

General Electric Company

Schenectady, N.Y.

January, 1925

*Bulletin No. 58355B

PARTS OF CR9145 TYPE RG FORM A RESISTORS

NOTE: The Type RG Resistor as originally built was equipped with steel sleeves and cupped washers or ferrules for spacing the grids and protecting the mica insulations. While this construction had certain advantages in cushioning the grids, some trouble was experienced from the burning or fusing of these sleeves and ferrules and the resistors as now constructed omit these parts altogether.

In repairing these RG resistors it is recommended that the sleeves and ferrules be omitted and that thicker mica washers be used to make up for the thickness of the cupped washers or ferrules. It is also advisable to put a 0.01 in. thick soft copper washer between all current carrying surfaces, as service tests have shown this to be an improvement.

SELECTION OF GRIDS

Pattern numbers and size numbers cast on each of the grids permit easy identification in the store room, and selection from the following table may be made accordingly. Also the name plate on each complete resistor gives a rating which signifies the size or sizes of grids and likewise the quantity of each contained in the resistor. Example: "CR9145 Type RG-7A18-T-7A18" contains 36 number 7 grids, all connected in series. The full significance of the rating is explained under the subject of "Nomenclature," Page 4.

The following table indicates the catalog numbers corresponding to the various pattern numbers and size numbers. Always order by catalog numbers.

GRIDS

Cat. No.	Size No.	Pattern No.	Resistance per Grid at 25 Deg. C.	Approx. Wt. in Lb. per 100
60530	1	803574-XE	0.0095	224
60532	3	803574-R	0.0145	190
60534	5	803574-T	0.0215	171
60536	7	803574-V	0.032	126
60537	8	803574-W	0.032	126
60538	9	803574-XA	0.049	112
60539	10	803574-XB	0.049	104
60541	12	803574-XH	0.074	92
177154	14	1652431-A	0.105	112
179296	15	1652431-B	0.062	126

FRAME PARTS

Resistor Form Stamped on Name Plate	Max. No. of Grids Lugs $\frac{5}{8}$ in. Thick	Max. No. of Grids Lugs $\frac{1}{2}$ in. Thick	End Frame Name Plate End	End Frame End Opposite Name Plate	Tie Rod for Grids	Mica Tube	Tie Rod for Frames	Spacing Collar Between Nut and Frame
			Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
A	36	48	123327	123328	458569	116122		123329
A $\frac{1}{3}$	14	18	224376	224376	440349	224384	224378	
A $\frac{1}{2}$	18	24	224376	224376	488019	224385	457188	
A $\frac{2}{3}$	22	29	224376	224376	445197	224386	224379	
A $\frac{3}{4}$	26	34	224376	224376	1414006	224387	224380	
A $\frac{5}{6}$	30	40	224376	224376	448025	224388	455187	
A1	56	74	123327	123328	192866	192867		123329
A2	56	74	123327	192865	192866	192867		123329
A3	28	36	123327	123328	408263	161253		123329
A4	48		123327	123328	1422497	1425996		123329

NOTE.—Data subject to change without notice.
*Supersedes Bulletin No. 58355A.

