

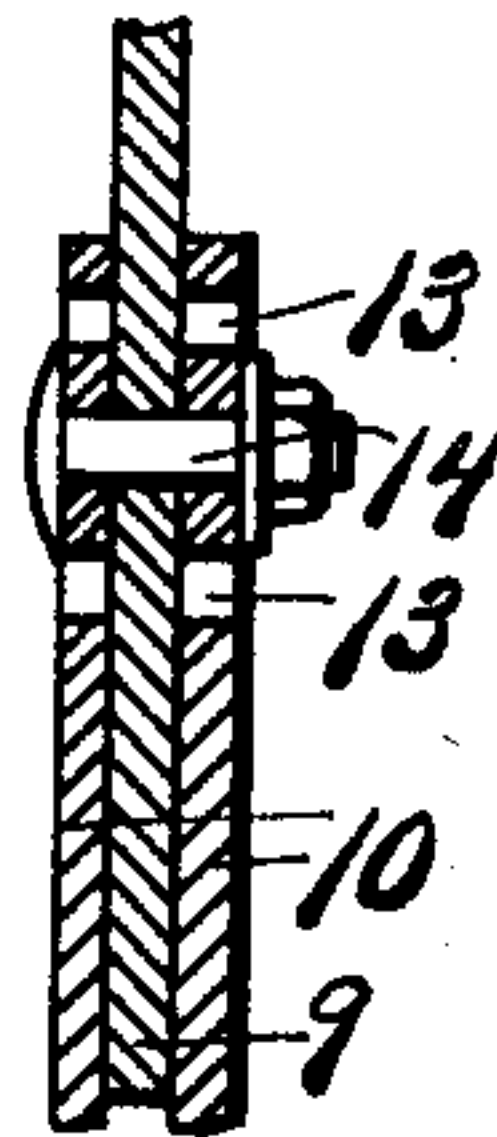
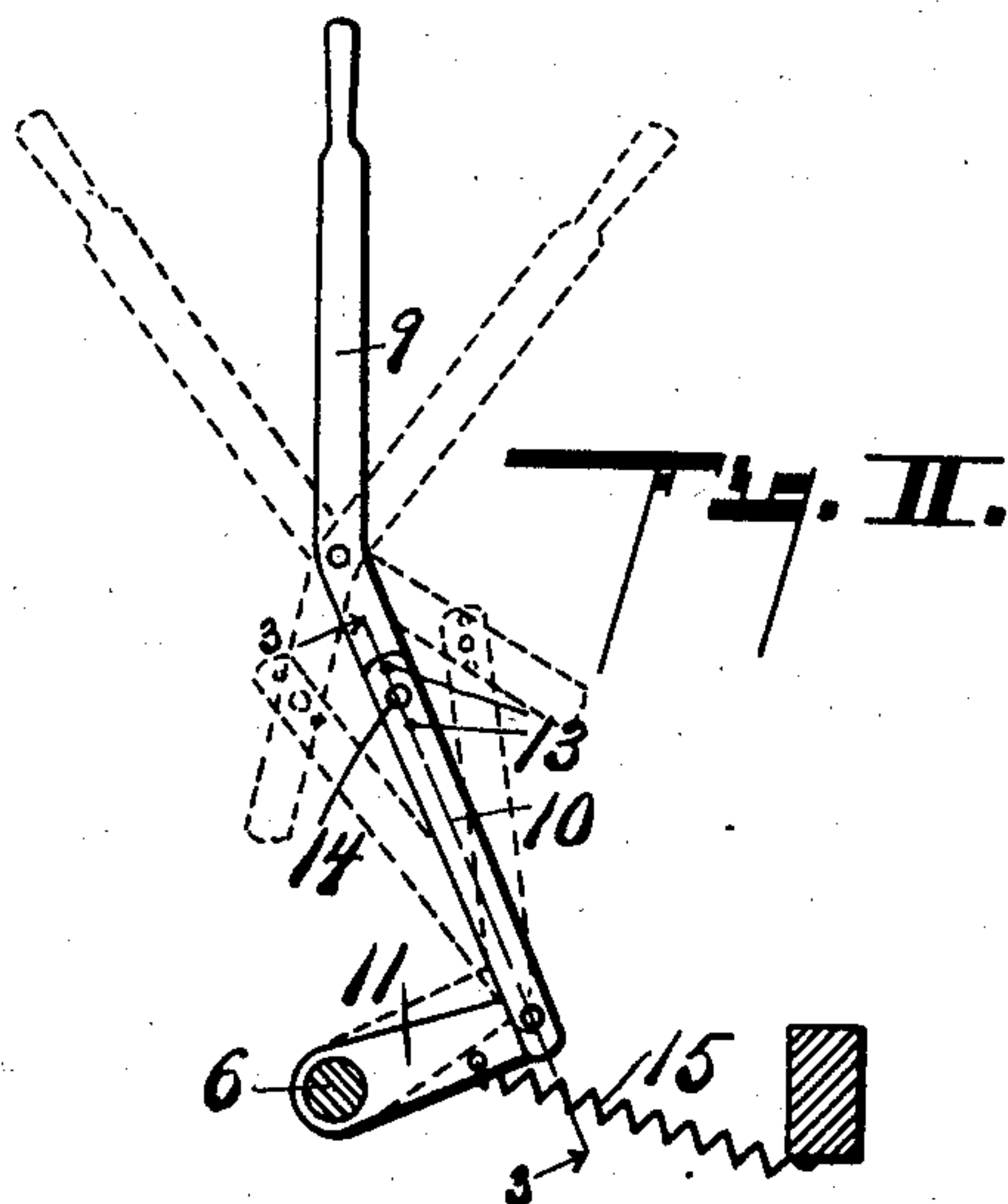
