STANDARD DRUM CONTROLLERS

GENERAL

From time to time improvements have been made in our standard controllers. As these improvements frequently affect the interchangeability of parts, it is usually necessary to change the form letters of the standard controller. In each instance that the interchangeability of parts is effected, careful consideration is given to its bearing on the repair of parts that our customers will have to carry in their storehouse. Oft times, improvements are deferred for this reason. Other times, they are not incorporated in the controller because we feel that the improvement is not of sufficient value to warrant the additional parts that the customer will have to stock.

STANDARD FOUR MOTOR CONTROLLERS

K-35 CONTROLLER

The K35 controller is an outstanding example of the extended improvements with have been made in the standard line. The K35-JJ controller is fitted with arc suppressor plates, lap type burning tips, improved reverse fingers and in the frame casing cable troughs at each side with a large opening at the bottom, are provided.

The K35-KK is like the K-35 JJ in all respects except that the frame and cap plate castings where a lighter alloy has been used, resulting in a reduction of sixty-five pounds in the weight of the controller.

K-75 CONTROLLER

The K-75 controller has been designed to supersede all forms of K-35 controllers up to a capacity of four 50 h.p. motors. A complete description of this controller is found in Apparatus Sales Advice No. RY-2.86.

K64 CONTROLLER

The K-64 controller replaces the K-34. As the demand for controllers of this capacity is very limited, a stock of parts for only one kind (K-64) is maintained.

The difference between the K-34 and K-64 controllers is in the current carrying parts which give greater capacity than the former. They have overall dimensions and are very similar in appearance.

The standard form is K-64-D. It differs from the K-64 (former standards) in having the terminals arranged so that the controller may be modified, to use it on a metallic circuit, by disconnecting some of the cables. A second difference is the segments engaging with the R fingers are held by two segment screws, while those in the form BR are held by a single screw and dowel. A third difference is the segments engaging the fingers other than first point, are extended nearer to the “off” position than those in the form BR.

This controller is fitted with arc suppressor plates. It is arranged for the easy installation of the LB handle and has the “lap” type of burning tip.

While it may be used without a line breaker, we are confident out customers will be much better satisfied with the operation when one is used.

TWO MOTOR CONTROLLERS

K-63 CONTROLLER

This is the safety car controller, and the K63-BR has long been standard. It is now superseded by the K63-G. This differs from the K-63-
BR in the addition of two main fingers and corresponding segments which give three breaks in the R4 wire during the transition from series to parallel.

Complete controllers are interchangeable, that is, a K-63-BR controller may be installed on one end of a car and a K-63-G on the other end.

K-68 CONTROLLER

This is the new name for the old K-36 controller. It differs from the K-36 controller in having four points in series and three in parallel as well as a different angular spacing of the other notches. Ferrules are used on all incoming cables. The reverse fingers are duplicates of those used in the K36 car controller, K63-BR with reverse cylinder and finger base to accommodate this finger.

The reverse pawl pin provided with a bearing on each side of the pawl casting.

Main pawl has a 7/8” case hardened roller.

The lower arc deflector hinge is rounded off to clear the cable better.

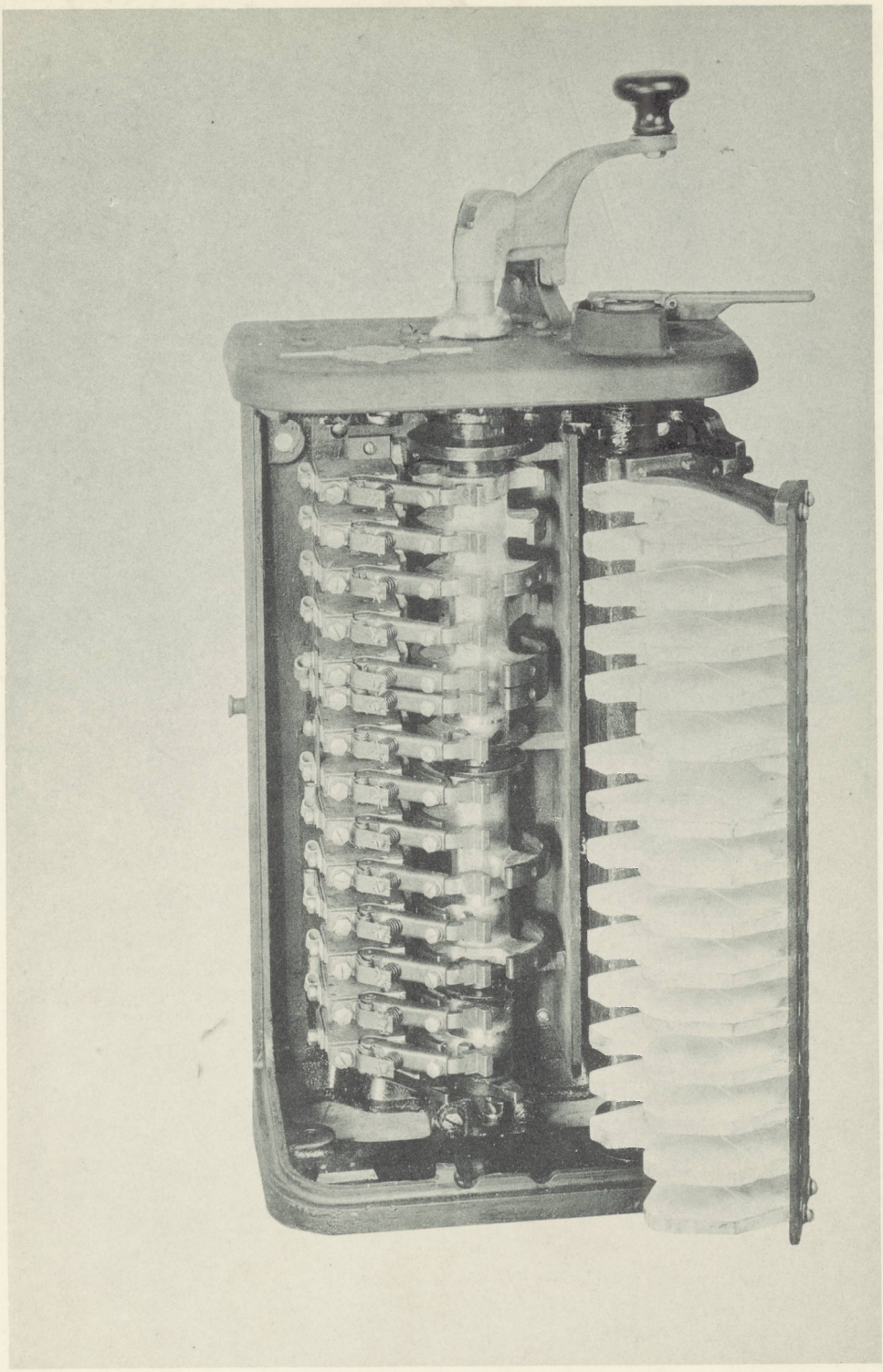
The main frame has a larger hole in the bottom so that cables may be readily taken out.

Main cylinder bearings in cap plate and frame have renewable alloy bushings.