GENERAL ELECTRIC COMPANY

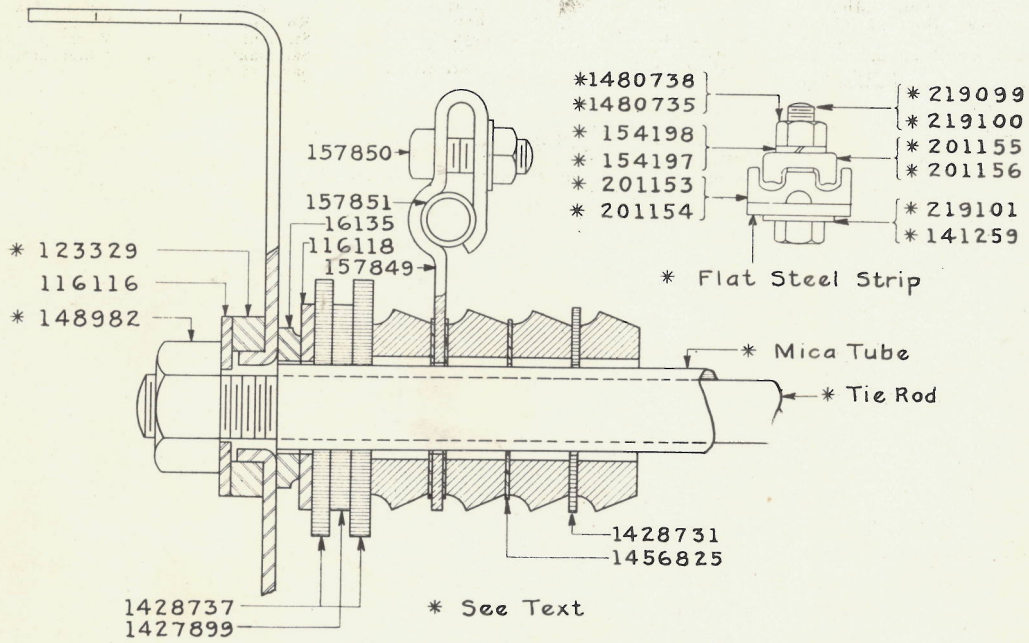
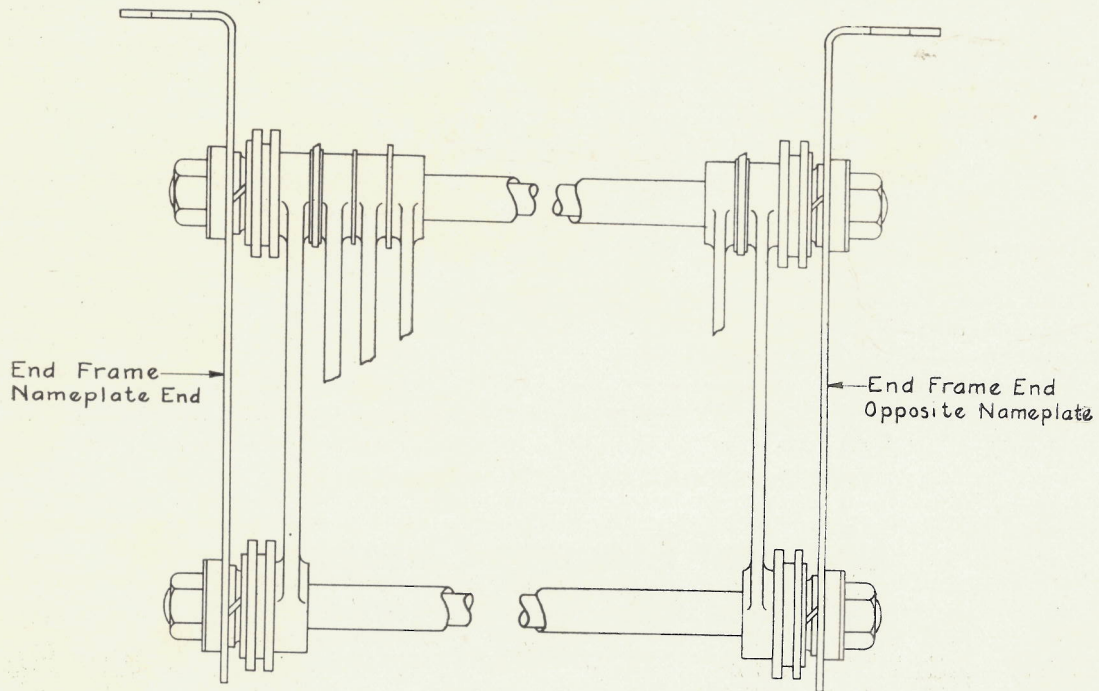
58355B-2 Parts of CR9145 Type RG Resistors

PARTS COMMON TO ALL FORMS LISTED IN THIS BULLETIN

Cat. No.	Description
148982	Nut for tie rod ($\frac{5}{8}$ in.-11, hex. st'd, sherardized)
116116	Steel plate washer back of nut ($\frac{11}{16}$ in. by $1\frac{3}{4}$ in. by 0.102 in. sherardized)
16135	National lock washer ($\frac{29}{32}$ in. by $1\frac{1}{2}$ in. by $\frac{7}{32}$ in. thick)
116118	Steel washer back of No. 16135 ($\frac{11}{16}$ in. by 2 in. by 0.114 in. sherardized)
1428737	Mica spacing washer, wide ($\frac{7}{8}$ in. by $2\frac{1}{2}$ in. by $\frac{3}{16}$ in. thick)
1427899	Mica spacing washer, narrow ($\frac{7}{8}$ in. by 2 in. by $\frac{3}{16}$ in. thick)
1428731	Mica washer between grids ($\frac{7}{8}$ in. by 2 in. by 0.0625 in.)
1456825	Copper contact washer between grids ($\frac{7}{8}$ in. by $1\frac{3}{4}$ in. by 0.010 in.)
116142	Connection strip for grids
116145	Steel spacer between grids, opposite connection strip or terminal
157849	Terminal with bushing, clamping bolt, nut and washer
157851	Bushing for terminal
157850	Clamping bolt ($\frac{3}{8}$ in.-16, 1 in. sq. h. sherardized)
1480735	Nut for clamping bolt ($\frac{3}{8}$ in.-16, hex. st'd, sherardized)
139517	Spring lock washer for nut ($\frac{13}{32}$ in. by $\frac{23}{32}$ in. by 0.0625 in.)

