

Part Catalogue No. 6192-16

March, 1925

For prices refer to catalogue 10-A or apply to nearest District Office

PARTS OF **Westinghouse** **Type E-16 Oil Circuit-Breakers**

Manually and Electrically Operated
Automatic and Non-Automatic
Single Throw, Cell Mounting
For Indoor Service

25 Cycles, 750 to 2250 Amperes, 15,000 to 25,000 Volts
60 Cycles, 600 to 2000 Amperes, 15,000 to 25,000 Volts

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When ordering repair parts give the complete name plate reading. Always give the name of the part wanted and the style number or the stock order number of the breaker on which the part is to be used.



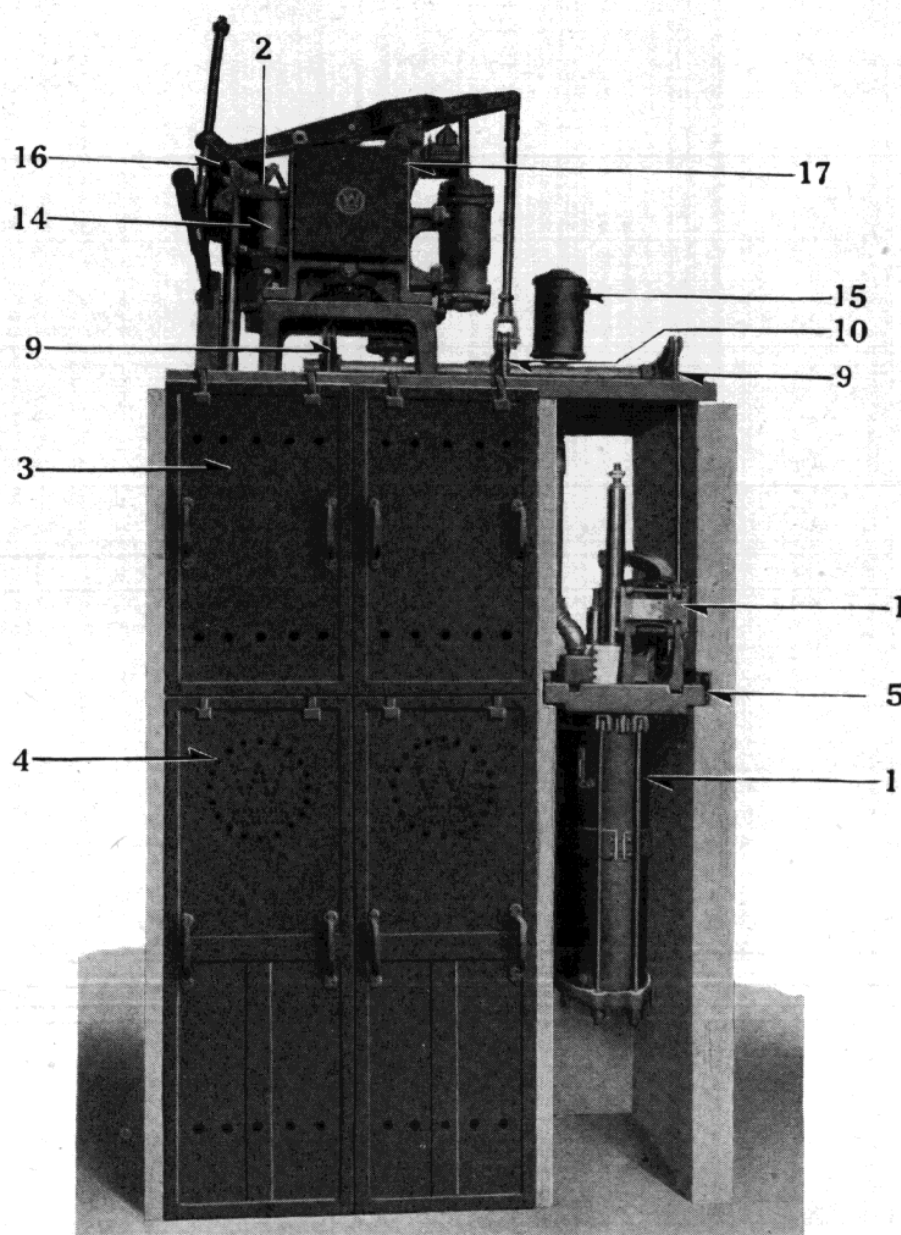
WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY

East Pittsburgh, Pa.

Printed in U. S. A.

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TYPE E-16, 3-POLE, ELECTRICALLY OPERATED OIL CIRCUIT-BREAKER

MAIN ASSEMBLY

For Type E-16 Electrically Operated, Non-Automatic, Shunt Trip Breakers

Illustrated on Page 2

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Complete Breakers Style No.	Amperes		Volts	Poles	Ref. No. 1 Breaker Units Complete			Ref. No. 2 Electrical Mechanisms, Top Plates and Shafts		Ref. No. 3†† Upper Doors with Punched Monogram		Ref. No. 4†† Lower Doors with Punched Monogram	
	60 Cycles	25 Cycles			No. Req.	Style No.		No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.
372030	600	750	25000	2	2	408200	**	2	277452	2	277453		
372031	600	750	25000	3	3	408200	**	3	277452	3	277453		
372032	600	750	25000	4	4	408200	**	4	277452	4	277453		
372033	1200	1350	25000	2	2	408201	**	2	277452	2	277453		
372034	1200	1350	25000	3	3	408201	**	3	277452	3	277453		
372035	1200	1350	25000	4	4	408201	**	4	277452	4	277453		
372036	1600	1800	15000	2	2	408202	**	2	277452	2	277453		
372037	1600	1800	15000	3	3	408202	**	3	277452	3	277453		
372038	1600	1800	15000	4	4	408202	**	4	277452	4	277453		
372039	2000	2250	15000	2	2	408203	**	2	277452	2	277453		
372040	2000	2250	15000	3	3	408203	**	3	277452	3	277453		
372041	2000	2250	15000	4	4	408203	**	4	277452	4	277453		

Complete Breakers Style No.	Ref. No. 5 Wall Channels		Ref. No. 6* Tie Rods for Top Plate		Ref. No. 7* Hexagon Nuts for Tie Rod		Ref. No. 8* Lockwashers for Tie Rod		Ref. No. 9 Pull Rods		Ref. No. 10 Pull Rods One Required	
	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Size	No. Req.	Size	No. Req.	Style No.	Style No.	Style No.
372030	3	277443	8	256141	16	1/2"-13	8	1/2"	1	264129		266514
372031	4	277443	12	256141	24	1/2"-13	12	1/2"	2	264129		266514
372032	5	277443	16	256141	32	1/2"-13	16	1/2"	3	264129		266514
372033	3	277443	8	256141	16	1/2"-13	8	1/2"	1	264129		266514
372034	4	277443	12	256141	24	1/2"-13	12	1/2"	2	264129		266514
372035	5	277443	16	256141	32	1/2"-13	16	1/2"	3	277378		277378
372036	3	277443	8	256141	16	1/2"-13	8	1/2"	1	264129		266514
372037	4	277443	12	256141	24	1/2"-13	12	1/2"	2	264129		266514
372038	5	277443	16	256141	32	1/2"-13	16	1/2"	3	277378		277378
372039	3	277443	8	256141	16	1/2"-13	8	1/2"	1	264129		266514
372040	4	277443	12	256141	24	1/2"-13	12	1/2"	2	264129		266514
372041	5	277443	16	256141	32	1/2"-13	16	1/2"	3	277378		277378

Complete Breakers Style No.	Ref. No. 11* Removable Hand Closing Levers†		Ref. No. 12* Tank Lifters†		Ref. No. 13* Closing Coils 125 V. D.-C. for One Required		Ref. No. 14 for Tripping Coils 125 V. D.-C. for One Required		Ref. No. 15 Mufflers Comp. with Connections		Ref. No. 16 Mufflers Comp. with Connections		Ref. No. 17 Control Relays Comp. †	
	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.
372030		285212		276438		422326		184307	1	408219		434716		375085
372031		285212		276438		277602		184307	2	408219		434716		375085
372032		285212		276438		315872		184307	3	408219		434716		375085
372033		285212		276438		277602		184307	1	408219		434716		375085
372034		285212		276438		315872		184307	2	408219		434716		375085
372035		285212		276438		422329		184307	3	408219		434716		375085
372036		285212		276438		277602		184307	1	408219		434716		375085
372037		285212		276438		422330		184307	2	408219		434716		375085
372038		285212		276438		422329		184307	3	408219		434716		375085
372039		285212		276438		277602		184307	1	408219		434716		375085
372040		285212		276438		434737		184307	2	408219		434716		375085
372041		285212		276438		422328		184307	3	408219		434716		375085

*Not illustrated.

**For material see page 14, 15 and 16.

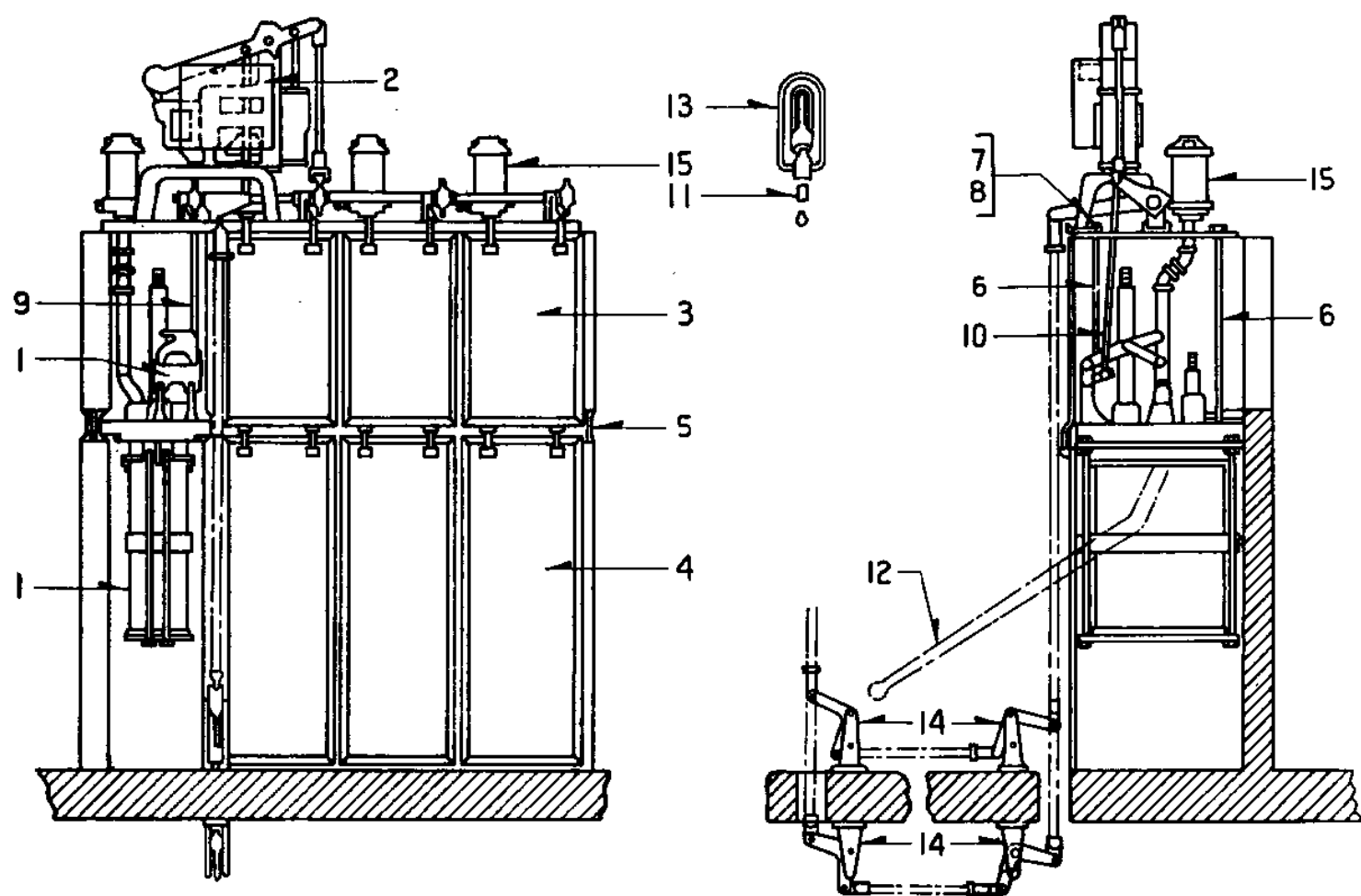
†Not part of Breaker Style Number, usually one per station required.

‡Mounting details are required—see Ref. Nos. 47 to 53 on Page 16.

††Orders for doors must specify whether metal or punched monograms are required, Style No. 434811 is for upper doors with metal monograms and Style No. 434812 is for lower doors with metal monograms.

MAIN ASSEMBLY

For Hand Operated, Full Automatic, Transformer Trip Breakers



ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Complete Breakers Style No.	Amperes		Volts	Poles	Ref. No. 1 Breaker Units Complete		Ref. No. 2 Hand Mechanisms, Top Plates and Shafts	Ref. No. 3† Upper Doors with Punched Monogram		Ref. No. 4† Lower Doors with Punched Monogram	
	60 Cycles	25 Cycles			No. Req.	Style No.		No. Req.	Style No.	No. Req.	Style No.
372006	600	750	25000	2	2	408200	**	2	277452	2	277453
372007	600	750	25000	3	3	408200	**	3	277452	3	277453
372008	600	750	25000	4	4	408200	**	4	277452	4	277453
372009	1200	1350	25000	2	2	408201	**	2	277452	2	277453
372010	1200	1350	25000	3	3	408201	**	3	277452	3	277453
372011	1200	1350	25000	4	4	408201	**	4	277452	4	277453
372012	1600	1800	15000	2	2	408202	**	2	277452	2	277453
372013	1600	1800	15000	3	3	408202	**	3	277452	3	277453
372014	1600	1800	15000	4	4	408202	**	4	277452	4	277453
372015	2000	2250	15000	2	2	408203	**	2	277452	2	277453
372016	2000	2250	15000	3	3	408203	**	3	277452	3	277453
372017	2000	2250	15000	4	4	408203	**	4	277452	4	277453

†Orders for doors must specify whether metal or punched monograms are required, Style No. 434811 is for upper door with metal monograms and Style No. 434812 is for lower doors with metal monograms.

