, with eye bolts, bushing, coil springs, washer and nuts for Fig. A, Aa or Ac (I-31, I-32, I-33a).....	
31b	Sleeve, with eye bolts, nuts, coil spring, bushing and washers, for Fig. Ab (I-31, I-32a, I-33a).....	
32	Eye Bolt, with nut, Fig. 32b, for Fig. 31.....	84-B-8034
32a	Eye Bolt, with nut, Fig. 32b, for Fig. 31.....	88-B-8034
32b	Nut, for eye bolt, Fig. 32 or 32a.....	73-B-8265
33	Eye Bolt, for Fig. 31.....	85-B-8034
33a	as above, with coil spring, bushing, washer and nut (I-33, I-33b, I-33c, I-34, I-35).....	
33b	Washer, for eye bolt, Fig. 33.....	63-B-7826
33c	Nut, for eye bolt, Fig. 33.....	82-B-8265
34	Coil Spring, for eye bolt, Fig. 33.....	169-B-7770
35	Bushing, for eye bolt, Fig. 33.....	218-B-8350
36	Bolt, with 1/2" thin hex. nut, for stopping semaphore crank, Fig. 10, 10b, 10d or 10f.....	9-B-8280
37	Stud, with 1/2" hex. nut, for fastening magnet yoke support, Fig. 26, and magnet yoke, Fig. 27, to bearing bracket, Fig. 14.....	72-B-8190
38	Lock Washer, for stud, Fig. 37.....	3-B-7926
39	Hex. Hd. Tap Bolt, 1/2"x3/4", for fastening cap, Fig. 7, to case, Fig. 1.....	
40	Hex. Hd. Tap Bolt, 1/2"x1-1/8", for fastening bearing bracket, Fig. 14, to case, Fig. 1.....	
41	Hex. Hd. Tap Bolt, 3/8"x1-1/4", for fastening circuit controller, Fig. B, to magnet yoke, Fig. 27.....	
42	Fil. Hd. Mach. Screw, 1/4"x5/16", for fastening arm, Fig. 17, to plunger, Fig. 16.....	
43	Oil Cup, for case, Fig. 1.....	



A

CIRCUIT CONTROLLER FOR ONE ARM SOLENOID DWARF SIGNAL MECHANISM. DRUM TYPE

**CIRCUIT CONTROLLER FOR ONE ARM SOLENOID
DWARF SIGNAL MECHANISM
DRUM TYPE**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Circuit Controller, as shown, for solenoid dwarf signal mechanism, (1-1, 1-2, 1-3, 1-4a, 1-4b, 1-11a, 1-12a, 5-13a, 1-14, 1-15a, 1-16, 1-17, 1-18a, 1-19a, 2-26, 4-29a)	1-C-7410	
1	Bracket	21-C-7423	
2	Shaft, with two cotters, 3/16" x 1-1/8"		
3	Contact Spring Base	42-B-9968	
4	Contact Support Drum	7-C-7423	
4a	as above, with sleeve, drum heads, operating arm, stud, contact blocks and screws (1-4, 1-5a, 1-8a, 2-10, 4-30, 2-31)		
4b	Contact Support Drum, with sleeve, drum heads, ratchets, studs, contact block, screws and cotter (1-4, 1-5a, 1-9a, 1-10, 4-30, 1-31)		
5	Sleeve, for drum, Fig. 4	14-C-7423	
5a	as above, with drum heads (1-5, 1-6, 1-7) ...		
6	Drum Head, for Fig. 4	5-C-7423	
7	Drum Head, for Fig. 4	6-C-7423	
8	Operating Arm	3-C-7423	
8a	as above, with stud (1-8, 1-21)		
9	Ratchet	4-C-7423	
9a	as above, with studs and cotter (1-9, 1-22, 1-23)		