SPECIAL TERMINALS FOR LOCOMOTIVE SERVICE

192870	Flat steel strip, drilled for terminal connection, busbar or punched copper tube cable terminal connection ($3\frac{3}{4}$ in. long, $\frac{1}{2}$ in. bolt hole)
192868	Flat steel strip, drilled for terminal connection, busbar or punched copper tube cable terminal connection ($4\frac{1}{2}$ in. long, $\frac{1}{2}$ in. bolt hole)
192869	Flat steel strip, drilled for terminal connection, busbar or punched copper tube cable terminal connection ($4\frac{1}{2}$ in. long, $\frac{1}{2}$ in. bolt hole)
116145	Steel spacer between grids, opposite flat steel strip
207549	Large terminal for cables, consists of two clamps with $\frac{1}{2}$ in. bolt, nut and washers (may be brought out at either top or bottom of resistor)
207550	Small terminal for cables, consists of two clamps with $\frac{3}{8}$ in. bolt, nut and washers (may be brought out at either top or bottom of resistor)
201153	Large clamp for cable, drilled for $\frac{1}{2}$ in. bolt
201154	Large clamp for cable, drilled for $\frac{3}{8}$ in. bolt
201155	Small clamp for cable, drilled for $\frac{1}{2}$ in. bolt
201156	Small clamp for cable, drilled for $\frac{3}{8}$ in. bolt
219099	Clamping bolt-Nos. 201153, 201155 ($\frac{1}{2}$ in.-13, $2\frac{1}{4}$ in. hex. h. sherardized)
219100	Clamping bolt for Nos. 201154, 201156 ($\frac{3}{8}$ in.-16, $1\frac{7}{8}$ in. hex. h. sherardized)
219101	Washer for No. 219099 ($\frac{13}{32}$ in. by $1\frac{3}{8}$ in. by 0.125 in. sherardized)
141259	Washer for No. 219100 ($\frac{13}{32}$ in. by $\frac{3}{4}$ in. by 0.0625 in. sherardized)
1480738	Nut for No. 219099 ($\frac{1}{2}$ in.-13, hex. st'd, sherardized)
1480735	Nut for No. 219100 ($\frac{3}{8}$ in.-16, hex. st'd, sherardized)
154198	Spring lock washer for No. 1480738 ($\frac{17}{32}$ in. by $1\frac{1}{2}$ in. by $\frac{1}{8}$ in. thick)
154197	Spring lock washer for No. 1480735 ($\frac{13}{32}$ in. by $\frac{23}{32}$ in. by $\frac{3}{32}$ in. thick)



CR 9145 Type RG Form A Resistor

58355B-4 Parts of CR9145 Type RG Resistors

NOMENCLATURE

Each resistor has a significant rating depending on the size, number and connections of its grids.

Each resistor is designated by the symbol CR9145 RG followed by a group or groups of symbols separated by dashes, the symbols in each group consisting of three parts, viz.:

- (1) A figure indicating the size and capacity of the grids in the group.
- (2) A letter indicating the way in which the grids are connected within the group: "A" indicating that the grids are connected in series; "B" that two grids are connected in multiple, the sets in series; "C" indicating three grids, in multiple, the sets in series; "D" indicating four grids in multiple, the sets in series.

(3) A figure indicating the number of grids in the group.

Illustrating the above, CR9145 RG-7A18-T-7A18 is a resistor containing 36 No. 7 grids, all connected in series.

CR9145 RG-7B18-T-7B18 is a resistor composed entirely of No. 7 grids connected two in multiple and containing 36 grids; CR9145 RG-7C18-T-7C18 indicates that the same grids are used, but that they are connected three in multiple and the sets in series.

Referring to the example of ratings given above, the "T" indicates that connection is made at the top of the box between the left- and right-hand groups of grids. If connection is made at the bottom of the box the letter "T" is replaced by "Y."

