

Part Catalogue No. 6192-5

September, 1924

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

PARTS OF

Westinghouse Type E-5 Oil Circuit-Breakers

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

25 Cycles, 400 to 2250 Amperes, 15,000 to 25,000 Volts
60 Cycles, 300 to 2000 Amperes, 15,000 to 25,000 Volts

Index to Parts.....Page 2
Index to Style Numbers.....Pages 34-35

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.



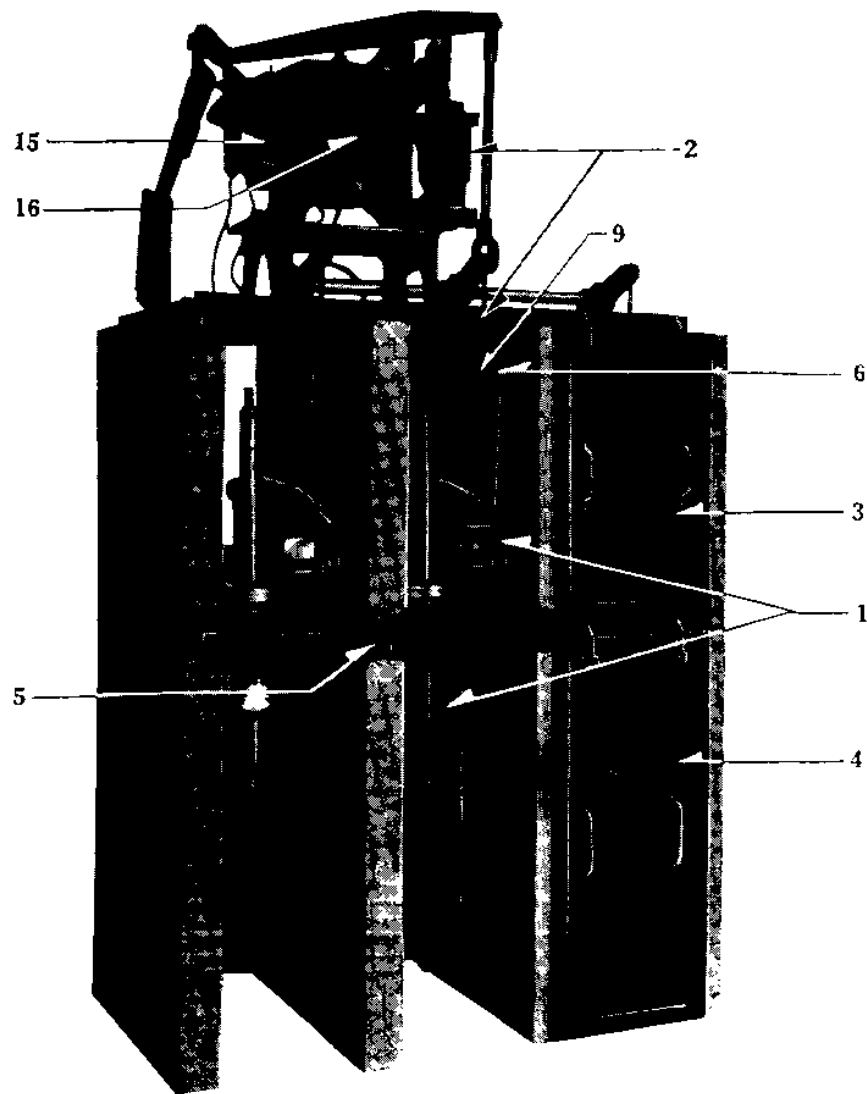
WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY

East Pittsburgh, Pa.

Printed in U. S. A.

INDEX TO PARTS

	Page
Breaker Unit Details.....	8-9
Bell Cranks and Details.....	25
Cover Plate, Hand Operating Lever Parts and Mounting Details.....	25
Cut-Off Switch and Details.....	31-32
Doors and Details.....	26
Hand and Electrical Mechanisms, Top Plates and Shafts, Style Nos. 277420, 277421, 277422, 277423, 277483, 277484, 277485, and 300292.....	10-11-12
Hand Mechanisms, Top Plates and Shafts, Style Nos. 277486, 277487 and 277488.....	13
Electrical Mechanisms, Top Plates and Shafts, Style Nos. 277424 and 277425.....	14
Electrical Mechanisms, Style Nos. 277412, 277413, 277414 and 277415.....	15-16-17
Hand Mechanisms, Full Automatic, Style Nos. 277426, 277427 and 300289.....	18-19
Main Assembly, Electrically Operated, Full Automatic, Shunt Trip Breakers.....	2-3
Main Assembly, Hand Operated, Full Automatic, Transformer Trip Breakers.....	4-5
Main Assembly, Hand Operated, Non-Automatic Breakers.....	6-7
Moving Contacts and Details.....	21-22
Pole Unit Operating Mechanisms, Style Nos. 221984 and 221987.....	20
Overload Release Mechanisms and Details, Style Nos. 277539 and 277540.....	29-30
Stationary Contacts and Details.....	23-24
Signal Switch and Details.....	33
Tank Lifter and Details.....	26
Under Voltage Release Mechanisms and Details.....	27-28



TYPE E-5 ELECTRICALLY OPERATED OIL CIRCUIT-BREAKER, FULL AUTOMATIC

Reference No. 1 Circuit-breaker unit. Specify stock order number and name plate reading when ordering.

Parts listed on Page 3

MAIN ASSEMBLY
Type E-5 Electrically Operated, Full Automatic, Shunt Trip Breakers

Illustrated on Page 2

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Amperes				Ref. No. 2 Mechanism and Top Plate		Ref. No. 3 Upper Door		Ref. No. 4 Lower Door		Ref. No. 5 Wall Channel	
60 Cycles	25 Cycles	Volts	Poles	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.
300	400	25,000	2	1	277420	2	277452	2	277453	3	277443
300	400	25,000	3	1	277421	3	277452	3	277453	4	277443
300	400	25,000	4	1	277423	4	277452	4	277453	5	277443
600	750	25,000	2	1	277420	2	277452	2	277453	3	277443
600	750	25,000	3	1	277421	3	277452	3	277453	4	277443
600	750	25,000	4	1	277423	4	277452	4	277453	5	277443
1200	1350	25,000	2	1	277420	2	277452	2	277453	3	277443
1200	1350	25,000	3	1	277421	3	277452	3	277453	4	277443
1200	1350	25,000	4	1	277424	4	277452	4	277453	5	277443
1600	1800	15,000	2	1	277420	2	277452	2	277453	3	277443
1600	1800	15,000	3	1	277422	3	277452	3	277453	4	277443
1600	1800	15,000	4	1	277425	4	277452	4	277453	5	277443
2000	2250	15,000	2	1	277420	2	277452	2	277453	3	277443
2000	2250	15,000	3	1	277422	3	277452	3	277453	4	277443
2000	2250	15,000	4	1	277425	4	277452	4	277453	5	277443

Amperes				Ref. No. 6 Tie Rod for Top Plate		Ref. No. 7* Nut for Tie Rod 1/2" Std. Hardware		Ref. No. 8* Lock Washer for Tie Rod 1/2" Std. Hardware		Ref. No. 9 Pull Rod		Ref. No. 10* Pull Rod	
60 Cycles	25 Cycles	Volts	Poles	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.
300	400	25,000	2	8	256141	16	8	1	264129	1	266514	1	266514
300	400	25,000	3	12	256141	24	12	2	264129	1	266514	1	266514
300	400	25,000	4	16	256141	32	16	3	264129	1	266514	1	266514
600	750	25,000	2	8	256141	16	8	1	264129	1	266514	1	266514
600	750	25,000	3	12	256141	24	12	2	264129	1	266514	1	266514
600	750	25,000	4	16	256141	32	16	3	264129	1	266514	1	266514
1200	1350	25,000	2	8	256141	16	8	1	264129	1	266514	1	266514
1200	1350	25,000	3	12	256141	24	12	2	264129	1	266514	1	266514
1200	1350	25,000	4	16	256141	32	16	3	277378	1	277378	1	277378
1600	1800	15,000	2	8	256141	16	8	1	264129	1	266514	1	266514
1600	1800	15,000	3	12	256141	24	12	2	264129	1	266514	1	266514
1600	1800	15,000	4	16	256141	32	16	3	277378	1	277378	1	277378
2000	2250	15,000	2	8	256141	16	8	1	264129	1	266514	1	266514
2000	2250	15,000	3	12	256141	24	12	2	264129	1	266514	1	266514
2000	2250	15,000	4	16	256141	32	16	3	277378	1	277378	1	277378

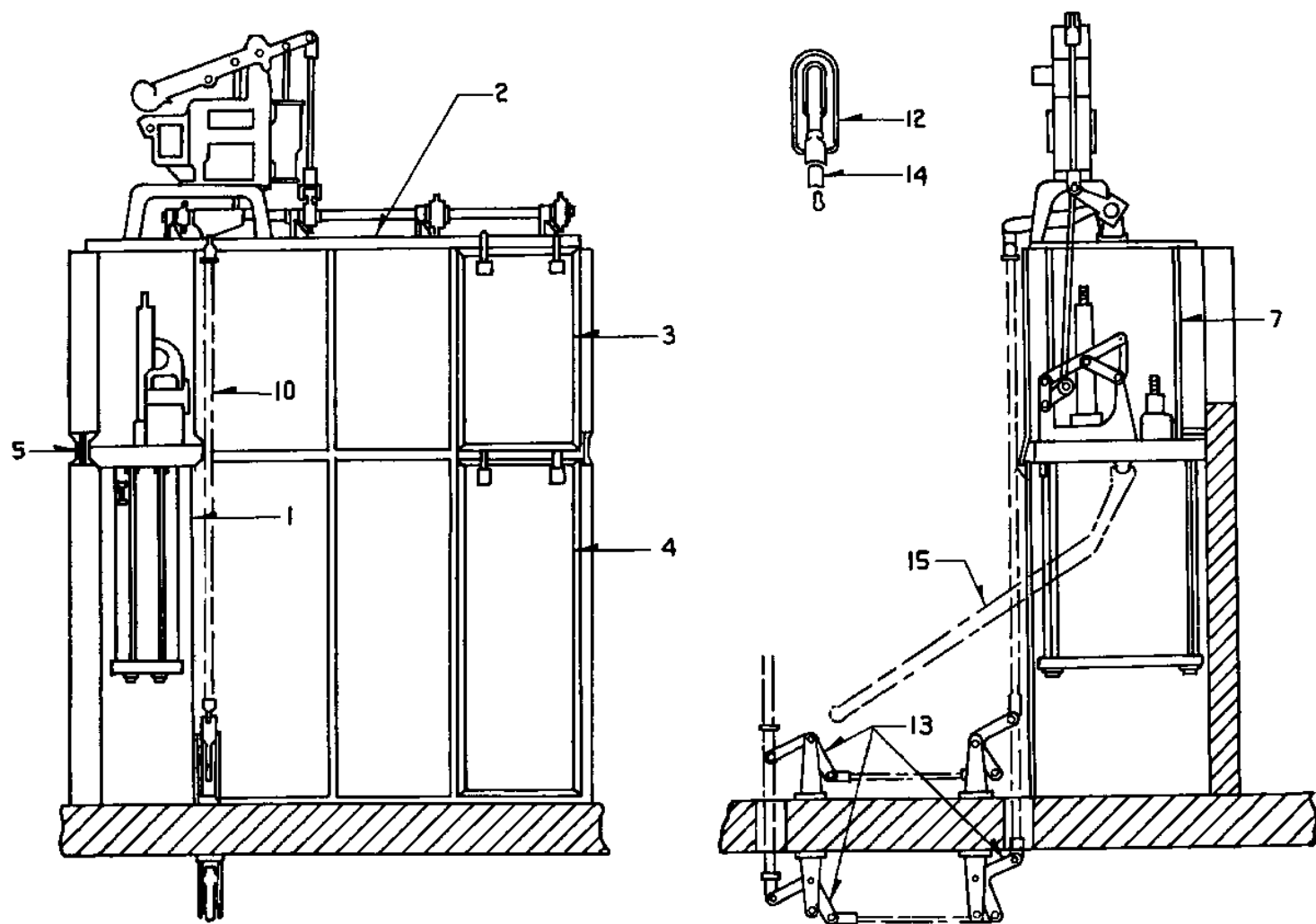
Amperes				Ref. No. 11* Swivel for Pull Rods		Ref. No. 12* Removable Hand Closing Lever†		Ref. No. 13* Tank Lifter‡		Ref. No. 14 Closing Coil†		Ref. No. 16 Tripping Coil†	
60 Cy.	25 Cy.	Volts	Poles	No. Req.	Style No.	Style No.	Style No.	Style No.	Style No.	No. Req.	No. Req.	No. Req.	No. Req.
300	400	25,000	2	2	273296	285212	276438	1	1	1	1	1	1
300	400	25,000	3	3	273296	285212	276438	1	1	1	1	1	1
300	400	25,000	4	4	273296	285212	276438	1	1	1	1	1	1
600	750	25,000	2	2	273296	285212	276438	1	1	1	1	1	1
600	750	25,000	3	3	273296	285212	276438	1	1	1	1	1	1
600	750	25,000	4	4	273296	285212	276438	1	1	1	1	1	1
1200	1350	25,000	2	2	273296	285212	276438	1	1	1	1	1	1
1200	1350	25,000	3	3	273296	285212	276438	1	1	1	1	1	1
1200	1350	25,000	4	4	273296	285212	276438	1	1	1	1	1	1
1600	1800	15,000	2	2	273296	285212	276438	1	1	1	1	1	1
1600	1800	15,000	3	3	273296	285212	276438	1	1	1	1	1	1
1600	1800	15,000	4	4	273296	285212	276438	1	1	1	1	1	1
2000	2250	15,000	2	2	273296	285212	276438	1	1	1	1	1	1
2000	2250	15,000	3	3	273296	285212	276438	1	1	1	1	1	1
2000	2250	15,000	4	4	273296	285212	276438	1	1	1	1	1	1

*Not illustrated.

†Order one coil per breaker, giving stock order or style number, amperes, volts and control circuit, as per name plate data.

‡One per station required.

MAIN ASSEMBLY
Type E-5 Hand Operated, Full Automatic, Transformer Trip Breakers



TYPE E-5 HAND OPERATED OIL CIRCUIT-BREAKER, FULL AUTOMATIC
Reference No. 1—Circuit-breaker unit. Specify stock order number and name plate reading when ordering.

