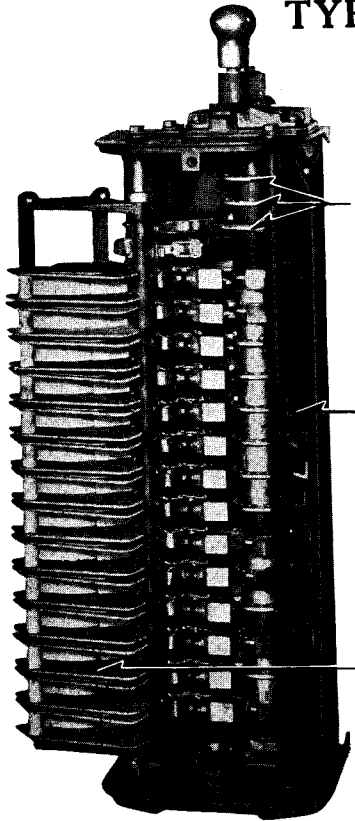


## TYPE A DRUM CONTROLLERS (For A-C. and D-C. Motors) INSTRUCTIONS



SPACE FOR TWO EXTRA  
AUXILIARY CONTACTS

DRUM CONTACTS WHICH HAVE BECOME WORN OR BURNED, MAY BE CUT DOWN TO SERVE AS SMALLER CONTACTS. MOST CONTACTS ARE REVERSIBLE. CORRECT LOCATION OF ALL CONTACTS IS MARKED ON THE OUTER SURFACE OF CONTACT SUPPORT DISCS.

ARC BARRIERS AND BLOWOUT COILS MAY BE REMOVED AS A UNIT BY REMOVING ONE BOLT AT TOP AND BOTTOM OF SUPPORTING BAR, AND ON D-C. CONTROLLERS, BY REMOVING THE SHUNT CONNECTORS. INDIVIDUAL ARC BOXES MAY BE REMOVED BY TAKING OUT TWO MOUNTING BOLTS AND BLOWOUT COIL CONNECTORS.

WHEN LEADING EDGE BECOMES BURNED, THE DRUM CONTACTS CAN BE REVERSED.

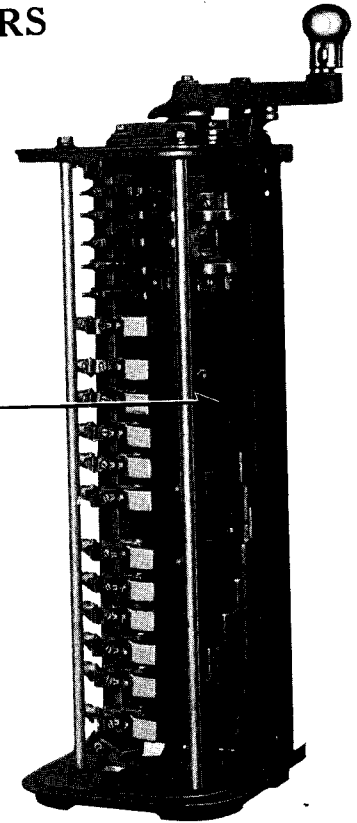


FIG. 2—TYPE A NON-REVERSING DRUM CONTROLLER

FIG. 1—TYPE A REVERSING DRUM CONTROLLER

**Installation and Wiring**—When installing the controller, note the following points:

- (1) The controller can be mounted in any desired position.
- (2) The back plate is easily removed for wiring the controller.
- (3) The controller may be used with or without a conduit box.
- (4) Make connections in accordance with the wiring diagram furnished with the controller.

**Maintenance**—Note the following important points:

- (1) Loose current carrying parts cause destructive arcing. **Keep them tight.**
- (2) Fingers should be adjusted so

that they will drop not more than  $\frac{1}{8}$ " below the surface of the drum contacts. Inspect and adjust fingers at regular intervals.

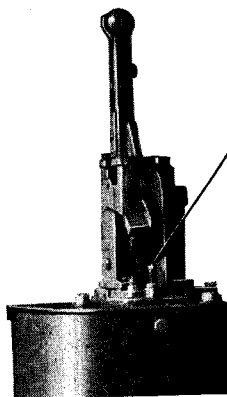
- (3) Lubricate all drum contacts with vaseline.
- (4) Keep both bearings, star wheel and pawl, cleaned and oiled.