MAIN ASSEMBLY

For Hand Operated, Full Automatic, Transformer Trip Breakers

Illustrated on Page 4

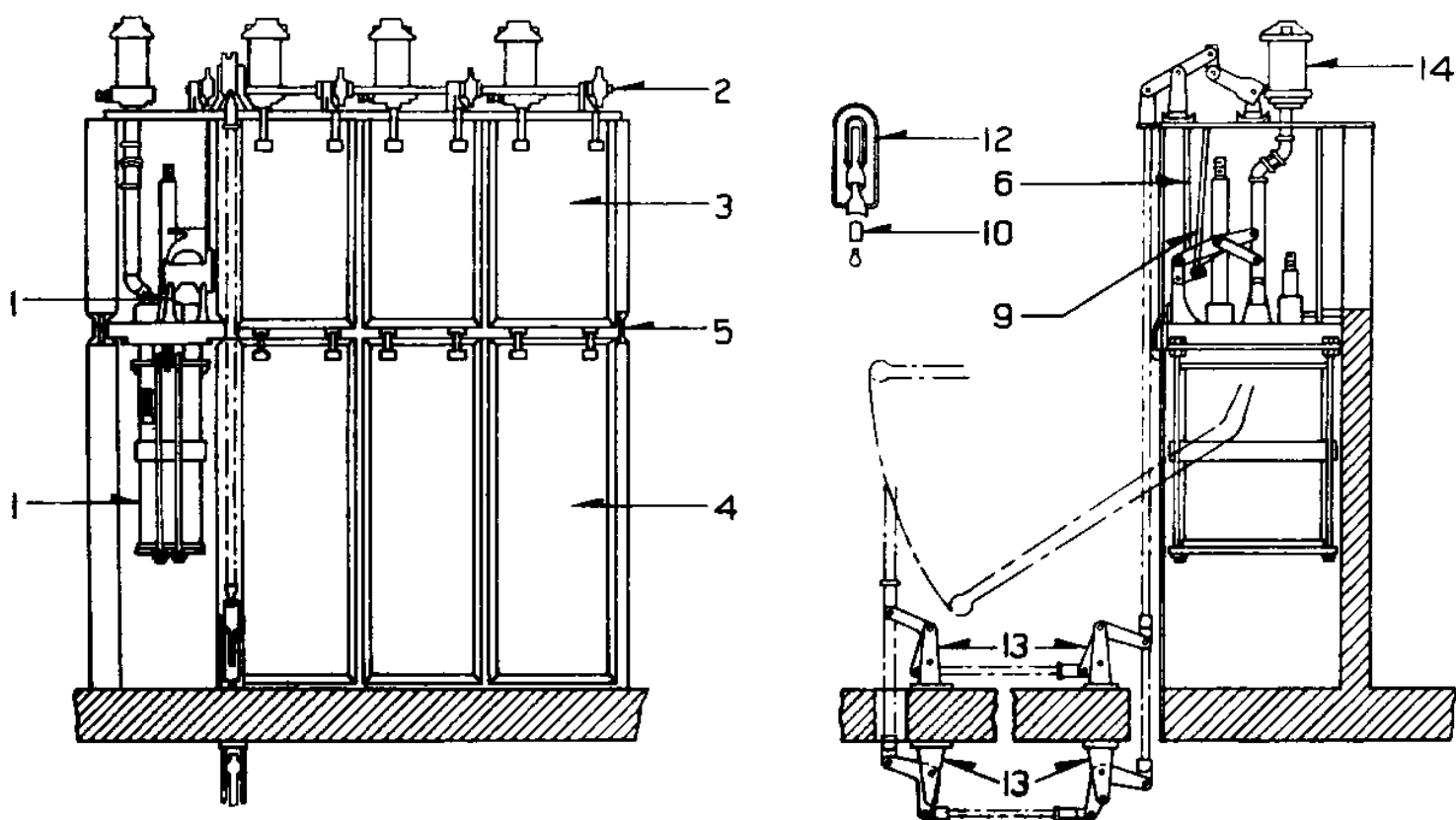
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Complete Breakers	Ref. No. 5 Wall Channels		Ref. No. 6 Tie Rods for Top Plate		Ref. No. 7 Hexagon Nuts for Tie Rods		Ref. No. 8 Lock Washers for Tie Rods		Ref. No. 9 Pull Rods		Ref. No. 10 Pull Rods	
	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Size	No. Req.	Size	No. Req.	Style No.	One Required	Style No.
372006	3	277443	8	256141	16	1/2"-13	8	1/2"	1	264129		266514
372007	4	277443	12	256141	24	1/2"-13	12	1/2"	2	264129		266514
372008	5	277443	16	256141	32	1/2"-13	16	1/2"	3	264129		266514
372009	3	277443	8	256141	16	1/2"-13	8	1/2"	1	264129		266514
372010	4	277443	12	256141	24	1/2"-13	12	1/2"	2	264129		266514
372011	5	277443	16	256141	32	1/2"-13	16	1/2"	3	264129		266514
372012	3	277443	8	256141	16	1/2"-13	8	1/2"	1	264129		266514
372013	4	277443	12	256141	24	1/2"-13	12	1/2"	2	264129		266514
372014	5	277443	16	256141	32	1/2"-13	16	1/2"	3	264129		266514
372015	3	277443	8	256141	16	1/2"-13	8	1/2"	1	277378		266514
372016	4	277443	12	256141	24	1/2"-13	12	1/2"	2	277378		266514
372017	5	277443	16	256141	32	1/2"-13	16	1/2"	3	277378		266514

Complete Breakers	Ref. No. 11 Removable Hand Closing Levers†		Ref. No. 12 Tank Lifters†		Ref. No. 13 Plates for Handle Levers		Ref. No. 14 Bell Cranks		Ref. No. 15 Mufflers Complete with Connections	
	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.
372006		200874		276438	1	277469	2	270454	2	408219
372007		200874		276438	1	277469	2	270454	3	408219
372008		200874		276438	1	277469	2	270454	4	408219
372009		200874		276438	1	277469	2	270454	2	408219
372010		200874		276438	1	277469	2	270454	3	408219
372011		200874		276438	2	277469	4	270454	4	408219
372012		200874		276438	1	277469	2	270454	2	408219
372013		200874		276438	1	277469	2	270454	3	408219
372014		200874		276438	2	277469	4	270454	4	408219
372015		200874		276438	1	277469	2	270454	2	408219
372016		200874		276438	1	277469	2	270454	3	408219
372017		200874		276438	2	277469	4	270454	4	408219

*Not illustrated.
**For material see Pages 14, 15 and 16.
†Not part of Breaker Style Number, usually one per station required.

MAIN ASSEMBLY
For Hand Operated, Non-Automatic Breakers



ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Complete Breaker	Amperes		Volts	Poles	Ref. No. 1	Ref. No. 2	Ref. No. 3†	Ref. No. 4†	
	60	25			Breaker Units				Hand Mechanisms,	Upper Doors	Lower Doors
Style No.	Cycles	Cycles			No.	Top Plates	with Punched	with Punched	
					Req.	and Shafts	Monograms	Monograms	
					Style No.		No.	No.	
							Req.	Style No.	
								Style No.	
372018	600	750	25000	2	2	408200	**	2 277452	2 277453
372019	600	750	25000	3	3	408200	**	3 277452	3 277453
372020	600	750	25000	4	4	408200	**	4 277452	4 277453
372021	1200	1350	25000	2	2	408201	**	2 277452	2 277453
372022	1200	1350	25000	3	3	408201	**	3 277452	3 277453
372023	1200	1350	25000	4	4	408201	**	4 277452	4 277453
372024	1600	1800	15000	2	2	408202	**	2 277452	2 277453
372025	1600	1800	15000	3	3	408202	**	3 277452	3 277453
372026	1600	1800	15000	4	4	408202	**	4 277452	4 277453
372027	2000	2250	15000	2	2	408203	**	2 277452	2 277453
372028	2000	2250	15000	3	3	408203	**	3 277452	3 277453
372029	2000	2250	15000	4	4	408203	**	4 277452	4 277453

†Orders for doors must specify whether metal or punched monograms are desired, Style No. 434811 is for upper door with metal monogram and Style No. 434812 is for lower door with metal monogram.

MAIN ASSEMBLY

For Hand Operated, Non-Automatic Breakers

Illustrated on Page 6

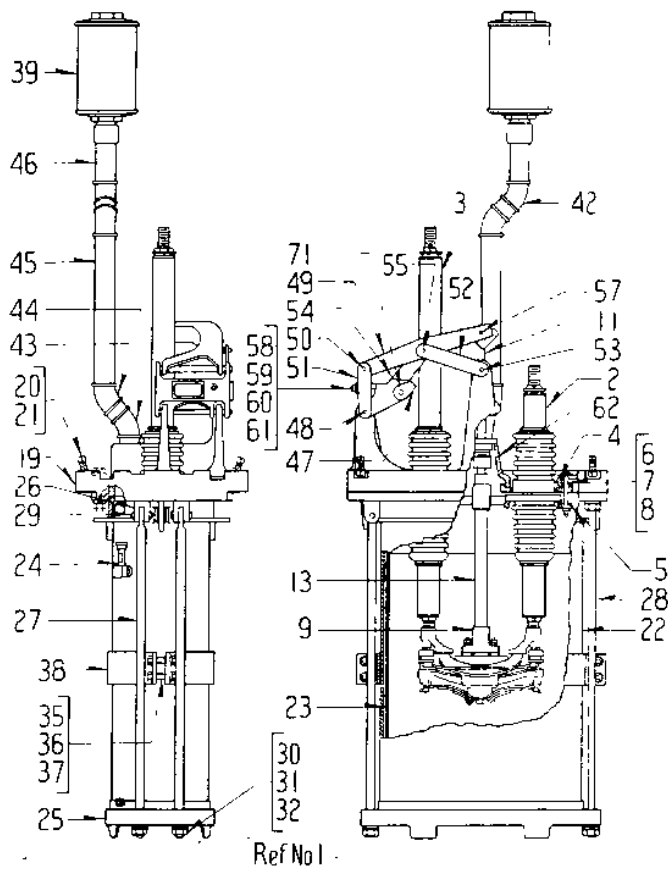
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Complete Breakers	Ref. No. 5 Wall Channels		Ref. No. 6 Tie Rods for Top Plates		Ref. No. 7* Hexagon Nuts for Tie Rod		Ref. No. 8* Lock Washers for Tie Rod		Ref. No. 9 Pull Rods	
	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Size	No. Req.	Size	No. Req.	Style No.
372018	3	277443	8	256141	16	1/2"-13	8	1/2"	2	264129
372019	4	277443	12	256141	24	1/2"-13	12	1/2"	3	264129
372020	5	277443	16	256141	32	1/2"-13	16	1/2"	4	264129
372021	3	277443	8	256141	16	1/2"-13	8	1/2"	2	264129
372022	4	277443	12	256141	24	1/2"-13	12	1/2"	3	264129
372023	5	277443	16	256141	32	1/2"-13	16	1/2"	4	264129
372024	3	277443	8	256141	16	1/2"-13	8	1/2"	2	264129
372025	4	277443	12	256141	24	1/2"-13	12	1/2"	3	264129
372026	5	277443	16	256141	32	1/2"-13	16	1/2"	4	264129
372027	3	277443	8	256141	16	1/2"-13	8	1/2"	2	264129
372028	4	277443	12	256141	24	1/2"-13	12	1/2"	3	264129
372029	5	277443	16	256141	32	1/2"-13	16	1/2"	4	264129

Complete Breakers	Ref. No. 10 Removable Hand Closing Levers†		Ref. No. 11* Tank Lifters†		Ref. No. 12 Cover Plates for Handle Levers		Ref. No. 13 Bell Cranks		Ref. No. 14 Mufflers Complete with Connections	
	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.
372018		200874		276438	1	277469	2	270454	2	408219
372019		200874		276438	1	277469	2	270454	3	408219
372020		200874		276438	1	277469	2	270454	4	408219
372021		200874		276438	1	277469	2	270454	2	408219
372022		200874		276438	1	277469	2	270454	3	408219
372023		200874		276438	2	277469	4	270454	4	408219
372024		200874		276438	1	277469	2	270454	2	408219
372025		200874		276438	1	277469	2	270454	3	408219
372026		200874		276438	2	277469	4	270454	4	408219
372027		200874		276438	1	277469	2	270454	2	408219
372028		200874		276438	1	277469	2	270454	3	408219
372029		200874		276438	2	277469	4	270454	4	408219

*Not illustrated.
**For material see pages 14, 15 and 16.
†Not part of Breaker Style Number, usually one per station required.

BREAKER UNITS, MUFFLER AND DETAILS



ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts Are Interchangeable Unless Otherwise Specified.