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Amperes			Poles	Ref. No. 2 Mechanism and Top Plate		Ref. No. 3 Upper Door		Ref. No. 4 Lower Door		Ref. No. 5 Wall Channel	
60 Cycles	25 Cycles	Volts		No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.
300	400	25,000	2	1	277483	2	277452	2	277453	3	277443
300	400	25,000	3	1	277484	3	277452	3	277453	4	277443
300	400	25,000	4	1	277485	4	277452	4	277453	5	277443
600	750	25,000	2	1	277483	2	277452	2	277453	3	277443
600	750	25,000	3	1	277484	3	277452	3	277453	4	277443
600	750	25,000	4	1	277485	4	277452	4	277453	5	277443
1200	1350	25,000	2	1	277483	2	277452	2	277453	3	277443
1200	1350	25,000	3	1	277484	3	277452	3	277453	4	277443
1200	1350	25,000	4	2	277483	4	277452	4	277453	5	277443
1600	1800	15,000	2	1	277483	2	277452	2	277453	3	277443
1600	1800	15,000	3	1	277484	3	277452	3	277453	4	277443
1600	1800	15,000	4	2	277483	4	277452	4	277453	5	277443
2000	2250	15,000	2	1	277483	2	277452	2	277453	3	277443
2000	2250	15,000	3	1	300292	3	277452	3	277453	4	277443
2000	2250	15,000	4	2	277483	4	277452	4	277453	5	277443

MAIN ASSEMBLY

Type E-5 Hand Operated, Full Automatic, Transformer Trip Breakers—Continued

Illustrated on Page 4

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

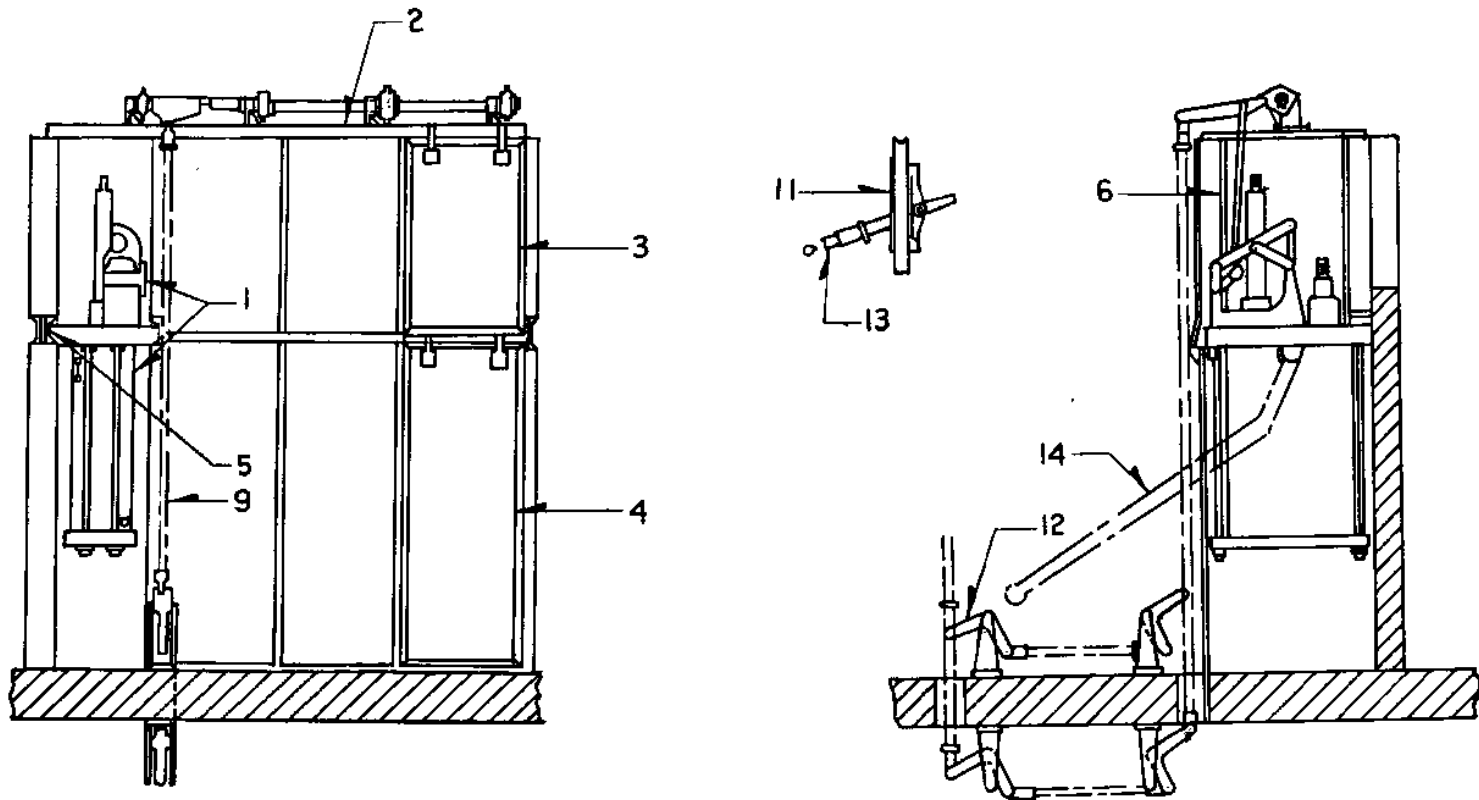
Amperes				Ref. No. 7 Tie Rod for Top Plate		Ref. No. 8* Nut for Tie Rod		Ref. No. 9* Lock Washer for Tie Rod		Ref. No. 10 Pull Rod		Ref. No. 10A* Pull Rod	
60 Cycles	25 Cycles	Volts	Poles	No. Req.	Style No.	1/2" Std. Hdw. No. Req.	1/2" Std. Hdw. No. Req.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.
300	400	25,000	2	8	256141	16	8	1	264129	1	266514	1	266514
300	400	25,000	3	12	256141	24	12	2	264129	1	266514	1	266514
300	400	25,000	4	16	256141	32	16	3	264129	1	266514	1	266514
600	750	25,000	2	8	256141	16	8	1	264129	1	266514	1	266514
600	750	25,000	3	12	256141	24	12	2	264129	1	266514	1	266514
600	750	25,000	4	16	256141	32	16	3	264129	1	266514	1	266514
1200	1350	25,000	2	8	256141	16	8	1	264129	1	266514	1	266514
1200	1350	25,000	3	12	256141	24	12	2	264129	1	266514	1	266514
1200	1350	25,000	4	16	256141	32	16	3	264129	2	266514	2	266514
1600	1800	15,000	2	8	256141	16	8	1	264129	1	266514	1	266514
1600	1800	15,000	3	12	256141	24	12	2	264129	1	266514	1	266514
1600	1800	15,000	4	16	256141	32	16	3	264129	2	266514	2	266514
2000	2250	15,000	2	8	256141	16	8	1	264129	1	266514	1	266514
2000	2250	15,000	3	12	256141	24	12	2	264129	1	266514	1	266514
2000	2250	15,000	4	16	256141	32	16	3	264129	2	266514	2	266514

Amperes				Ref. No. 11* Swivel for Pull Rods		Ref. No. 12 Cover Plate for Handle Lever		Ref. No. 13 Bell Crank†		Ref. No. 14 Removable Hand Closing Lever†		Ref. No 15 Tank Lifter†	
60 Cycles	25 Cycles	Volts	Poles	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	Style No.	Style No.		
300	400	25,000	2	2	273296	1	277469	2	270454	200874	276438		
300	400	25,000	3	3	273296	1	277469	2	270454	200874	276438		
300	400	25,000	4	4	273296	1	277469	2	270454	200874	276438		
600	750	25,000	2	2	273296	1	277469	2	270454	200874	276438		
600	750	25,000	3	3	273296	1	277469	2	270454	200874	276438		
600	750	25,000	4	4	273296	1	277469	2	270454	200874	276438		
1200	1350	25,000	2	2	273296	1	277469	2	270454	200874	276438		
1200	1350	25,000	3	3	273296	1	277469	2	270454	200874	276438		
1200	1350	25,000	4	4	273296	2	277469	4	270454	200874	276438		
1600	1800	15,000	2	2	273296	1	277469	2	270454	200874	276438		
1600	1800	15,000	3	3	273296	1	277469	2	270454	200874	276438		
1600	1800	15,000	4	4	273296	2	277469	4	270454	200874	276438		
2000	2250	15,000	2	2	273296	1	277469	2	270454	200874	276438		
2000	2250	15,000	3	3	273296	1	277469	2	270454	200874	276438		
2000	2250	15,000	4	4	273296	2	277469	4	270454	200874	276438		

*Not illustrated.
†For mounting above or below floor.
‡One per station required.

MAIN ASSEMBLY

Type E-5 Hand Operated, Non-Automatic Breakers



TYPE E-5 HAND OPERATED OIL CIRCUIT-BREAKER, NON-AUTOMATIC

Reference No. 1—Circuit-breaker unit complete. Specify stock order number and give name plate reading when ordering.

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

			Poles	Ref. No. 2 Mechanism Top Plate		Ref. No. 3 Upper Door		Ref. No. 4 Lower Door		Ref. No. 5 Wall Channel		Ref. No. 6 Tie Rod for Top Plate		Ref. No. 7* Nut for Tie Rod 1/2" Std. Hdwre	Ref. No. 8* Lock Washer for Tie Rod 1/2" Std. Hdwre
Amperes 60 Cy. 25 Cy.	Volts			No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	No. Req.
300 400	25,000	2	1	277486	2	277452	2	277453	3	277443	8	256141	16		8
300 400	25,000	3	1	277487	3	277452	3	277453	4	277443	12	256141	24		12
300 400	25,000	4	1	277488	4	277452	4	277453	5	277443	16	256141	32		16
600 750	25,000	2	1	277486	2	277452	2	277453	3	277443	8	256141	16		8
600 750	25,000	3	1	277487	3	277452	3	277453	4	277443	12	256141	24		12
600 750	25,000	4	1	277488	4	277452	4	277453	5	277443	16	256141	32		16
1200 1350	25,000	2	1	277486	2	277452	2	277453	3	277443	8	256141	16		8
1200 1350	25,000	3	1	277487	3	277452	3	277453	4	277443	12	256141	24		12
1200 1350	25,000	4	2	277486	4	277452	4	277453	5	277443	16	256141	32		16
1600 1800	15,000	2	1	277486	2	277452	2	277453	3	277443	8	256141	16		8
1600 1800	15,000	3	1	277487	3	277452	3	277453	4	277443	12	256141	24		12
1600 1800	15,000	4	2	277486	4	277452	4	277453	5	277443	16	256141	32		16
2000 2250	15,000	2	1	277486	2	277452	2	277453	3	277443	8	256141	16		8
2000 2250	15,000	3	1	277487	3	277452	3	277453	4	277443	12	256141	24		12
2000 2250	15,000	4	2	277486	4	277452	4	277453	5	277443	16	256141	32		16

*Not illustrated.

MAIN ASSEMBLY
Type E-5, Hand Operated, Non-Automatic Breakers—Continued

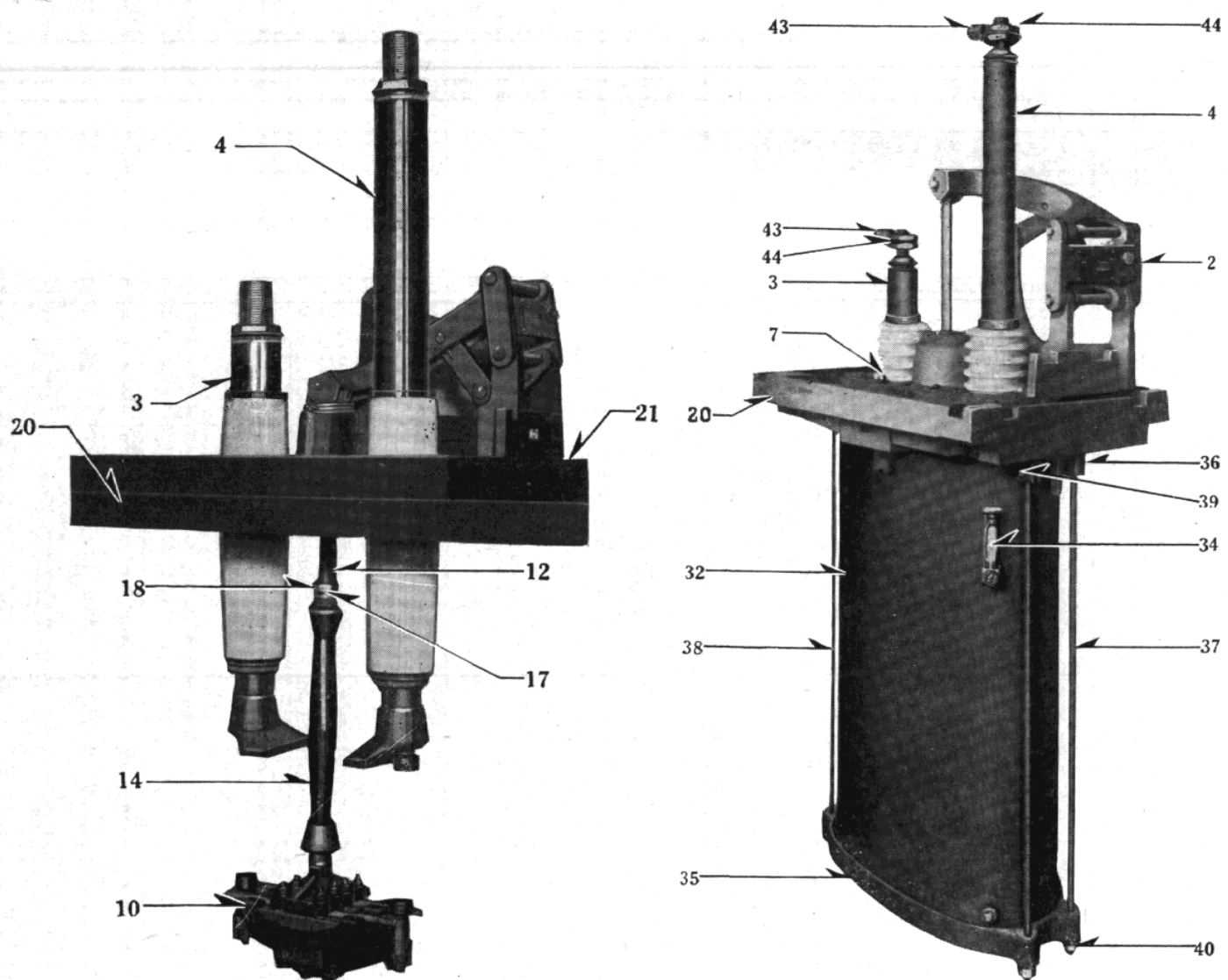
Parts Illustrated on Page 6

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

				Ref. No. 9 Pull Rod		Ref. No. 10* Swivel for Pull Rod		Ref. No. 11 Cover Plate for Handle Lever		Ref. No. 12 Bell Crank†		Ref. No. 13 Removable Hand Closing Lever†	Ref. No. 14 Tank Lifter†
Amperes		Volts	Poles	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	No. Req.	Style No.	Style No.	Style No.
60 Cy.	25 Cy.												
300	400	25,000	2	2	264129	2	273296	1	277469	2	270454	200874	276438
300	400	25,000	3	3	264129	3	273296	1	277469	2	270454	200874	276438
300	400	25,000	4	4	264129	4	273296	1	277469	2	270454	200874	276438
600	750	25,000	2	2	264129	2	273296	1	277469	2	270454	200874	276438
600	750	25,000	3	3	264129	3	273296	1	277469	2	270454	200874	276438
600	750	25,000	4	4	264129	4	273296	1	277469	2	270454	200874	276438
1200	1350	25,000	2	2	264129	2	273296	1	277469	2	270454	200874	276438
1200	1350	25,000	3	3	264129	3	273296	1	277469	2	270454	200874	276438
1200	1350	25,000	4	4	264129	4	273296	2	277469	4	270454	200874	276438
1600	1800	15,000	2	2	264129	2	273296	1	277469	2	270454	200874	276438
1600	1800	15,000	3	3	264129	3	273296	1	277469	2	270454	200874	276438
1600	1800	15,000	4	4	264129	4	273296	2	277469	4	270454	200874	276438
2000	2250	15,000	2	2	264129	2	273296	1	277469	2	270454	200874	276438
2000	2250	15,000	3	3	264129	3	273296	1	277469	2	270454	200874	276438
2000	2250	15,000	4	4	264129	4	273296	2	277469	4	270454	200874	276438

*Not illustrated.
†For mounting above or below floor.
‡One per station required.

BREAKER UNIT DETAILS



REFERENCE No. 1†

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts Are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Unit	Description
1†	.....	1	Breaker unit complete
2	221984	1	Breaker operating mechanism complete for 300, 600 and 1200 ampere breakers
2	221987	1	Breaker operating mechanism complete for 1600 and 2000 ampere breakers
3	277337	1	Stationary contact, short, for 300 ampere breaker
3	277339	1	Stationary contact, short, for 600 ampere breaker
3	277341	1	Stationary contact, short, for 1200 ampere breaker
3	277343	1	Stationary contact, short, for 1600 ampere breaker
3	277345	1	Stationary contact, short, for 2000 ampere breaker
4	277338	1	Stationary contact, long, for 300 ampere breaker
4	277340	1	Stationary contact, long, for 600 ampere breaker
4	277342	1	Stationary contact, long, for 1200 ampere breaker
4	277344	1	Stationary contact, long, for 1600 ampere breaker
4	277346	1	Stationary contact, long, for 2000 ampere breaker
5*	277353	2	Adjusting ring, for contacts, for 300 ampere breaker
5*	277354	2	Adjusting ring, for contacts, for 600 and 1200 ampere breakers
6*	233256	2	Clamp ring, for contacts, for 300 ampere breaker
6*	277347	2	Clamp ring, for contacts, for 600 and 1200 ampere breakers
6*	277356	2	Clamp ring, for contacts, for 1600 ampere breaker
7	.....	6	Machine bolt, $\frac{3}{8}$ " x 2" (standard hardware), to mount stationary contacts to base

*Not illustrated

†Specify complete name plate reading when ordering complete breaker units.