**Operation**—Note the following important points.

- (1) When operating the controller, always make full notches as indicated by the star wheel. **Never stop between notches.** Advance the controller handle notch after notch with a firm deliberate movement, and return the handle to the "off" position quickly.

- (2) Operating heads are sometimes shipped separately. When assembling the operating head on the controller, be sure that the drum is in the normal "off" position as indicated by the pawl roller being in the large notch on the star wheel.

**General**—The finger bar assembly may be removed by disconnecting the wires from the fingers, and removing a bolt at top and bottom of bar. The drum may be removed through the hole in the top plate. To do this conveniently, insert a wedge between pawl and top plate, to hold pawl out of engagement with the star wheel.



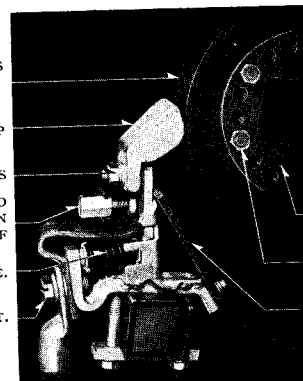
ADJUST VERTICAL HANDLE STOP HERE TO CORRESPOND WITH THE FULL RUNNING POSITION ON THE CONTROLLER DRUM.

MOST OF THE CONTACTS ARE REVERSIBLE

RENEWABLE FINGER TIP

LOCK NUT AND WASHERS  
ADJUST FINGER HERE TO DROP NOT MORE THAN  $\frac{1}{8}$ " BELOW SURFACE OF DRUM CONTACT.  
SPRING IS REMOVABLE.

$\frac{3}{8}$ " TAP BOLT.



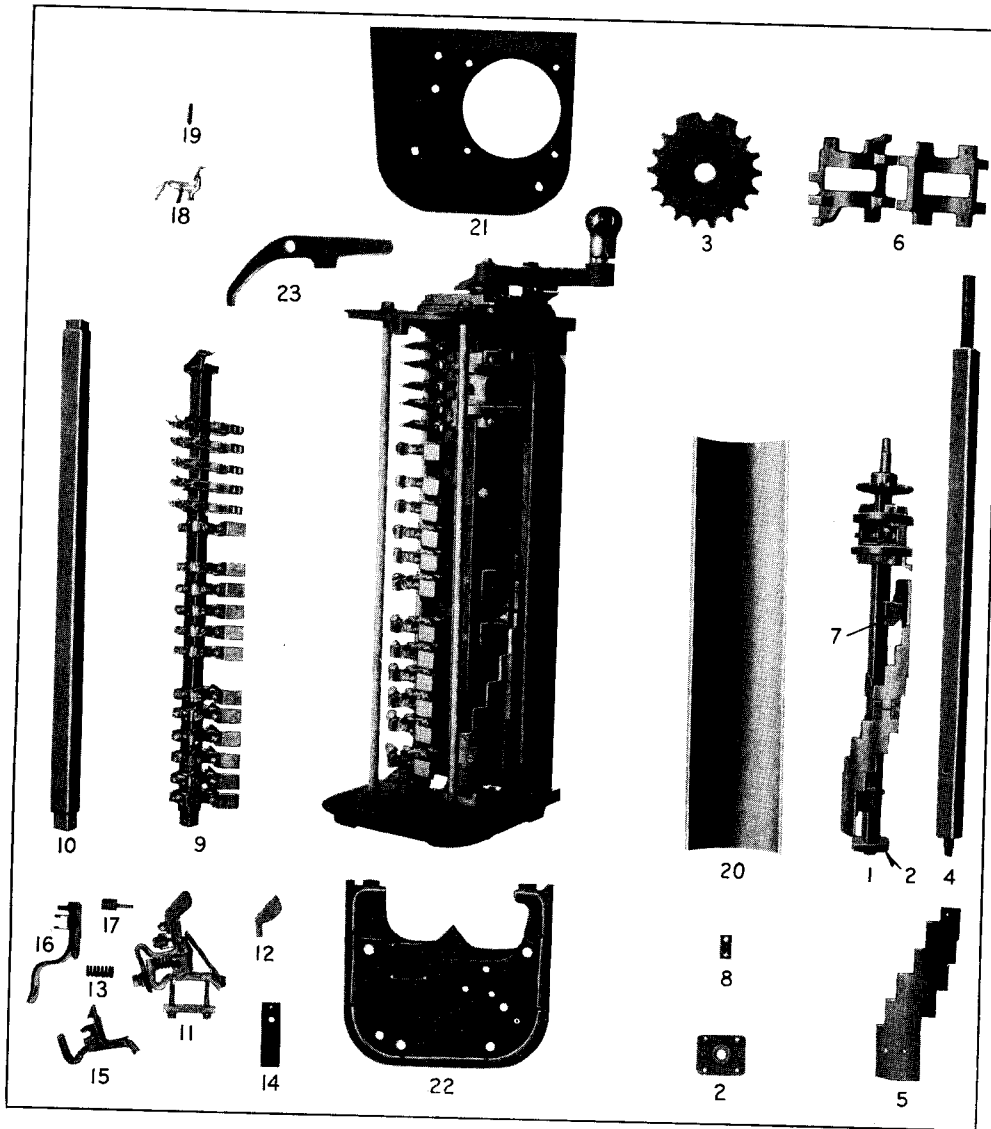
CONTACT SEGMENT RING SUPPORT.  
 $\frac{1}{4}$ " BOLT WITH HEXAGON NUT.  
INDIVIDUAL ARC BARRIER FOR EACH FINGER.