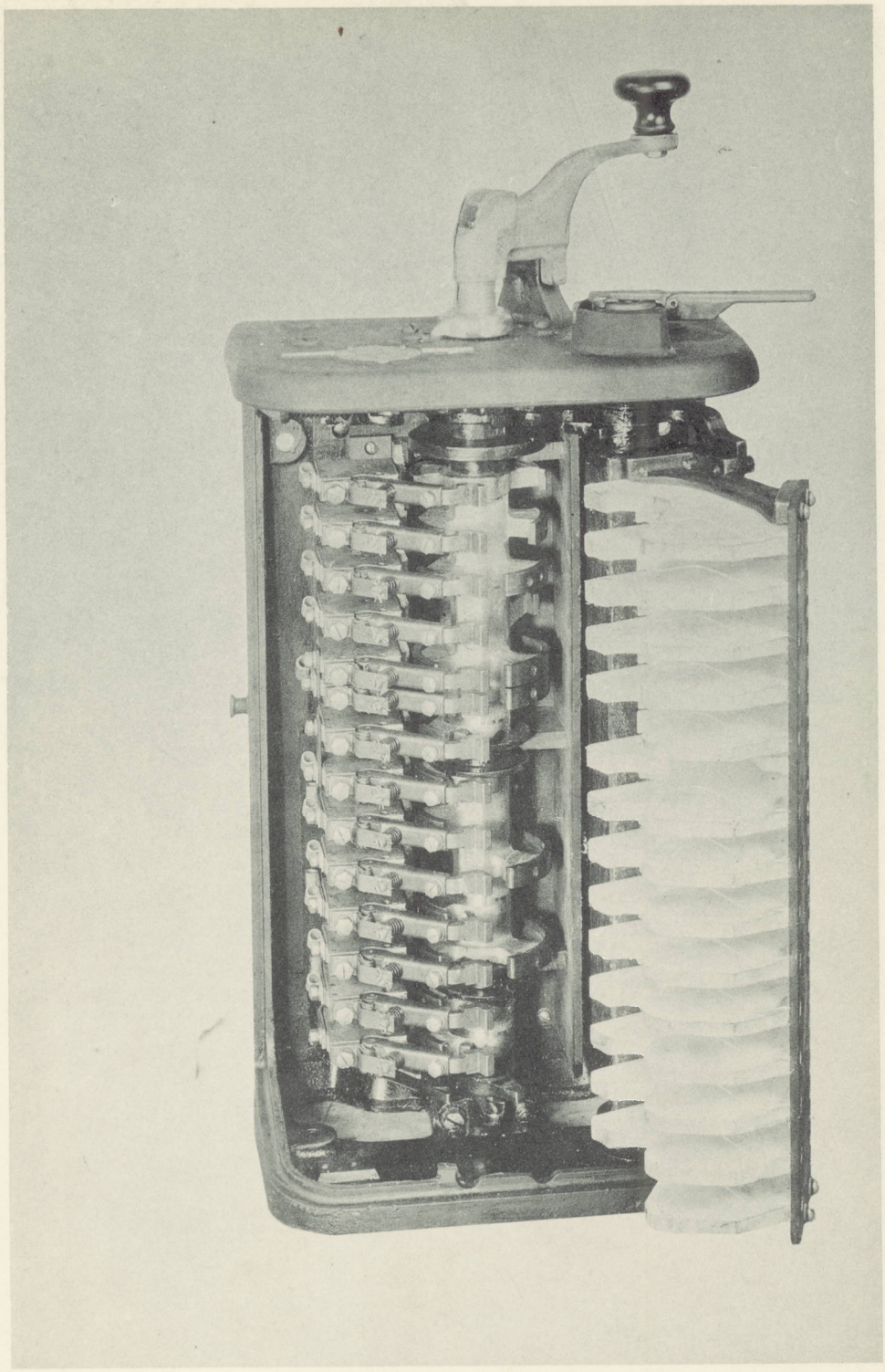
The K-68 controller with alloy frame and cap plate in known as the K-68_C and weighs 80 pounds less than the K68-A with cast iron frame.

TYPE K CONTROLLERS FOR 600 VOLT SERVICE WITH MAXIMUM PEAK OF 750 VOLTS

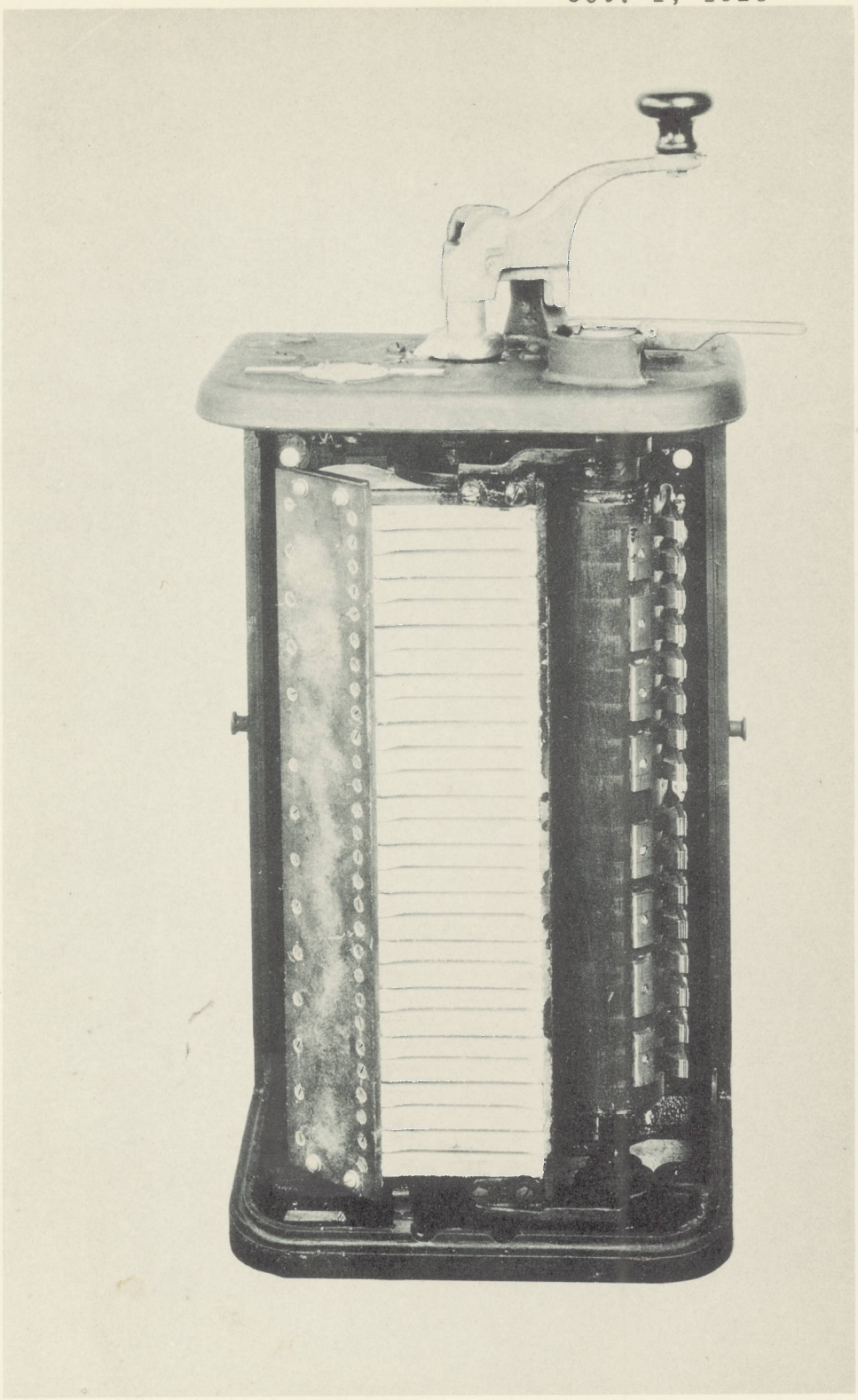
Type	No. of Motors	Maximum Allowable Capacities Of Each Motor (Neither To Be Exceeded) Hourly Rating HP. on 600 V.	Continuous Rating Amperes	Number of Points Series	Parallel	Approx. Wt. In. Lb.	Remarks
K-75	4	50	50	5	3	145	
K-35	4	65	60	5	3	270	
K-68	2	70	66	4	4	225	
K-39	2	70	66	4	4	230	For metallic return circuit.
K-40	4	65	60	5	3	280	For metallic return circuit.
K-51	2	70	66	5	4	250	For field control motors.
K-63	2	40	39	4	3	135	
K-64	4	110	105	6	4	450	Replaces K-34
K-67	8	40	35	5	3		Furnished only with line breaker and separate reverser.