BREAKER UNIT DETAILS—Continued

Illustrated on Page 8

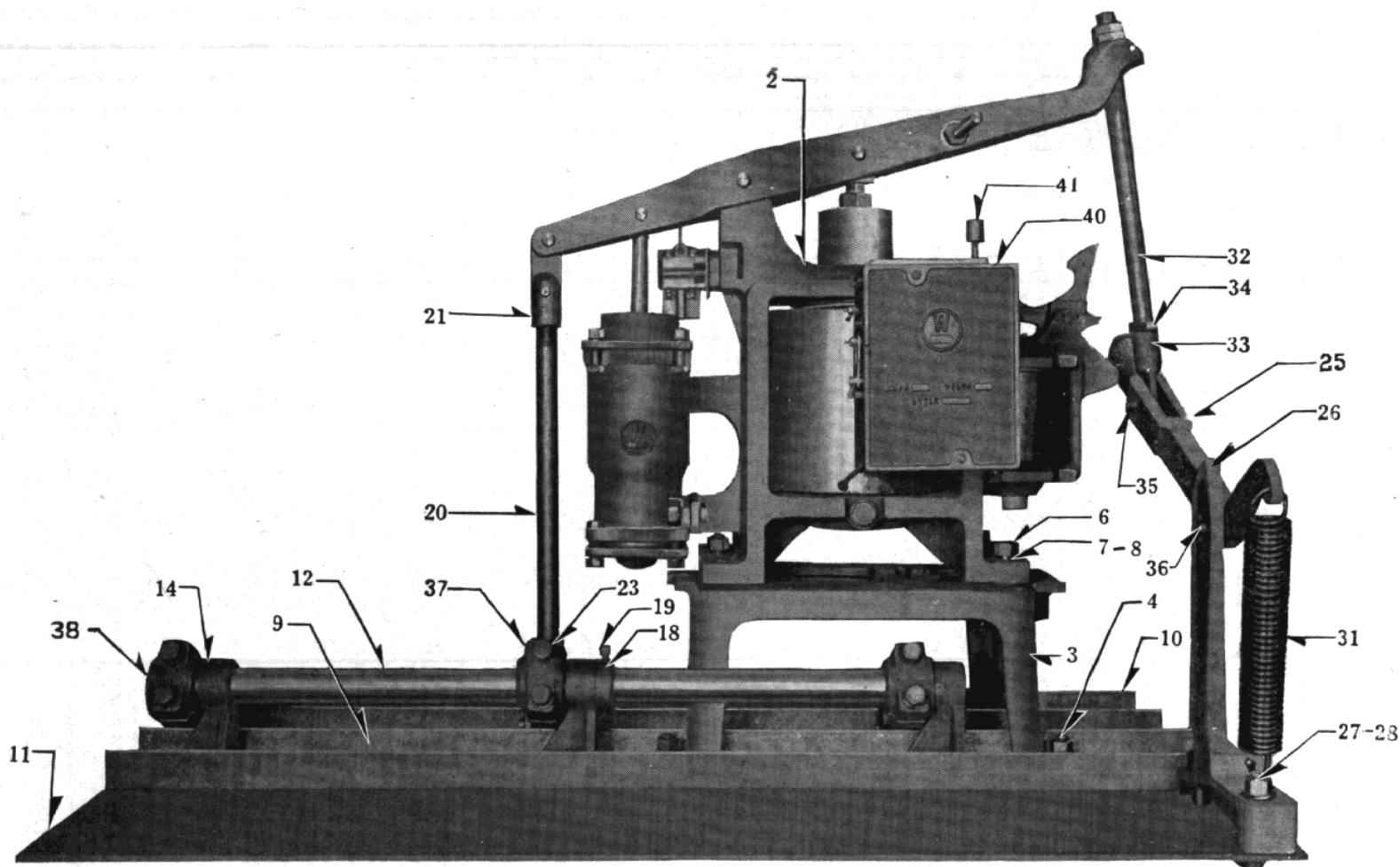
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts Are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Unit	Description
8*	.....	6	Lock washer, $\frac{3}{8}$ " (standard hardware), for machine bolt
9*	.....	6	Wrought iron washer, $\frac{3}{8}$ " (standard hardware), for machine bolt
10	277331	1	Moving contact complete, for 300 and 600 ampere breakers
10	277332	1	Moving contact complete, for 1200 ampere breaker
10	277333	1	Moving contact complete, for 1600 ampere breaker
10	277334	1	Moving contact complete, for 2000 ampere breaker
11*	277335	1	Lifting rod assembled complete, for 1600 ampere breaker
11*	277336	1	Lifting rod assembled complete, for 2000 ampere breaker
12	277358	1	Steel lifting rod only, for 300, 600, 1200 and 1600 ampere breakers
12	277357	1	Steel lifting rod only, for 2000 ampere breaker
13*	301691	1	Steel pin, to fasten lifting rod to rod end, for 300, 600 and 1200 ampere breakers
14	384859	1	Wood lifting rod with rod ends, for 1600 ampere breaker
14	384858	1	Wood lifting rod with rod ends, for 2000 ampere breaker
15*	277473	1	Stud, to connect wood rod to contact, for 1600 and 2000 ampere breakers
16*	.....	2	Taper pin, No. 2 x $1\frac{1}{2}$ " (standard hardware), to fasten wood rod to steel rod and stud, for 1600 and 2000 ampere breakers
17	88907	1	Lock washer, for stud, for 1600 and 2000 ampere breakers
18	.....	1	Lock nut, $\frac{3}{4}$ " (standard hardware), for stud and lifting rod
19*	.....	1	Spring cotter, $\frac{3}{16}$ " x $\frac{1}{2}$ " (standard hardware), for stud, for 1600 and 2000 ampere breakers
20	405162	1	Supporting frame, for tank and mechanism base
21	405401	1	Slate base, for mechanism, for 300, 600 and 1200 ampere breakers
21	405192	1	Slate base, for mechanism, for 1600 and 2000 ampere breakers
*	.....	4	Machine bolt, $\frac{3}{8}$ -16 x 4" (standard hardware), to fasten slate base to tank supporting frame
*	88907	4	Washer, for machine bolt
22*	405161	4	Wedge to mount slate base in channel iron support
*	.....	4	Machine bolt, $\frac{1}{2}$ " x $3\frac{1}{2}$ " (standard hardware), to fasten wedge to channel iron support
*	.....	4	Lock washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
23*	.....	4	Soft white felt gasket, 2" x 1" x $\frac{1}{8}$ ", used between slate base and channel iron support
24*	422320	1	Angle iron door support
*	.....	2	Machine bolt, $\frac{3}{8}$ "-16 x 3" (standard hardware), for angle iron door support
*	.....	2	Lock washer, $\frac{3}{8}$ " (standard hardware), for machine bolt
*	.....	2	Wrought iron washer, $\frac{3}{8}$ " (standard hardware), for machine bolt
25*	.....	2	Machine bolt, $\frac{3}{4}$ " x $2\frac{1}{2}$ " (standard hardware), to fasten breaker mechanism bracket to base
26*	.....	2	Lock washer, $\frac{3}{4}$ " (standard hardware), for machine bolt
27*	.....	4	Set screw, $\frac{5}{8}$ " x $1\frac{1}{2}$ " (standard hardware), to fasten supporting frame in channel iron
28*	.....	4	Square nut, $\frac{5}{8}$ " (standard hardware), for set screw
29*	.....	4	Machine bolt, $\frac{1}{2}$ " x $1\frac{3}{4}$ " (standard hardware), to fasten mechanism base to supporting frame
30*	.....	4	Lock washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
31*	.....	4	Wrought iron washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
32	221986	1	Tank complete with lining
33*	384881	1	Tank lining
34	41477	1	Oil gauge for tank
35	384863	1	Tank cradle for tank support
36	273792	2	Swivel bolt, for front tie rod for tank
37	270615	2	Hinge bolt, used as front tie rod for tank
38	277355	2	Rear tie rod for tank
39	88900	2	Pin, to fasten hinge bolt in swivel bolt
40	.....	10	Hexagon iron nut, $\frac{1}{2}$ "-13 (standard hardware), for tie rods
41*	.....	8	Lock washer, $\frac{1}{2}$ " (standard hardware), for tie rods
42*	.....	8	Wrought iron washer, $\frac{1}{2}$ " (standard hardware), for tie rods
*	233239	1	Tank locking lever, right hand
*	233240	1	Tank locking lever, left hand
*	255976	1	Pin to connect levers
*	94774	2	Pin to connect lever to tank
*	3429	2	Washer for pin
43	229124	2	Terminal, for 300 ampere breaker
43	229774	2	Terminal, for 600 ampere breaker
44	7544	2	Terminal nut, for 300 ampere breaker
44	7545	2	Terminal nut, for 600 ampere breaker

*Not illustrated.

HAND AND ELECTRICAL MECHANISMS, TOP PLATES AND SHAFTS
Style Nos. 277420, 277421, 277422, 277423, 277483, 277484, 277485 and 300292



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	277420†	..	Electrical mechanism, top plate and shaft complete
1	277421†	..	Electrical mechanism, top plate and shaft complete
1	277422†	..	Electrical mechanism, top plate and shaft complete
1	277423†	..	Electrical mechanism, top plate and shaft complete
1	277483†	..	Hand mechanism, top plate and shaft complete
1	277484†	..	Hand mechanism, top plate and shaft complete
1	277485†	..	Hand mechanism, top plate and shaft complete
1	300292†	..	Hand mechanism, top plate and shaft complete
2	277412	1	Electrical mechanism assembled complete, for Style Nos. 277420, 277421 and 277423 only
2	277413	1	Electrical mechanism assembled complete, for Style No. 277422
3	277438	1	Bracket, to mount electrical mechanism
4	.....	4	Machine bolt, 5/8"-11 x 2" (standard hardware), to mount bracket for electrical mechanism
5*	.....	4	Lock washer, for machine bolt
6	.....	3	Machine bolt, 5/8"-11 x 3" (standard hardware), to mount electrical mechanism to bracket
7	.....	3	Washer, 5/8" (standard hardware), for machine bolt
8	.....	3	Lock washer, 5/8" (standard hardware), for machine bolt
9	277440	1	Front channel base, for Style Nos. 277420 and 277483
9	277480	1	Front channel base, for Style Nos. 277421, 277422, 277484 and 300292
9	277449	1	Front channel base, for Style Nos. 277423 and 277485

*Not illustrated.

†See pages 3, 4 and 5 for application of these style numbers.

HAND AND ELECTRICAL MECHANISMS, TOP PLATES AND SHAFTS—Cont'd **Style Nos. 277420, 277421, 277422, 277423, 277483, 277484, 277485 and 300292**

Illustrated on Page 10

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
10	277441	1	Rear channel base, for Style Nos. 277420 and 277483
10	277481	1	Rear channel base, for Style Nos. 277421, 277422, 277484 and 300292
10	277450	1	Rear channel base, for Style Nos. 277423 and 277485
11	277442	1	Steel plate, for base, for Style Nos. 277420 and 277483
11	277482	1	Steel plate, for base, for Style Nos. 277421, 277422, 277484 and 300292
11	277451	1	Steel plate, for base, for Style Nos. 277423 and 277485
12	277444	1	Operating shaft, for Style Nos. 277420 and 277483
12	241477	1	Operating shaft, for Style Nos. 277421, 277422, 277484 and 300292
12	277445	1	Operating shaft, for Style Nos. 277423 and 277485
13*	32128	2	Key, for shaft, Style No. 277444
13*	32128	3	Key, for shaft, Style No. 241477
13*	32128	4	Key, for shaft, Style No. 277445
14	272014	2	Bearing bracket, for operating shaft, Style No. 277444
14	272014	3	Bearing bracket, for operating shaft, Style No. 241477
14	272014	4	Bearing bracket, for operating shaft, Style No. 277445
15*	.....	4	Machine bolt, $\frac{1}{2}$ "-13 x $1\frac{1}{2}$ " (standard hardware), for bearing bracket and shaft, Style No. 277444
15*	.....	6	Machine bolt, $\frac{1}{2}$ "-13 x $1\frac{1}{2}$ " (standard hardware), for bearing bracket and shaft, Style No. 277477
15*	.....	8	Machine bolt, $\frac{1}{2}$ "-13 x $1\frac{1}{2}$ " (standard hardware), for bearing bracket and shaft, Style No. 277445
16*	.....	4	Washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
16*	.....	6	Washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
16*	.....	8	Washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
17*	.....	4	Lock washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
17*	.....	6	Lock washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
17*	.....	8	Lock washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
18	265698	1	Collar, for operating shaft
19	.....	1	Set screw, $\frac{3}{8}$ " x $\frac{3}{4}$ " (standard hardware), for collar
20	384887	1	Operating rod, from electrical mechanism to operating shaft lever
21	233252	1	Rod end, for top of operating rod
22*	.....	1	Pipe nut, $\frac{3}{4}$ ", (standard hardware,) for upper rod end
23	233251	1	Rod end, for bottom of operating rod
24*	63634	1	Shaft, for lower rod end, lever and pull rod
25	277472	1	Hand closing lever, for Style Nos. 277420, 277421, 277422 and 277423
26	277470	1	Bearing bracket, for hand closing lever socket, Style No. 277472
27	.....	1	Machine bolt, $\frac{3}{4}$ "-10 x $3\frac{1}{2}$ " (standard hardware), to mount bracket Style No. 277470
28	.....	1	Machine bolt, $\frac{3}{4}$ "-10 x 3" (standard hardware), to mount bracket Style No. 277470
29*	.....	2	Washer, $\frac{3}{4}$ " (standard hardware), for bolt
30*	.....	2	Lock washer, $\frac{3}{4}$ " (standard hardware), for bolt
31	252300	1	Spring, for closing lever Style No. 277472
32	277471	1	Pull rod, for handle lever, for Style Nos. 277420, 277421, 277422 and 277423 only
33	72281	1	Rod end, for pull rod Style No. 277471
34	.....	1	Pipe nut, $\frac{3}{4}$ " (standard hardware), for pull rod Style No. 277471
35	65150	1	Shaft, for handle lever and pull rod Style No. 277471
36	87676	1	Shaft, for handle lever and bearing bracket, for Style Nos. 277420, 277421, 277422 and 277423
37	240470	1	Lever, to connect electrical mechanism and pull rod

*Not illustrated.