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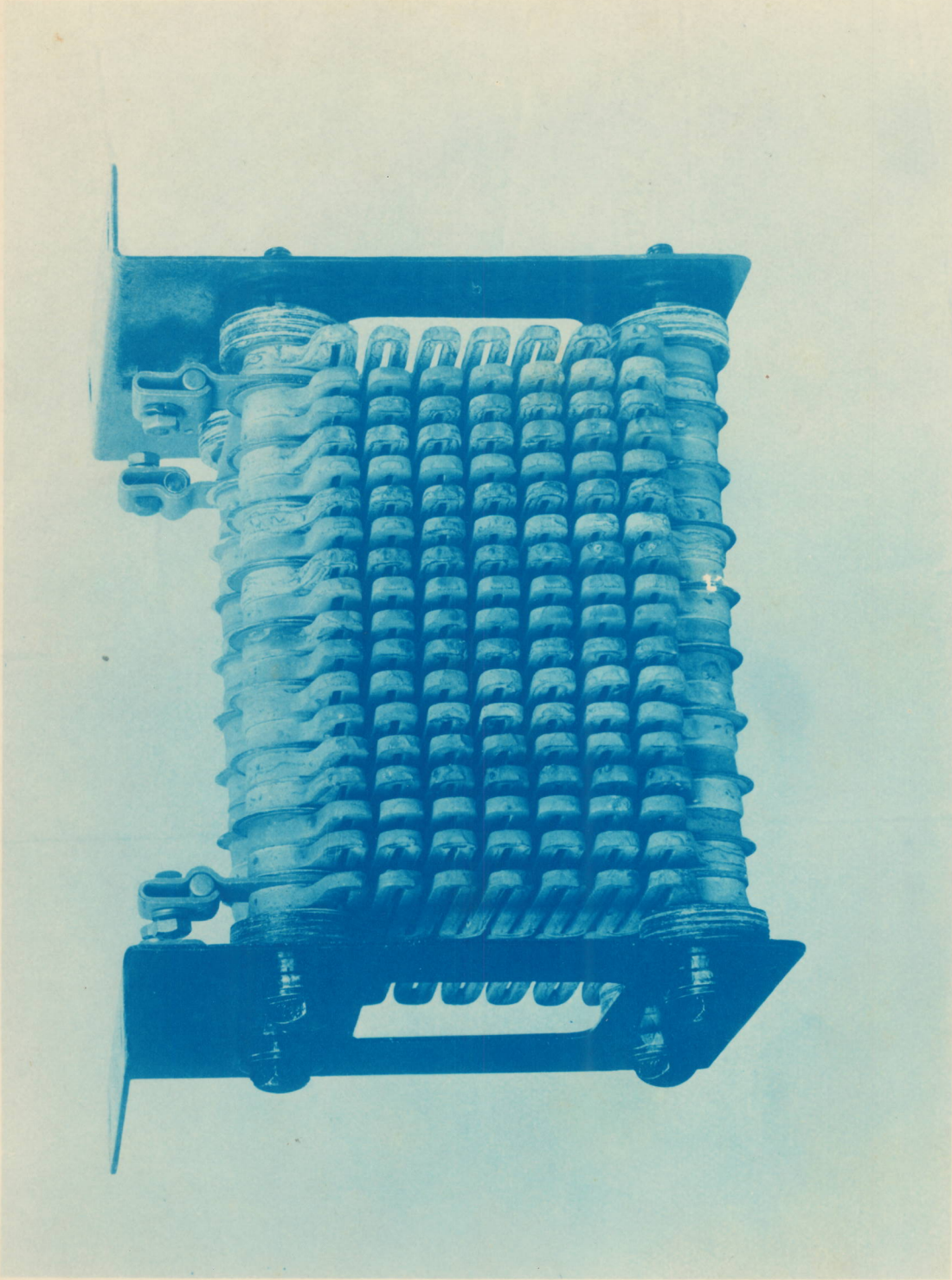