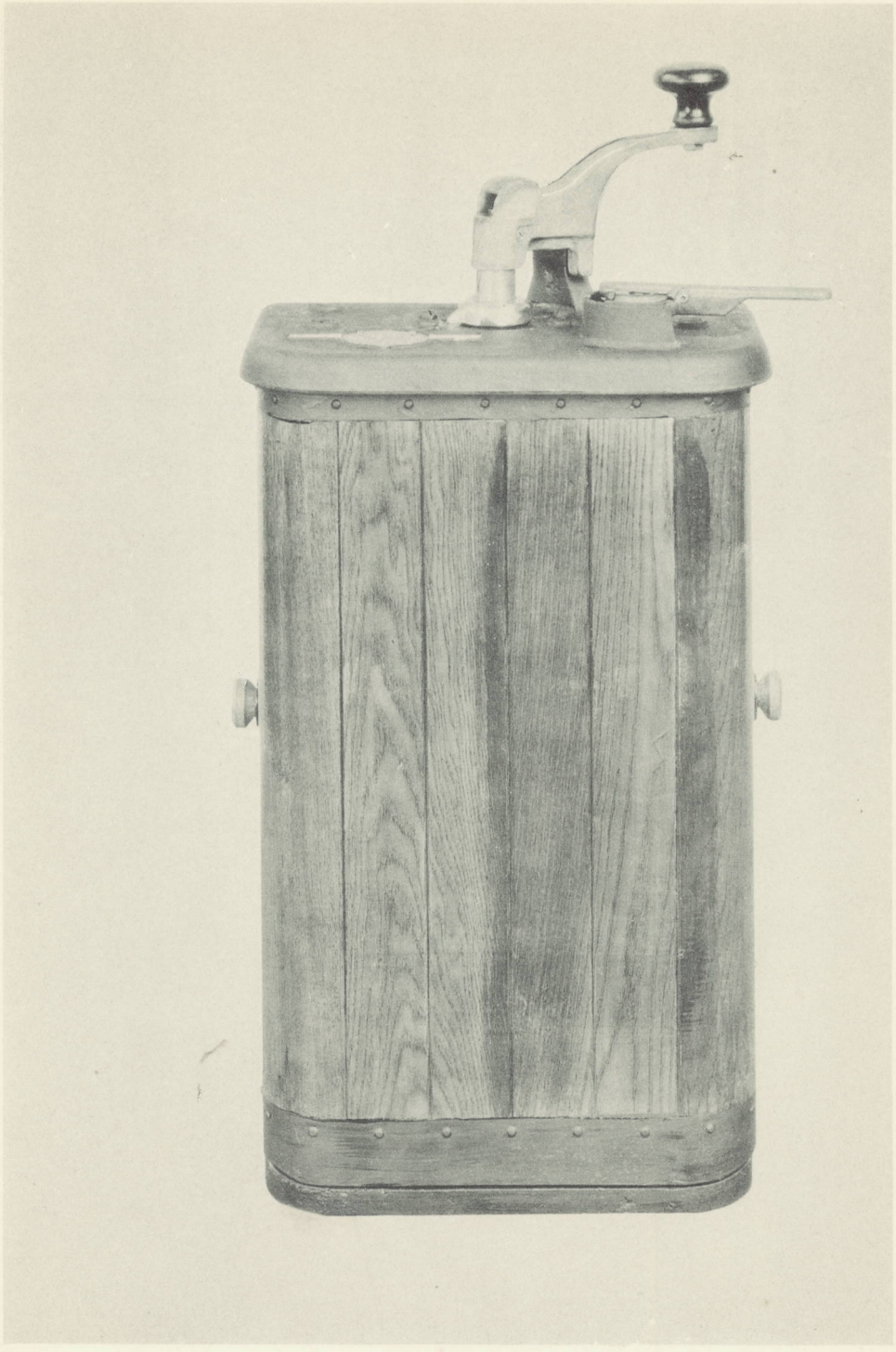
245494 TYPE K-75 FORM A CONTROLLER.
APPROX. 1/5 SIZE INDEX E-353.7 5 12 26