FIG. 3—VERTICAL HANDLE MOUNTING

FIG. 4—CONTACT SUPPORT RING, DRUM CONTACT, FINGER AND FINGER BASE

\*To be filed as an Instruction Leaflet and as Renewal Parts Data; for Renewal Parts Data, see pages 2, 3 and 4.

TYPE A DRUM CONTROLLERS (A-C. NON-REVERSING)  
RENEWAL PARTS DATA



RECOMMENDED STOCK OF RENEWAL PARTS

This list of Renewal Parts and that on next page are given only as a guide. When continuous operation is a primary consideration, additional insurance against shutdowns is desirable. Under such conditions more renewal parts should be carried, considering the severity of the service and the time required to secure replacements. For Ordering Instructions, See Page 4.

FIG. 5—RENEWAL PARTS FOR TYPE A A-C. NON-REVERSING DRUM CONTROLLER

RECOMMENDED STOCK OF RENEWAL PARTS

For Controllers in use up to and including.....				For Controllers in use up to and including.....			
Ref. No.	Name of Part	No. Per Unit	Recommended For Stock	Ref. No.	Name of Part	No. Per Unit	Recommended For Stock
1	Drum Complete with Ball Bearing.....	1	0 0	11	Main Finger Complete—Continued	—	—
2	Ball Bearing.....	1	0 0	14	Finger Arc Barrier.....	1 set	1/2 set 1/2 set
3	Star Wheel.....	1	0 0	15	Bracket.....	1 set	0 0
4	Drum Shaft.....	1	0 0	16	Support with Shunt.....	1 set	1 2
5	Main Contact Segment.....	1	0 0	17	Adjusting Screw.....	1 set	0 1
6	Auxiliary Contact Drum Segment.....	2	1 2	†	Auxiliary Contact Finger Complete...	1 set	0 0
7	Support for Main Contact Segment.....	1	0 1	†	Auxiliary Contact Finger.....	1 set	0 1
†	Support for Auxiliary Contact Drum Segment.....	4	0 1	18	Auxiliary Contact Finger Base.....	1 set	0 0
8	Connection Strap.....	4	0 1	†	Auxiliary Contact Finger Spring Assembly.....	1 set	0 1
9	Finger Bar Assembly.....	2	0 0	20	Drum Guard.....	1	0 0
10	Finger Base Support.....	1	0 0	21	Top Casting.....	1	0 0
11	Main Finger Complete.....	1 set	1 2	22	Bottom Casting.....	1	0 0
12	Finger Tip.....	1 set	1/2 set 1 set	23	Pawl with Roller.....	1	0 0
13	Finger Spring.....	1 set	1/4 set 1/2 set				

Parts indented are included in the part under which they are indented.

†Not shown on illustration.

\*To be filed as an Instruction Leaflet and as Renewal Parts Data; for Instructions see page 1.