**CIRCUIT CONTROLLER FOR ONE ARM SOLENOID
DWARF SIGNAL MECHANISM
DRUM TYPE**

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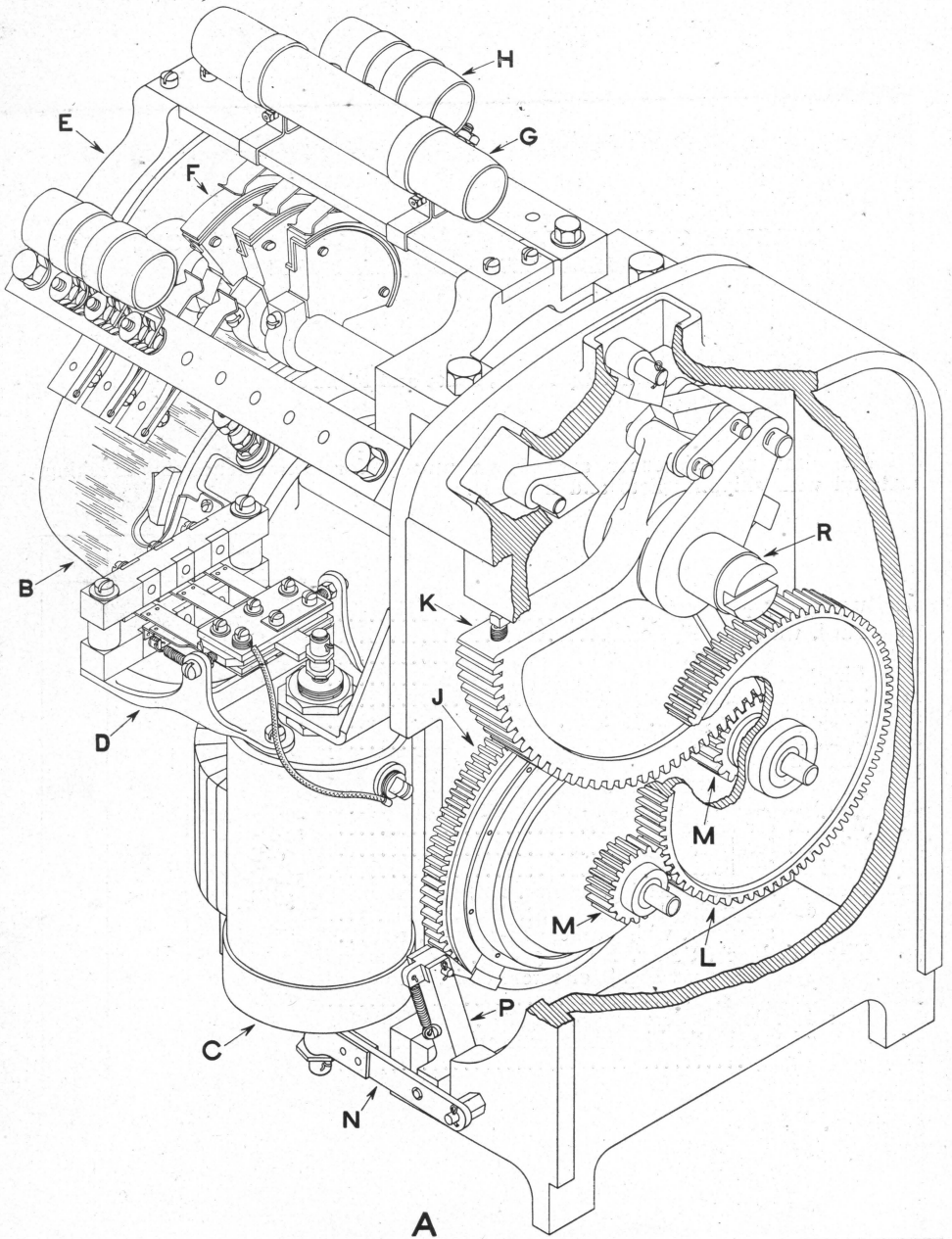
Fig.		Drawing Reference	List Price
10	Contact Block	11-C-7423	
11	Contact Spring, with terminal post and rivets.....	654-B-8385	
11a	as above, with washers and nuts (1-11, 2-11b, 2-11c, 1-11d).....		
11b	Washer, for terminal post of contact spring, Fig. 11, 12 or 13, and for socket, Fig. 18.....	5-B-7828	
11c	Nut, for terminal post of contact spring, Fig. 11, 12 or 13, and for socket, Fig. 18.....	3-B-8109	
11d	Lock Nut, for terminal post of contact spring, Fig. 11, 12 or 13.....	17-B-8109	
12	Contact Spring, with terminal post and rivets.....	655-B-8385	
12a	as above, with washers and nuts (1-12, 2-11b, 2-11c, 1-11d).....		
13	Contact Spring, with terminal post, reinforcing spring and rivets.....	653-B-8385	
13a	as above, with washers and nuts (1-13, 2-11b, 2-11c, 1-11d).....		
14	Outside Shell of Spring Guide.....	15-C-7423	
15	Inside Shell of Spring Guide.....	16-C-7423	
15a	as above, with pin and cotter (1-15, 1-24)...		
16	Coil Spring, for spring guide.....	168-B-7770	
17	Coil Spring, for pawl, Fig. 20.....	134-B-7770	
18	Socket, for coil spring, Fig. 17.....	31-B-8084	
18a	as above, with washer and nut (1-18, 1-11b, 1-11c)		
19	Jaw, with $\frac{3}{8}$ " hex. nut, for holding pawl, Fig. 20....	29-B-8025	
19a	as above, with pawl, pin, stud, cotters, washer and nut (1-19, 1-19b, 1-20a, 1-25).....		