Ref. No.	Style No.	No. per Unit	Description
1	408200†	..	Breaker unit complete for 600 amperes, 60 cycles, and 750 amperes, 25 cycles
1	408201†	..	Breaker unit complete for 1200 amperes, 60 cycles, and 1350 amperes, 25 cycles
1	408202†	..	Breaker unit complete for 1600 amperes, 60 cycles, and 1800 amperes, 25 cycles
1	408203†	..	Breaker unit complete for 2000 amperes, 60 cycles, and 2250 amperes, 25 cycles
2	408210†	1	Stationary contact, short, for Style No. 408200. For details see page 13.
2	277341†	1	Stationary contact, short, for Style No. 408201. For details see page 13.
2	408208†	1	Stationary contact, short, for Style No. 408202. For details see page 13.
2	277345†	1	Stationary contact, short, for Style No. 408203. For details see page 13.
3	408211†	1	Stationary contact, long, for Style No. 408200. For details see page 13.
3	277342†	1	Stationary contact, long, for Style No. 408201. For details see page 13.
3	408209†	1	Stationary contact, long, for Style No. 408202. For details see page 13.
3	277346†	1	Stationary contact, long, for Style No. 408203. For details see page 13.
4	277354	2	Adjusting ring for contacts for Style Nos. 408200 and 408201
5	277347	2	Clamp ring for contacts for Style Nos. 408200 and 408201
5	277356	2	Clamp ring for contacts for Style No. 408202
6	.....	12	Machine bolt, 3⁄8"x4" (standard hardware), to fasten stationary contact to base for Style Nos. 408200 and 408201
6	.....	6	Machine bolt, 3⁄8"x3 3⁄4" (standard hardware), to fasten stationary contact to base for Style Nos. 408202 and 408203
7	.....	18	Lock washer, 3⁄8" (standard hardware), for bolts
8	.....	18	Wrought iron washer, 3⁄8" (standard hardware), for bolts
9	277331	1	Moving contact complete for Style No. 408200
9	277332	1	Moving contact complete for Style No. 408201
9	277333	1	Moving contact complete for Style No. 408202
9	277334	1	Moving contact complete for Style No. 408203
10*	277335	1	Lifting rod complete for Style Nos. 408202 and 408203
11	277358	1	Steel lifting rod only for Style Nos. 408200 and 408201
12*	301691	1	Steel pin to fasten lifting rod to rod end for Style No. 408200

*Not illustrated.
†For application of these style numbers see pages 3, 5 and 7.
‡Westinghouse cement No. 18 is used to seal cracks around bushing after assembling.

BREAKER UNITS, MUFFLER AND DETAILS—Continued

Illustrated on Page 8

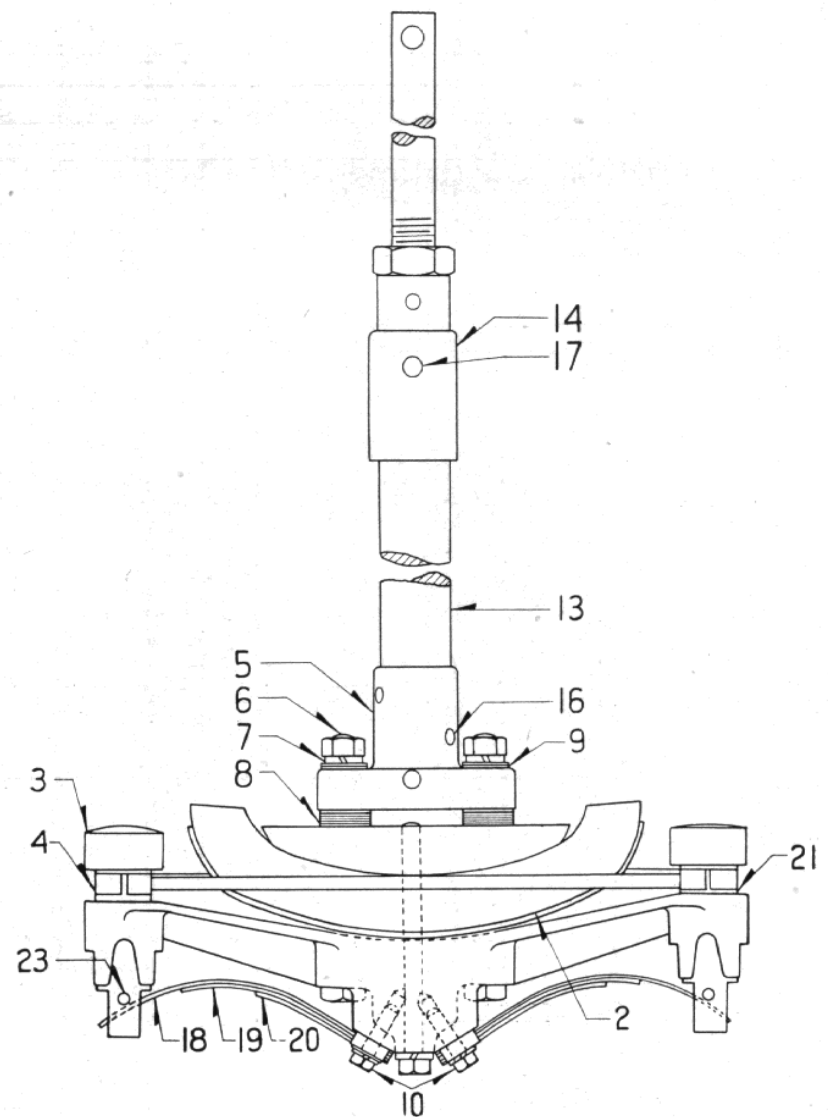
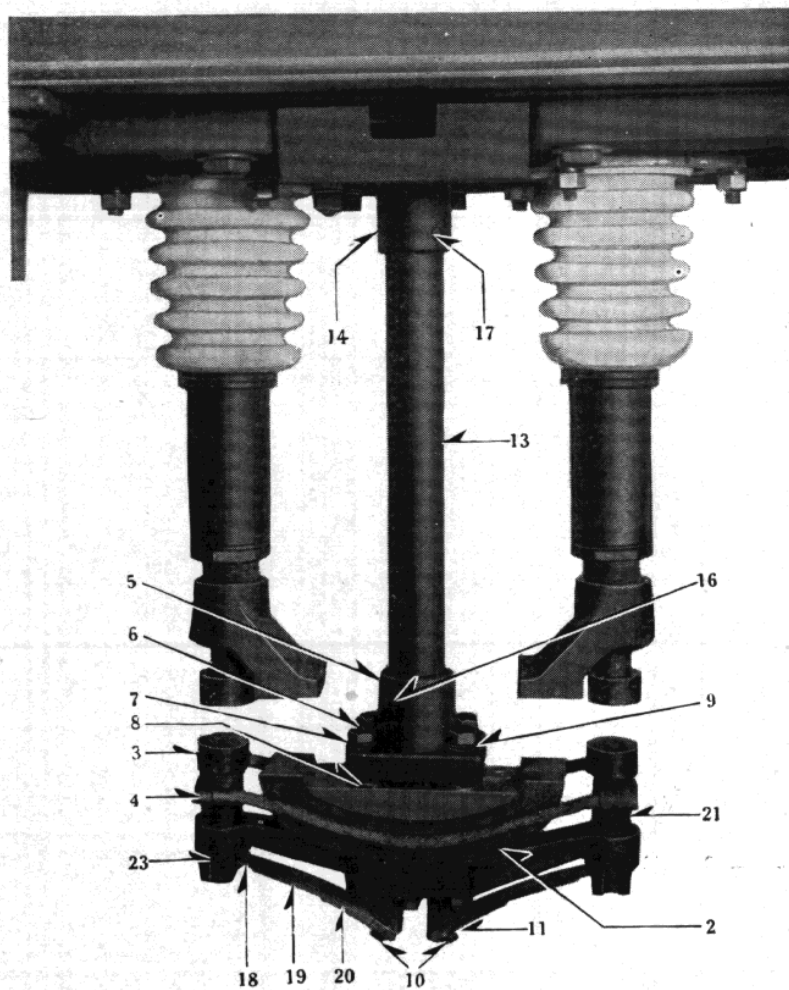
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Ref. No.	Style No.	No. per Unit	Description
13	384859	1	Wood lifting rod with rod ends
14*	277473	1	Stud to fasten lifting rod to contact
15*	.....	2	Taper pin, No. 2x1½" (standard hardware), to fasten wood rod to steel and stud
16*	88907	1	Lock washer for stud
17*	.....	1	Lock nut, ¾"-10 (standard hardware), for stud
18*	.....	1	Spring cotter, ⅜"x1½" (standard hardware), for stud
19	425595	1	Supporting frame for Style No. 408200
19	425594	1	Supporting frame for Style No. 408201
19	425593	1	Supporting frame for Style No. 408202 and 408203
20	.....	4	Set screw, ⅝"x1½" (standard hardware), to fasten supporting frame in channel iron
21	.....	4	Square nut, ⅝"-11 (standard hardware), for screw
22	425600	1	Tank complete without lining or gauge. Requires bolted tank bands.
22	422669	1	Tank complete with lining and gauge, with welded on tank bands
23	425601	1	Tank lining
24	41477	1	Oil gauge for tank
25	411817	1	Tank cradle for tank support
26	425591	2	Swivel bolt for front tie rod for tank
27	425592	2	Hinge bolt, used as front tie rod for tank
28	407072	2	Rear tie rod for tank
29	63621	2	Pin to fasten hinge bolt in swivel bolt
30	.....	10	Hexagon iron nut, ¾"-10 (standard hardware), for tie rods
31	.....	8	Lock washer, ¾" (standard hardware), for tie rods
32	.....	8	Wrought iron washer, ¾" (standard hardware), for tie rods
33*†	229774	2	Terminal for Style No. 408200 only
34*†	7545	2	Terminal nut for Style No. 408200 only
35	.....	4	Tap bolt, ½"x2½" (standard hardware), to fasten reinforcing band to tank. Used with Style No. 425600 only, Ref. No. 22
36	.....	4	Hexagon iron nut, ½"-13 (standard hardware), for bolt
37	.....	4	Lock washer, ½" (standard hardware), for bolt
38	.....	2	Tank reinforcing band. Used with Style No. 425600 only
39	408219	1	Muffler complete with connections, includes Ref. Nos. 39-A to 46
39A*	393556	1	Muffler only
40*	.....	1	Set screw, ¾"-10x1½" (standard hardware), used as adjusting screw for muffler
41*	.....	1	Lock nut, ¾"-10 (standard hardware), for screw
42	.....	2	Forty-five degree street elbow, 1½" (standard hardware), for pipe
43	.....	2	Forty-five degree M.I. elbow, 1½"x1½" (standard hardware), for pipe
44	.....	1	Union elbow, 1½" (standard hardware), for pipe
45	.....	1	W.I. pipe, 13⅞"x1½" (standard hardware), threaded on both ends
46	.....	1	W.I. pipe, 5¼"x1½" (standard hardware), threaded on both ends to mount muffler
46A	.....	1	W.I. pipe, 19¾"x1½" (standard hardware), threaded on both ends to mount muffler
47	384282	1	Closing lever
48	247350	2	Bearing shaft for closing lever and guide
49	233244	1	Main lever
50	247350	1	Bearing shaft for main lever and guide
51	384885	1	Guide to mount main lever
52	273900	1	Guide link from main bracket to main lever
53	63619	1	Shaft to fasten guide link to bracket
54	273902	1	Toggle link to connect closing lever and main lever
55	425586	1	Shaft to fasten toggle link to guide link and main lever
56*	63620	1	Shaft to fasten toggle link to closing lever
57	300281	1	Shaft to fasten lifting rod to main lever
58	.....	1	Set screw, ⅝"x1¾" (standard hardware), used as bumper in main lever guide
59	.....	1	Hexagon iron nut, ⅝"-16 (standard hardware), for screw
60	.....	1	Lock nut, ⅝"-16 (standard hardware), for screw
61	.....	1	Lock washer, ⅝" (standard hardware), for screw
62	412129	1	Pole bumper
63*	58789	1	Steel washer for bumper
64*	101039	2	Leather washer for bumper
65*	114143	10	Felt washer for bumper
66*	425589	3	Felt washer for pole bumper
67*	.....	2	Tap bolt, ¼"x⅞" (standard hardware), to mount pole bumper
68*	.....	2	Lock washer, ¼" (standard hardware), for bolt
69*	425587	1	Cap nut for pole bumper
70*	.....	1	Set screw, ¼"x1½" (standard hardware), for pole bumper
71	273296	1	Swivel for pull rod

*Not illustrated.

†Terminals and terminal nuts supplied as standard with Style No. 408200 only.

MOVING CONTACTS AND DETAILS



REFERENCE NO. 1

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Req.	Description
1	277331†	..	Moving contact complete
1	277332†	..	Moving contact complete
1	277333†	..	Moving contact complete
1	277334†	..	Moving contact complete
2	215153	1	Brush complete, for two arcing tips, for Style Nos. 277331 and 277333
2	215154	2	Brush complete, for one offset arcing tip, for Style Nos. 277332 and 277334
2	215155	2	Brush complete, without arcing tip, for Style Nos. 277333 and 277334
3	233226	2	Arcing tip, for Style Nos. 277331, 277332, 277333 and 277334
4	275052	2	Shunt complete, for Style Nos. 277331 and 277333
4	275053	2	Shunt complete, for Style Nos. 277332 and 277334
5	272012	1	Lifting rod foot, to connect lifting rod to brush, for Style No. 277331
5	277604	1	Lifting rod foot, to connect lifting rod to brush, for Style No. 277332
5	277437	1	Lifting rod foot, to connect lifting rod to brush, for Style No. 277333
5	277436	1	Lifting rod foot, to connect lifting rod to brush, for Style No. 277334
6	.....	2	Machine bolt, $\frac{3}{8}$ "x $\frac{1}{4}$ " (standard hardware), to connect lifting rod foot to brush, for Style No. 277331
6	.....	4	Machine bolt, $\frac{3}{8}$ "x $\frac{1}{2}$ " (standard hardware), to connect lifting rod foot to brush, for Style No. 277332
6	.....	6	Machine bolt, $\frac{3}{8}$ "x $\frac{1}{2}$ " (standard hardware), to connect lifting rod foot to brush, for Style No. 277333
6	.....	8	Machine bolt, $\frac{3}{8}$ "x $\frac{1}{2}$ " (standard hardware), to connect lifting rod foot to brush, for Style No. 277334

†See page 8, Ref. No. 9 for application of these Style Numbers.