TYPE A DRUM CONTROLLERS (A-C. AND D-C. REVERSING)  
RENEWAL PARTS DATA

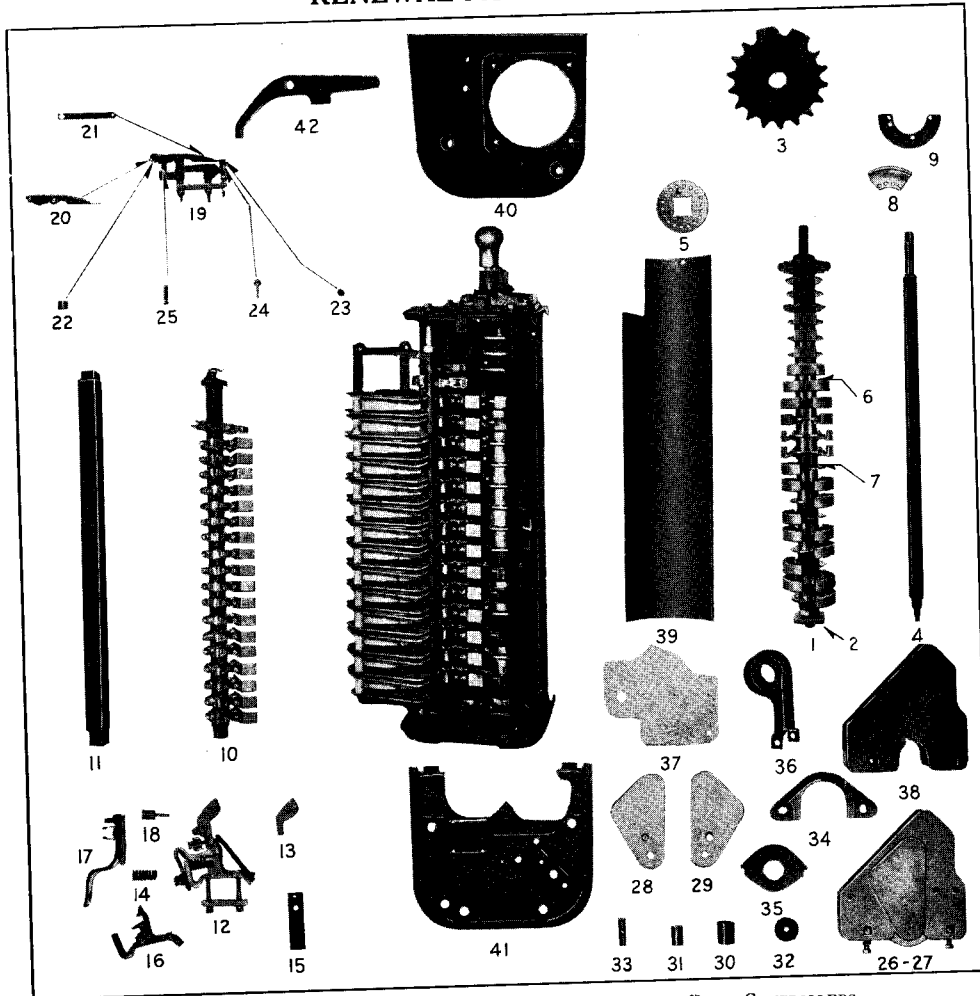


FIG. 6—RENEWAL PARTS FOR TYPE A A-C. AND D-C. REVERSING DRUM CONTROLLERS

Recommended Stock of Renewal Parts

For Controllers in use up to and including .....				1	5	For Controllers in use up to and including .....				1	5
Ref. No.	Name of Part	No. Per Unit	Recommended For Stock			Ref. No.	Name of Part	No. Per Unit	Recommended For Stock		
1	Drum Complete with Ball Bearing.....	1	0	0		19	Auxiliary Contact Finger—Continued	—	—	—	—
2	Ball Bearing.....	1	0	0		24	Stationary Contact.....	1 set	1	2	
3	Star Wheel.....	1	0	0		25	Spring.....	1 set	0	1	
4	Drum Shaft with Insulation.....	1	0	0		26	††Arc Box with Blowout Coil—Clockwise—Black.....	1 set	0	0	
5	Contact Segment Ring Support.....	1 set	1	2		27	††Arc Box with Blowout Coil—Counterclockwise—Red.....	1 set	0	0	
6	†Micarta Spacers.....	1 set	0	0		28	Pole Piece—Top.....	1 set	0	0	
7	†Brass Spacers.....	1 set	0	0		29	Pole Piece—Bottom.....	1 set	0	0	
8	†Drum Contact Segments.....	1 set	1 set	1 set		30	Core Insulator.....	1 set	0	0	
9	‡Auxiliary Contact Cam.....	1	0	0		31	Barrier Spacer.....	1 set	0	0	
10	Finger Bar Assembly.....	1	0	0		32	Washers for Core Insulator.....	1 set	0	0	
11	Finger Base Support.....	1 set	1	2		33	Insert.....	1 set	0	0	
12	**Main Finger Complete.....	1 set	½ set	1 set		34	Coil Shield.....	1 set	0	0	
13	**Finger Tip.....	1 set	¼ set	½ set		35	Coil Seal.....	1 set	0	0	
14	**Finger Spring.....	1 set	¼ set	½ set		36	††Blowout Coil.....	1 set	0	0	