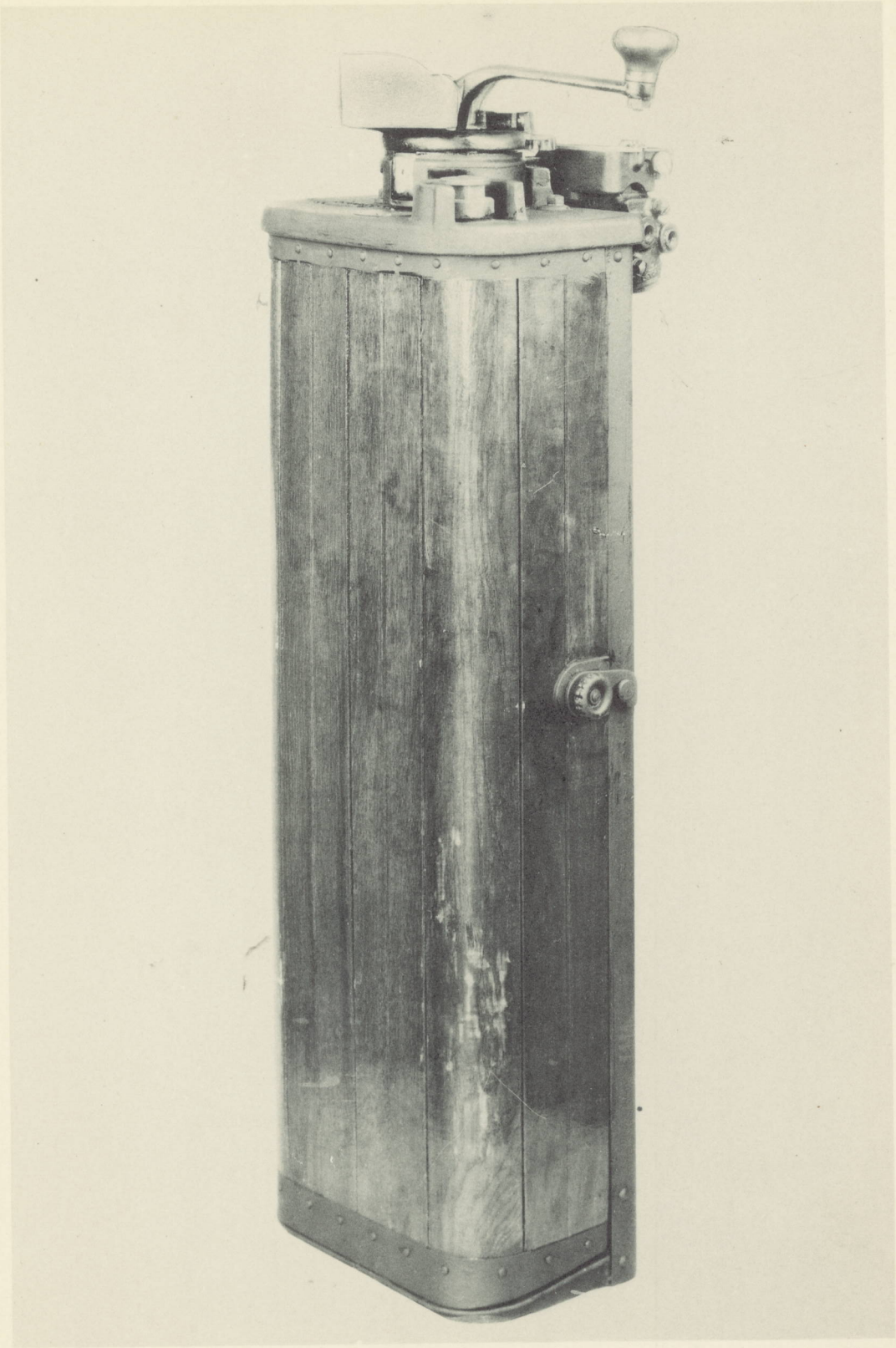
245494 TYPE K-75 FORM A CONTROLLER.
APPROX. 1/5 SIZE INDEX E-353.7 5 12 26