HAND AND ELECTRICAL MECHANISMS, TOP PLATES AND SHAFTS—Cont'd
Style Nos. 277420, 277421, 277422, 277423, 277483, 277484, 277485 and 300292

Illustrated on Page 10

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No Per Mechanism	Description
38	277431	1	Lifting lever, for pull rod, for Style Nos. 277420 and 277483
38	277431	2	Lifting lever, for pull rod, for Style Nos. 277421, 277422, 277484 and 300292
38	277431	3	Lifting lever, for pull rod, for Style Nos. 277423 and 277485
39*	63613	1	Shaft, for lifting lever and pull rod, for Style Nos. 277420 and 277483
39*	63613	2	Shaft, for lifting lever and pull rod, for Style Nos. 277421, 277422, 277484 and 300292
39*	63613	3	Shaft, for lifting lever and pull rod, for Style Nos. 277423 and 277485
40	277491	1	Cut off switch complete with coil, for Style Nos. 277420, 277421, 277422 and 277423
41	277589	1	Cap, for plunger rod on cut off switch, Style No. 277491
42*	.....	3	Tap bolt slotted head, $\frac{3}{8}$ "-16 x $1\frac{3}{4}$ " (standard hardware), to mount cut off switch Style No. 277491
43*	107314	3	Lock washer, for tap bolt
44*	384888	3	Spacer, for tap bolt
45*	277478	1	Trip pin, for Style Nos. 277420, 277421, 277422 and 277423 only
46*	.....	2	Nut, $\frac{5}{8}$ "-11 (standard hardware), for trip pin
47*	.....	2	Lock washer, for trip pin
48*	277426	1	Hand operating mechanism assembled complete, for Style No. 277483
48*	277427	1	Hand operating mechanism assembled complete, for Style Nos. 277484 and 277485
48*	300289	1	Hand operating mechanism assembled complete, for Style No. 300292
49*	240473	1	Closing lever, for remote control, for Style Nos. 277483, 277484, 277485 and 300292
50*	384890	1	Pull rod, from closing lever to operating mechanism, for Style Nos. 277483, 277484, 277485 and 300292
51*	.....	2	Pipe nut, $\frac{3}{4}$ " (standard hardware), for pull rod
52*	63622	1	Shaft, for rod, operating mechanism and closing lever, for Style No. 240473
53*	105265	1	Shaft, for closing lever, rod end and operating mechanism, for Style Nos. 277483, 277484, 277485 and 300292
54*	248949	2	Rod end, for closing lever and pull rod Style No. 384890

*Not illustrated.

HAND MECHANISMS, TOP PLATES AND SHAFTS**Style Nos. 277486, 277487 and 277488**

Parts Similar to These Illustrated on Page 10

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
1	277486†	..	Mechanism, top plate and shaft
1	277487†	..	Mechanism, top plate and shaft
1	277488†	..	Mechanism, top plate and shaft
2	.....	..	Not used
3	277438	1	Bracket to mount electric mechanism
4	.....	4	Machine bolt, $\frac{5}{8}$ "-11 x 2" (standard hardware), to mount bracket for electric mechanism
5-8	.....	..	Not used
9	277440	1	Front channel base, for Style No. 277486
9	277480	1	Front channel base, for Style No. 277487
9	277449	1	Front channel base, for Style No. 277488
10	277441	1	Rear channel base, for Style No. 277486
10	277481	1	Rear channel base, for Style No. 277487
10	277450	1	Rear channel base, for Style No. 277488
11	277442	1	Steel plate, for base, for Style No. 277486
11	277482	1	Steel plate, for base, for Style No. 277487
11	277451	1	Steel plate, for base, for Style No. 277488
12	277444	1	Operating shaft, for Style No. 277486
12	241477	1	Operating shaft, for Style No. 277487
12	277445	1	Operating shaft, for Style No. 277488
13*	32128	3	Key, for shaft, Style No. 277444
13*	32128	4	Key, for shaft, Style No. 241477
13*	32128	5	Key, for shaft, Style No. 277445
14	272014	2	Bearing bracket, for operating shaft, Style No. 277444
14	272014	3	Bearing bracket, for operating shaft, Style No. 241477
14	272014	4	Bearing bracket, for operating shaft, Style No. 277445
15*	.....	4	Machine bolt, $\frac{1}{2}$ "-13 x $1\frac{1}{2}$ " (standard hardware), for bearing bracket, for operating shaft Style No. 277444
15*	.....	6	Machine bolt, $\frac{1}{2}$ "-13 x $1\frac{1}{2}$ " (standard hardware), for bearing bracket, for operating shaft Style No. 241477
15*	.....	8	Machine bolt, $\frac{1}{2}$ "-13 x $1\frac{1}{2}$ " (standard hardware), for bearing bracket, for operating shaft Style No. 277445
16*	.....	4	Washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
16*	.....	6	Washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
16*	.....	8	Washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
17*	.....	4	Lock washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
17*	.....	6	Lock washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
17*	.....	8	Lock washer, $\frac{1}{2}$ " (standard hardware), for machine bolt
18	265698	1	Collar, for operating shaft
19	.....	1	Set screw, $\frac{3}{8}$ " x $\frac{3}{4}$ " (standard hardware), for collar
20	384887	1	Operating rod, from electric mechanism to operating shaft lever
21	233252	1	Rod end, for top of operating rod
22*	.....	1	Pipe nut, $\frac{3}{4}$ " (standard hardware), for upper rod end
23	233251	1	Rod end, for bottom of operating rod
24*	63634	1	Shaft, for lower rod end, lever and pull rod
25-36	.....	..	Not used
37	277431	1	Lifting lever, used as operating shaft lever
38	277431	2	Lifting lever, for pull rod, for Style No. 277486
38	277431	3	Lifting lever, for pull rod, for Style No. 277487
38	277431	4	Lifting lever, for pull rod, for Style No. 277488
39*	63613	1	Shaft, for lifting lever and pull rod, for Style No. 277486
39*	63613	2	Shaft, for lifting lever and pull rod, for Style No. 277487
39*	63613	3	Shaft, for lifting lever and pull rod, for Style No. 277488
40-48	.....	..	Not used
49*	240471	1	Closing lever, for remote control
*	277455	1	Bearing bracket, for closing lever, for remote control
*	.....	2	Machine bolt, $\frac{1}{2}$ "-13 x $2\frac{3}{4}$ " (standard hardware), to mount closing lever bracket
*	.....	2	Lock washer, $\frac{1}{2}$ " (standard hardware), for bolt
*	88353	1	Shaft, for closing lever and bearing bracket
*	277456	1	Link, for closing lever and operating shaft lever
*	63631	1	Shaft, for link and operating shaft lever
*	85531	1	Shaft, for link and closing lever
50-52	.....	..	Not used
53*	105265	1	Shaft, for closing lever and rod end to bell crank
54*	248949	1	Rod end, for closing lever and pull rod

*Not Illustrated.

†See pages 6 and 7 for application of these style numbers.

ELECTRICAL MECHANISMS, TOP PLATES AND SHAFTS

Style Nos. 277424 and 277425

Parts Similar to These Illustrated on Page 10

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

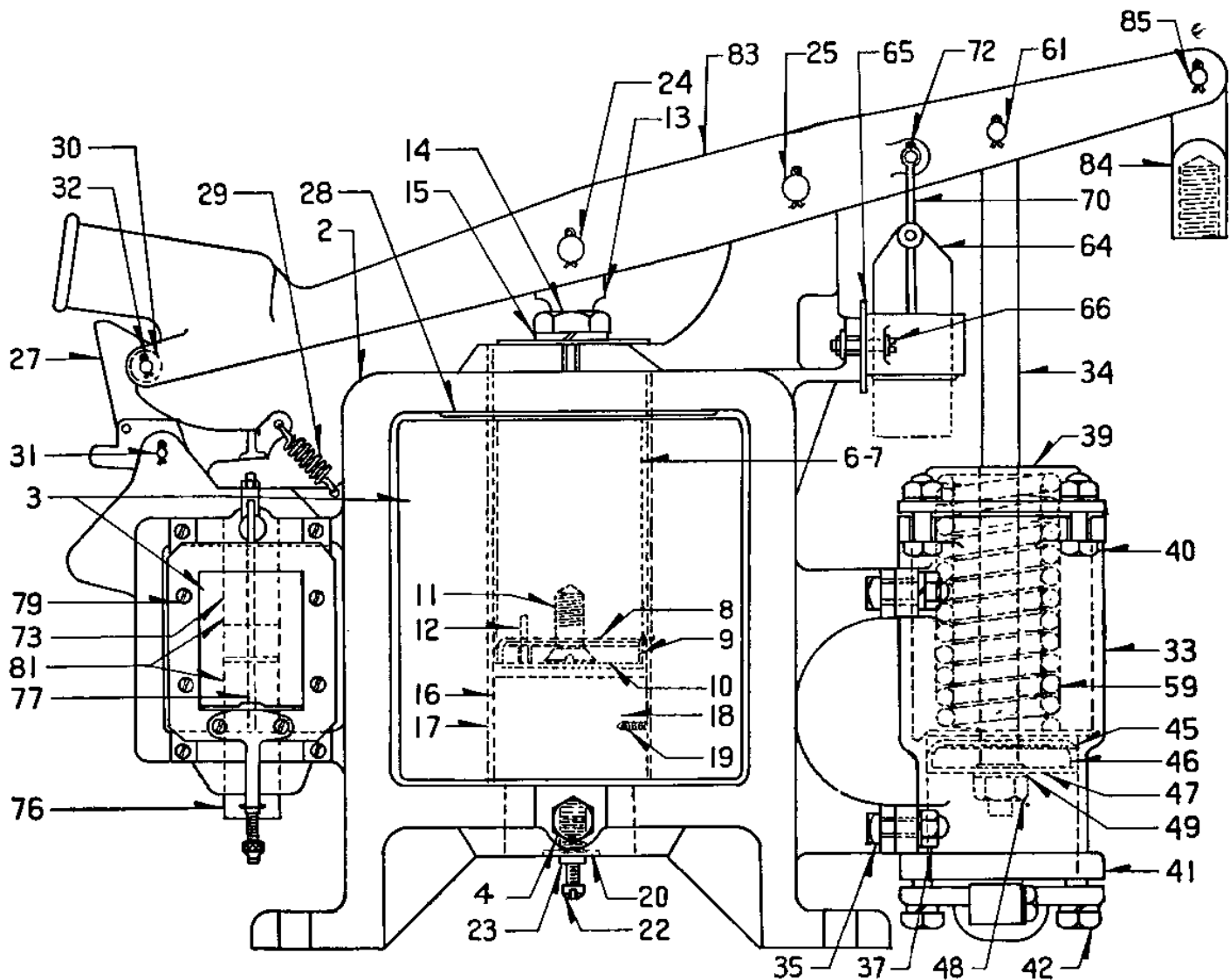
All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
1	277424†	..	Mechanism, top plate and shaft complete
1	277425†	..	Mechanism, top plate and shaft complete
2	277414	1	Electrical mechanism assembled complete, for Style No. 277424
2	277415	1	Electrical mechanism assembled complete, for Style No. 277425
3	277463	1	Bracket, to mount electrical mechanism
4	.....	4	Machine bolt, $\frac{3}{4}$ "-10 x $2\frac{1}{4}$ " (standard hardware), to mount bracket for electrical mechanism
5*	.....	4	Lock washer, $\frac{3}{4}$ " (standard hardware), for bolt
6	.....	3	Machine bolt, $\frac{7}{8}$ "-9 x $3\frac{1}{2}$ " (standard hardware), to mount electrical mechanism to bracket
7	.....	3	Washer, $\frac{7}{8}$ " (standard hardware), for bolt
8	.....	3	Lock washer, $\frac{7}{8}$ " (standard hardware), for bolt
9	277465	1	Front channel base
10	277466	1	Rear channel base
11	277467	1	Steel plate, for base
12	277468	1	Operating shaft
13*	41002	4	Key, for shaft
14	277454	4	Bearing bracket, for electrical mechanism
15*	.....	8	Machine bolt, $\frac{1}{2}$ "-13 x $1\frac{3}{4}$ " (standard hardware), for bearing bracket for operating shaft
16*	.....	8	Washer, $\frac{1}{2}$ " (standard hardware), for bolt
17*	.....	8	Lock washer, $\frac{1}{2}$ " (standard hardware), for bolt
18-19	.....	..	Not used
20	384889	1	Operating rod, from electrical mechanism to operating shaft lever
21-22	.....	..	Not used
23	248951	1	Rod end, for bottom of operating rod
24*	63625	1	Shaft, for lower rod end, lever and pull rod
25*	277472	1	Hand closing lever
26	277470	1	Bearing bracket for hand closing lever
27	.....	1	Machine bolt, $\frac{3}{4}$ "-10 x $3\frac{1}{2}$ " (standard hardware), to mount bracket
28	.....	1	Machine bolt, $\frac{3}{4}$ "-10 x 3" (standard hardware), to mount bracket
29*	.....	1	Washer, $\frac{3}{4}$ " (standard hardware), for machine bolt
30*	.....	1	Lock washer, $\frac{3}{4}$ " (standard hardware), for machine bolt
31	252300	1	Spring, for hand closing lever
32	277471	1	Pull rod, for handle lever
33	83129	1	Rod end, for pull rod
34	.....	1	Pipe nut, $\frac{3}{4}$ " (standard hardware), for rod end
35	65150	1	Shaft, for handle lever and pull rod
36	87676	1	Shaft, for handle lever and bearing bracket
37	.....	..	Not used
38	277432	4	Lifting lever, for pull rod
39*	105265	3	Shaft, for lifting lever and pull rod
40	277491	1	Cut off switch complete with coil
41	277589	1	Cap, for plunger rod on cut off switch
42*	.....	3	Tap bolt with slotted head, $\frac{3}{8}$ "-16 x $1\frac{1}{4}$ " (standard hardware), to mount cut off switch
43*	107314	3	Lock washer, for tap bolt
44*	277479	1	Trip pin
45*	.....	2	Nut, $\frac{3}{4}$ " (standard hardware), for trip pin
46*	.....	2	Lock washer, $\frac{3}{4}$ " (standard hardware), for trip pin

*Not illustrated.

†See page 3 for application of these style numbers.

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
1	277413†	..	Mechanism complete
1	277414†	..	Mechanism complete
1	277415†	..	Mechanism complete
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, 3/4"-10 x 3 1/2" (standard hardware), to fasten magnet in frame Style No. 277580
4	.....	2	Tap bolt, 1"-8 x 3 1/4" (standard hardware), to fasten magnet in frame Style No. 277581
5*	.....	2	Lock washer, 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.

†Specify complete name plate readings when ordering coils.

‡See pages 10 and 14 for application of these style numbers.

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

Illustrated on Page 15

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, 1 1/4" (standard hardware), for eye-bolt Style No. 277571
15	85635	1	Lock washer, for eye-bolt Style No. 253488
15	.....	1	Lock washer, 1 1/4" (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	384895	1	Brass tube, for stationary core Style No. 277573
18	264230	1	Stationary magnet core for Style No. 273334
18	384894	1	Stationary magnet core for Style No. 277573
19	.....	1	Flat head iron machine screw, No. 14-24 x 1/2" (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 flax packing, 3/8" 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, 1/2"-13 x 1 3/4" (standard hardware), to fasten dash pot to frame, for Style Nos. 277412 and 277413
36*	.....	3	Tap bolt, 5/8"-11 x 2" (standard hardware), to fasten dash pot to frame for Style Nos. 277414 and 277415
37	.....	3	Lock washer, 1/2" (standard hardware), for machine bolt
38*	107316	3	Lock washer, 5/8", 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, 1/2"-13 x 1 3/4" (standard hardware), to fasten cover to dash pot

*Not illustrated.