MOVING CONTACTS AND DETAILS—Continued

Illustrated on Page 10

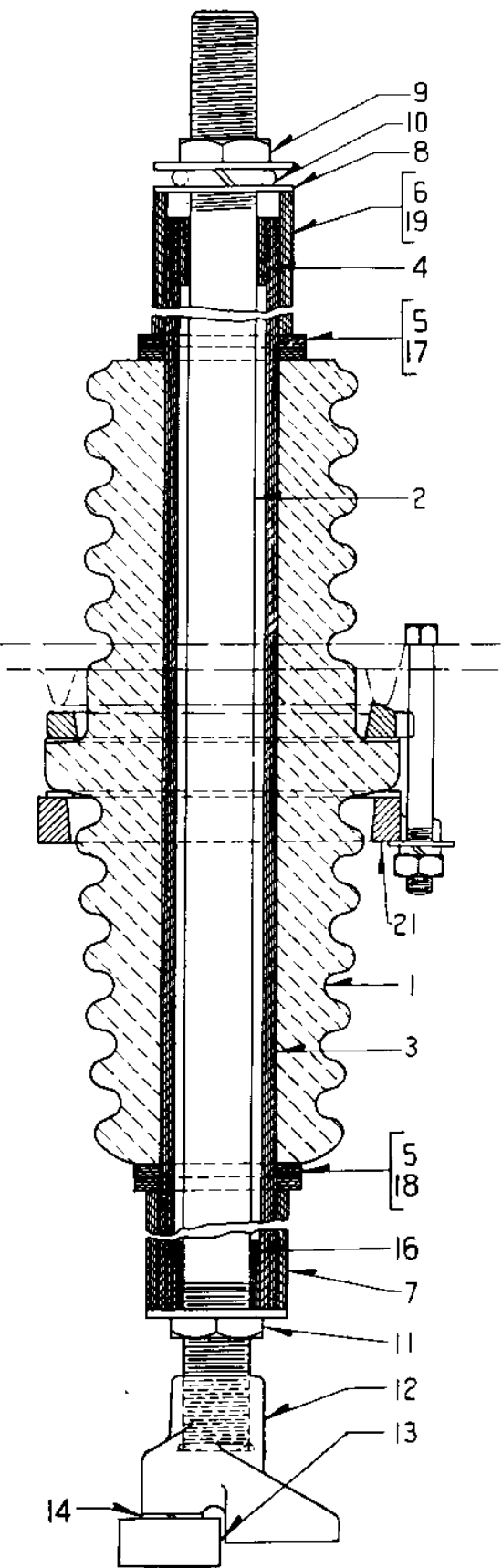
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Req.	Description
7	.....	2	Lock washer, $\frac{3}{8}$ " (standard hardware), for machine bolt, for Style No. 277331
7	.....	4	Lock washer, $\frac{3}{8}$ " (standard hardware), for machine bolt, Style No. 277332
7	.....	6	Lock washer, $\frac{3}{8}$ " (standard hardware), for machine bolt, for Style No. 277333
7	.....	8	Lock washer, $\frac{3}{8}$ " (standard hardware), for machine bolt, for Style No. 277334
8	178397	8	Liner, used between brush block and lifting rod foot, for Style No. 277331
8	178397	16	Liner, used between brush block and lifting rod foot, for Style No. 277332
8	178397	24	Liner, used between brush block and lifting rod foot, for Style No. 277333
9	101681	4	Washer, for machine bolt, for Style No. 277331
9	101681	12	Washer, for machine bolt, for Style No. 277332
9	101681	18	Washer, for machine bolt, for Style No. 277333
9	101681	16	Washer, for machine bolt, for Style No. 277334
10	.....	2	Tap bolt, $\frac{1}{4}$ "x1" (standard hardware), to fasten arcing plunger spring to brush, for Style Nos. 277331, 277332, 277333 and 277334
11	.....	2	Lock washer, $\frac{1}{4}$ " (standard hardware), for tap bolt, for Style Nos. 277331, 277332, 277333 and 277334
12*	107315	2	Lock washer, for arcing tip, for Style Nos. 277331, 277333 and 277334
12*	.....	2	Lock washer, $\frac{1}{2}$ " (standard hardware), for arcing tip, for Style No. 277332
13	276951	1	Wood lifting rod, for Style No. 277331
13	277439	1	Wood lifting rod, for Style No. 277332
14	273346	1	Rod end, to connect wood rod to steel rod, for Style No. 277331
14	233253	1	Rod end, to connect wood rod to steel rod, for Style No. 277332
16	275986	3	Steel pin, to fasten wood rod to foot, for Style No. 277332
17	193681	6	Steel pin, to fasten wood rod to rod end, for Style No. 277331
17	384880	3	Steel pin, to fasten wood rod to rod end, for Style No. 277332
18	247362	6	Arcing plunger spring (long), for Style Nos. 277331, 277332, 277333 and 277334
19	247363	4	Arcing plunger spring (intermediate), for Style Nos. 277331, 277332, 277333 and 277334
20	247364	4	Arcing plunger spring (short), for Style Nos. 277331, 277332, 277333 and 277334
21	233044	2	Arcing plunger, for Style Nos. 277331, 277332, 277333 and 277334
22*	226539	2	Clip washer, for arcing plunger for Style Nos. 277331, 277332, 277333 and 277334
23	246428	2	Steel pin, used as spring bearing, for Style Nos. 277331, 277332, 277333 and 277334

*Not illustrated.

STATIONARY CONTACTS AND DETAILS



CROSS SECTION OF STATIONARY CONTACT

STATIONARY CONTACTS AND DETAILS

Illustrated on Page 12

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Complete Stationary Contacts† Style No.	Ref. No. 1 Porcelain Insulator One Per Contact Style No.	Ref. No. 2 Terminal Rod One Per Cont. Style No.	Ref. No. 3 Insulator Tube One Per Contact Style No.	Ref. No. 4 Spacing Tube No. Per Contact Style No.	Ref. No. 5 Fibre Washer Four Per Cont. Style No.	Ref. No. 6 Outside Top Tube One Per Cont. Style No.
408210	116597	277461	384864	3 215160	384866	215164
408211	116597	277462	384865	3 215160	384866	215165
277341	116597	277457	384867	.. None	384866	215164
277342	116597	277458	384868	.. None	384866	215165
408208	247655	277475	None	1 220981	None	None
408209	247655	277476	None	1 220981	None	384875
277345	247655	277447	None	.. None	None	None
277346	247655	277448	None	.. None	None	384878

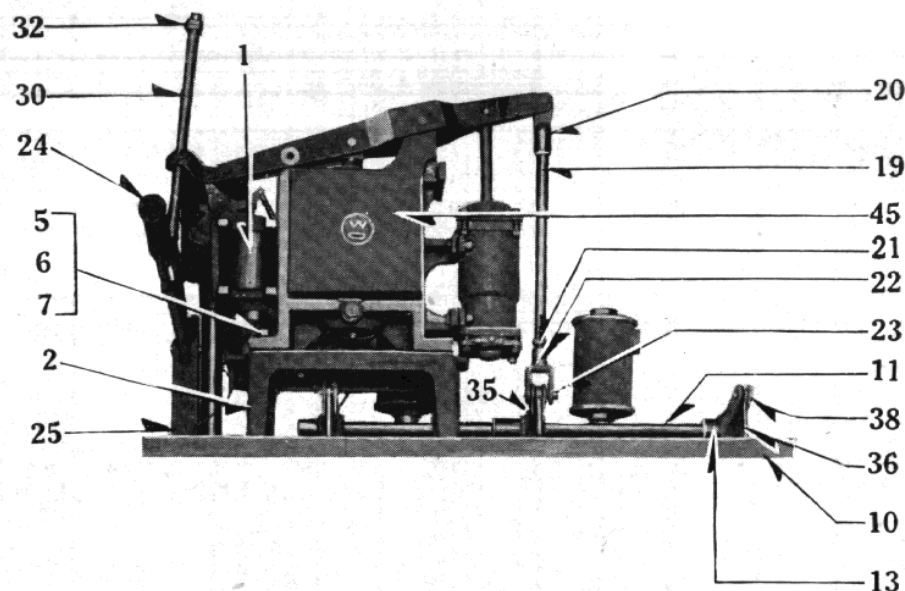
Complete Stationary Contacts† Style No.	Ref. No. 7 Outside Bottom Tube One Per Contact Style No.	Ref. No. 8 Brass Clamp Washer Three per Contact Style No.	Ref. No. 9 Nut for Top of Terminal Rod One Per Contact Style No.	Ref. No. 10 Lock Washer for Terminal Rod One Per Contact Style No.	Ref. No. 11 Nut for Bottom of Terminal Rod One Per Contact Style No.
408210	247836	184410	211911	203604	296801
408211	247836	184410	211911	203604	296801
277341	247836	277430	211915	211850	211915
277342	247836	277430	211915	211850	211915
408208	247836	277121	211913	257812	211913
408209	247836	277121	211913	257812	211913
277345	247836	239038	211914	201341	211914
277346	247836	239038	211914	201341	211914

Complete Stationary Contacts† Style No.	Ref. No. 12 Contact Foot One Per Contact Style No.	Ref. No. 13 Arcing Tip One Per Contact Style No.	Ref. No. 14 Lock Washer for Arcing Tip One Per Contact Style No.	Ref. No. 15 Fullerboard Washer Two Per Contact Style No.	Ref. No. 16 Spacing Tube for Terminal Rod One Per Contact Style No.
408210	277433	233225	107315	380380	None
408211	277433	233225	107315	380380	None
277341	262945	233225	107315	380380	None
277342	262945	233225	107315	380380	None
408208	277474	233225	107315	300874	221008
408209	277474	233225	107315	300874	221008
277345	277435	233224	None	300874	384877
277346	277435	233225	None	300874	None

Complete Stationary Contacts† Style No.	Ref. No. 17 Fibre Washer for Top of Insulator One Per Contact Style No.	Ref. No. 18 Fibre Washer for Bottom of Insulator One Per Contact Style No.	Ref. No. 19 Insulating Tube for Top of Insulator One Per Contact Style No.	Ref. No. 20 Insulating Tube for Bottom of Insulator One Per Contact Style No.	Ref. No. 21 Clamp Ring One Per Contact Style No.
408210	None	None	None	None	425596
408211	None	None	None	None	None
277341	None	None	None	None	None
277342	None	None	None	None	None
408208	384870	384871	384873	384872	None
408209	384871	384871	384874	384872	425596
277345	384871	384871	None	384876	277356
277346	384871	384871	384879	384876	277356

*Not illustrated.
†See page 8 for application of these style numbers.

HAND AND ELECTRICAL MECHANISMS, TOP PLATES AND SHAFTS



ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism				Description
		600 Amps†	1200 Amps†	1600 Amps†	2000 Amps†	
1	277426	1	1	1	1	Hand operating mechanism for 2 poles
1	277427	1	1	1	..	Hand operating mechanism for 3 poles
1	300289	..	..	..	1	Hand operating mechanism for 3 poles
1	277426	..	2	2	2	Hand operating mechanism for 4 poles
1	277427	2	..	..	..	Hand operating mechanism for 4 poles
1	277412	1	..	..	..	Electrical operating mechanism for 2, 3 and 4 poles
1	277412	..	1	..	..	Electrical operating mechanism for 2 and 3 poles
1	277412	..	..	1	1	Electrical operating mechanism for 2 poles
1	277413	..	..	1	1	Electrical operating mechanism for 3 poles
1	277414	..	1	..	..	Electrical operating mechanism for 4 poles
1	277415	..	..	1	1	Electrical operating mechanism for 4 poles
2	277438	1	1	1	..	Bracket to mount electrical mechanism Style Nos. 277412 and 277413
2	277463	..	..	..	1	Bracket to mount electrical mechanism Style Nos. 277414 and 277415
3*	.....	4	4	4	..	Machine bolt, $\frac{5}{8}$ "x2" (standard hardware), to mount bracket
3*	.....	..	..	..	4	Machine bolt, $\frac{3}{4}$ "x2- $\frac{1}{4}$ " (standard hardware) to mount bracket
4*	.....	4	4	4	..	Lock washer, $\frac{5}{8}$ " (standard hardware) for bolt
4*	.....	..	..	..	4	Lock washer, $\frac{3}{4}$ " (standard hardware) for bolt
5	.....	3	3	3	..	Machine bolt, $\frac{5}{8}$ "x3" (standard hardware), to fasten electrical mechanism to bracket
5	.....	..	..	..	3	Machine bolt, $\frac{7}{8}$ "x3" (standard hardware), to fasten electrical mechanism to bracket
6	.....	3	3	3	..	Washer, $\frac{5}{8}$ " (standard hardware), for bolt
6	.....	..	..	..	3	Washer, $\frac{7}{8}$ " (standard hardware), for bolt
7	.....	3	3	3	..	Lock washer, $\frac{5}{8}$ " (standard hardware) for bolt
7	.....	..	..	..	3	Lock washer, $\frac{7}{8}$ " (standard hardware) for bolt
8*	277440	1	1	1	1	Front channel base for 2 poles
8*	277480	1	1	1	1	Front channel base for 3 poles
8*	277449	1	..	..	..	Front channel base for 4 poles
8*	277465	..	1	1	1	Front channel base for 4 poles
9*	277441	1	1	1	1	Rear channel base for 2 poles
9*	277481	1	1	1	1	Rear channel base for 3 poles
9*	277466	..	1	1	1	Rear channel base for 4 poles
9*	277450	1	..	..	..	Rear channel base for 4 poles

*Not illustrated.
†60 cycle rating—see Page 3 for corresponding 25 cycle rating.