245496 TYPE K-75 FORM A CONTROLLER.
APPROX. 1/5 SIZE INDEX E-353.7 5 12 26

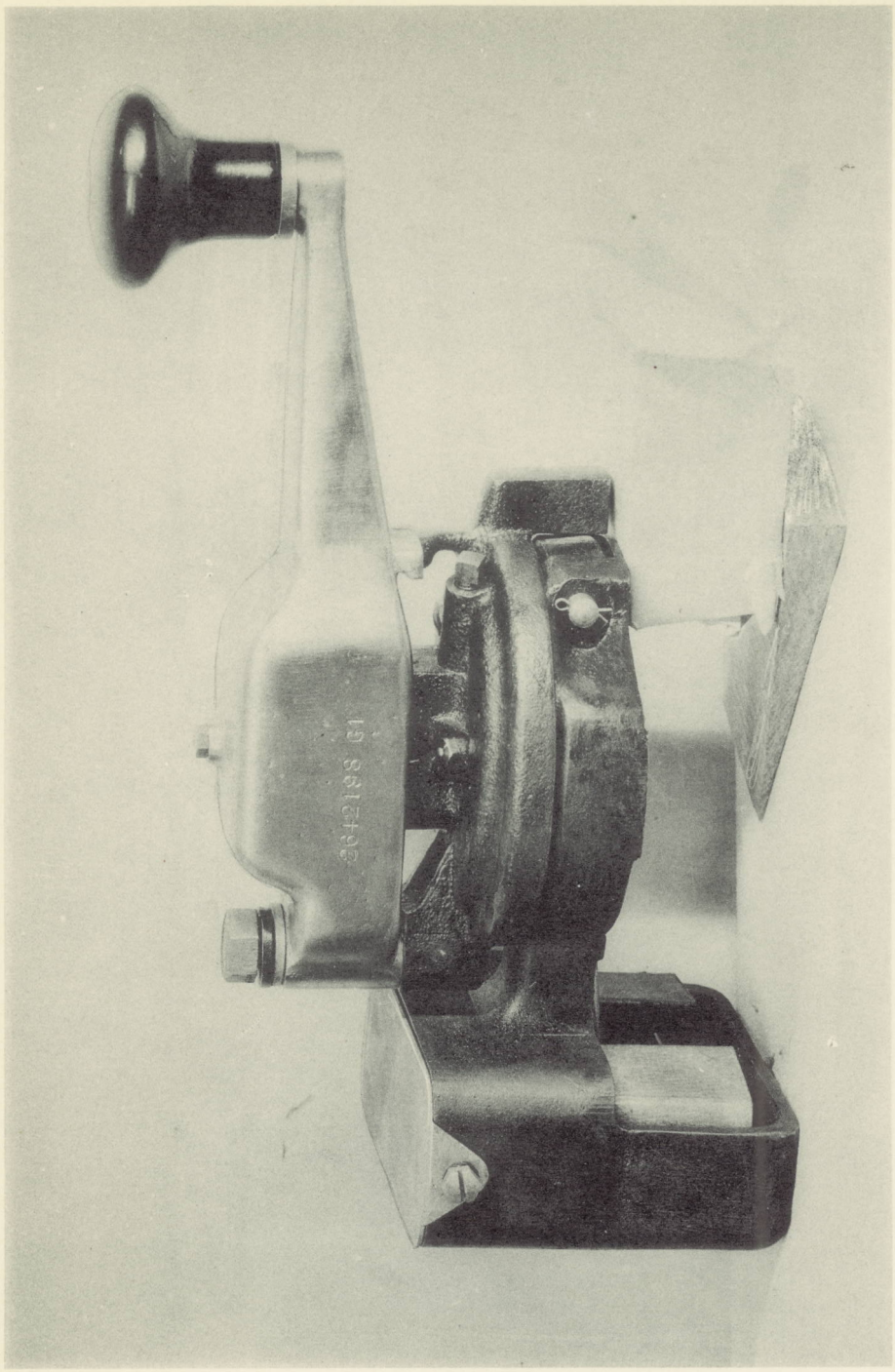


245495 TYPE K-75 FORM A CONTROLLER.
APPROX. 1/5 SIZE INDEX E-353.7 5 12 26

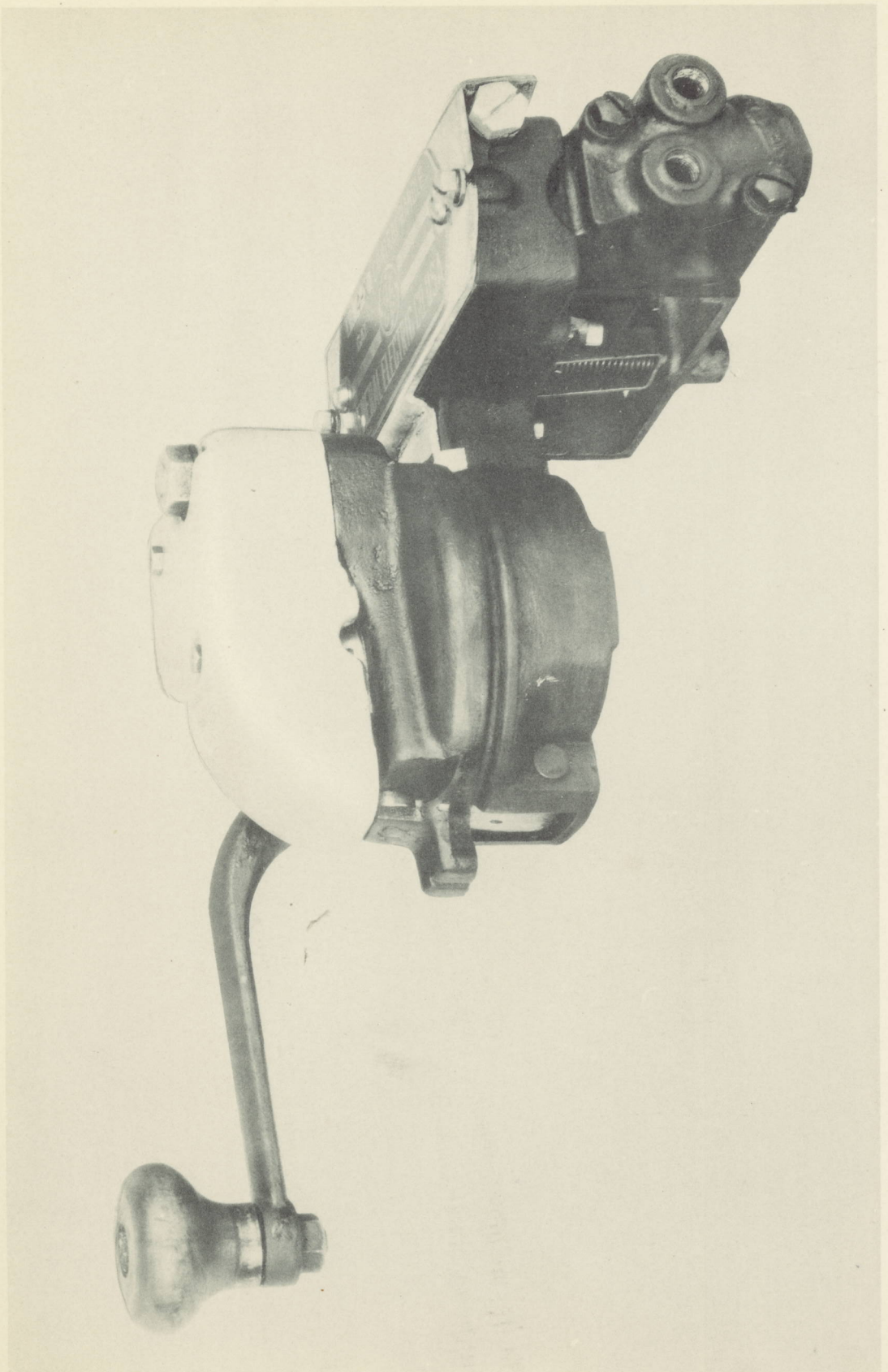


244991 TYPE K-63-BR CONTROLLER WITH LB-4-A CONTROL DEVICE ASSEMBLED ON IT.

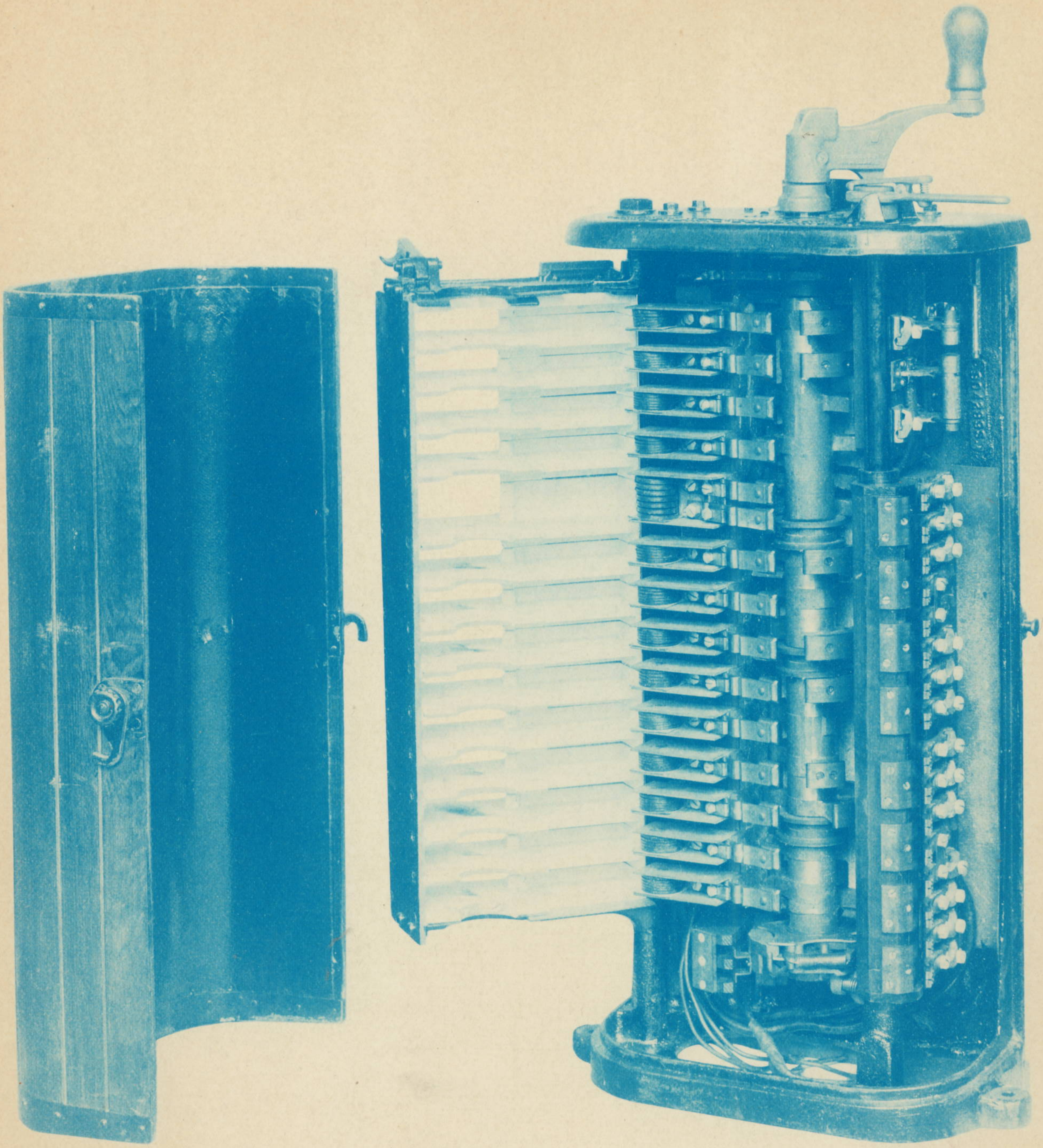
APPROX. 1/5 SIZE INDEX E-353.7 12 17 25



409722 LB-2-A CONTROL HANDLE.
INDEX E-353.7



244990 TYPE LB-4-A CONTROL HANDLE. 12 17 25
INDEX E-353.7

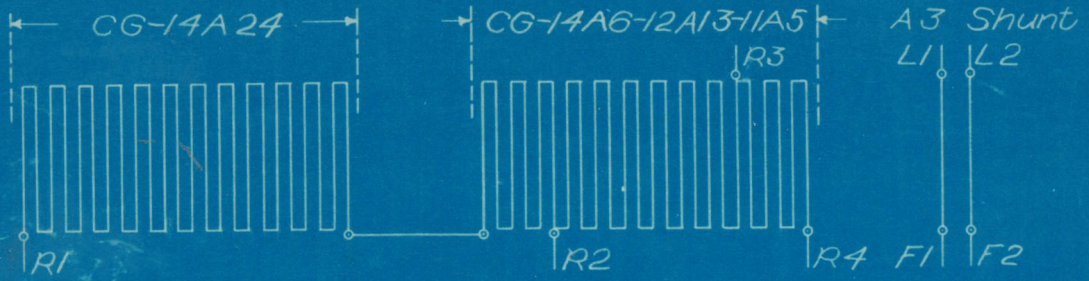


K35-AA2

314053 TYPE K-35-AA-2 CONTROLLER

APPROX. 1/8 SIZE INDEX E-3537 10-30-16

Connections of CG Rheostats
for use on 11 Ton Car Equipped with Two GE-800 Motors and K-2 Controllers



Resistance Approximate

R1–R2 = 5.32 Ohms	R1 = 7.24 Ohms
R2–R3 = 1.47 "	R2 = 1.92 "
R3–R4 = .45 "	R3 = .45 "
F1–L1 = 2.00 "	R4 = .00 "
F2–L2 = 2.00 "	

Name Plate end of each Rheostat at left

These Connections are also suitable for [redacted] Motors and [redacted] Controllers