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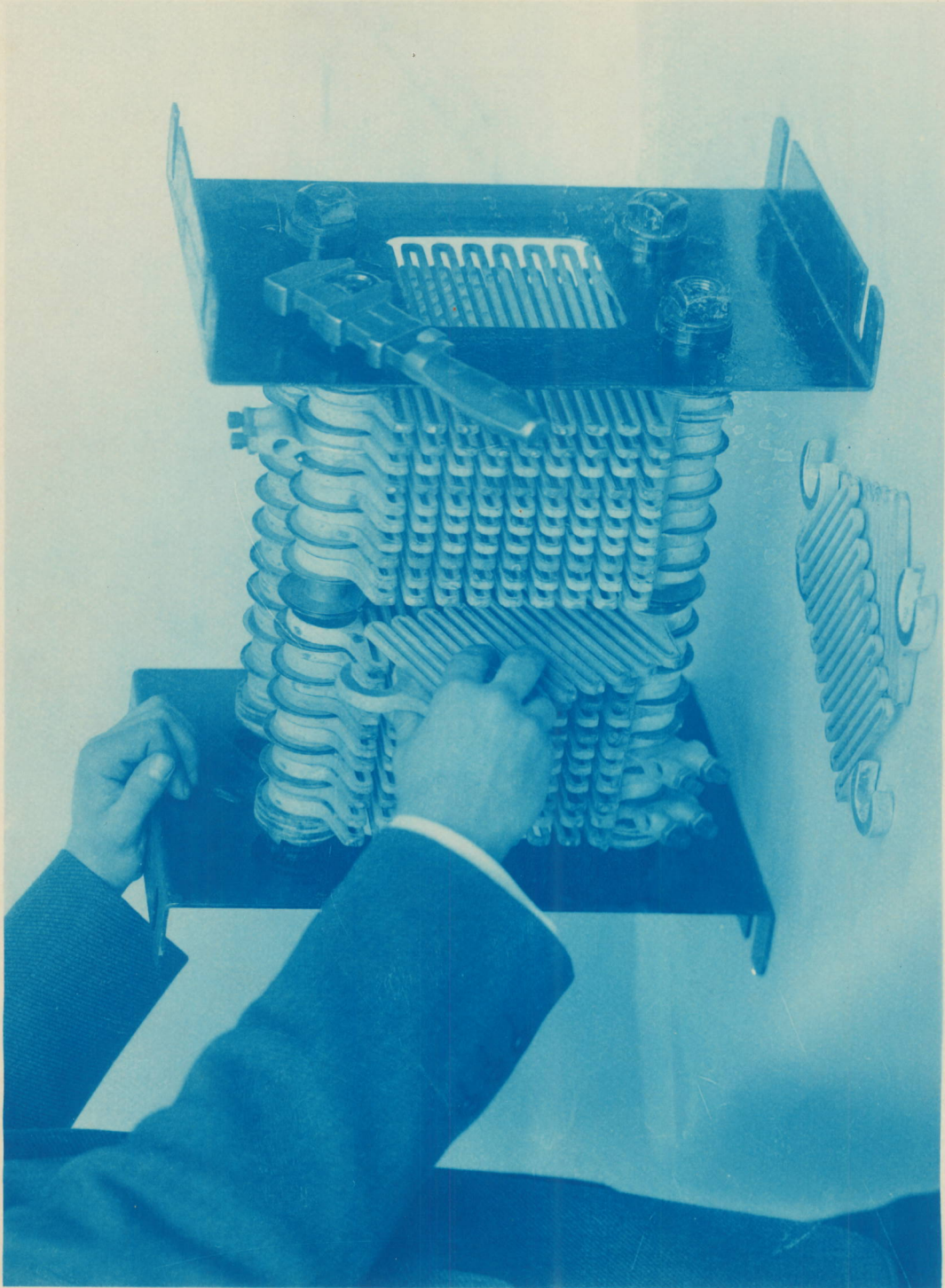
INTERNATIONAL GENERAL ELECTRIC CO., INC.
120 Broadway, New York City, and Schenectady, N. Y.
REPRESENTATIVES AND AGENTS IN ALL COUNTRIES



CR-9145 TYPE RC RHEOSTAT.
INDEX E-355

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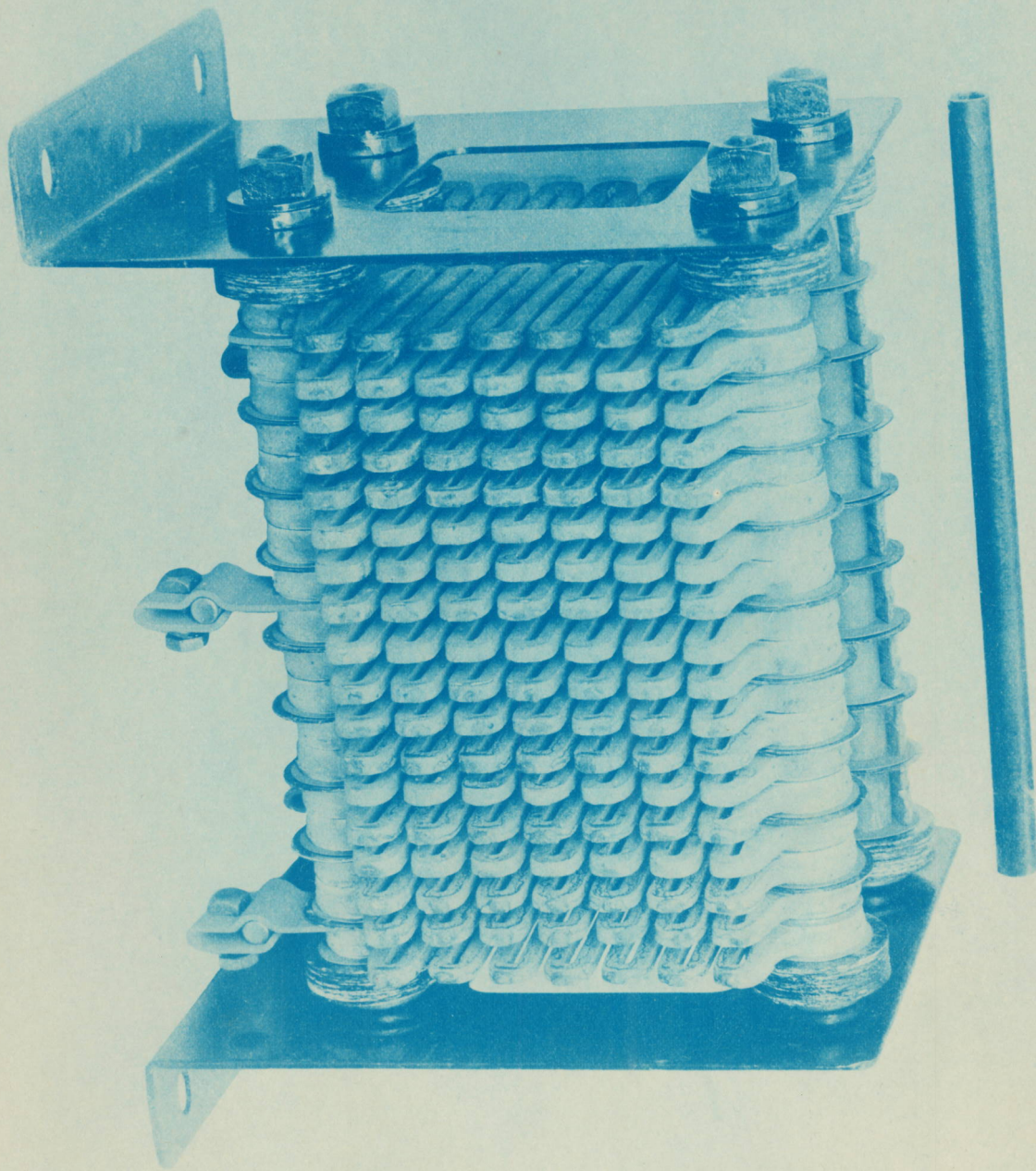