15	**Finger Arc Barrier.....	1 set	0	0		37	Arc Barrier for A-C. Controllers.....	1 set	0	0	
16	**Bracket.....	1 set	1	2		38	Arc Barrier for D-C. Controllers.....	1 set	0	0	
17	**Support with Shunt.....	1 set	0	1		39	Drum Guard.....	1	0	0	
18	**Adjusting Screw.....	1 set	0	0		40	Top Casting.....	1	0	0	
19	Auxiliary Contact Finger Complete.....	1 set	0	1		41	Bottom Casting.....	1	0	0	
20	Moving Contact Element with Shunt.....	1 set	0	1		42	Pawl with Roller.....	1	0	0	
21	Shunt.....	1 set	0	0							
22	Roller.....	1 set	0	0							
23	Contact Tip.....	1 set	1	2							

†When ordering Spacers, specify the number of the spacer (counting from the top down) and state whether made of Brass or Micarta.  
 ‡When ordering Drum Contact Segments, be sure to give the style number stamped on the old one.  
 §When ordering Auxiliary Contact Cam, specify whether with four holes (as illustrated) one with two holes, or one with three holes and a notch is desired.  
 \*\*When ordering Main Fingers complete or any parts of the Main Finger, specify whether width of Finger Tip is ½" or 1".  
 ††Arc Box with Blowout Coil, used on D-C. Reversing Controller only, is either Clockwise (painted black) or Counterclockwise (painted red), depending upon the way the coil is wound. When ordering be sure to give the style number stamped on the arm of the old coil.  
 Parts indented are included in the part under which they are indented.  
 \*To be filed as an Instruction Leaflet and as Renewal Parts Data; for Instructions see page 1.