Checked F.E. Case

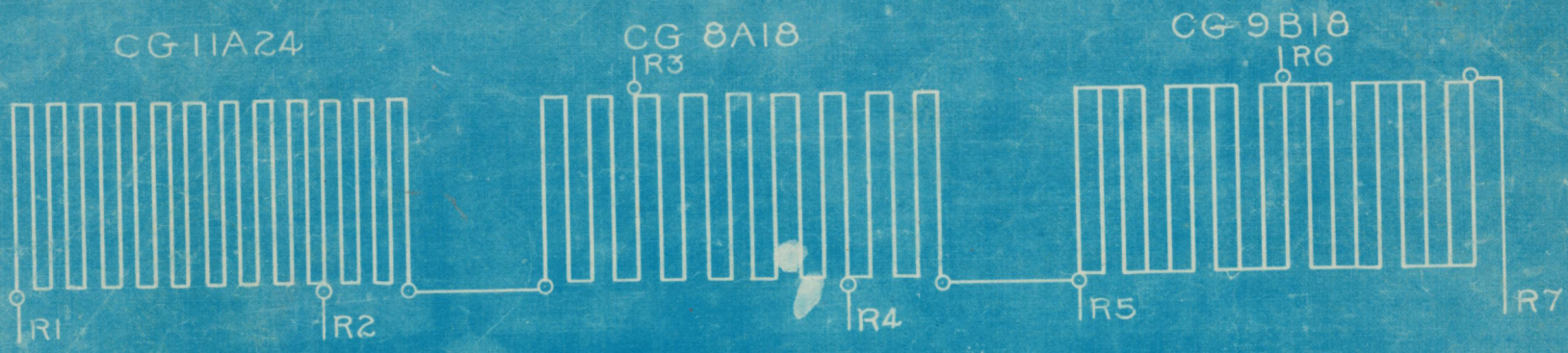
6 May 1903

Engineering Dept.
General Electric Company

D.S. 3897.

Connections of

CG Rheostats for use with 23 Ton Car Equipped with Four GE-67-A-1 Motors and K-6 Controllers



Resistance Approximate at 70°C

R1 – R2 =	1.64 ohms	R1 =	3.58 ohms total
R2 – R3 =	.84 "	R2 =	1.94 " "
R3 – R4 =	.53 "	R3 =	1.10 " "
R4 – R5 =	.24 "	R4 =	.57 " "
R5 – R6 =	.18 "	R5 =	.33 " "
R6 – R7 =	.15 "	R6 =	.15 " "
		R7 =	.00 " "

Name Plate end of each Rheostat at left

These connections are also suitable for _____ Motors and _____ Controllers

Checked H. E. Coes

D.S. 1867

Engineering Dept.
General Electric Company

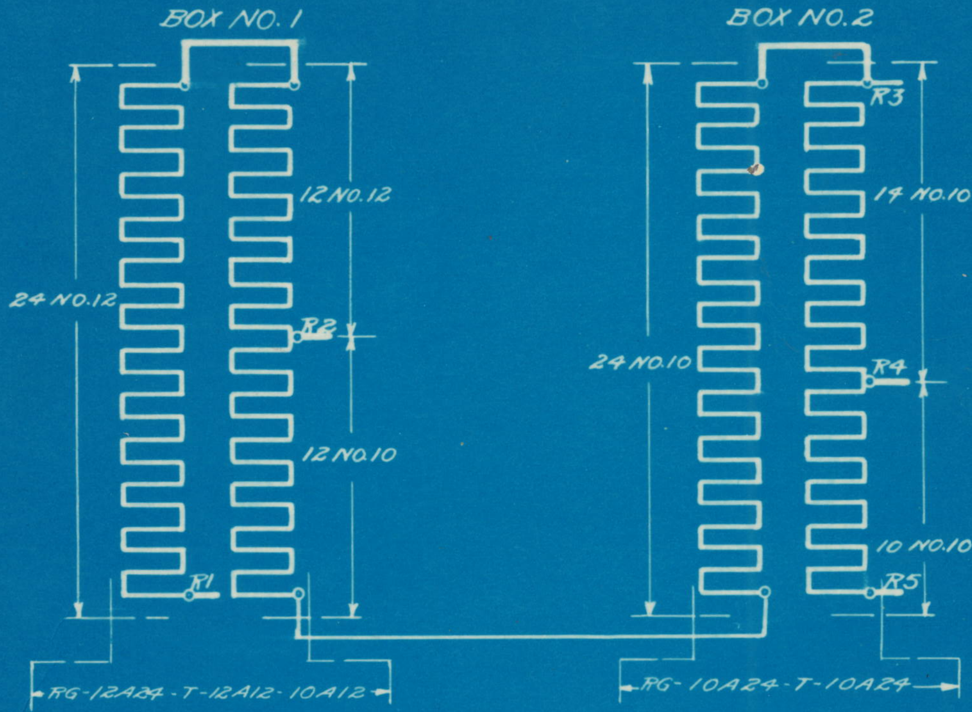
D.S. 1867

25 Apr. 1901
J. M. C.

D.S. 1867

K-1922526

311 20



APPROXIMATE
RESISTANCE PER DIVISION

R1 - R2	=	2.66	OHMS
R2 - R3	=	1.76	"
R3 - R4	=	.88	"
R4 - R5	=	.49	"
TOTAL	=	5.79	"

CONNECTIONS OF RG RESISTORS FOR USE
WITH K-10 CONTROLLER

K 1922526

CHECKED R.S.B. W.F.F.