RG RHEOSTAT.
INDEX E-355.1

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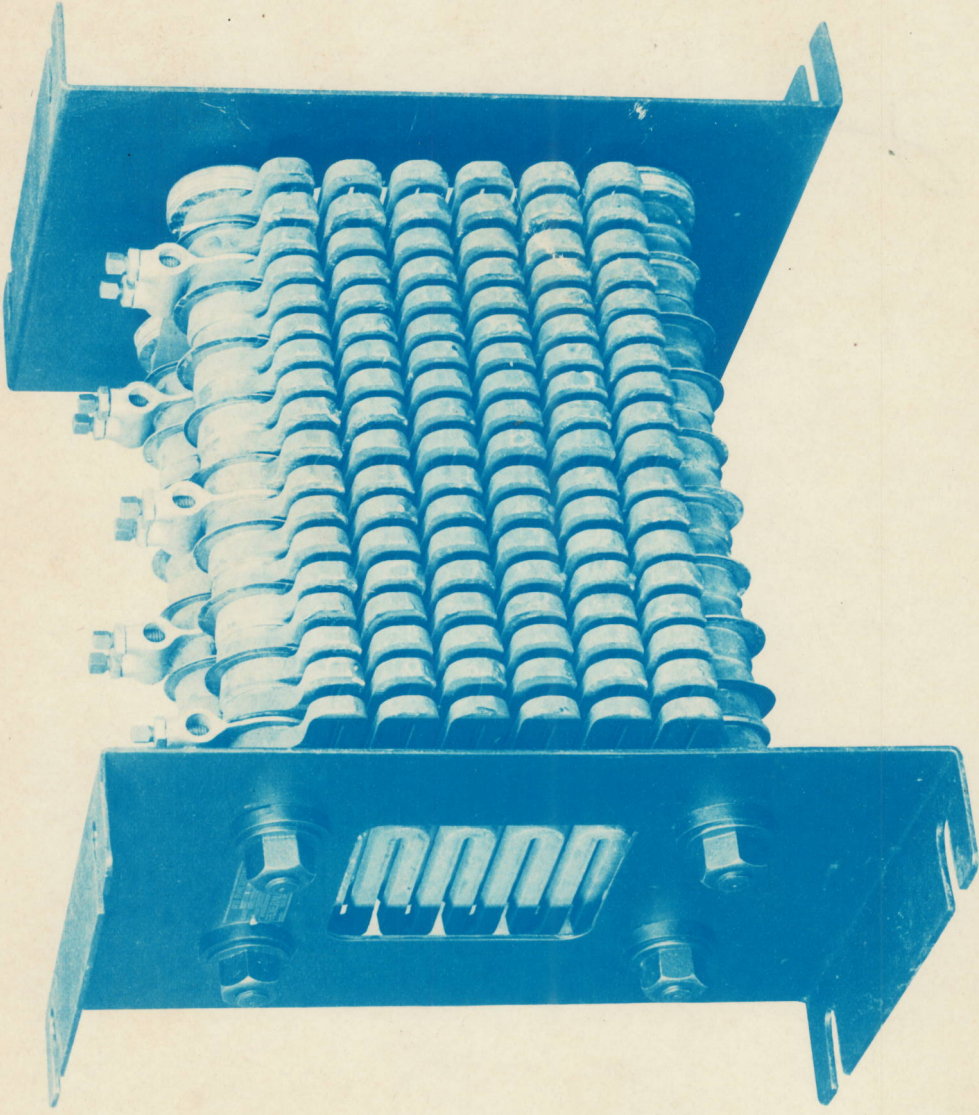