## OPERATING HEADS FOR TYPE A DRUM CONTROLLERS

### RENEWAL PARTS DATA

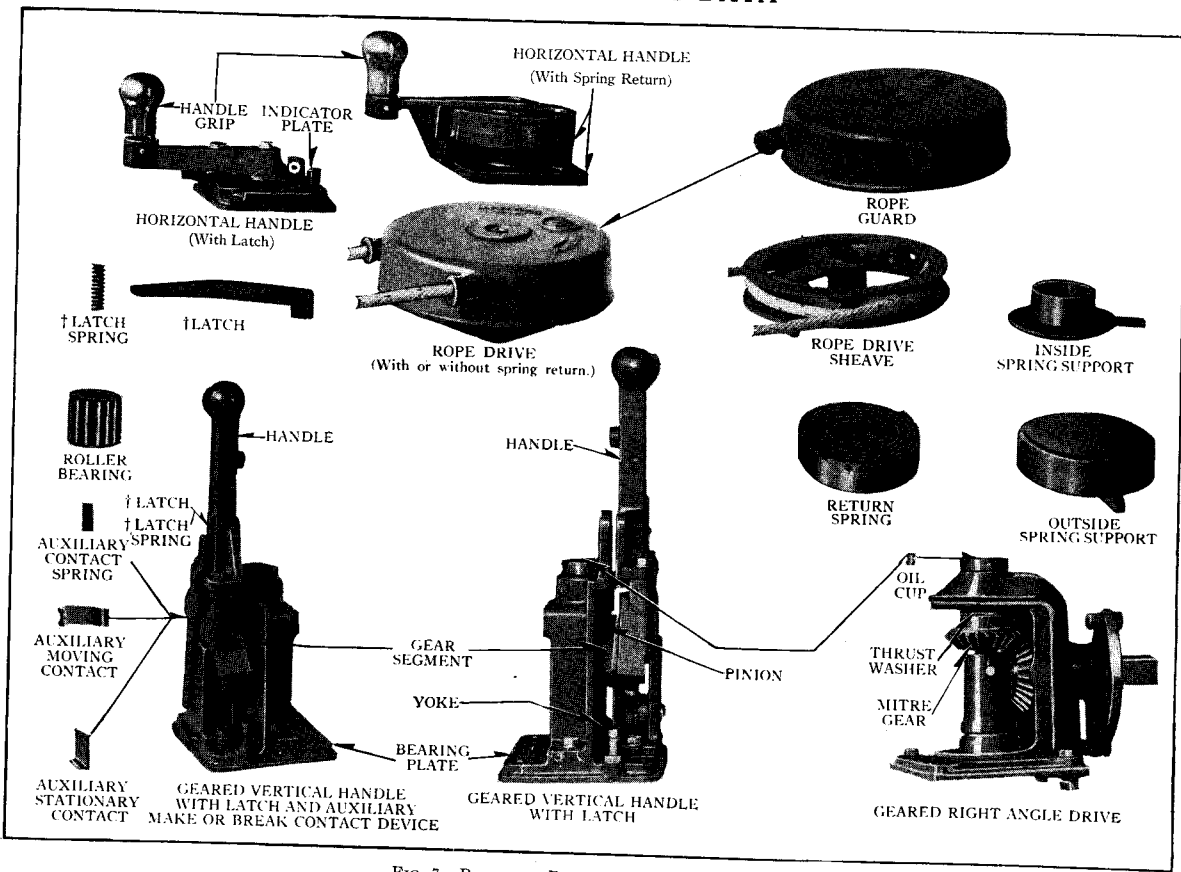


FIG. 7—RENEWAL PARTS FOR OPERATING HEADS

Operating Heads are interchangeable and may be mounted in any one of four positions. Spring Return Operating Heads are not recommended for use with Controllers having 1" finger tips.

#### RECOMMENDED STOCK OF RENEWAL PARTS

Name of Part	No. Per Unit	Recommended For Stock	
		1	5
Handle Grip.....	1	0	0
For Horizontal Handle			
†Latch.....	1	0	0
For Horizontal Handle with Latch or for Geared Vertical Handle			
†Latch Spring.....	1	0	1
Return Spring.....	1	0	1
For Horizontal Handle with Spring Return			
For Rope Drive with Spring Return			
Thrust Washer.....	2	0	1
For Geared Right Angle Drive			
Auxiliary Stationary Contact.....	2	1	2
Auxiliary Moving Contact.....	2	1	2
Auxiliary Contact Spring.....	2	1	2
For Geared Vertical Handle with Auxiliary Contact Device			

†When ordering Latch or Latch Spring, or any other part always specify the Type and Style Number of Operating Head on which the part ordered is to be used.

#### ORDERING INSTRUCTIONS

When ordering Renewal Parts, always specify the name or reference number of the part wanted as shown on the illustration in this Instruction Leaflet, giving

#### ORDERING INSTRUCTIONS—Continued

10024 (1-26-25)  
**Westinghouse**  
**A. C. MANUAL CONTROLLER**

CLASS TYPE  
MAX. H. P. LINE VOLTS  
AMPS. SEC. VOLTS  
CYCLES PHASE STYLE  
WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY  
EAST PGH. WORKS, EAST PITTSBURGH, PA., U. S. A.

10024 (1-26-25)  
**Westinghouse**  
**D. C. MANUAL CONTROLLER**

CLASS TYPE  
H. P. VOLTS  
AMPS. STYLE  
WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY  
EAST PGH. WORKS, EAST PITTSBURGH, PA., U. S. A.

15872  
**OPERATING HEAD**  
STYLE

FIG. 8—NAME PLATES

Style or Shop Order Number, and the type of apparatus as shown on the name plate.

To avoid delays and misunderstandings, note carefully the following points:

1. Send all correspondence and orders to the nearest Sales Office of the Company.

2. State whether shipment is to be made by freight, express or parcel post. In the absence of instructions, goods will be shipped at our discretion. Parcel post shipments will be insured only on request. All shipments are at purchaser's risk.

3. Small orders should be combined so as to amount to a value of at least \$1.00 net. Where the total of the sale is less than this, the material will be invoiced at \$1.00.

**Westinghouse Electric & Manufacturing Company**

East Pittsburgh Works

Printed in U.S.A.

East Pittsburgh, Pa.

\*To be filed as an Instruction Leaflet and as Renewal Parts Data; for Instructions, see page 1.

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