

SALES AND ENGINEERING DATA--FILE IN FOLDER NO.1041.

Schenectady, March 18, 1921.

SUBJECT: B-54 DRUM TYPE CONTROLLERS.

Your attention is called to the B-54 Drum Type Controller FOR RAILWAY SERVICE which has been developed especially for the International General Electric Company to meet the requirements of our customers in countries outside the United States for a high grade, light weight, medium height railway controller which permits the use of rheostatic or magnetic braking.

This controller is mentioned in our new bulletin I.G.E. 44484 on Modern Railway Car Equipment and will be covered in a new bulletin on Drum Type Controllers for railway service.

In the absence of any detailed information the following descriptive photographs and data have been prepared to assist you in the exploitation of this controller.

The B-54 Controller is very similar to the Type K, series -parallel controller except that there are several additional contacts for establishing the braking circuits.

This controller will satisfactorily handle two 75 H.P. motors at 600 volts or at a continuous capacity of 75 amperes per motor and give a smooth and uniform rate of accelerating and braking.

DETAILS OF DESIGN.

The controller has a cast iron base with a sheet iron back. The front cover is of wood lined with asbestos. This construction embodies light weight and great ruggedness.

MOTOR CUTOUT

A great convenience is embodied in the form of an extra cylinder whereby a motor may be cut out without removing the controller cover. The shaft of the cutout cylinder extends thru the top of the controller and may be operated by the reverse handle.

MOTOR CONNECTIONS.

The main controller handle has two throws, one for power and one for braking. There are four series and three parallel positions in the power throw and seven braking positions. The armatures are reversed to change direction. Incoming controller leads are connected directly to terminals on the finger bases.

BRAKING.

It is not customary practice in the United States to use rheostatic or magnetic braking but many countries do require electric braking in addition to the usual hand and air brakes.

The principle of rheostatic braking is based on the use of the motors as generators which derive their energy from the momentum of the car and convert it into electrical energy which is absorbed either in a set of resistors or by the use of magnetic brake shoes. This places somewhat heavier service on the motors and consequently if braking service is severe larger motors might be required.

The controllers for the service are similar to the K type with additional contacts for braking circuits. By turning the operating handle in an opposite direction from the power positions braking is established, varying in accordance with the resistance in the circuit.

GENERAL

Certain details of this type of controller will appeal to practical railroad operators. They are:

- (a) Segments and fingers provided with removable tips.
- (b) Has special narrow arc chute to facilitate extinguishing arcs.
- (c) Has powerful individual finger blow out coils.
- (d) Operating and reverse cylinder handles mechanically interlocked to prevent improper operation.
- (e) Angular throw of main operating handle—power throw 189°, braking throw 144°.
- (f) Uses same method of transition from series to parallel operation as the Type K Controller.

Photograph 328302 shows the B-54-A controller with cover removed and arc shield closed.

Photograph 328303 shows the controller with cover removed and arc shield open.

Photograph 333949 shows controller connections.

DIMENSIONS

Height over all including operating handle.....3 ft. 5-7/16" - 104.7 CM

Height over top of controller cover.....2 ft. 11-7/8" - 90.9 CM

Maximum width.....17½ Inches - 43.7 CM

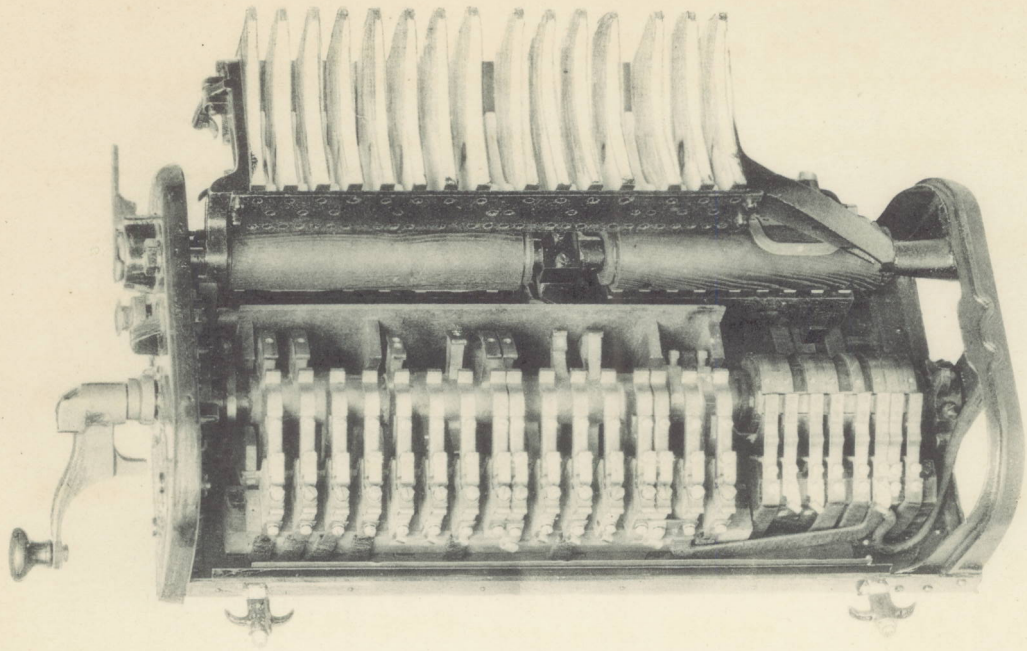
Maximum depth.....10 Inches - 26.2 CM

SHIPPING DATA

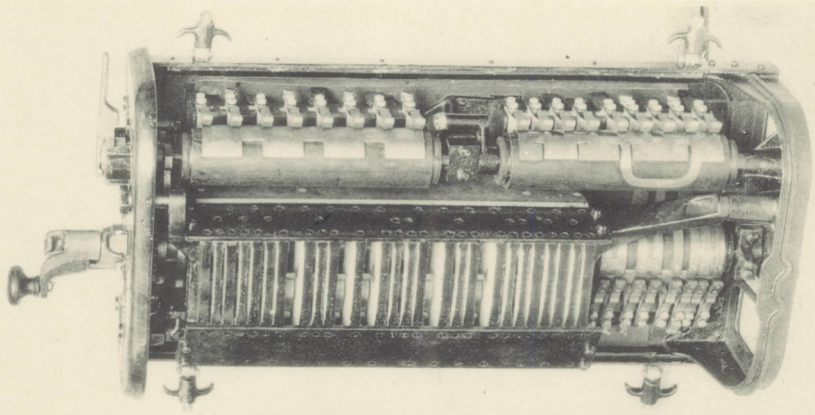
Net Weight.....	285 Lbs.	129 Kilos
Gross shipping weight....	475 Lbs.	215 Kilos
Shipping dimensions.....	20"x29 "x52"	
	17.7 cu. Ft.	.5 Cu. M.

G. L. WILDER,

RAILWAY SUPPLY SPECIALIST.



328303 TYPE B-54-A CONTROLLER.
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