HAND AND ELECTRICAL MECHANISMS, TOP PLATES AND
SHAFTS—Continued

Illustrated on Page 14

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Ref. No.	Style No.	No. Per Mechanism				Description
		600** Amps.	1200** Amps.	1600** Amps.	2000** Amps.	
10	422322	1	1	1	1	Steel plate for base, 2 poles
10	442800	1	1	1	1	Steel plate for base, 3 holes
10	442801	1	..	..	..	Steel plate for base, 4 poles
10	442802	..	1	1	1	Steel plate for base, 4 poles
11	277444	1	1	1	1	Operating shaft for 2 pole hand full automatic, and electric non-automatic
11	241477	1	1	1	1	Operating shaft for 3 pole hand full automatic, and electric non-automatic
11	277445	1	1	1	1	Operating shaft for 4 pole hand full automatic
11	241477	1	..	..	..	Operating shaft for 4 pole hand electric non- automatic
11	277468	..	1	1	1	Operating shaft for 4 pole electric non-auto- matic
11	241477	1	..	..	..	Operating shaft for 4 pole hand non-automatic
11	277444	..	2	2	2	Operating shaft for 4 pole hand non-automatic
12*	32128	†	†	†	†	Key for shaft for all amperes, 2 and 3 poles and for 600 amperes, 4 poles
12*	41002	..	†	†	†	Key for shaft for 4 poles
13	272014	2	2	2	2	Bearing bracket for operating shaft Style No. 277444
13	272014	3	3	3	3	Bearing bracket for operating shaft Style No. 241477
13	272014	4	4	4	4	Bearing bracket for operating shaft Style Nos. 241477 and 277445
13	277454	..	4	4	4	Bearing bracket for operating shaft Style No. 277468
14*	.....	4	6	8	8	Machine bolt, 1½"x1¾" (standard hard-ware), for bearing bracket and shaft
15*	.....	4	1	8	8	Washer, ½" (standard hardware), for bolt
16*	.....	4	6	8	8	Lock washer, ½" (standard hardware), for bolt
17*	265698	1	1	1	1	Collar for operating shaft
18*	.....	1	1	1	1	Set screw, ⅜"x¼" (standard hardware), for collar
19	422321	1	1	1	1	Operating rod from electrical mechanism to operating shaft lever for all amperes, 2 and 3 poles, and 600 amperes, 4 poles
19	384887	1	1	1	1	Operating rod from hand mechanism to operating shaft lever for 2, 3 and 4 poles
19	384889	..	1	1	1	Operating rod from electrical mechanism to operating shaft lever for 4 poles
20	233252	1	1	1	1	Rod end for top of operating rod for Style No. 422321
21	.....	1	1	1	1	Pipe nut, ¾" (standard hardware), for upper rod end
22	233251	1	1	1	1	Rod end for bottom of operating rod for Style Nos. 422321 and 384887
22	248951	..	1	1	1	Rod end for bottom of operating rod for Style No. 384889
23	63625	1	1	1	1	Shaft for lower rod end and lever for Style Nos. 422321 and 384887
23	63625	..	1	1	1	Shaft for lower rod end and lever for Style No. 384889
24	277472	1	1	1	1	Hand closing lever socket
25	277470	1	1	1	1	Bearing bracket for hand closing lever
25	277455	1	1	1	1	Bearing bracket for hand closing lever
26*	.....	1	1	1	1	Machine bolt, ¾"x3½" (standard hardware), to mount bracket
26*	.....	1	1	1	1	Machine bolt, ¾"x3" (standard hardware), to mount bracket

*Not illustrated.
**60 cycle rating—see page 3 for corresponding 25 cycle rating.
†On electrically operated breakers the required amount is equal to the number of poles. On hand operated breakers, Style No.
32128 only is used, one more than the number of poles being required.

HAND AND ELECTRICAL MECHANISMS, TOP PLATES AND
SHAFTS—Continued

Illustrated on Page 14

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Ref. No.	Style No.	No. Per Mechanism				Description
		600 Amps.**	1200 Amps.**	1600 Amps.**	2000 Amps.**	
26*	.....	2	2	2	2	Machine bolt, 1/2"x2 3/4" (standard hardware), to mount bracket
27*	.....	2	2	2	2	Washer, 3/4" (standard hardware), for bolt
28*	.....	2	2	2	2	Lock washer, 3/4" (standard hardware), for bolt
28*	.....	2	2	2	2	Lock washer, 1/2" (standard hardware), for bolt
29*	252300	1	1	1	1	Spring for closing lever
30	277471	1	1	1	1	Pull rod for handle lever for all amperes, 2 and 3 poles and for 600 amperes, 4 poles
30	422323	..	1	1	1	Pull rod for handle lever for 4 poles
31*	72281	1	1	1	1	Rod end for pull rod for Style No. 277471
31*	83129	..	1	1	1	Rod end for pull rod for Style No. 422323
32	.....	1	1	1	1	Pipe nut, 3/4" (standard hardware), for pull rod
33*	65150	1	1	1	1	Shaft for handle lever and pull rod
34*	87676	1	1	1	1	Shaft for handle lever and bearing bracket
35	240470	1	1	1	1	Lever to fasten electrical mechanism to pull rod
36	277431	1	1	1	1	Lifting lever used as operating shaft lever for hand operated breakers only
37*	277431	†	†	†	†	Lifting lever for pull rod for Style No. 277471
37*	277432	..	†	†	†	Lifting lever for pull rod for Style No. 422323
38	63613	†	†	†	†	Shaft for lifting lever and pull rod for Style No. 277431
38	105265	..	†	†	†	Shaft for lifting lever and pull rod for Style No. 277432
39*	240473	1	1	1	1	Closing lever for remote control for electrical mechanism
39*	240471	1	1	1	1	Closing lever for remote control for hand mechanism
40*	384890	1	1	1	1	Pull rod from closing lever to operating mechanism
41*	.....	2	2	2	2	Pipe nut, 3/4" (standard hardware), for pull rod
42*	88353	1	1	1	1	Shaft for closing lever and bearing bracket
43*	63622	1	1	1	1	Shaft for pull rod, operating mechanism and closing lever for Style No. 240473
44*	105265	1	1	1	1	Shaft for rod end, operating mechanism and closing lever
45†	375085	1	1	1	1	Control relay and panel complete
46*	248949	2	2	2	2	Rod end for closing lever and pull rod for Style No. 384890
47*†	394500	1	1	1	1	Mounting strap support for control relay panel used with Style Nos. 277412 and 277413
47*†	422325	1	1	1	1	Mounting strap support for control relay
48*†	394498	1	1	1	1	Spacer, short
49*†	394499	2	2	2	2	Spacer, long
50*†	.....	1	1	1	1	Tap bolt, 5/16"x2 1/4" (standard hardware), to fasten support to mechanism frame
51*†	.....	2	2	2	2	Tap bolt, 5/16"x1 1/4" (standard hardware), to fasten support to control panel
52*†	.....	4	4	4	4	Lock washer, 5/16" (standard hardware), for bolt
53*†	3272	3	3	3	3	Washer for bolt
54*	277456	1	1	1	1	Link for closing lever and operating shaft lever for hand operated breakers only
55*	63631	1	1	1	1	Shaft lever link and operating shaft lever
56*	85531	1	1	1	1	Shaft lever link and closing lever

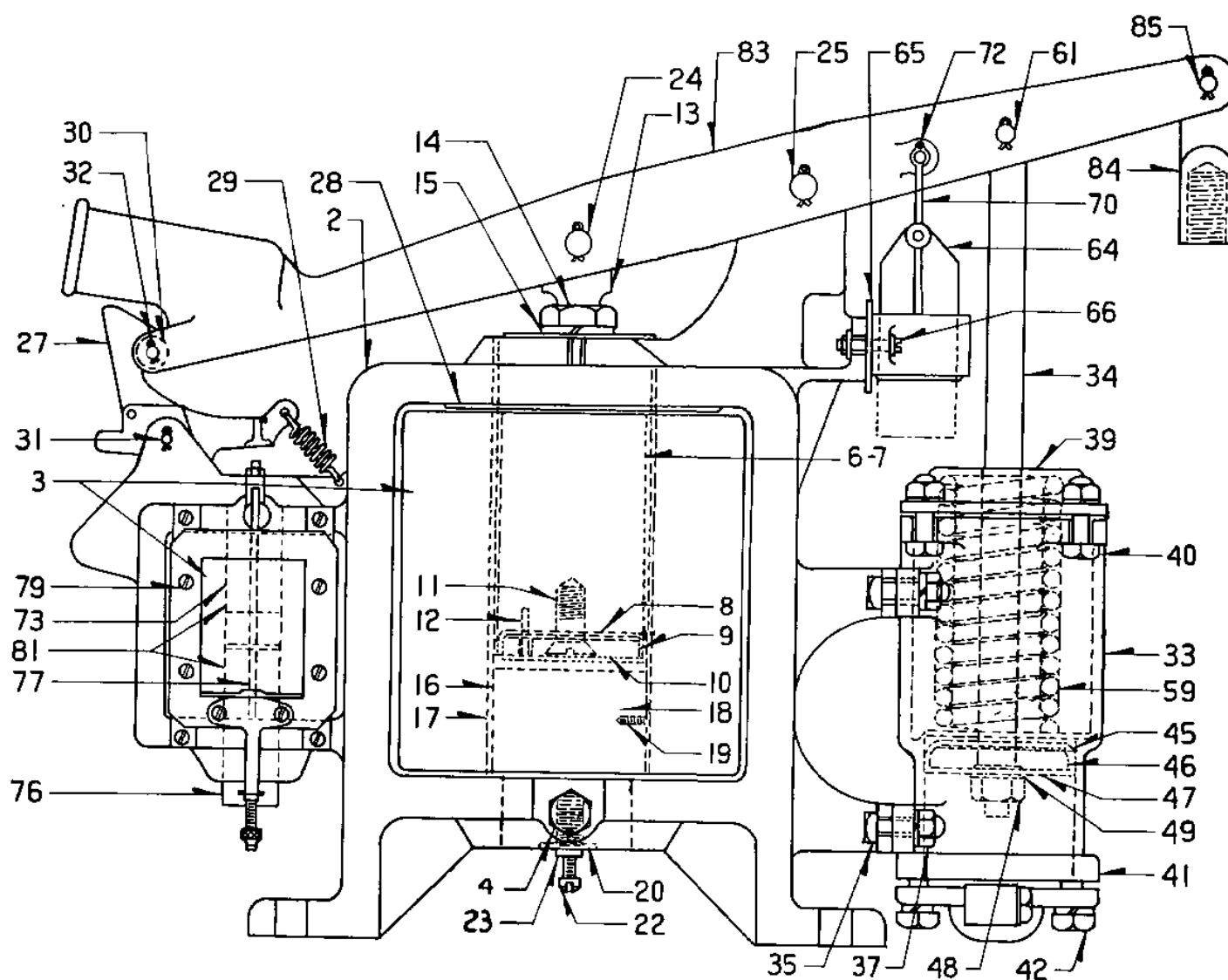
*Not illustrated

**60 cycle rating—see page 3 for corresponding 25 cycle rating.

†On electrically operated breakers the required amount is equal to the number of poles. On hand operated breakers one more is required than the number of poles.

‡Used with electrically operated breakers only as per Ref. No. 17, Page 3.

ELECTRICAL MECHANISMS
Style Nos. 277412, 277413, 277414 and 277415



REFERENCE NO. 1

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
1	277412†	..	Mechanism complete without coil
1	277413†	..	Mechanism complete without coil
1	277414†	..	Mechanism complete without coil
1	277415†	..	Mechanism complete without coil
2	277580	1	Magnet frame, for Style Nos. 277412 and 277413
2	277581	1	Magnet frame, for Style Nos. 277414 and 277415
3†	.....	..	Closing and tripping coils
4	.....	2	Tap bolt, $\frac{3}{4}$ "x $3\frac{1}{2}$ " (standard hardware), to fasten magnet in frame Style No. 277580
4	.....	2	Tap bolt, 1 "x $3\frac{1}{4}$ " (standard hardware), to fasten magnet in frame Style No. 277581
5*	.....	2	Lock washer, $\frac{3}{4}$ " (standard hardware), for bolt
5*	85635	2	Lock washer, 1 ", for bolt
6	225439	1	Moving core for magnet, for Style Nos. 277412 and 277413
7	277572	1	Moving core for magnet, for Style Nos. 277414 and 277415
8	333085	1	Leather, for bottom of moving core Style No. 225439
8	384893	1	Leather, for bottom of moving core Style No. 277572
9	189929	1	Expander, for leather Style No. 333085
9	277546	1	Expander, for leather Style No. 384893

*Not illustrated.

†For coils see Page No. 3, Ref. Nos. 13 and 14.

‡See Page 14 for application of these style numbers.

ELECTRICAL MECHANISMS—Continued
Style Nos. 277412, 277413, 277414 and 277415

Illustrated on Page 17

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
10	271438	1	Steel follower, for expander Style No. 189929
10	277570	1	Steel follower, for expander Style No. 277546
11	117211	1	Screw to fasten leather, expander and follower to moving core
12	151006	1	Pin for bottom of core, through follower and core, Style No. 225439
12	116941	1	Pin for bottom of core, through follower and core, Style No. 277572
13	253488	1	Eye-bolt, for top of moving core Style No. 225439
13	277571	1	Eye-bolt for top of moving core Style No. 277572
14	255993	1	Nut, for eye-bolt Style No. 253488
14	.....	1	Lock nut, 1¼" (standard hardware), for eye-bolt Style No. 277571
15	85635	1	Lock washer, for eye-bolt Style No. 253488
15	.....	1	Lock washer, 1¼" (standard hardware), for eye-bolt Style No. 277571
16	273334	1	Stationary core and brass tube assembled, for Style Nos. 277412 and 277413
16	277573	1	Stationary core and brass tube assembled, for Style Nos. 277414 and 277415
17	333083	1	Brass tube, for stationary core Style No. 273334
17	394895	1	Brass tube, for stationary core Style No. 277573
18	264230	1	Magnet, for stationary core Style No. 273334
18	394894	1	Magnet, for stationary core Style No. 277573
19	.....	1	Flat head iron machine screw, No. 14-24x½" (standard hardware), to fasten magnet to tube
20	185454	1	Brass plug, for bottom of magnet
21*	184519	1	Brass ball, for bottom of magnet
22	277826	1	Adjusting screw, for ball
23	.....	1	Iron machine screw nut, No. 20-18 (standard hardware), for adjusting screw
24	63634	1	Shaft, for main lever and magnet plunger for Style Nos. 277412 and 277413
24	277576	1	Shaft, for main lever and magnet plunger for Style Nos. 277414 and 277415
25	276860	1	Shaft, for magnet frame and main lever Style No. 277583 shown on page 17
25	277575	1	Shaft, for magnet frame and main lever Style No. 277584 shown on page 17
26*	.....	1	Square flat packing, 3/16"x 28", for stationary magnet core, for Style Nos. 277414 and 277415 only
27	273087	1	Trigger complete, for Style Nos. 277412 and 277413
27	277566	1	Trigger complete, for Style Nos. 277414 and 277415
28	333086	3	Fullerboard washer, used between magnet and frame, for Style Nos. 277412 and 277413
28	384902	3	Fullerboard washer, used between magnet and frame, for Style Nos. 277414 and 277415
29	140362	1	Spring, for trigger Style No. 273087
29	199287	1	Spring, for trigger Style No. 277566
30	271427	1	Roller, for trigger Style No. 273087
30	277549	1	Roller, for trigger Style No. 277566
31	109229	1	Bearing shaft, for trigger Style No. 273087
31	277561	1	Bearing shaft, for trigger Style No. 277566
32	63603	1	Shaft, for main lever and trigger roller Style No. 271427
32	63609	1	Shaft, for main lever and trigger roller Style No. 277549
33	250114	1	Dash pot cylinder, for Style Nos. 277412 and 277413
33	277563	1	Dash pot cylinder, for Style Nos. 277414 and 277415
34	273372	1	Piston rod, for dash pot, for Style No. 277412
34	283043	1	Piston rod, for dash pot, for Style No. 277413
34	277564	1	Piston rod, for dash pot, for Style No. 277414
34	384896	1	Piston rod, for dash pot, for Style No. 277415
35	.....	3	Machine bolt, ½"x1¼" (standard hardware), to fasten dash pot to frame, for Style Nos. 277412 and 277413
36*	.....	3	Tap bolt, 5/8"x2" (standard hardware), to fasten dash pot to frame for Style Nos. 277414 and 277415
37	.....	3	Lock washer, ½" (standard hardware), for machine bolt
38*	107316	3	Lock washer, for tap bolt
39	277560	1	Cast iron cover, for dash pot Style No. 250114
39	277553	1	Cast iron cover, for dash pot Style No. 277563
40	.....	4	Machine bolt, ½"x1¼" (standard hardware), to fasten cover to dash pot

*Not illustrated.