TYPE RG FORM A RHEOSTAT WITH IMPROVED TERMINALS.
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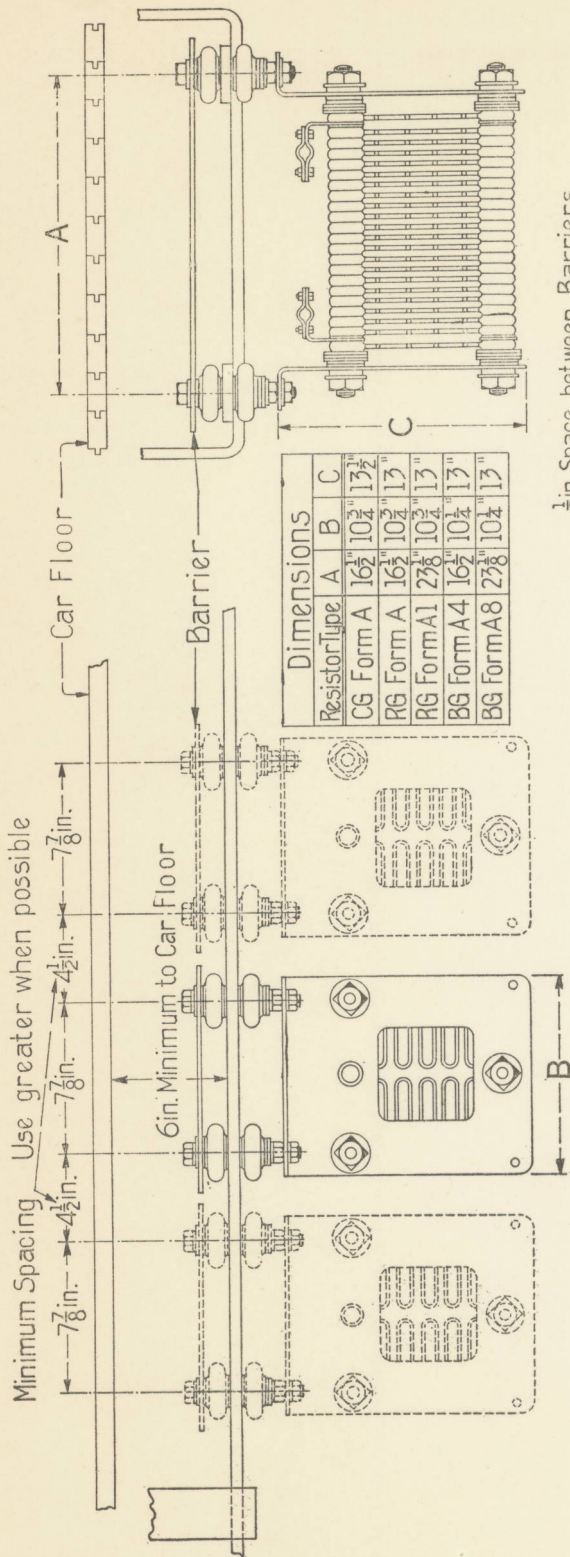
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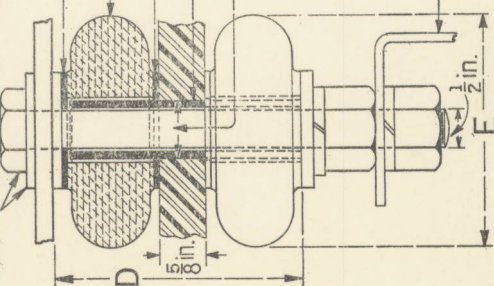


211657 TYPE RG RHEOSTAT FOR RAILWAY SERVICE

★METHOD OF SUPPORTING RAILWAY RESISTORS USING PORCELAIN BOLT INSULATORS FOR 600- AND 1500-VOLT WORK

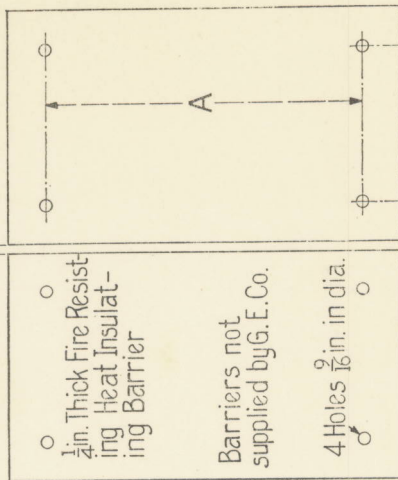


Bolt and Metal Washer not supplied by G. E. Co.