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

Illustrated on Page 15

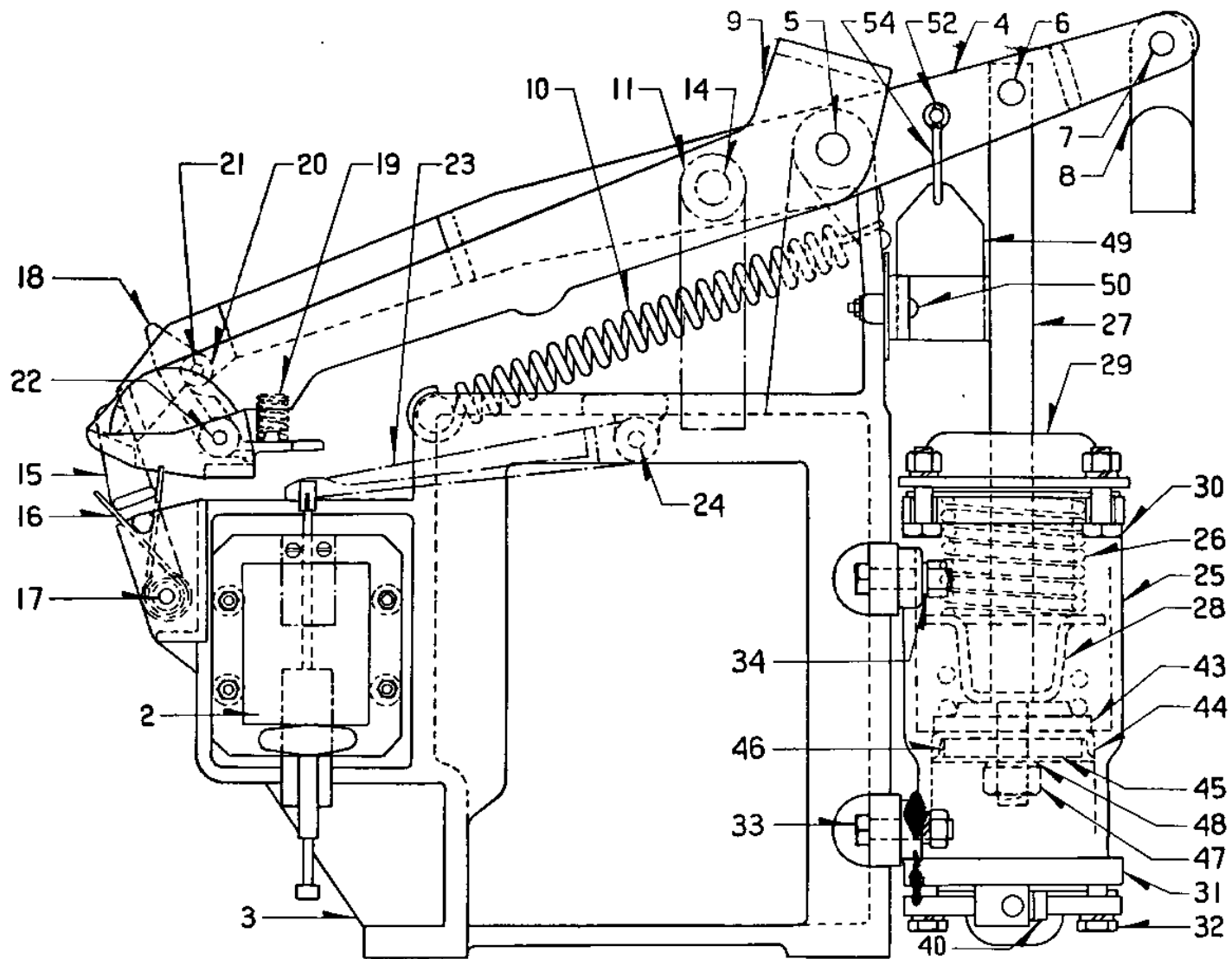
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
40	.....	4	Machine bolt, 1/2"-13 x 2" (standard hardware), to fasten cover to dash pot
*	.....	4	Lock washer, 1/2" (standard hardware), for machine bolt
*	107315	4	Lock washer, 1/2", for machine bolt
41	230342	1	Bottom, for dash pot
42	....	5	Tap bolt, 1/2"-13 x 1 3/4" (standard hardware), for dash pot bottom
42	....	4	Machine bolt, 1/2"-13 x 2 1/4" (standard hardware), for dash pot bottom
43*	.....	5	Lock washer, 1/2" (standard hardware), for tap bolt
43*	107315	4	Lock washer, 1/2", 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. 10-32 x 1 1/2" (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 No. 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 33
65	263046	1	Fullerboard shield between switch and frame
66	.....	2	Fillister head iron machine screw, No. 14-24 x 1 3/4" (standard hardware), to mount signal switch on frame
67*	.....	2	Lock washer, 1/4" (standard hardware), 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. 10-32 x 3/8" (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†	..	Mechanism complete
1	277427†	..	Mechanism complete
1	300289†	..	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, 3/8"-16 x 1 1/4" (standard hardware), for trip arm

*Not illustrated.

†Mounted on right hand side of mechanism frame.

‡See page 12 for application of these style numbers.

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

Illustrated on Page 18

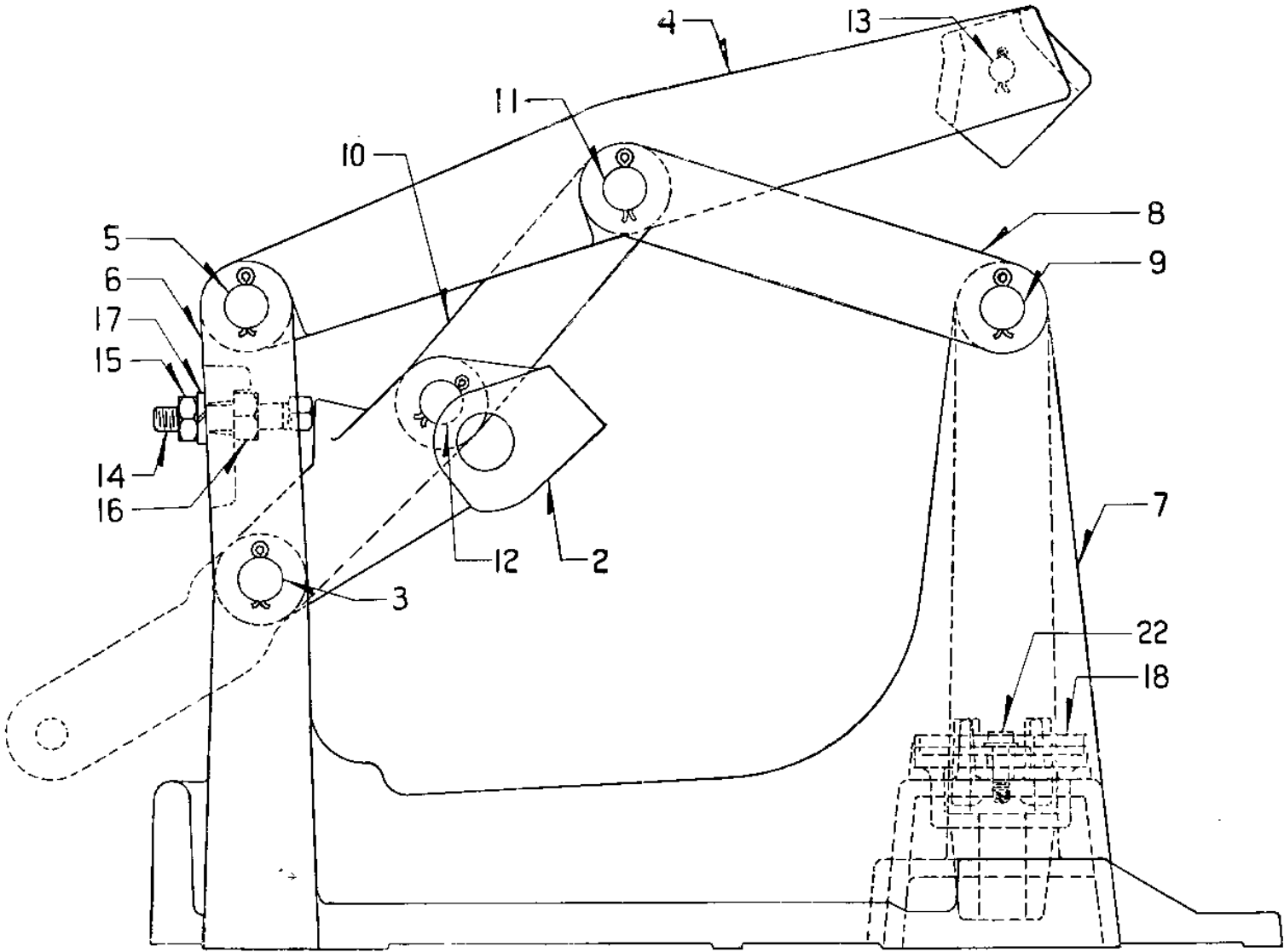
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

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, $\frac{3}{8}$ " (standard hardware), for machine bolt
*	.....	1	Lock nut, $\frac{3}{8}$ " (standard hardware), 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	Plunger 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, $\frac{1}{2}$ "-13 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, $\frac{1}{2}$ "-13 x $1\frac{3}{4}$ " (standard hardware), to fasten dash pot head
33	.....	3	Machine bolt, $\frac{1}{2}$ "-13 x 2" (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. 10-32 x $\frac{1}{2}$ " (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 33
50	.....	1	Round head stove bolt, $\frac{1}{4}$ " x $1\frac{1}{2}$ " (standard hardware), to mount signal switch
51*	.....	1	Lock washer, $\frac{1}{4}$ " (standard hardware), 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, $\frac{3}{8}$ "-16 x 1" (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, $\frac{3}{8}$ "-16 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.

POLE UNIT OPERATING MECHANISMS
Style Nos. 221984 and 221987



REFERENCE NO. 1

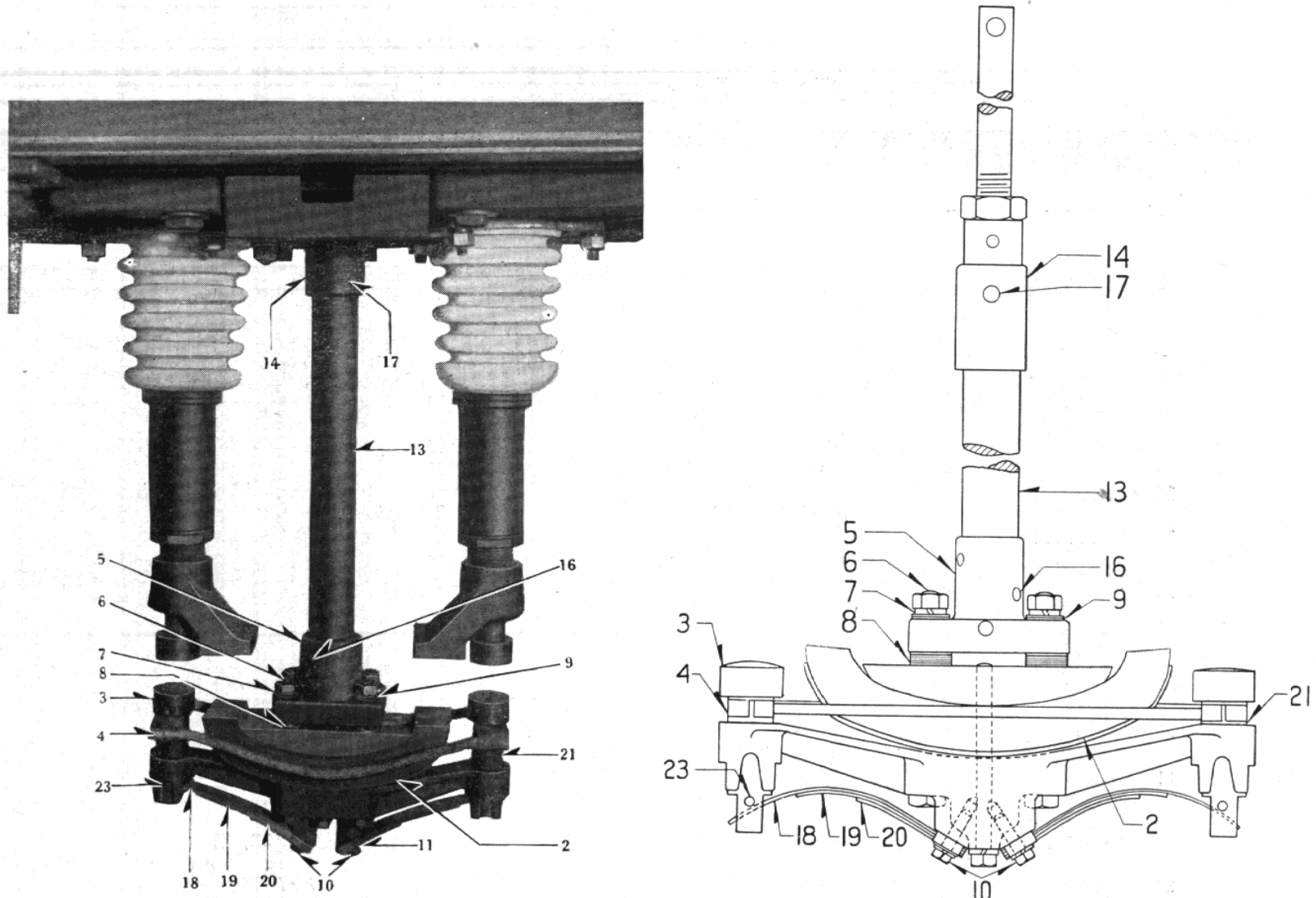
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION
All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
1	221984†	..	Operating mechanism complete for 300, 600 and 1200 ampere breakers
1	221987†	..	Operating mechanism complete for 1600 and 2000 ampere breakers
2	384882	1	Closing lever
3	247350	1	Bearing shaft, for closing lever and guide
4	384884	1	Main lever, for Style No. 221984
4	233244	1	Main lever, for Style No. 221987
5	247350	1	Bearing shaft, for main lever and guide
6	384885	1	Guide, to mount main lever
7	384886	1	Main bracket, to mount mechanism, for Style No. 221984
7	233243	1	Main bracket, to mount mechanism, for Style No. 221987
8	273900	1	Guide link from main bracket to main lever
9	63619	1	Shaft, to fasten guide link to bracket
10	273902	1	Toggle link, to connect closing lever and main lever
11	63623	1	Shaft, to fasten toggle link to guide link and main lever
12	63620	1	Shaft, to fasten toggle link to closing lever
13	70127	1	Shaft, to fasten lifting rod to main lever, for Style No. 221984
13	300281	1	Shaft, to fasten lifting rod to main lever, for Style No. 221987
14	.....	1	Set screw, 3/8" x 1 3/4" (standard hardware), used as bumper in main lever guide
15	.....	1	Hexagon iron nut, 3/8" (standard hardware), for set screw
16	.....	1	Lock nut, 3/8" (standard hardware), for set screw
17	.....	1	Lock washer, 3/8" (standard hardware), for set screw
18	277464	1	Adjusting plate
19*	58789	1	Steel washer, for bumper
20*	101039	2	Leather washer, for bumper
21*	114143	10	Felt washer, for bumper
22	.....	2	Tap bolt, 1/4"-20 x 7/8" (standard hardware), to mount adjusting plate
23*	.....	2	Lock washer, 1/4" (standard hardware), for tap bolt

*Not illustrated.

†See page 8 for application of these style numbers.

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, for 300 and 600 ampere breakers
1	277332†	..	Moving contact complete, for 1200 ampere breaker
1	277333†	..	Moving contact complete, for 1600 ampere breaker
1	277334†	..	Moving contact complete, for 2000 ampere breaker
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, $\frac{3}{8}$ "-16 x $4\frac{1}{4}$ " (standard hardware), to connect lifting rod foot to brush, for Style No. 277331
6	.....	4	Machine bolt, $\frac{3}{8}$ "-16 x $4\frac{1}{2}$ " (standard hardware), to connect lifting rod foot to brush, for style No. 277332
6	.....	6	Machine bolt, $\frac{3}{8}$ "-16 x $4\frac{1}{2}$ " (standard hardware), to connect lifting rod foot to brush, for Style No. 277333
6	.....	8	Machine bolt, $\frac{3}{8}$ "-16 x $4\frac{1}{2}$ " (standard hardware), to connect lifting rod foot to brush, for Style No. 277334

†See page 9 for application of these style numbers.