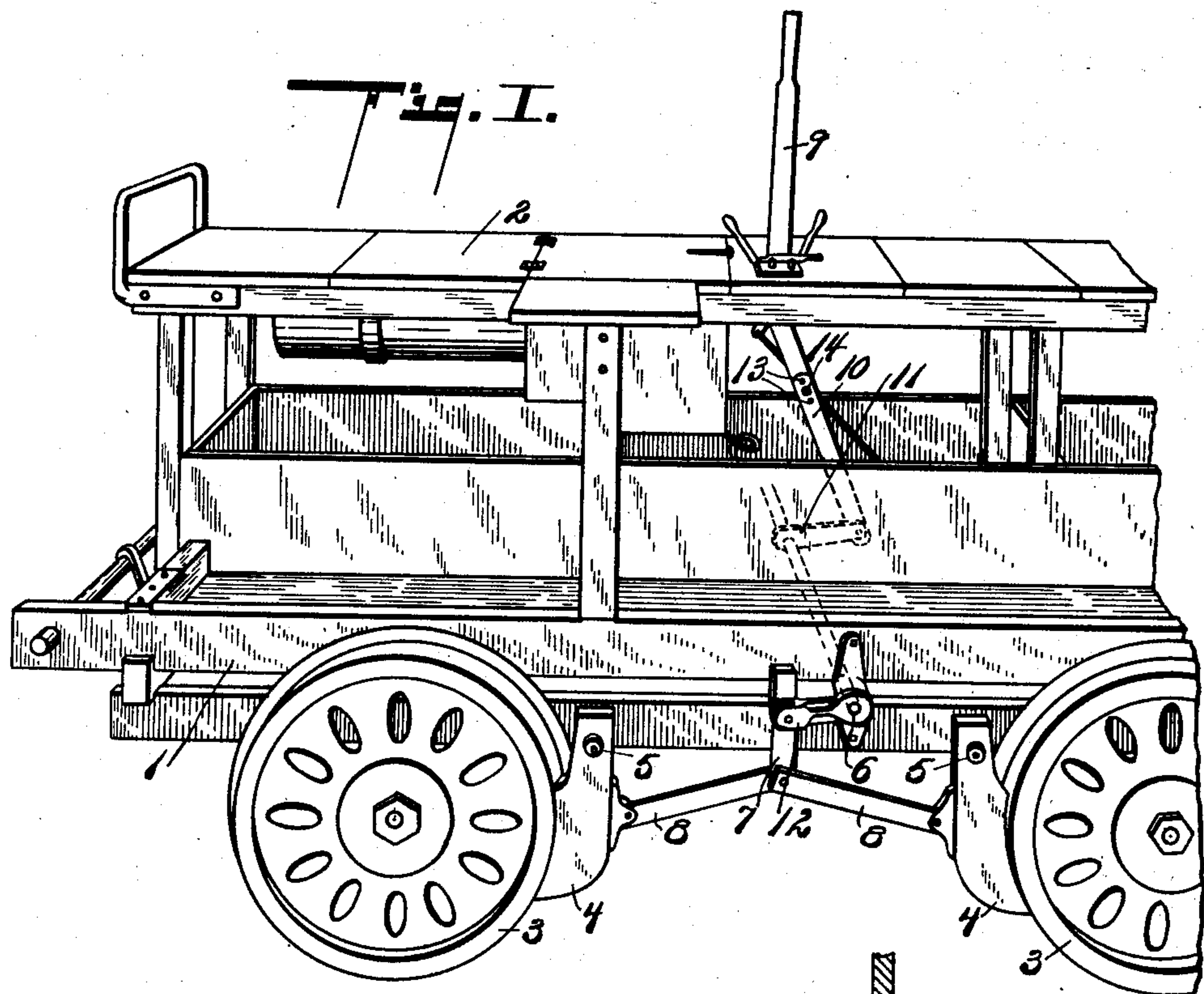
C. G. MAHANA, W. S. HOVEY & C. B. STEBBINS.