Packing Washer	600 Volts	1500 Volts
Porcelain Insulator	Cat. No. 1435581	Cat. No. 1435581
Packing Washer	Cat. No. 450869	Cat. No. 450880
Insulating Tube	Cat. No. 1435582	Cat. No. 1435796
Hole in Support	1 1/2 in.	1 5/16 in.
Complete Insulator	Cat. No. 1803472P4	Cat. No. 1436075
Weight	1 lb.	2 lb.
Dimension D	7 3/8 in.	4 3/8 in.
Dimension E	3 in.	7 1/2 in.

1/2 in. Space between Barriers



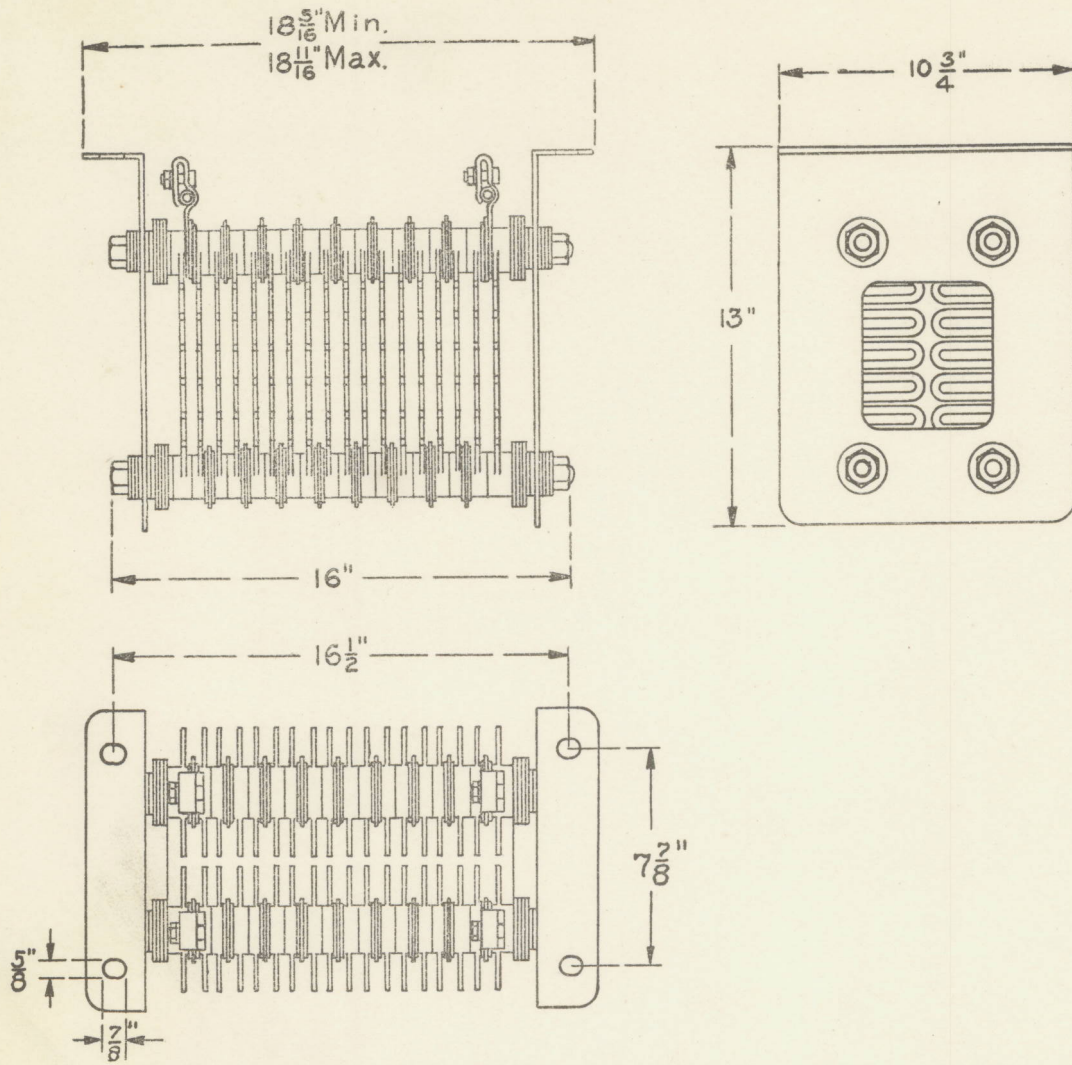
Drilling for Barriers

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Changed SEPT. 15, 1927
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DIMENSIONS OF TYPE RG, FORM A RHEOSTATS



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Changed
16 FEB., 1915

No. 14601-A
Supersedes DS 22665

ENGINEERING DEPT.
GENERAL ELECTRIC COMPANY

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