ELECTRICAL MECHANISMS—Continued
Style Nos. 277412, 277413, 277414 and 277415

Illustrated on Page 17

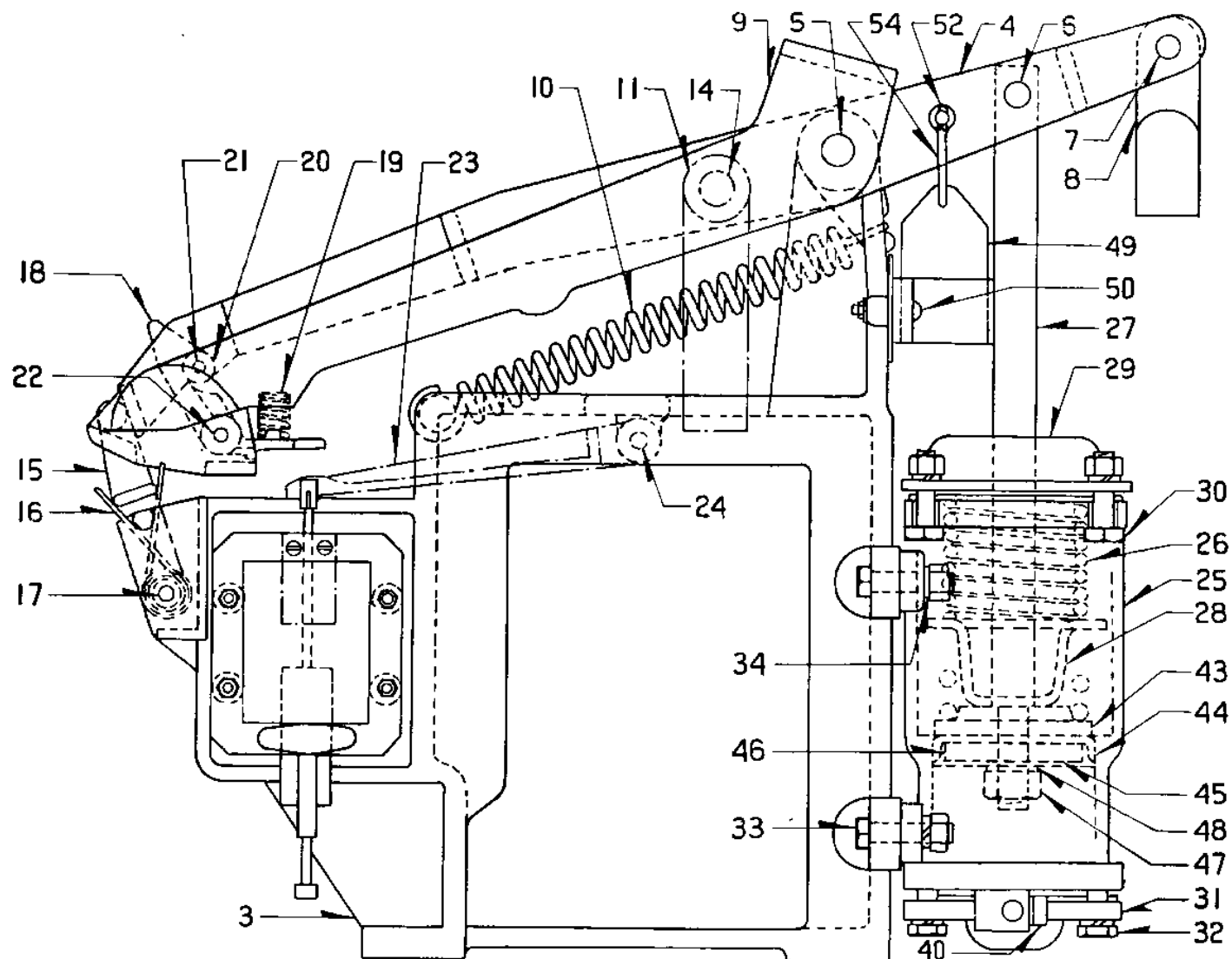
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
40	.....	4	Machine bolt, 1/2"x2" (standard hardware), to fasten cover to dash pot
*	.....	4	Lock washer, 1/2" (standard hardware), for machine bolt
*	107315	4	Lock washer, for machine bolt
41	230342	1	Bottom, for dash pot
42	.....	5	Tap bolt, 1/2"x1 3/4" (standard hardware), for dash pot bottom
42	.....	4	Machine bolt, 1/2"x2 1/4" (standard hardware), for dash pot bottom
43*	.....	5	Lock washer, 1/2" (standard hardware), for tap bolt
43*	107315	4	Lock washer, for machine bolt
44*	272649	1	Cast iron washer, for plunger rod in dash pot Style No. 250114
44*	277577	1	Cast iron washer, for plunger rod in dash pot Style No. 277563
45	112506	1	Leather washer, for plunger rod in cylinder
46	187120	1	Expander, for leather washer
47	277547	1	Steel follower, for leather washer
48	.....	1	Hexagon nut, 3/4" (standard hardware), to clamp follower to expander
49	.....	1	Lock washer, 3/4" (standard hardware), used between nut and follower
50*	214139	1	Brass bushing, for valve assembly
51*	185236	1	Valve assembly
52*	198929	1	Valve spring
53*	68776	1	Cap nut, for valve on dash pot bottom
54*	187761	1	Valve pin
55*	.....	1	Fillister head iron machine screw No. 10-32x1/2" (standard hardware), to adjust valve pin
56*	40662	1	Nut for screw
57*	275056	1	Brass plug for side of valve casting
58*	122532	2	Gasket, for bottom of dash pot
59	272917	1	Spring, for dash pot, for Style No. 277412
59	122525	1	Spring, for dash pot, for Style No. 277413
59	240518	1	Spring, for dash pot, for Style No. 277414
59	122525	1	Spring, for dash pot, for Style No. 277415
60*	277554	2	Spring holder in dash pot, for Style No. 277413 only
60*	277556	1	Spring holder in dash pot, for Style Nos. 277414 and 277415
61	117200	1	Shaft, for dash pot plunger rod and main lever Style No. 277583
61	277574	1	Shaft, for dash pot plunger rod and main lever Style No. 277584
62*	277550	2	Collar, for dash pot plunger for Style No. 277413 only
62*	277557	2	Collar, for dash pot plunger for Style No. 277415 only
63*	277548	2	Pin, for collar on dash pot plunger for Style No. 277413
63*	277565	2	Pin, for collar on dash pot plunger for Style No. 277415
64	216071	1	Signal switch complete. For details see page 26
65	263046	1	Fuller board shield between switch and frame
66	.....	2	Fillister head iron machine screw, No. 14-24x1 3/4" (standard hardware), to mount signal switch on frame
67*	.....	2	Lock washer, 1/4", for screw
68*	.....	2	Iron machine nut, No. 14-24 (standard hardware), for screw
69*	7443	2	Washer for screw
70	384891	1	Link, to operate signal switch for Style Nos. 277412 and 277413
70	277567	1	Link, to operate signal switch for Style Nos. 277414 and 277415
71*	323744	1	Stud, for main lever and signal switch link, Style No. 384891
71*	277578	1	Stud, for main lever and signal switch link, Style No. 277567
72	3272	1	Washer, for stud, for Style Nos. 277412, 277413 and 277415 only
73	333124	1	Stationary core for overload trip
74*	333123	1	Brass sleeve, for core for overload trip
75*	.....	1	Flat head iron machine screw, No. 10-32x3/8" (standard hardware), to fasten sleeve to core
76	333125	1	Moving core, for overload trip
77	193688	1	Plunger rod, for overload trip core
78*	141901	1	Rivet, for plunger rod and core
79	40646	1	Washer, for bottom of plunger rod
80*	46870	1	Nut, for top of plunger rod
81	184889	1	Overload trip core complete
82*	.....	2	Lock nut, 1/2"—13 (standard hardware), for auxiliary switch stud in main lever
83	277583	1	Main lever, for Style Nos. 277412 and 277413
83	277584	1	Main lever, for Style Nos. 277414 and 277415
84	248949	1	Rod end, for pull rod and main lever Style No. 277583
84	248948	1	Rod end, for pull rod and main lever Style No. 277584
85	87679	1	Shaft, for rod end and main lever Style No. 277583
85	277562	1	Shaft, for rod end and main lever Style No. 277584

*Not illustrated.

HAND MECHANISMS, FULL AUTOMATIC Style Nos. 277426, 277427 and 300289



REFERENCE NO. 1

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
1	277426†	1	Mechanism complete
1	277427†	1	Mechanism complete
1	300289†	1	Mechanism complete
2*	277539	1	Overload release mechanism complete with coil for Style No. 277426
2*	277540	1	Overload release mechanism complete with coil, for Style Nos. 277427 and 300289
3	277586	1	Cast iron frame, for mechanism
4	274856	1	Main lever
5	127688	1	Bearing shaft, for main lever
6	63614	1	Shaft, for main lever and dash pot plunger rod
7	105265	1	Shaft, for main lever and rod end
8	248949	1	Rod end, for end of main lever
9	277588	1	Closing lever
10	272177	1	Spring, for closing lever
11	273393	1	Yoke, for closing lever
*	277551	2	Shoulder pin, for closing lever
*	.....	2	Washer, for shoulder pin
Ref. No. 12-13-14	.....	.....	Not used
15	273391	1	Dog, to engage end of handle lever
16	277569	1	Spring, for dog
17	140734	1	Shaft, for dog
18	277541	1	Trigger, complete
19	199287	1	Spring, for trigger
20	145393	1	Roller, for trigger
21	63601	1	Shaft, for roller
22	107356	1	Shaft, for trigger
*	277568	1	Trip arm, on pull rod
*	.....	1	Machine bolt, $\frac{3}{8}$ "x1 $\frac{1}{4}$ " (standard hardware), for trip arm

*Not illustrated.

†See Page 14 for application of these Style Numbers.