**CIRCUIT CONTROLLER FOR ONE ARM SOLENOID
DWARF SIGNAL MECHANISM
DRUM TYPE**

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	Drawing Reference	List Price
Fig. 19b	Washer, for jaw, Fig. 19.....	3-B-7824
20	Pawl, with pin, Fig. 20b.....	8-C-7423
20a	as above, with stud (1-20, 1-23).....	
20b	Pin, 1/8"x5/16", C. R. S., for pawl, Fig. 20.....	
21	Stud, for operating arm, Fig. 8.....	
22	Stud, with one cotter, 1/8"x3/4", for ratchet, Fig. 9....	118-B-8114
23	Stud, for ratchet, Fig. 9, and pawl, Fig. 20.....	75-B-8114
24	Pin, with two cotters, 1/16"x3/4", for fastening inside shell, Fig. 15, to operating arm, Fig. 8.....	109-B-8114
25	Pin, with two cotters, 1/16"x3/4", for jaw, Fig. 19....	29-B-10203
26	Washer, for shaft, Fig. 2.....	19-B-10203
27	Washer, for bolt, Fig. 20.....	9-B-8332
28	Washer, for bolt, Fig. 20.....	320-B-8078
29	Hex. Hd. Bolt, 3/8"x1-3/4", and sq. nut, for fastening contact spring base, Fig. 3, to bracket, Fig. 1....	56-B-7828
29a	as above, with washers (1-20, 1-27, 1-28)....	
30	Flat Hd. Mach. Screw, No. 10-32x3/4", for fastening operating arm, Fig. 8, or ratchet, Fig. 9, to drum head, Fig. 7.....	
31	Flat Hd. Wood Screw, No. 10-x3/4", for fastening contact block, Fig. 10, to contact support drum, Fig. 4.....	



MECHANISM FOR STYLE "T" TOP POST SIGNAL
UPPER QUADRANT

**MECHANISM FOR STYLE "T" TOP POST SIGNAL
UPPER QUADRANT**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
A	Mechanism, as shown, for style "T" top pose signal, giving indication in the upper quadrant.....	4-D-1527	
Aa	Front Plate	10-C-7578	
Ab	Back Plate	11-C-7578	
Ac	Stop, for gear segment, Fig. K.....	9-C-7578	
Ad	Pin, for holding stop, Fig. Ac, to back plate, Fig. Ab.	202-8097	
Ae	Pin, with two cotters, 1/16"x3/4", for holding stop, Fig. Ac, to back plate, Fig. Ab.....	33-B-10203	
Af	Stud, with 5/8" hex. nut, for back plate, Fig. Ab.....	64-8071	
Ag	Dowel Pin, 1/4"x3/4", for back plate, Fig. Ab.....		
Ah	Cap Screw, 3/8"x1-1/4", for fastening front plate, Fig. Aa, to back plate, Fig. Ab.....		
B	Motor, with terminal board, Fig. Ba, one stud, Fig. Bb, one nut lock washer, Fig. Bc, and one drill rod, Fig. Bd.....	7-C-4666	
Ba	Terminal Board, with supporting plate, terminal posts, washers, screws and nuts, for base of motor, Fig. B.....	57-C-7578	
Bb	Stud, with 5/8" hex. nut, for supporting motor, Fig. B.	48-8114	
Bc	Nut Lock Washer, for stud, Fig. Bb.....	103-8486	
Bd	Drill Rod, No. 30x1-1/2", for fastening stud, Fig. Bb, in front plate, Fig. Aa.....		
C	Holding Magnet, with magnet bracket, Fig. Ca, and two cap screws, Fig. Cb.....	65-B-8342	
Ca	Magnet Bracket, for holding magnet, Fig. C.....	149-8075	
Cb	Cap Screw, 5/16"x1/2", for fastening magnet bracket, Fig. Ca, to front plate, Fig. Aa.....		
D	Magnet Circuit Controller, with two fil. hd. mach. screws, Fig. Da, for top of magnet, Fig. C.....	85-C-7578	
Da	Fil. Hd. Mach. Screw, No. 10-30x5/16", for fastening magnet circuit controller, Fig. D, to holding magnet, Fig. C.....		