MOVING CONTACTS AND DETAILS—Continued

Illustrated on Page 21

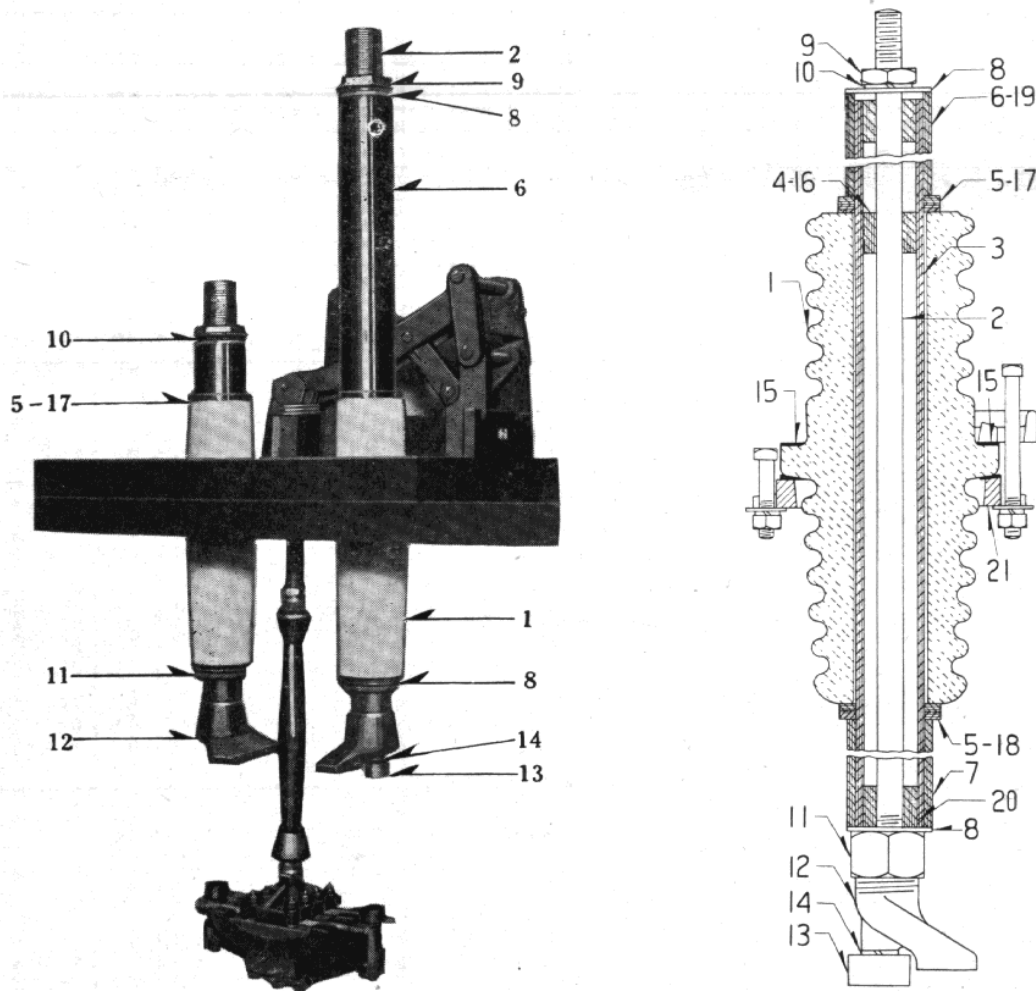
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

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, for 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, $\frac{1}{4}$ "-20 x 1" (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



ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Complete Stationary Contacts†	Ref. No. 1 Porcelain Insulator One Per Contact Style No.	Ref. No. 2 Terminal Rod One Per Contact Style No.	Ref. No. 3 Insulator Tube One Per Contact Style No.	No. Per Contact	Ref. No. 4 Spacing Tube Style No.	Ref. No. 5 Fibre Washer Four Per Cont. Style No.	Ref. No. 6 Outside Top Tube One Per Cont. Style No.
Style No.							
277337	116597	277459	384864	3	220972	384866	215164
277338	116597	277460	384865	3	220972	384866	215165
277339	116597	277461	384864	3	215160	384866	215164
277340	116597	277462	384865	3	215160	384866	215165
277341	116597	277457	384867	..	None	384866	215164
277342	116597	277458	384868	..	None	384866	215165
277343	247655	277475	None	1	220981	None	None
277344	247655	277476	None	1	220981	None	384875
277345	247655	277447	None	..	None	None	None
277346	247655	277448	None	..	None	None	384878

Complete Stationary Contacts†	Ref. No. 7 Outside Bottom Tube One Per Contact Style No.	No. Per Contact	Ref. No. 8 Brass Clamp Washer 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.
Style No.						
277337	247836	2	250219	7544	107316	235961
277338	247836	2	250219	7544	107316	235961
277339	247836	3	184410	211911	203604	211911
277340	247836	3	184410	211911	203604	211911
277341	247836	3	277430	211915	211850	211915
277342	247836	3	277430	211915	211850	211915
277343	384869	3	277121	211913	257812	211913
277344	384869	3	277121	211913	257812	211913
277345	384869	3	239038	211914	201341	211914
277346	384869	3	239038	211914	201341	211914

†See page 8 for application of these style numbers.

STATIONARY CONTACTS AND DETAILS—Continued

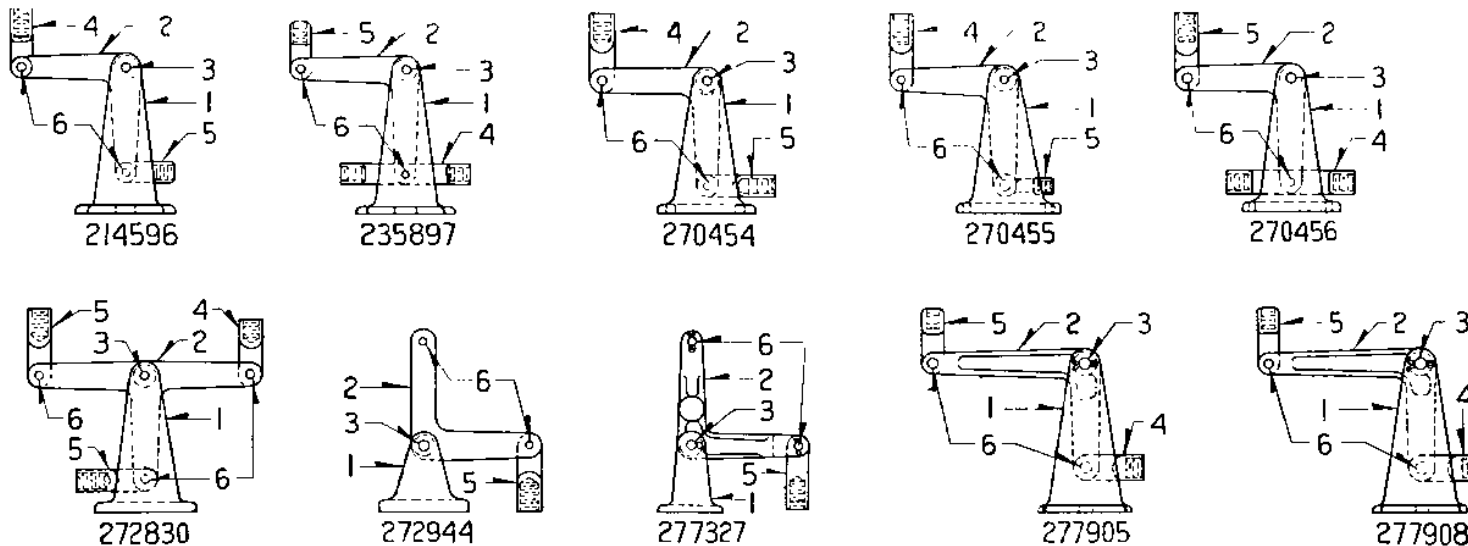
Illustrated on Page 23

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Complete Stationary Contacts†	Ref. No. 12 Contact Foot	Ref. No. 13 Arcing Tip	Ref. No. 14 Lock Washer for Arcing Tip	Ref. No. 15 Fullerboard Washer	Ref. No. 16 Spacing Tube for Terminal Rod
Style No.	One Per Contact Style No.	One Per Contact Style No.	One Per Contact Style No.	Two Per Contact Style No.	One Per Contact Style No.
277337	277434	233225	107315	380380	None
277338	277434	233225	107315	380380	None
277339	277433	233225	107315	380380	None
277340	277433	233225	107315	380380	None
277341	262945	233225	107315	380380	None
277342	262945	233225	107315	380380	None
277343	277474	233225	107315	300874	221008
277344	277474	233225	107315	300874	221008
277345	277435	233225	None	300874	384877
277346	277435	233225	None	300874	None
Complete Stationary Contacts†	Ref. No. 17 Fibre Washer for Top of Insulator	Ref. No. 18 Fibre Washer for Bottom of Insulator	Ref. No. 19 Insulating Tube for Top of Insulator	Ref. No. 20 Insulating Tube for Bottom of Insulator	Ref. No. 21 Clamp Ring
Style No.	One Per Contact Style No.	One Per Contact Style No.	One Per Contact Style No.	One Per Contact Style No.	One Per Contact Style No.
277337	None	None	None	None	None
277338	None	None	None	None	None
277339	None	None	None	None	None
277340	None	None	None	None	None
277341	None	None	None	None	None
277342	None	None	None	None	None
277343	384870	384871	384873	384872	None
277344	384871	384871	384874	384872	None
277345	384871	384871	None	384876	277356
277346	384871	384871	384879	384876	277356

†See page 8 for application of these style numbers.

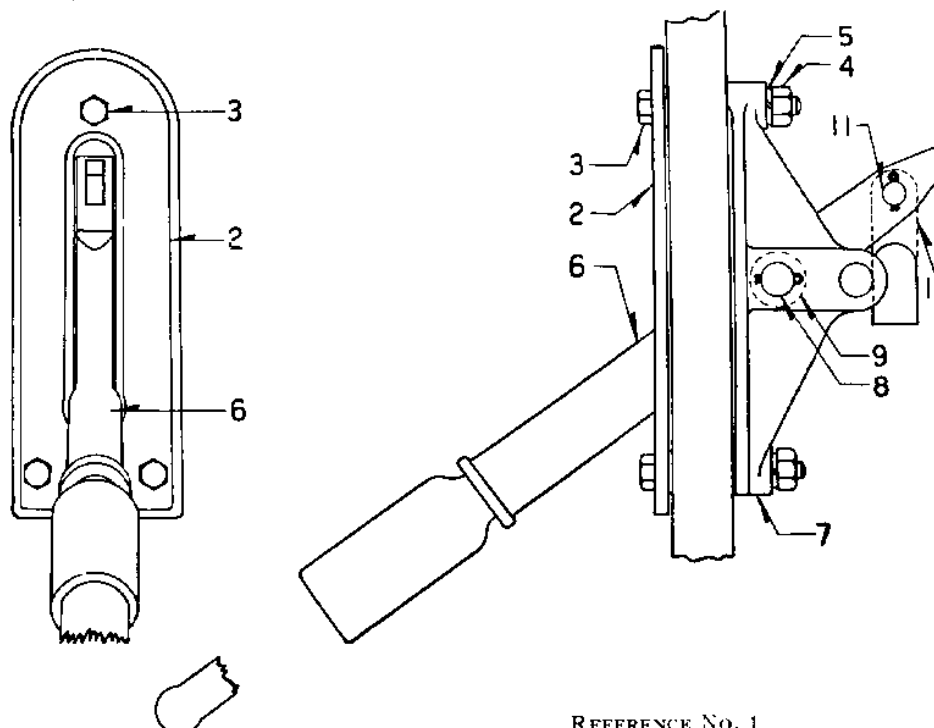
BELL CRANKS AND DETAILS, FOR MOUNTING ABOVE OR BELOW FLOOR



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	1	None	1	248949	2	105265
277327	1	272858	1	272856	1	125685	1	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

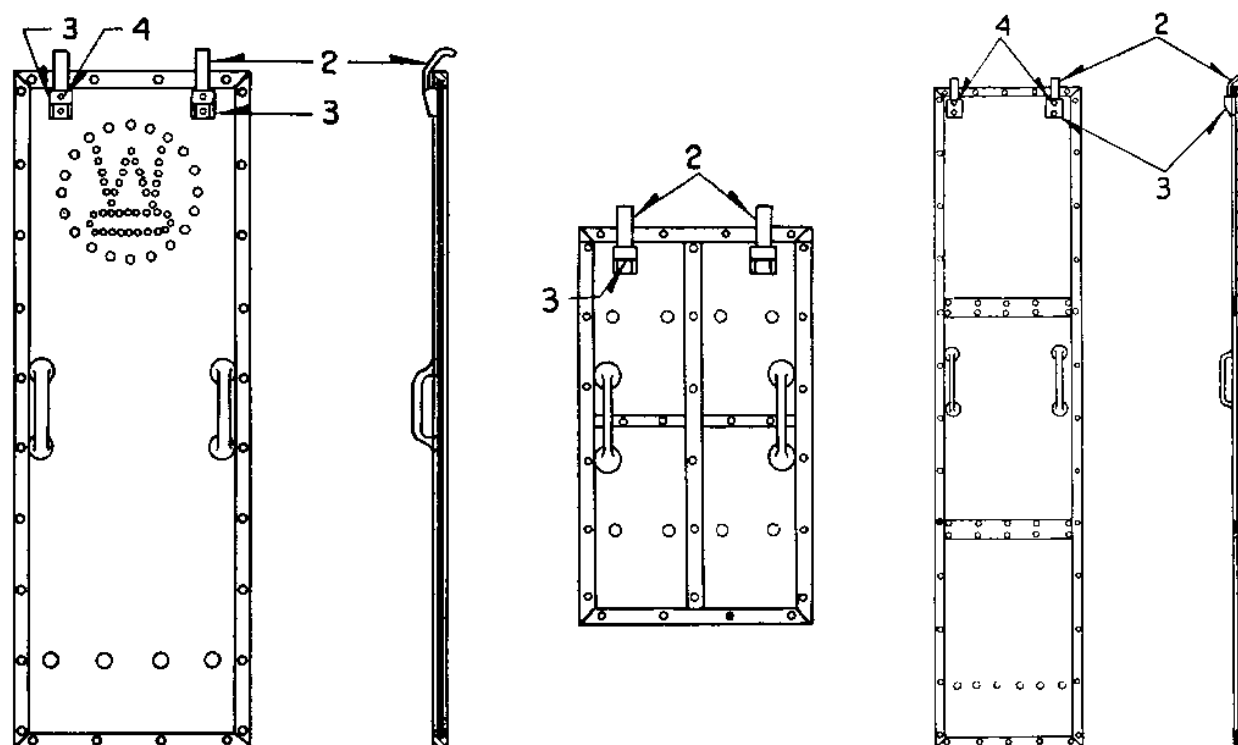


REFERENCE NO. 1

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"-11 x 4 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.

DOORS AND DETAILS

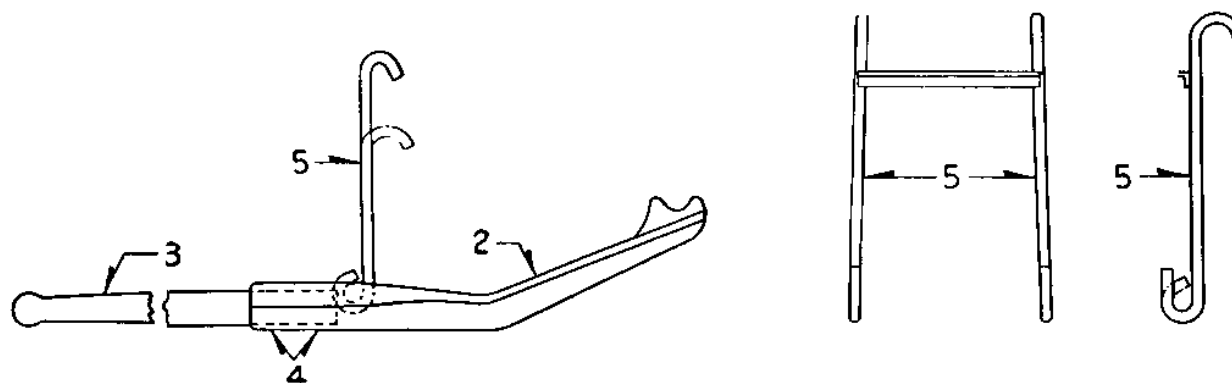


REFERENCE No. 1

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Ref. No.	Style No.	No. Per Door	Description
1†	277452	..	Door complete, upper
1†	277453	..	Door complete, lower
2	380005	2	Hook for door
3	380006	2	Bracket for door
4	.....	2	Tap bolt, $\frac{5}{16}$ "-18 x $1\frac{3}{4}$ " (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, $\frac{5}{16}$ " (standard hardware), to be welded to end frame

TANK LIFTER AND DETAILS



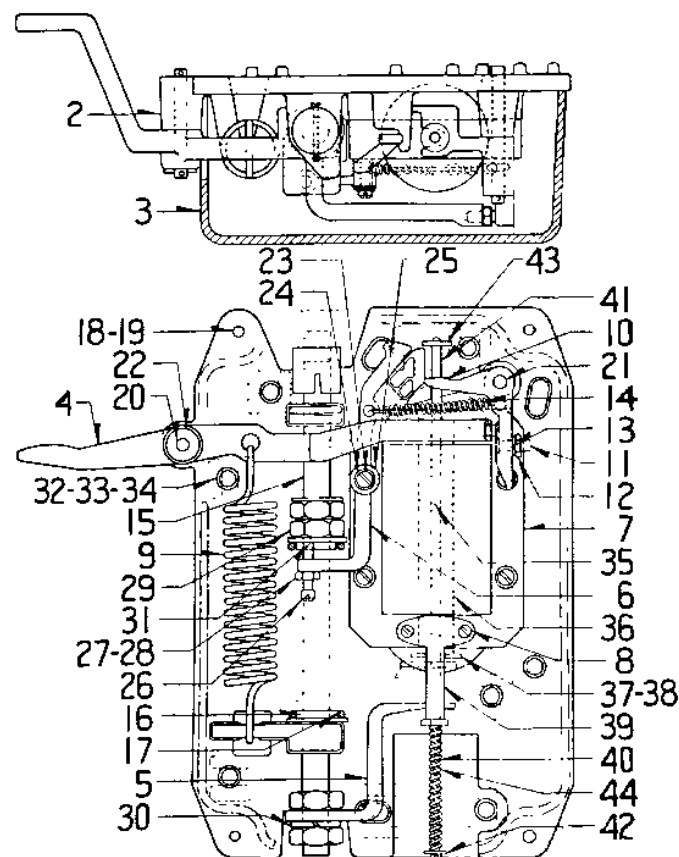
REFERENCE No. 1

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 and 7 for application of these style numbers.