HAND MECHANISMS, FULL AUTOMATIC—Continued

Style Nos. 277426, 277427 and 300289

Illustrated on Page 20

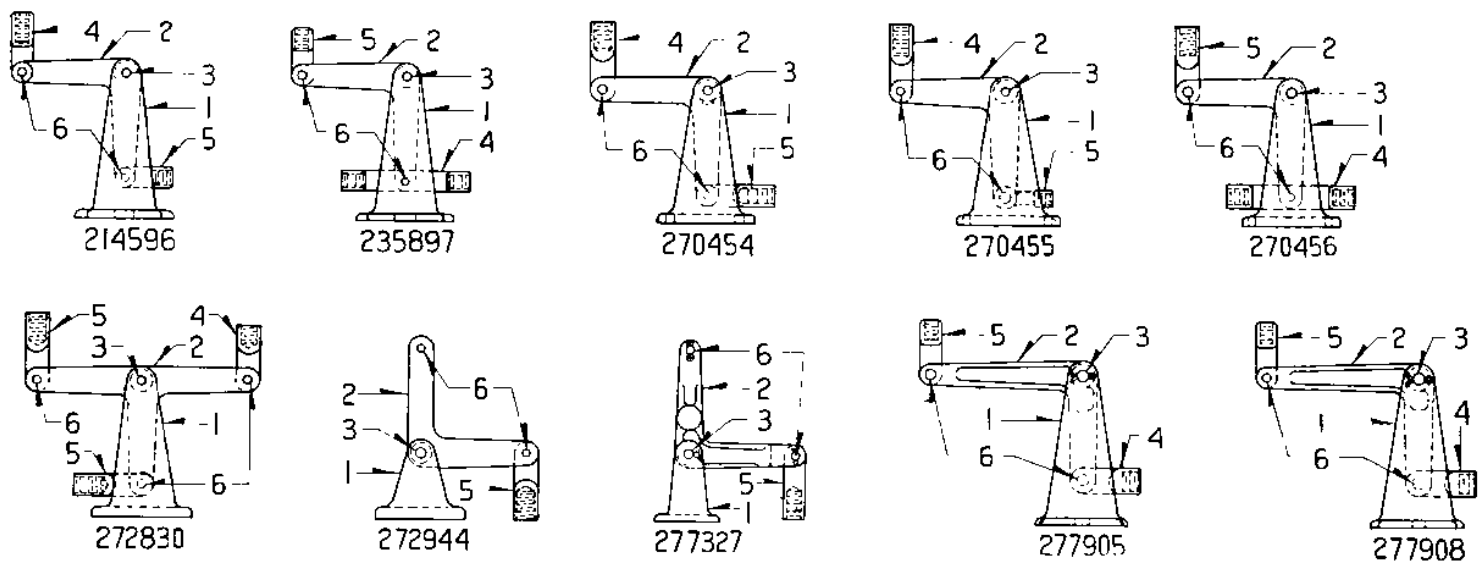
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
*	.....	1	Set screw, $\frac{3}{8}$ "x $\frac{3}{4}$ " (standard hardware), for trip arm
*	.....	1	Lock washer, for machine bolt
*	.....	1	Lock nut, for set screw
23	273392	1	Trip lever
24	63604	1	Shaft, for trip lever
25	250114	1	Cast iron dash pot cylinder
26	272917	1	Spring, for dash pot, for Style Nos. 277426 and 277427
26	122525	1	Spring, for dash pot, for Style No. 300289
27	273372	1	Piston rod, for dash pot
28	277554	1	Spring holder, for dash pot spring, for Style No. 300289
29	277560	1	Cast iron cover, for dash pot
30	.....	4	Machine bolt, $\frac{1}{2}$ "x $1\frac{3}{4}$ " (standard hardware), to fasten dash pot cover
31	230342	1	Cast iron bottom, for dash pot
32	.....	4	Tap bolt, $\frac{1}{2}$ "x $1\frac{3}{4}$ " (standard hardware), to fasten dash pot head
33	.....	3	Machine bolt, $\frac{1}{2}$ "x2" (standard hardware), to mount dash pot on frame
34	.....	11	Lock washer, $\frac{1}{2}$ " (standard hardware), for bolt
35*	214139	1	Brass valve bushing for valve assembly
36*	185236	1	Brass valve, for dash pot head
37*	198929	1	Spring, for valve
*	68776	1	Cap nut, for valve
38*	187761	1	Pin, for valve
39*	.....	1	Fillister head iron machine screw, No. 10-32x $\frac{1}{2}$ " (standard hardware), to adjust pin
40	40662	1	Nut, for screw
41*	275056	1	Brass plug, for side of valve casting
42*	122532	2	Gasket, for head of dash pot
43	272649	1	Cast iron washer for plunger rod in dash pot, Style No. 250114
44	112506	1	Leather washer, for plunger rod in dash pot
45	187120	1	Expander, for leather washer
46	277547	1	Steel follower, for expander
47	.....	1	Nut, $\frac{3}{4}$ " (standard hardware), to clamp follower to expander
48	.....	1	Lock washer, used between nut and follower
49	216071	1	Signal switch complete. For details see page 26
50	.....	1	Round head stove bolt, $\frac{1}{4}$ "x $1\frac{1}{2}$ " (standard hardware), to mount signal switch
51*	.....	1	Lock washer, for stove bolt
52	323744	1	Stud, for link and main lever
53*	3272	1	Washer, for stud
54	277559	1	Link, for signal switch and main lever
55*	384892	1	Extension lever
56*	.....	2	Tap bolt, $\frac{3}{8}$ "x1" (standard hardware), to mount extension lever
57*	3428	2	Washer, for tap bolt
58*	.....	2	Lock washer, $\frac{3}{8}$ " (standard hardware), for tap bolt
59*	.....	3	Tap bolt, $\frac{3}{8}$ "x $2\frac{1}{2}$ " (standard hardware), to mount overload release mechanism
60*	283038	3	Brass tube spacer for bolt
61*	3428	3	Washer, for bolt
62*	.....	3	Lock washer, $\frac{3}{8}$ " (standard hardware), for bolt
63*	.....	3	Wrought iron washer, $\frac{3}{8}$ " (standard hardware), for bolt and tube spacer

*Not illustrated.

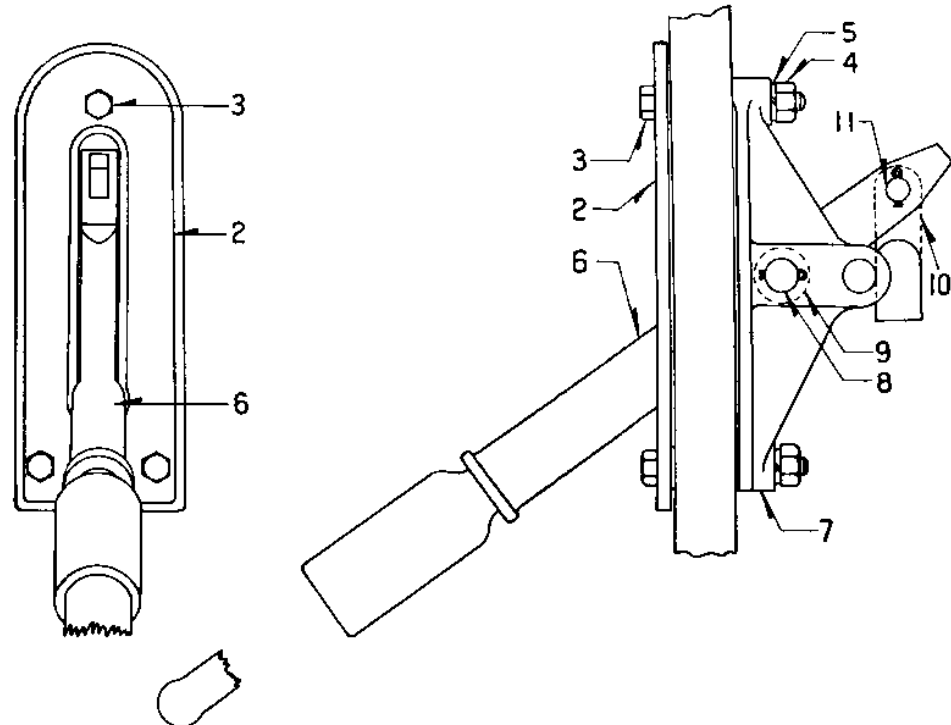
BELL CRANKS AND DETAILS, FOR MOUNTING ABOVE OR BELOW FLOOR



ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Complete Bell Crank	Ref. No. 1 Bracket		Ref. No. 2 Bell Crank		Ref. No. 3 Shaft		Ref. No. 4 Adjustable Rod End		Ref. No. 5 Non-Adjustable Rod End		Ref. No. 6 Shaft	
Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.
214596†	1	272857	1	272856	1	125685	1	72281	1	83129	2	83813
235897†	1	272857	1	272856	1	125685	1	235962	1	83129	2	83813
270454*	1	289443	1	283040	1	88354	1	248949	1	248949	2	105265
270455*	1	289443	1	283040	1	88354	1	248949	1	277888	2	105265
270456*	1	289443	1	283040	1	88354	1	296361	1	248949	2	105265
272830*	1	289443	1	287270	1	88354	1	239919	2	248949	3	105265
272944†	1	283039	1	283040	1	88353		None	1	248949	2	105265
277327†	1	272858	1	272856	1	125685		None	1	72281	2	83813
277905†	1	384928	1	384927	1	125685	1	83129	1	72281	2	83813
277908†	1	277857	1	283042	1	125685	1	83129	1	72281	2	83813

COVER PLATE, HAND OPERATING LEVER PARTS AND MOUNTING DETAILS



REFERENCE NO. 1

Ref. No.	Style No.	No. Req.	Description
1	277469*	1	Cover plate, complete
2	312432	1	Cover plate casting
3	.....	3	Tap bolt, 5/8"x4 3/4" (standard hardware), to mount cover plate
4	.....	3	Hexagon nut, 5/8" (standard hardware), for tap bolt
5	.....	3	Lock washer, 5/8" (standard hardware), for tap bolt
6	384919	1	Handle lever socket
7	312431	1	Handle lever bearing bracket
8	283061	1	Shaft, to fasten handle lever socket to bearing bracket
9	3359	2	Washer, for handle bearing shaft
10	233252	1	Rod end, for handle lever
11	92712	1	Shaft, to fasten rod end to handle lever socket

*See Pages 5 and 7 for application of these Style Numbers.
†Used only with special mountings.

The image contains three technical drawings of a metal safe, labeled with numbers 1, 2, and 3.

- View 1 (Left):** A front view of the safe. It shows a rectangular door with a handle on the right side. The door is secured by a locking mechanism at the top. Callout 1 points to the top edge of the door, callout 2 points to the handle, and callout 3 points to the locking mechanism.
- View 2 (Middle):** A top view of the safe. It shows the internal structure of the door, including the handle and the locking mechanism. Callout 1 points to the top edge of the door, callout 2 points to the handle, and callout 3 points to the locking mechanism.
- View 3 (Right):** A side view of the safe. It shows the profile of the door and the internal structure. Callout 1 points to the top edge of the door, callout 2 points to the handle, and callout 3 points to the locking mechanism.

REFERENCE No. 1

Ref. No.	Style No.	No. Per Door	Description
1	277452†	..	Door complete, upper, with punched monogram
1	277453†	..	Door complete, lower, with punched monogram
2	380005	2	Hook for door
3	380006	2	Bracket for door
4		2	Tap bolt, $\frac{5}{16}$ "x1 $\frac{3}{4}$ " (standard hardware), to mount hook and bracket
5*		2	Nut, $\frac{5}{16}$ " (standard hardware), for machine bolt
6*		2	Round head stove bolt, $\frac{5}{16}$ "x $\frac{7}{8}$ " (standard hardware), to mount bracket
7*		6	Washer, to be welded to end frame
*	434811	..	Door complete, upper, with metal monogram
*	434812	..	Door complete, lower, with metal monogram

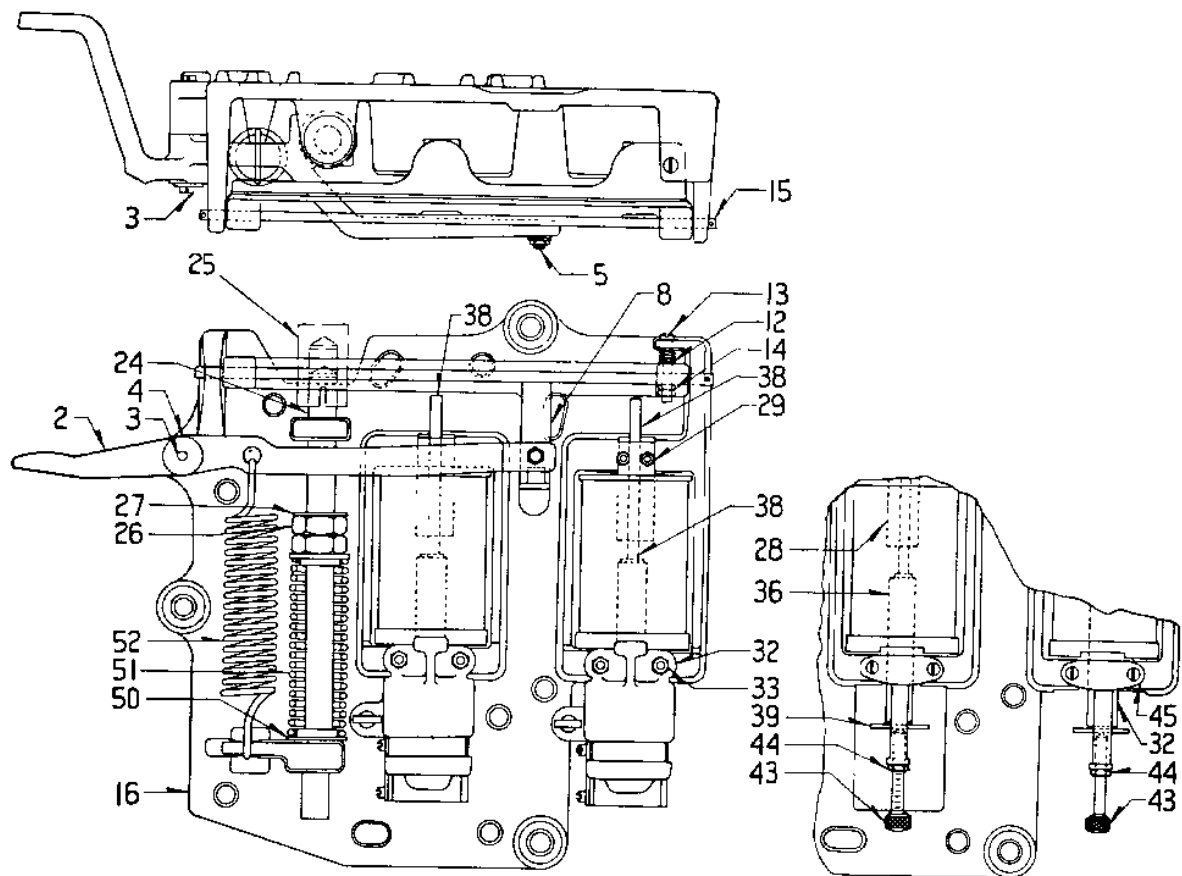
REFERENCE No. 1

Ref. No.	Style No.	No. Per Lifter	Description
1	276438†	..	Tank lifter complete
2	384920	1	Tank lifter casting
3	199488	1	Wood handle
4	384921	2	Pin, to fasten handle to casting
5	384922	1	Two links and cross bar assembled

*Not illustrated.

†See Pages 3, 5 and 7 for application of these style numbers.

OVERLOAD RELEASE MECHANISMS AND DETAILS
Style Nos. 277539 and 277540



REFERENCE NO. 1

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Req.	Description
1	277539†	..	Overload release mechanism complete, with one overload coil
1	277540†	..	Overload release mechanism complete, with two overload coils
2	384929	1	Cast steel trip lever
3	63605	1	Shaft, for trip lever
4	3272	1	Washer, for shaft
5	220349	1	Square head screw, for trip lever
6*	.....	1	Lock washer, 1/4" (standard hardware), for screw
7*	.....	1	Lock nut, 1/4"-20 (standard hardware), for screw
8	333474	1	Malleable iron trigger
9*	220349	1	Square head screw, for trigger
10*	.....	1	Lock washer, 1/4" (standard hardware), for screw
11*	.....	1	Lock nut, 1/4"-20 (standard hardware), for screw
12	72065	1	Spring, for trigger
13	.....	1	Fillister head iron machine screw, No. 10-32x1 3/4" (standard hardware), for trigger spring
14	.....	2	Hexagon iron machine screw nut, No. 10-32 (standard hardware), for screw
15	380237	1	Shaft, for trigger
16	333472	1	Cast iron mechanism frame
17*	283060	3	Spacing rod, for cover
18*	.....	3	Tap bolt, 3/8"-18x3/4" (standard hardware), for spacing rod
19*	.....	3	Tap bolt, 3/8"-16x1" (standard hardware), for spacing rod
20*	333473	1	Cast iron cover for frame
21*	.....	3	Tap bolt, 3/8"x2 1/2" (standard hardware), to mount mechanism frame
22*	3428	3	Washer, for bolt
23*	.....	3	Lock washer, 3/8" (standard hardware), for tap bolt
24	283056	1	Plunger rod, for trip lever and retrieving lever
25	283057	1	Steel cap, for plunger rod
26	.....	2	Lock nut, 3/8"-11 (standard hardware), for plunger rod
27	3429	1	Washer, for plunger rod
28	116760	1	Stationary core complete, for Style No. 277539
28	116760	2	Stationary core complete, for Style No. 277540

*Not illustrated.