**MECHANISM FOR STYLE "T" TOP POST SIGNAL
UPPER QUADRANT**

Order by Name, Plate and Figure

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	Drawing Reference	List Price
Fig. E	Circuit Controller Frame, with two cap screws, Fig. Ea	
Ea	Cap Screw, $\frac{3}{8}$ "x1", for fastening circuit controller frame, Fig. E, to front plate, Fig. Aa	30-C-7578
F	Contracts, for circuit controller frame, Fig. E	1-B-10902
G	Resistance Tube, on top of circuit controller frame, Fig. E	24-B-9065
H	Resistance Tube, on top of circuit controller frame, Fig. E	23-B-9065
J	Clutch, with pin, Fig. Ja, one bushing, Fig. Jb, one bushing, Fig. Jc, one screw plug, Fig. Jd, and one screw plug, Fig. Je	70-C-7578
Ja	Pin, for supporting clutch, Fig. J; also for supporting gear, Fig. L, and pinion, Fig. M	22-B-8184
Jb	Bushing, for end of pin, Fig. Ja, in front plate, Fig. Aa	47-8092
Jc	Bushing, for end of pin, Fig. Ja, in back plate, Fig. Ab	46-8092
Jd	Screw Plug, for holding pin, Fig. Ja, in front plate, Fig. Aa	18-9511
Je	Screw Plug, for holding pin, Fig. Ja, in back plate, Fig. Ab	19-9511
K	Gear Segment, with two links, Fig. Ka, two links, Fig. Kb, one pawl, Fig. Kc, one set screw, Fig. Kd, one pin, Fig. Ke, and two pins, Fig. Kf	80-8425
Ka	Link, for gear segment, Fig. K	12-C-7578
Kb	Link, for connecting pawl, Fig. Kc, to gear segment, Fig. K	54-C-7578
Kc	Pawl, for gear segment, Fig. K	76-C-7578
Kd	Set Screw, $\frac{5}{16}$ "x $\frac{3}{8}$ ", for gear segment, Fig. K	
Ke	Pin, with two pieces iron wire, No. 11x $\frac{3}{4}$ ", for fastening together pawl, Fig. Kc, and link, Fig. Ka	30-B-10209

**MECHANISM FOR STYLE "T" TOP POST SIGNAL
UPPER QUADRANT**

Order by Name, Plate and Figure

The drawing references are shown merely for convenience in checking material with shipping lists and invoices.

Fig.		Drawing Reference	List Price
Kf	Pin, with two pieces iron wire, No. 16x $\frac{3}{4}$ ", for fastening together pawl, Fig. Kc, and link, Fig. Kb; also for fastening link, Fig. Kb, to gear segment, Fig. K.....	32-B-10203	
L	Gear, with woodruff key, Fig. La.....	80-8425	
La	Woodruff Key, No. 5, for gear, Fig. L.....		
M	Pinion	98-8424	
N	Operating Lever, with stud, Fig. Na.....	66-C-7578	
Na	Stud, with cotter, 1/16"x $\frac{3}{8}$ ", for fastening operating lever, Fig. N, to side of back plate, Fig. Ab.....	159-8114	
P	Operating Lever, with pawl, Fig. Pa, coil spring, Fig. Pb, one stud, Fig. Pc, one stud, Fig. Pd, one pin, Fig. Pe, and one cap screw, Fig. Pf.....	65-C-7578	
Pa	Pawl, for operating lever, Fig. P.....	33-9121	
Pb	Coil Spring, for operating lever, Fig. P.....	59-7770	
Pc	Stud, for holding coil spring, Fig. Pb, to operating lever, Fig. P.....	146-8114	
Pd	Stud, for operating lever, Fig. P.....	158-8114	
Pe	Pin, with cotters, 1/16"x $\frac{3}{8}$ ", for fastening pawl, Fig. Pa, to operating lever, Fig. P.....	159-B-8097	
Pf	Cap Screw, for fastening front plate, Fig. Aa, to back plate, Fig. Ab, and operating lever, Fig. P, to back plate, Fig. Ab.....	78-8099	
R	Shaft, with one bushing, Fig. Ra, one bushing, Fig. Rb, and coupling, Fig. Rc.....	14-C-7578	
Ra	Bushing, for end of shaft, Fig. R, on front plate, Fig. Aa	45-8092	
Rb	Bushing, for end of shaft, Fig. R, on back plate, Fig. Ab	44-8092	
Rc	Coupling, for connecting shaft, Fig. R, and shaft of circuit controller frame, Fig. E.....	13-C-7578	

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