UNDER VOLTAGE RELEASE MECHANISMS AND DETAILS **For Electrically Operated Breakers**



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	287132	..	Under voltage release mechanism complete, for electrically operated breakers
1	289882	..	Under voltage release mechanism complete, for hand operated breakers
2	380260	1	Cast iron base
3	380258	1	Cast iron cover
4	380259	1	Cast steel trip lever
5	301716	1	Malleable iron retrieving lever
6	380256	1	Malleable iron locking lever
7	116759	1	Magnet frame complete
7-A*	88828	2	Guide bracket
8	.....	2	Round head stove bolt, $\frac{3}{16}$ " x $1\frac{3}{4}$ " (standard hardware), to fasten guide bracket to magnet
8-A*	.....	2	Round head stove bolt, $\frac{3}{16}$ " x $1\frac{1}{4}$ " (standard hardware), to fasten stationary core to magnet
9	283059	1	Tension spring for trip lever
10	380262	1	Malleable iron trigger
11	220349	2	Square head screw, for trigger and latch and for trip lever
12	.....	2	Lock nut, $\frac{1}{4}$ " (standard hardware), for square head screw
13	.....	1	Lock washer, $\frac{1}{4}$ " (standard hardware), for square head screw
14	107323	1	Tension spring, for trigger
15	380263	1	Retrieving plunger
15-A*	283057	1	Cold rolled steel cap, for retrieving plunger
16	333476	2	Spring seat, for compression spring
17	283058	1	Pressure spring, for retrieving plunger
17-A*	333476	2	Malleable iron seat, for pressure spring
18	.....	4	Filister head iron machine screw, No. 14-24 x $\frac{5}{8}$ " (standard hardware), to fasten cover to base
19	.....	4	Hexagon iron nut, No. 14-24 (standard hardware), for cover screws
20	63605	1	Shaft, to hold tripping lever to frame
21	63606	1	Shaft, to hold trigger to frame

*Not illustrated.

UNDER VOLTAGE RELEASE MECHANISMS AND DETAILS—Continued
For Electrically Operated Breakers

Illustrated on Page 27

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

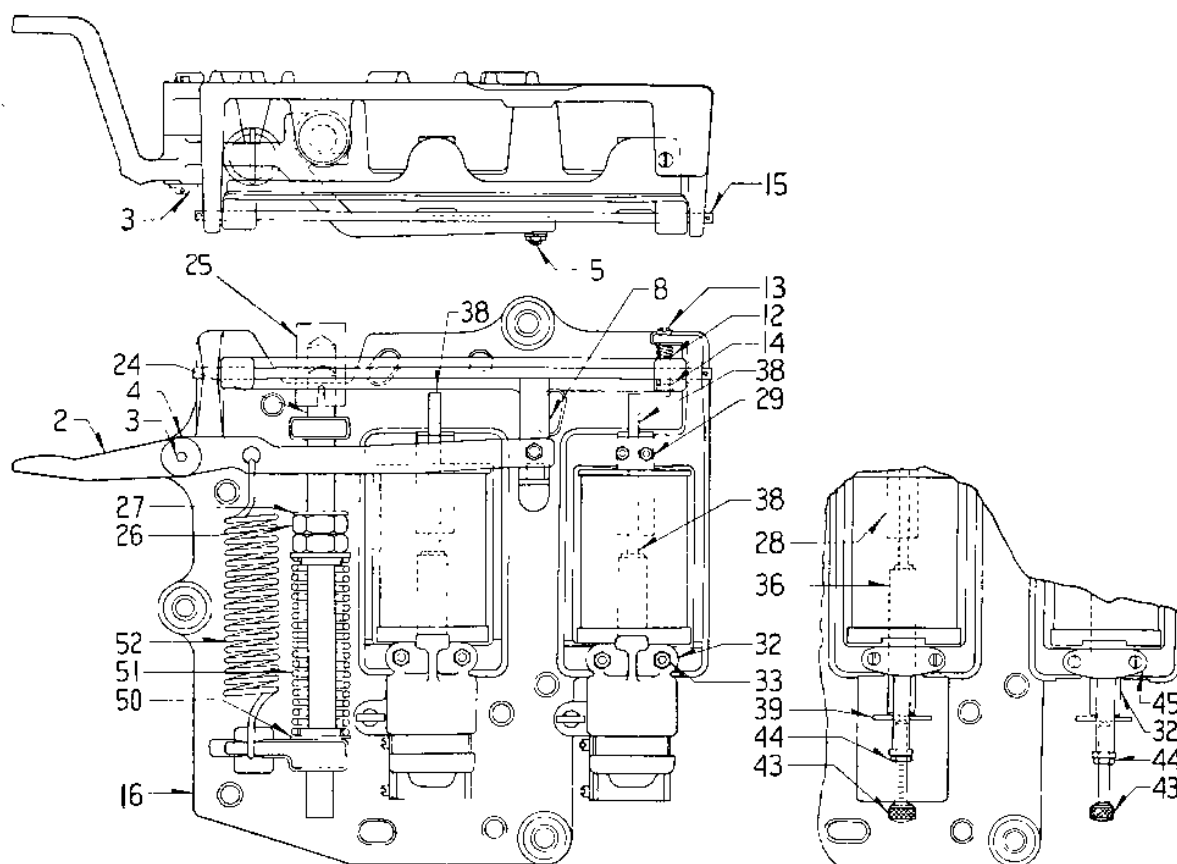
All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Per Mechanism	Description
22	3272	1	Washer, for trip lever shaft
22-A*	380257	1	Brass tube, used as bearing for locking lever
23	.....	1	Fillister head iron machine screw, No. 14-24 x 2" (standard hardware), to fasten locking lever and magnet to base
24	7443	1	Washer, for locking lever screw
25	.....	1	Lock washer, 1/4" (standard hardware), for locking lever screw
25-A*	.....	3	Fillister head iron machine screw, No. 14-24 x 1 3/8" (standard hardware), to fasten magnet to base
25-B*	7443	3	Washer, for magnet screw
25-C*	.....	3	Lock washer, 1/4" (standard hardware), for magnet screw
26	.....	1	Fillister head iron machine screw, No. 14-24 x 1 1/8" (standard hardware), used to adjust locking lever
27	.....	1	Hexagon iron nut, No. 14-24 (standard hardware), for locking lever adjusting screw
28	7443	1	Washer, for locking lever adjusting screw
29	.....	4	Lock nut, 5/8"—11 (standard hardware), used to adjust retrieving plunger
30	100516	1	Lock washer, used with lock nut on retrieving plunger
31	3429	1	Washer, used on retrieving plunger
31-A*	285154	1	Extension lever, for Style No. 287132
31-A*	384917	1	Extension lever, for Style No. 289882
32	.....	3	Tap bolt, 3/8"—16 x 2" (standard hardware), for mounting under voltage re- lease mechanism
32-A*	.....	2	Tap bolt, 3/8"—16 x 1" (standard hardware), to mount extension lever
33	3428	5	Washer, for mounting bolt
34	.....	5	Lock washer, 3/8" (standard hardware), for mounting bolt
34-A*	289883	1	Moving and stationary cores assembled complete
35	116760	1	Stationary core
36	116761	1	Moving core
36-A*	.....	1	Dowel, ".085 x 1/16", for moving core
37	3423	2	Iron washer, for base of moving core
38	116763	1	Sheet copper washer, for base of moving core
39	219396	1	Core guide
40	385288	1	Stem complete with lower brass sleeve
40-A*	219399	1	Stem, only
41	219397	1	Upper brass sleeve, for stem
41-A*	301722	1	Lower brass sleeve, for stem
42	7444	1	Washer, for bottom end of stem
43	325113	1	Washer, for top end of stem
44	294567	1	Spring, for stem
45*	.....	2	Phosphor bronze rivet, ".0641 x 5/16" (standard hardware), to rivet sleeve to stem
46*	148909	1	Under voltage release mechanism coil, 25 cycle, 110 volts; 60 cycle, 220 volts
46*	148907	1	Under voltage release mechanism coil, 25 cycle, 220 volts; 60 cycle, 440 volts
46*	165220	1	Under voltage release mechanism coil, 25 cycle, 440 volts
46*	201482	1	Under voltage release mechanism coil, 25 cycle, 550 volts
46*	201482	1	Under voltage release mechanism coil, 25 cycle, 600 volts, plus one resistance Style No. 186470
46*	148908	1	Under voltage release mechanism coil, 60 cycle, 110 volts
46*	241504	1	Under voltage release mechanism coil, 60 cycle, 600 volts

*Not illustrated.

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, $\frac{1}{4}$ " (standard hardware), for screw
7*	..	1	Lock nut, $\frac{1}{4}$ "—20 (standard hardware), for screw
8	333474	1	Malleable iron trigger
9*	220349	1	Square head screw, for trigger
10*	..	1	Lock washer, $\frac{1}{4}$ " (standard hardware), for screw
11*	..	1	Lock nut, $\frac{1}{4}$ "—20 (standard hardware), for screw
12	72065	1	Spring, for trigger
13	..	1	Fillister head iron machine screw, No. 10-32 x $1\frac{3}{4}$ " (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, $\frac{5}{16}$ "—18 x $\frac{3}{4}$ " (standard hardware), for spacing rod
19*	..	3	Tap bolt, $\frac{3}{8}$ "—16 x $1\frac{1}{2}$ " (standard hardware), for spacing rod
20*	333473	1	Cast iron cover for frame
21*	..	3	Tap bolt, $\frac{3}{8}$ " x $2\frac{1}{2}$ " (standard hardware), to mount mechanism frame
22*	3428	3	Washer, for bolt
23*	..	3	Lock washer, $\frac{3}{8}$ " (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, $\frac{5}{8}$ "—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.

OVERLOAD RELEASE MECHANISMS AND DETAILS—Continued

Style Nos. 277539 and 277540

Illustrated on Page 29

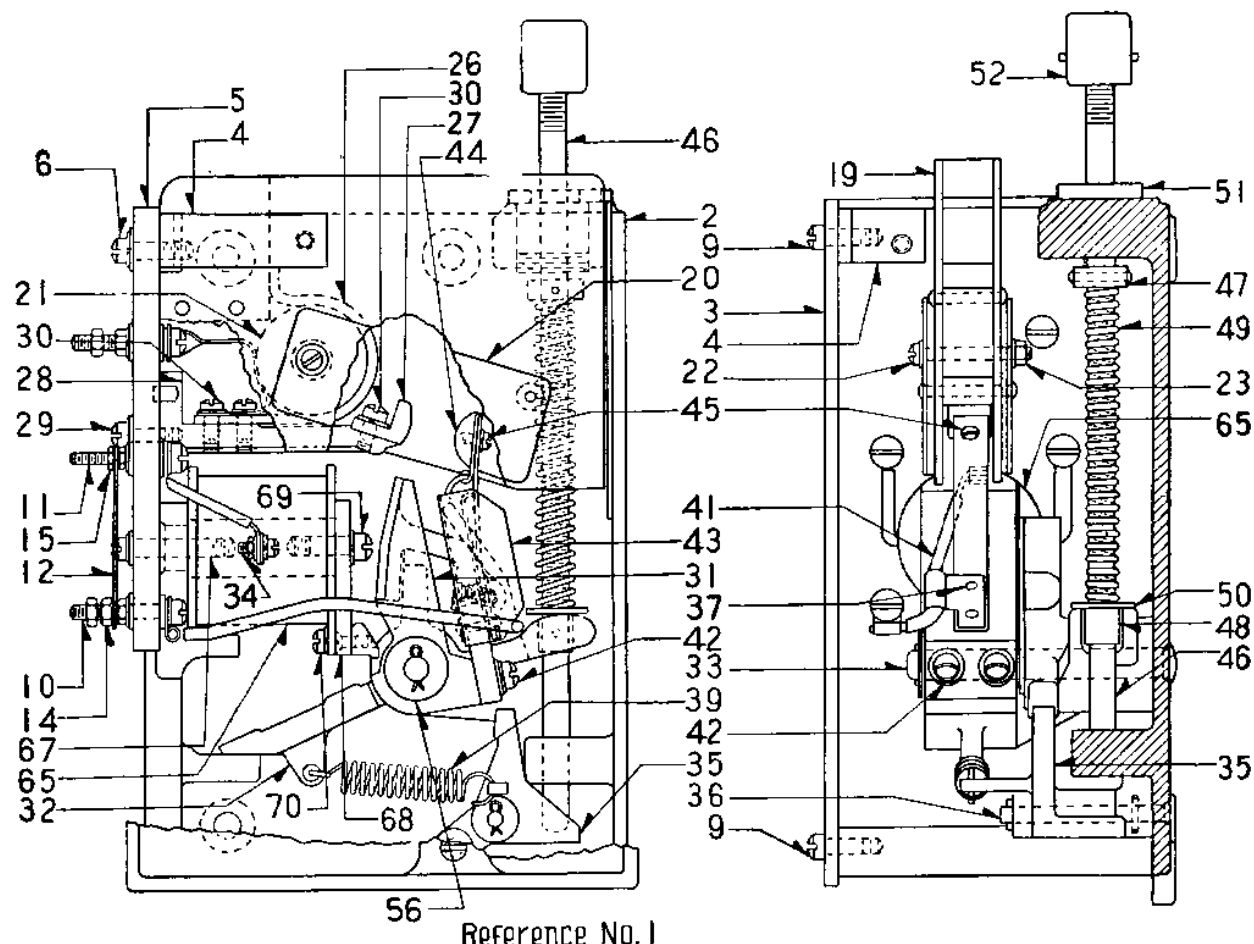
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

All Parts are Interchangeable Unless Otherwise Specified

Ref. No.	Style No.	No. Req.	Description
29	.....	2	Fillister head iron machine screw, No. 10-32 x 2½" (standard hardware), to mount stationary core, for Style No. 277539
29	.....	4	Fillister head iron machine screw, No. 10-32 x 2½" (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. 10-32 x 1¾" (standard hardware), to mount coil bracket, for Style No. 277539
33	.....	4	Fillister head iron machine screw, No. 10-32 x 1¾" (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, ".086 x 1/16", 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, 3/8"-16 x 1" (standard hardware), to mount lever
48*	3428	2	Washer for bolt
49*	.....	2	Lock washer, 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.