APPROVED RWY. EQUIP. DEPT.

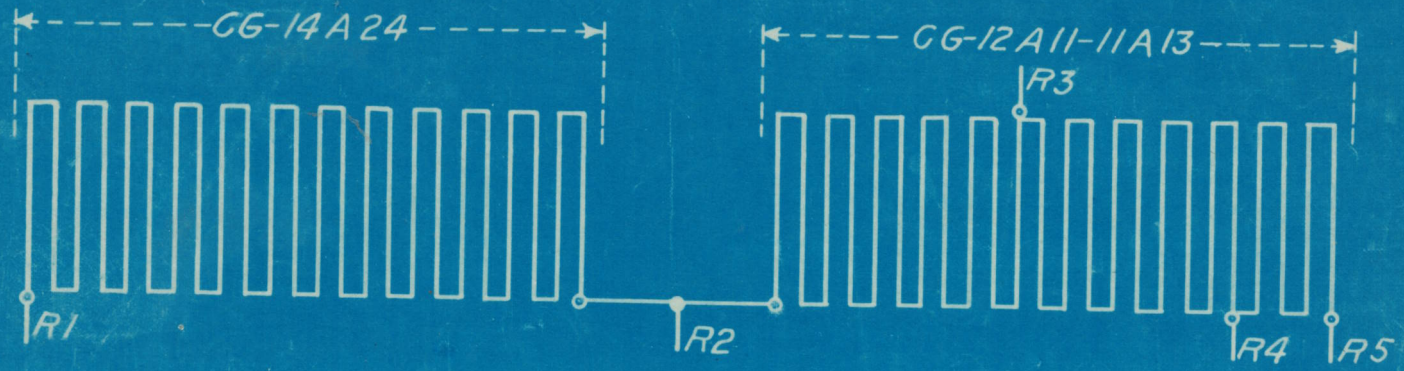
GENERAL ELECTRIC COMPANY, SCHENECTADY, N.Y.

R.C.

DRAWN BY R. NEWTON MARCH 3, 1920 INSPECTED Mar. 10, 1920.

FF-449—3M—5-7-18

Connections of GG Rheostats
for use on 11 Ton Car equipped with Two G.E-54-A-1 Motors and K-10 Controllers



Resistance Approximate

R1-R2 = 4.25	Ohms	R1-R5 = 6.67	Ohms Total
R2-R3 = 1.24	"	R2-R5 = 2.42	" "
R3-R4 = .82	"	R3-R5 = 1.18	" "
R4-R5 = .36	"	R4-R5 = .36	" "

Name Plate end of each Rheostat at left.

These connections are also suitable for [redacted] Motors and [redacted] Controllers

Changed 11 Dec. 1903

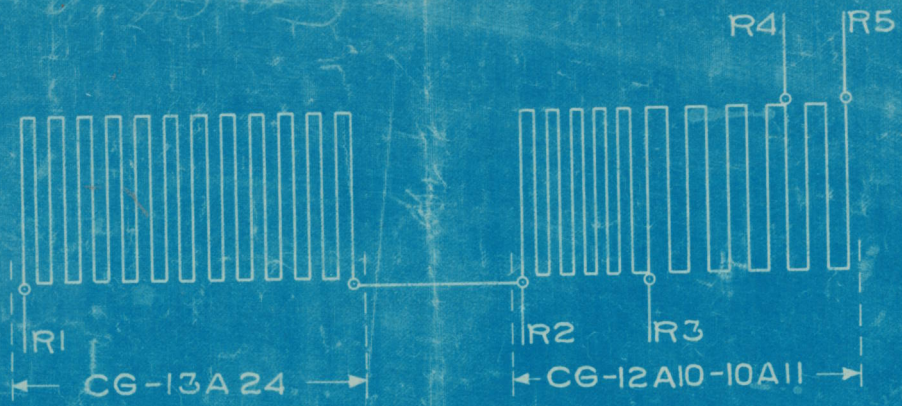
Checked F. E. Case
15 Dec. 1902

Engineering Dept.
General Electric Company

D.S. 3163

Thos. Engvold.

Connections of CG Rheostats
for use on Car Equipped with Two GE-67 Motors and K-10 Controllers



Resistance Approximate

R1 - R2 =	3.40 ohms	R1 - R5 =	5.55 ohms
R2 - R3 =	1.13 "	R2 - R5 =	2.15 "
R3 - R4 =	.65 "	R3 - R5 =	1.02 "
R4 - R5 =	.37 "	R4 - R5 =	.37 "

Name Plate end of each Rheostat at left

These connections are also suitable for [redacted] Motors and [redacted] Controllers

2503

ked

Engineering Dept.

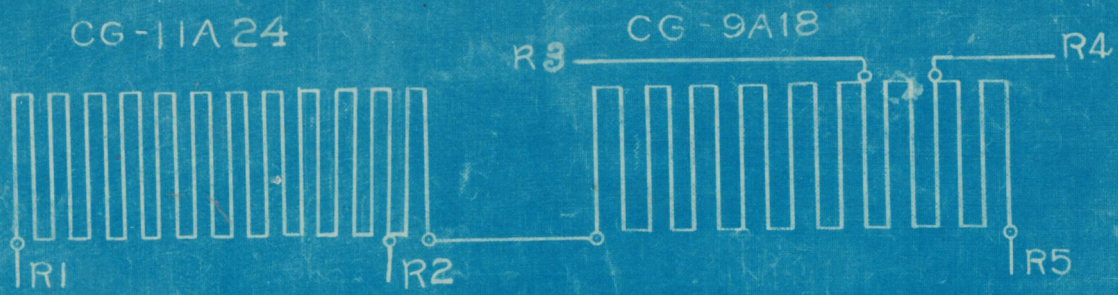
General Electric Company

2503

26 Mar 1902

Connections of

CG Rheostats for use with 20 Ton Car Equipped with Two GE-57-A-9 Motors and K-11 Controllers



Resistance Approximate at 70°C

R1 – R2 =	2.00 ohms	R1 =	3.50 ohms total
R2 – R3 =	.98 "	R2 =	1.50 " "
R3 – R4 =	.30 "	R3 =	.52 " "
R4 – R5 =	.22 "	R4 =	.22 " "
		R5 =	.00 " "