†See Pages 5 and 7 for application of these style numbers.

OVERLOAD RELEASE MECHANISMS AND DETAILS—Continued

Style Nos. 277539 and 277540

Illustrated on Page 24

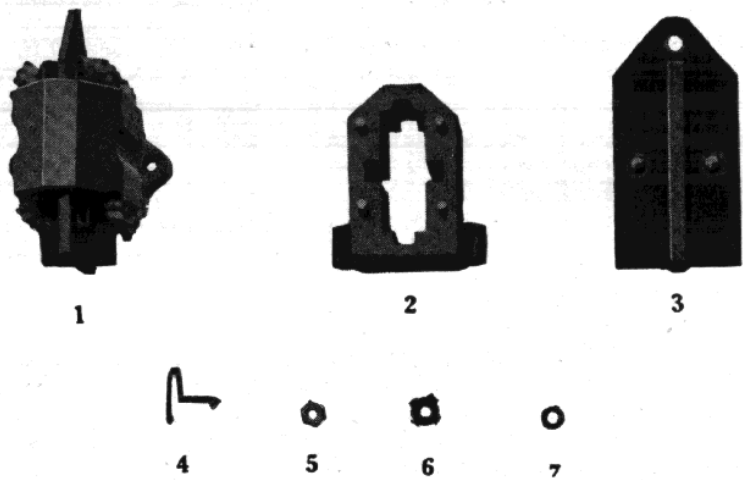
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Req.	Description
29	.....	2	Fillister head iron machine screw, No. 10-32x2 $\frac{1}{4}$ " (standard hardware), to mount stationary core, for Style No. 277539
29	.....	4	Fillister head iron machine screw, No. 10-32x2 $\frac{1}{2}$ " (standard hardware), to mount stationary core, for Style No. 277540
30*	4000	2	Lock washer, for screw
30*	4000	4	Lock washer, for screw
31*	.....	2	Iron machine screw nut, No. 10-32 (standard hardware), for screw
31*	.....	4	Iron machine screw nut, No. 10-32 (standard hardware), for screw
32	88828	2	Bracket for coil, for Style No. 277539
32	88828	4	Bracket for coil, for Style No. 277540
33	.....	2	Fillister head iron machine screw, No. 10-32x1 $\frac{3}{4}$ " (standard hardware), to mount coil bracket, for Style No. 277539
33	.....	4	Fillister head iron machine screw, No. 10-32x1 $\frac{3}{4}$ " (standard hardware), to mount coil bracket, for Style No. 277540
34*	4000	2	Lock washer, for screw
34*	4000	4	Lock washer, for screw
35*	.....	2	Iron machine screw nut, No. 10-32 (standard hardware), for screw
35*	.....	4	Iron machine screw nut, No. 10-32 (standard hardware), for screw
36	126283	1	Moving core and plunger rod complete
36	126283	2	Moving core and plunger rod complete
37*	116761	1	Moving core assembled
38	148509	1	Plunger rod, for core
39	116763	1	Guide washer, for bottom of core and plunger rod
40*	3423	1	Washer between guide washer and core
41*	.....	1	Dowel, ".086x $\frac{7}{16}$ ", to fasten guide washer to core
42*	233098	1	Washer, for top of core
43	88829	1	Adjusting screw
43	88829	2	Adjusting screw
44	.....	1	Iron machine screw nut, No. 14-24 (standard hardware), for adjusting screw
44	.....	2	Iron machine screw nut, No. 14-24 (standard hardware), for adjusting screw
45	219614	1	Core guide
45	219614	2	Core guide
46*	384892	1	Extension lever
47*	.....	2	Tap bolt, $\frac{3}{8}$ "x1" (standard hardware), to mount lever
48*	3428	2	Washer for bolt
49*	.....	2	Lock washer, $\frac{3}{8}$ " (standard hardware), for bolt
50	333476	2	Spring seat, for compression spring, for retrieving lever
51	283058	1	Compression spring, for retrieving lever
52	283059	1	Tension spring, for retrieving lever
53*	224185	1	Overload coil, 5 ampere, for Style No. 277539
53*	224185	2	Overload coil, 5 ampere, for Style No. 277540

*Not illustrated.

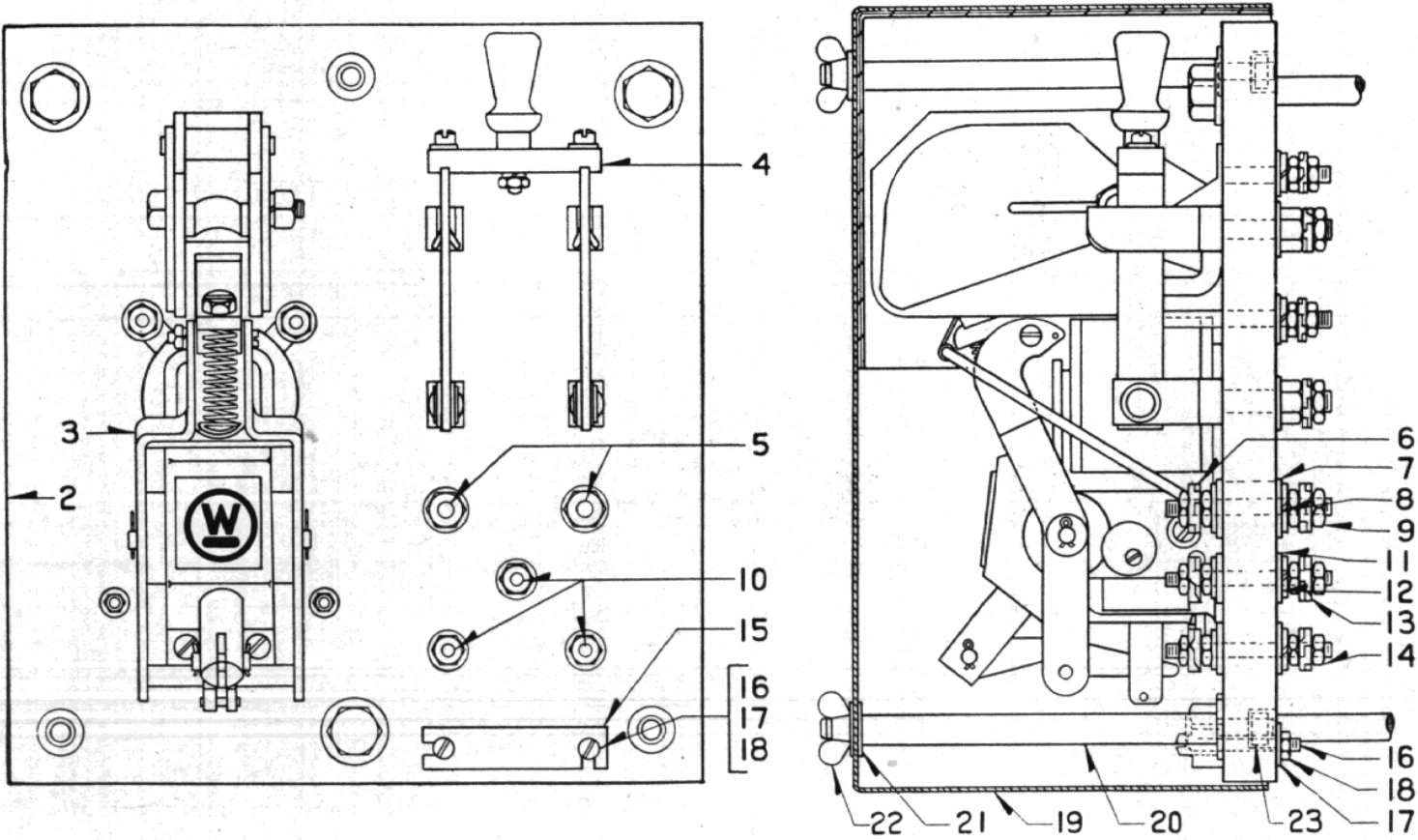
SIGNAL SWITCH AND DETAILS



ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Ref. No.	Style No.	No. Per Switch	Description
1	216071†	..	Signal switch complete
2	377723	1	Moulded composition switch body and studs
3	220996	1	Moulded composition plunger with contact piece
4	220999	8	Phosphor bronze contact finger
5	40662	16	Hexagon brass contact nut
6	148425	8	Crimp washer, used with nut
7	.....	8	Lock washer, 1/8" (standard hardware), used with nut

CONTROL PANEL AND DETAILS



REFERENCE No. 1

Ref. No.	Style No.	No. per Panel	Description
1	375085†	..	Control panel complete, with 125 volt coils

†See Page 3 for application of this Style Number.
†See Page 19, Ref. No. 64 and Page 21, Ref. No. 49 for application of this Style Number.

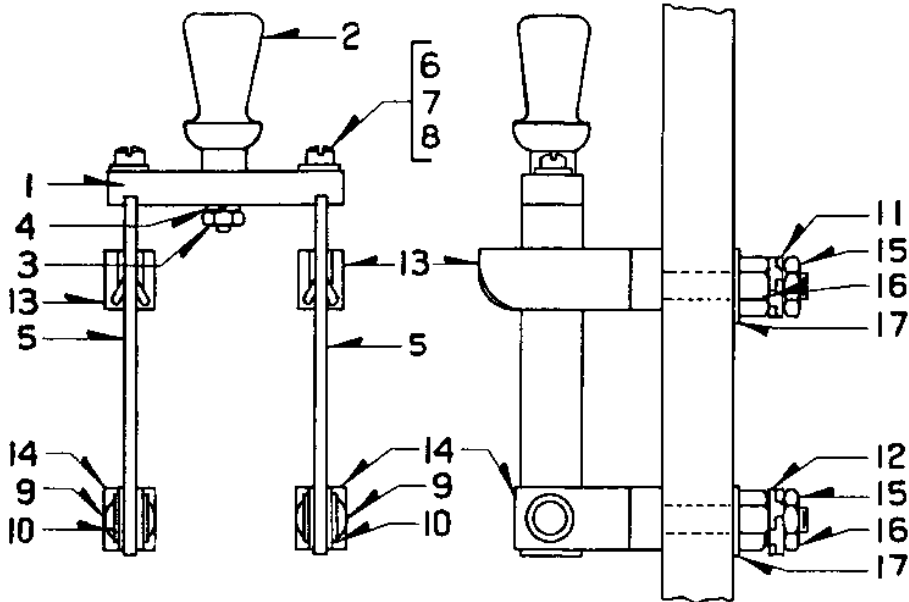
CONTROL PANEL AND DETAILS—Continued

Parts Illustrated on Page 26

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Ref. No.	Style No.	No. Per Panel	Description
*	384953	1	Operating coil, 125 volts
*	375628	1	Releasing coil, 125 volts
2	385048	1	Slate panel
3	398300	1	Type S-1 Control Relay. For details see Part Catalogue No. 6221
4	398301	1	Type A knife switch. 2-pole, single-throw, 100 amperes, 250 volts, direct current
5	361711	2	Copper terminal stud, large
6	163424	8	Iron washer, for terminal stud
7	7458	4	Iron washer, for terminal stud
8	.....	10	Lock washer, 1/4" (standard hardware), for terminal stud
9	46868	8	Hexagon brass nut, for terminal stud
10	361706	3	Copper terminal stud, small
11	3421	6	Washer, for terminal stud
12	4000	6	Lock washer for terminal stud
13	148425	12	Crimped brass washer, for terminal stud
14	40662	12	Hexagon brass nut, for terminal stud
15	199656	1	Fibre wire cleat
16	.....	2	Fillister head iron machine screw, No. 10-32x1 1/2" (standard hardware), to fasten wire cleat to slate panel
17	3410	2	Washer, for machine screw
18	.....	2	Hexagon iron nut, No. 10-32 (standard hardware), for machine screw
19	385051	1	Cover complete
20	385049	3	Stud, for cover
21	7444	12	Washer, for stud
22	197938	3	Wing nut, for stud
23	.....	3	Hexagon iron nut, 1/4" (standard hardware), for stud

TYPE A KNIFE SWITCH, STYLE NO. 398301 AND DETAILS



Ref. No.	Style No.	No. per Switch	Description
..	398301	..	Knife switch, 2-pole, single-throw. 100 amperes, 250 volts, direct current
1	385050	1	Cross bar
2	293081	1	Handle complete
3	40662	1	Hexagon iron nut, to fasten handle to cross bar
4	4000	1	Lock washer, used under hexagon iron nut
5	189777	2	Switch blade
6	.....	2	Fillister head iron machine screw, No. 10-32x3/4" (standard hardware), to fasten switch blade to cross bar
7	40662	2	Hexagon iron nut, for machine screw
8	3410	2	Washer, to fit between hexagon iron nut and cross bar
9	.....	2	Copper rivet, 1/8"x1/2" (standard hardware), used as a hinge pin for switch blade
10	230883	4	Washer, for rivet
11	23216	4	Terminal clip, for break jaw
12	194512	8	Terminal clip, for hinge jaw
13	189769	2	Break jaw complete
14	189768	2	Hinge jaw complete
15	369094	4	Contact nut, for hinge and break jaws
16	15309	4	Hexagon brass nut, to fasten hinge and break jaws to base
17	3272	4	Iron washer, used under hexagon brass nut

*Not illustrated.

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