CUT-OFF SWITCH AND DETAILS



Reference No. 1

ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Frame, Cover, Terminal Base and Details

Ref. No.	Style No.	No. Per Breaker	Description
1	277491	1	Cut-off switch complete
2	333519	1	Frame
3	333520	1	Cover
4	289919	1	Supporting bracket
5	333521	1	Terminal base
6	.....	2	Fillister head iron machine screw, No. 14-24 x $\frac{3}{4}$ " (standard hardware), to fasten cover support to terminal base
7*	7443	15	Iron washer
8*	.....	10	Lock washer, $\frac{1}{4}$ " (standard hardware)
9	.....	5	Fillister head iron machine screw, No. 14-24 x $\frac{5}{8}$ " (standard hardware), to fasten cover to support and to frame
10	.....	2	Fillister head brass machine screw, No. 14-24 x $1\frac{1}{4}$ " (standard hardware), used as a terminal stud
11	.....	2	Fillister head brass machine screw, No. 10-32 x $1\frac{1}{4}$ " (standard hardware), used as a terminal stud
12	303949	1	Connection strap
13*	243981	2	Copper terminal
14	46868	5	Hexagon brass nut, to fasten connection strap and terminal on stud
15	40662	4	Hexagon brass nut, to fasten connection strap on terminal stud
16*	3422	8	Iron washer
17*	4000	6	Lock washer
18*	148425	6	Crimp washer

Arc Shield, Contact Tip and Details

19	333523	1	Arc shield with spacers and pole pieces
20	303944	2	Steel pole piece
21	246392	1	Blowout coil
22	.....	1	Fillister head iron machine screw, No. 10-32 x $1\frac{1}{2}$ " (standard hardware), to fasten blowout coil and pole pieces to arc shield
23	40662	1	Hexagon iron nut, for No. 10-32 machine screw
24*	4000	8	Lock washer for machine screw
25*	246096	1	Blowout coil core
26	333524	1	Arcing horn
27	184665	1	Contact tip
28	301928	1	Contact support
29	.....	5	Fillister head iron machine screw, No. 14-24 x $\frac{3}{4}$ " (standard hardware), to fasten contact support to terminal base
30	.....	3	Fillister head brass machine screw, No. 10-32 x $\frac{1}{2}$ " (standard hardware), to fasten arcing horn and contact tip to support

*Not illustrated.

CUT-OFF SWITCH AND DETAILS--Continued

Illustrated on Page 31

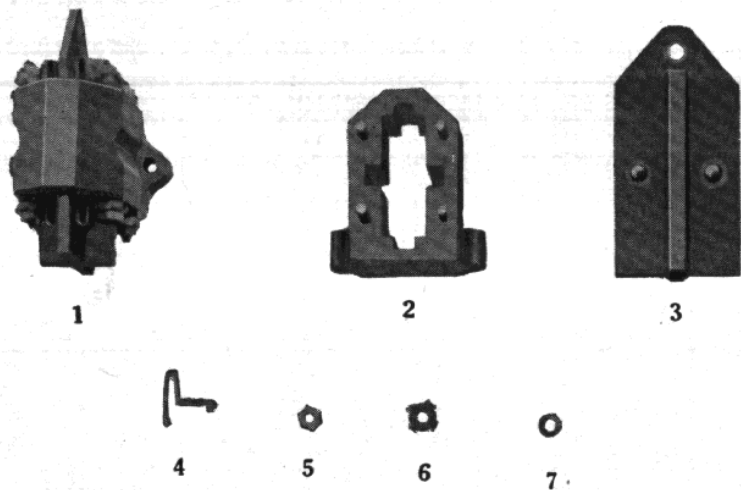
ORDER PARTS BY STYLE NUMBER AND DESCRIPTION

Armature, Trip Lever, Coil and Details

Ref. No.	Style No.	No. Per Breaker	Description
31	333525	1	Armature
32	333526	1	Trip lever
33	283044	1	Hinge pin, for armature and trip lever
34	242860	2	Lead screw
35	282417	1	Tripping trigger
36	283045	1	Hinge pin, for tripping trigger
37	.....	2	Round head copper rivet, 1/8" x 5/8" (standard hardware), to fasten shunt clip
38*	283052	1	Compression spring
39	283053	1	Tension spring
40*	333527	1	Moving contact complete with block, shield, spring stop and clip
41	303948	1	Shunt with clips
42	.. . . .	3	Fillister head iron machine screw, No. 14-24 x 3/4" (standard hardware), to fasten support to armature
43	333529	1	Arc shield
44	283048	1	Contact tip
45	.....	1	Fillister head brass machine screw, No. 10-32 x 5/16" (standard hardware), to fasten contact tip and shunt to armature
46	283046	1	Trip rod
47	283049	1	Trip rod collar
48	283047	1	Trip rod spacer
49	283051	1	Compression spring
50	3428	1	Iron washer
51	301927	1	Hexagon brass nut
52	333531	1	Trip rod cap
53*	333530	1	Rivet to fasten collar on trip rod
54*	333532	1	Operating link
55*	2892	2	Iron washer, for link
56	3427	2	Washer for pin, Style No. 283044
57*	333533	1	Switch lever
58*	85531	2	Hinge pin, for link and switch lever
59*	87679	1	Hinge pin, for switch lever
61*	333534	1	Connection strap
62*	63628	1	Hinge pin, for bell crank and connection strap
63*	63619	1	Hinge pin, for switch lever and connection strap
64*	3428	2	Washer for pin, Style No. 63628
65	.....	1	Cut-off switch coil
66*	283054	1	Cut-off switch core
67	.....	1	Fillister head iron machine screw, No. 14-24 x 1 1/4" (standard hardware), to fasten coil core to terminal base
68	333535	1	Pole piece
69	.....	3	Fillister head iron machine screw, No. 14-24 x 3/4" (standard hardware), to fasten pole piece to coil core
70	.....	1	Fillister head iron machine screw, No. 8-32 x 1/2" (standard hardware), to fasten pole piece to trip coil washer
71*	125680	1	Lock washer for machine screw
72*	216071	1	Signal switch complete. For details see page 33
73*	333518	1	Operating link
74*	.....	1	Spring cotter, 1/16" x 3/4" (standard hardware), for link

*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, Ref. No. 5
7	.....	8	Lock washer, 1/8" (standard hardware), used with nut, Ref. No. 5

INDEX TO STYLE NUMBERS

Style No.	Page	Style No.	Page	Style No.	Page	Style No.	Page
2892.....	32	109229.....	16	220349.....	27-29	266514.....	3-5
3359.....	25	112506.....	17-19	220972.....	23	270454.....	5-7-25
3272.....	17-19-28-29	114143.....	20	220981.....	23	270455.....	25
3422.....	31	116597.....	23	220996.....	33	270456.....	25
3423.....	28-30	116759.....	27	220999.....	33	270615.....	9
3427.....	32	116760.....	28-29	221008.....	24	271427.....	16
3428.....	19-28-29-30-32	116761.....	28-30	221984.....	8-20	271438.....	16
3429.....	9-28-29	116763.....	28-30	221986.....	9	272012.....	21
4000.....	30-31	116941.....	16	221987.....	8-20	272014.....	11-13
7443.....	17-28-31	117200.....	17	224185.....	30	272177.....	18
7444.....	28	117211.....	16	225439.....	15	272649.....	17-19
7544.....	9-23	122525.....	17-19	226539.....	22	272830.....	25
7545.....	9	122532.....	17-19	229124.....	9	272856.....	25
32128.....	11-13	125680.....	32	229774.....	9	272857.....	25
40646.....	17	125685.....	25	230342.....	17-19	272858.....	25
40662.....	17-19-31-33	126283.....	30	233044.....	22	272917.....	17-19
41002.....	14	127688.....	18	233098.....	30	272944.....	25
41477.....	9	140362.....	16	233225.....	24	273087.....	16
46868.....	31	140734.....	18	233226.....	21	273296.....	3-5-7
46870.....	17	141901.....	17	233239.....	9	273334.....	16
58789.....	20	145393.....	18	233240.....	9	273346.....	22
63601.....	18	148425.....	31-33	233243.....	20	273372.....	16-19
63603.....	16	148509.....	30	233244.....	20	273391.....	18
63604.....	19	148907.....	28	233251.....	11-13	273392.....	19
63605.....	27-29	148908.....	28	233252.....	11-13-25	273393.....	18
63606.....	27	148909.....	28	233253.....	22	273792.....	9
63609.....	16	151006.....	16	233256.....	8	273900.....	20
63613.....	12-13	165220.....	28	235897.....	25	273902.....	20
63614.....	18	178397.....	22	235961.....	23	274856.....	18
63619.....	20-32	184410.....	23	235962.....	25	275052.....	21
63620.....	20	184519.....	16	239038.....	23	275053.....	21
63622.....	12	184665.....	31	239919.....	25	275056.....	17-19
63623.....	20	184889.....	17	240470.....	11	275986.....	22
63625.....	14	185236.....	17-19	240471.....	13	276438.....	3-5-7-26
63628.....	32	185454.....	16	240473.....	12	276860.....	16
63631.....	13	187120.....	17-19	240518.....	17	276951.....	22
63634.....	11-13-16	187761.....	17-19	241477.....	11-13	277121.....	23
65150.....	11-14	189929.....	15	241504.....	28	277327.....	25
68776.....	17-19	193681.....	22	242860.....	32	277331.....	9-21
70127.....	20	193688.....	17	243981.....	31	277332.....	9-21
72065.....	29	198929.....	17-19	246096.....	31	277333.....	9-21
72281.....	11-25	199287.....	16-18	246392.....	31	277334.....	9-21
83129.....	14-25	199488.....	26	246428.....	22	277335.....	9
83813.....	25	200874.....	5-7	247350.....	20	277336.....	9
85531.....	13-32	201341.....	23	247362.....	22	277337.....	8-23-24
85635.....	15-16	201482.....	28	247363.....	22	277338.....	8-23-24
87676.....	11-14	203604.....	23	247364.....	22	277339.....	8-23-24
87679.....	17-32	211850.....	23	247655.....	23	277340.....	8-23-24
88353.....	13-25	211911.....	23	247836.....	23	277341.....	8-23-24
88354.....	25	211913.....	23	248948.....	17	277342.....	8-23-24
88828.....	27-30	211914.....	23	248949.....	12-13-17-18-25	277343.....	8-23-24
88829.....	30	211915.....	23	248951.....	14	277344.....	8-23-24
88900.....	9	214139.....	17-19	250114.....	16-19	277345.....	8-23-24
88907.....	9	214596.....	25	250219.....	23	277346.....	8-23-24
92712.....	25	215153.....	21	252300.....	11-14	277347.....	8
94774.....	9	215154.....	21	253488.....	16	277353.....	8
100516.....	28	215155.....	21	255976.....	9	277354.....	8
101039.....	20	215160.....	23	255993.....	16	277355.....	9
101681.....	22	215164.....	23	256141.....	3-5-6	277356.....	8-24
105265.....	12-13-14-18-25	215165.....	23	257812.....	23	277357.....	9
107314.....	12-14	216071.....	17-19-32-33	262945.....	24	277358.....	9
107315.....	17-22-24	219396.....	28	263046.....	17	277378.....	3
107316.....	16-23	219397.....	28	264129.....	3-5-7	277412.....	10-15
107323.....	27	219399.....	28	264230.....	16	277413.....	10-15
107356.....	18	219614.....	30	265698.....	11-13	277414.....	14-15

INDEX TO STYLE NUMBERS--Continued

Style No.	Page	Style No.	Page	Style No.	Page	Style No.	Page
277415.....	14-15	277486.....	6-13	283052.....	32	380006.....	26
277420.....	3-10	277487.....	6-13	283053.....	32	380237.....	29
277421.....	3-10	277488.....	6-13	283054.....	32	380256.....	27
277422.....	3-10	277491.....	12-14-31	283056.....	29	380257.....	28
277423.....	3-10	277539.....	18-29	283057.....	27-29	380258.....	27
277424.....	3-14	277540.....	18-29	283058.....	27-30	380259.....	27
277425.....	3-14	277541.....	18	283059.....	27-30	380260.....	27
277426.....	12-18	277546.....	15	283060.....	29	380262.....	27
277427.....	12-18	277547.....	17-19	283061.....	25	380263.....	27
277430.....	23	277548.....	17	285154.....	28	380380.....	24
277431.....	12-13	277549.....	16	285212.....	3	384858.....	9
277432.....	14	277550.....	17	287132.....	27	384859.....	9
277433.....	24	277551.....	18	287270.....	25	384863.....	9
277434.....	24	277553.....	16	289443.....	25	384864.....	23
277435.....	24	277554.....	17-19	289882.....	27	384865.....	23
277436.....	21	277556.....	17	289883.....	28	384866.....	23
277437.....	21	277557.....	17	289919.....	31	384867.....	23
277438.....	10-13	277559.....	19	294567.....	28	384868.....	23
277439.....	22	277560.....	16-19	296361.....	25	384869.....	23
277440.....	10-13	277561.....	16	300281.....	20	384870.....	24
277441.....	11-13	277562.....	17	300289.....	12-18	384871.....	24
277442.....	11-13	277563.....	16	300292.....	4-10	384872.....	24
277443.....	3-4-6	277564.....	16	300874.....	24	384873.....	24
277444.....	11-13	277565.....	17	301691.....	9	384874.....	24
277445.....	11-13	277566.....	16	301716.....	27	384875.....	23
277447.....	23	277567.....	17	301722.....	28	384876.....	24
277448.....	23	277568.....	18	301927.....	32	384877.....	24
277449.....	10-13	277569.....	18	301928.....	31	384878.....	23
277450.....	11-13	277570.....	16	303944.....	31	384879.....	24
277451.....	11-13	277571.....	16	303948.....	32	384880.....	22
277452.....	3-4-6-26	277572.....	15	303949.....	31	384881.....	9
277453.....	3-4-6-26	277573.....	16	312431.....	25	384882.....	20
277454.....	14	277574.....	17	312432.....	25	384884.....	20
277455.....	13	277575.....	16	323744.....	17-19	384885.....	20
277456.....	13	277576.....	16	325113.....	28	384886.....	20
277457.....	23	277577.....	17	333083.....	16	384887.....	11-13
277458.....	23	277578.....	17	333085.....	15	384888.....	12
277459.....	23	277580.....	15	333086.....	16	384889.....	14
277460.....	23	277581.....	15	333123.....	17	384890.....	12
277461.....	23	277583.....	17	333124.....	17	384891.....	17
277462.....	23	277584.....	17	333125.....	17	384892.....	19-30
277463.....	14	277586.....	18	333472.....	29	384893.....	15
277464.....	20	277588.....	18	333473.....	29	384894.....	16
277465.....	14	277589.....	12-14	333474.....	29	384895.....	16
277466.....	14	277604.....	21	333476.....	27-30	384896.....	16
277467.....	14	277826.....	16	333518.....	32	384902.....	16
277468.....	14	277857.....	25	333519.....	31	384917.....	28
277469.....	5-7-25	277888.....	25	333520.....	31	384919.....	25
277470.....	11-14	277905.....	25	333521.....	31	384920.....	26
277471.....	11-14	277908.....	25	333523.....	31	384921.....	26
277472.....	11-14	282417.....	32	333524.....	31	384922.....	26
277473.....	9	283038.....	19	333525.....	32	384927.....	25
277474.....	24	283039.....	25	333526.....	32	384928.....	25
277475.....	23	283040.....	25	333527.....	32	384929.....	29
277476.....	23	283042.....	25	333529.....	32	385288.....	28
277478.....	12	283043.....	16	333530.....	32	405161.....	9
277479.....	14	283044.....	32	333531.....	32	405162.....	9
277480.....	10-13	283045.....	32	333532.....	32	405192.....	9
277481.....	11-13	283046.....	32	333533.....	32	405401.....	9
277482.....	11-13	283047.....	32	333534.....	32	422320.....	9
277483.....	4-10	283048.....	32	333535.....	32		
277484.....	4-10	283049.....	32	377723.....	33		
277485.....	4-10	283051.....	32	380005.....	26		