These connections are also suitable for _____ Motors and _____ Controllers

Changed 7 Mar 1904

Checked H. E. Boyd

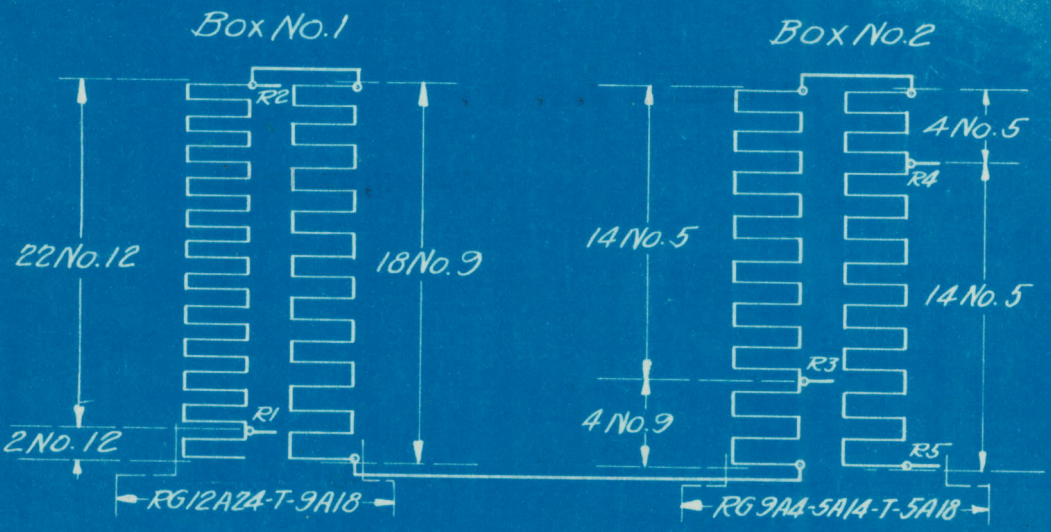
D.S. 1871

Engineering Dept.
General Electric Company

D.S. 1871

29 Apr 1901

Connections of Two RG Rheostats for use with K-11-A Controller and Two Motors.



Resistance per Division

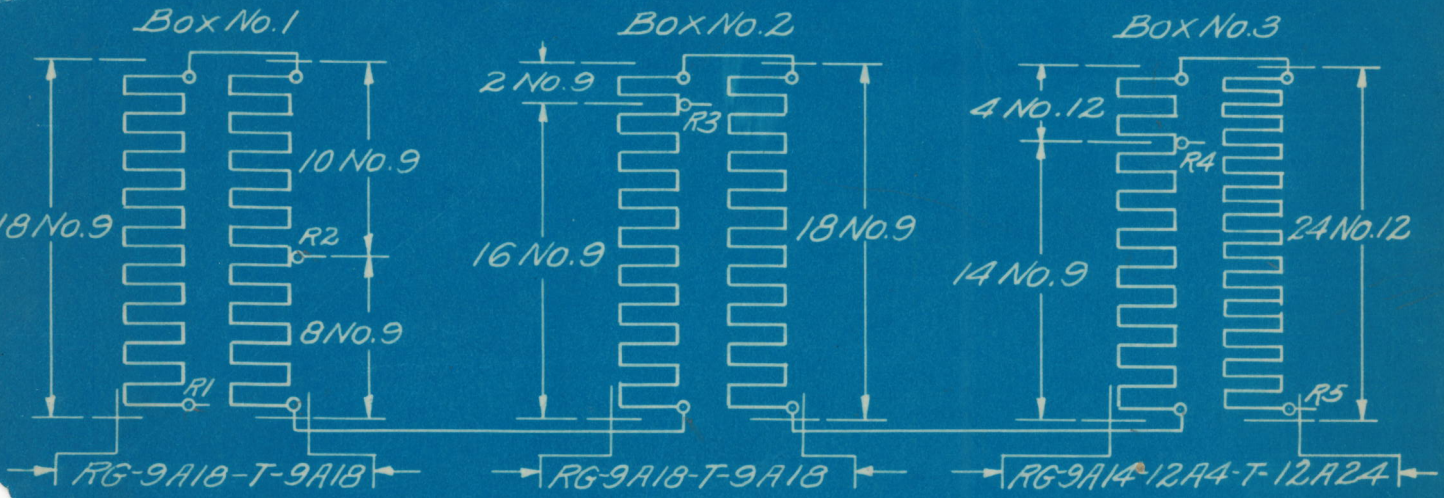
R1 - R2 = 1.63 Ohms.
R2 - R3 = 1.08 "
R3 - R4 = .39 "
R4 - R5 = .30 "
Total = 3.40 "

K-1632371

Checked C.A.B. Approved F.E.C.

15 June 1915 Engineering Dept. General Electric Company

P.J.



Resistance Approximate

R1 – R2	= 1.372	Ohms
R2 – R3	= 1.176	"
R3 – R4	= 1.666	"
R4 – R5	= 2.072	"
Total	= 6.286	"

K-1637216

Connections of RG Form A Rheostats
for use with K-28 Controller

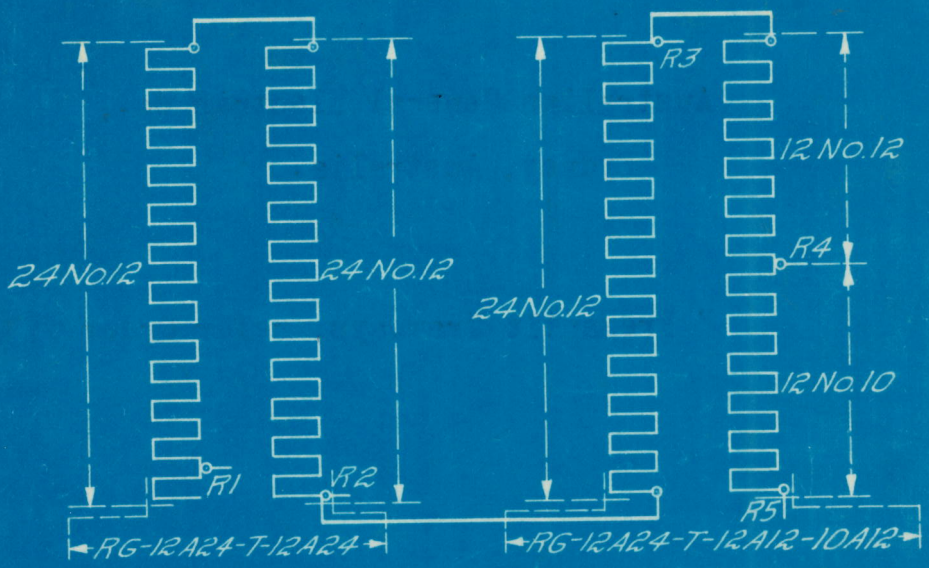
GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y.

Checked H.C.K. Approved Rwy. Equip. Dept.

DRAWN BY E. Lyman 22 Mar. 1917 INSPECTED C.G.E.

1637216

Connections of RG Rheostats for use with Two GE 216 Motors and K-36-G Controllers



Resistance Approximate	
R1-R2	3.45
R2-R3	1.80
R3-R4	.90
R4-R5	.60

Resistance by Steps	
1	6.75
2	3.30
3	1.50
4	.00
5	3.30
6	1.50
7	.60
8	.00

Checked F.G. & R.L.

Approved F. Carey

20 Nov. 1911

Engineering Dept.
General Electric Company.

D.S. 25176

1-2-3-4- -10-12-43

W.J.