BRAKE FOR RAILWAY MOTOR CARS.

APPLICATION FILED DEC. 6, 1910.

997,571.

Patented July 11, 1911.



Witnesses

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UNITED STATES PATENT OFFICE.

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BRAKE FOR RAILWAY MOTOR-CARS.

997,571.

Specification of Letters Patent.

Patented July 11, 1911.

Original application filed July 22, 1909, Serial No. 508,932. Divided and this application filed December 6, 1910. Serial No. 595,918.

To all whom it may concern:

Be it known that we, CHARLES G. MAHANA, WILLIAM S. HOVEY, and CHARLES B. STEBBINS, citizens of the United States, residing at Three Rivers, county of St. Joseph, State of Michigan, have invented certain new and useful Improvements in Brakes for Railway Motor-Cars, of which the following is a specification.

10 This invention relates to improvements in brakes for railway motor cars.

Our improvements are especially designed for use on railway motor cars such as are shown in our application for Letters Patent 15 filed July 22, 1909, Ser. No. 508,932, and the present application is a division of that application. Our improved brake is, however, adapted for use in various relations.

20 The main objects of this invention are to provide an improved brake which is adapted to be operated by the shifting of the lever in either direction, and, further, to provide an improved brake in which the operating connections are such that great power may 25 be applied therethrough.

Further objects and objects relating to structural details will definitely appear from the detailed description to follow.

30 We accomplish the objects of our invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

35 A structure which is a preferred embodiment of our invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which,

40 Figure 1 is a detail side elevation of a structure embodying the features of our invention. Fig. 2 is a detail view (parts being shown in vertical section) of the actuating lever for the brakes and connections therefor to the brake actuating rock shaft, the movements of the parts being indicated 45 by dotted lines. Fig. 3 is an enlarged detail section taken on a line corresponding to line 3—3 of Fig. 2, looking in the direction of the little arrows at the ends of the section line.

50 In the drawings, similar reference numerals refer to similar parts throughout the several views.

Referring to the drawing, the car illus-

trated is especially designed as a work car for track repair men. The body 1 of the car preferably consists of suitable longitudinal sills and cross sills, as illustrated. The seat 2 is arranged longitudinally of the car so that the occupants may sit on either side, sidewise of the car. This body is described in detail in our original application referred 60 to, and as it forms no part of the present invention, is not further described herein.

Wheels 3 are of the well known car wheel type. The brakes 4 are arranged in pairs and pivoted to the frame at 5. They are 65 operated through the rock shaft 6, which is connected by the links 7 to the inner ends of the links 8, the outer ends of these links being pivoted to the brake shoes, as indicated. This provides a toggle connection 70 for the brake shoes to the rock shaft, so that when the rock shaft is actuated in one direction both brake shoes are engaged and when actuated in the other direction both are released. Further, the thrusting strain on the 75 brake shoes is largely transmitted from one to the other.

The rock shaft 6 is actuated through a lever 9, which is connected to the rock shaft by the link 10, the rock shaft being provided 80 with an arm 11 to which the link 10 is connected, and with an oppositely-disposed arm 12 to which the link 7 is connected. The link 10 is preferably adjustably connected to the lever 9 by providing a plurality of 85 holes 13 in the link for the pivot bolt 14, as clearly appears in the drawing.

A spring 15, shown in conventional form, is provided for returning the parts to their initial or inoperative position. By thus ar- 90 ranging and connecting the parts, the brake shoes are actuated by actuating the lever in either direction from its normal or inoperative position. The car being adapted to run in either direction, the brake mechanism can be actuated by the same relative 95 movement of the lever when the car is moving in either direction, thus avoiding any likelihood of accident resulting from a change of direction of movement of the car. 100 Also, by this arrangement, we provide an operating connection which both sets and releases the brake shoes through the toggle-like operating mechanism.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a structure of the class described, 5 the combination with the wheels, of a pair of pivotally-mounted brake shoes; a rock shaft; a pair of arms on said rock shaft; a pair of oppositely-disposed links connected to said brake shoes; a link connecting said 10 pair of links with one of said arms on said rock shaft; a pivoted operating lever; a connecting link therefor to the other arm of said rock shaft, whereby said brakes are actuated when said actuating lever is 15 shifted in either direction; and a spring connected to the rock shaft to actuate the same to disengage the brake shoes and to return the lever to its initial position.

2. In a structure of the class described, 20 the combination with the wheels, of a pair of pivotally-mounted brake shoes; a rock shaft; a pair of arms on said rock shaft; a pair of oppositely-disposed links connected to said brake shoes; a link connecting 25 said pair of links with one of said arms on said rock shaft; a pivoted operating lever; and a connecting link therefor to the other arm of said rock shaft whereby said brakes are actuated when said actuating lever is 30 shifted in either direction.

3. In a structure of the class described, the combination with the wheels, of a shoe;

a rock shaft; an operating connection for said rock shaft to said brake shoe, one member of the toggle being connected to said 35 rock shaft; a pivoted operating lever; a connecting link therefor to an arm on said rock shaft whereby said brake is actuated when said actuating lever is shifted in either direction; and a spring connected to the 40 rock shaft to actuate the same to disengage the brake shoe and to return the lever to its initial position.

4. In a structure of the class described, the combination with the wheels, of a brake 45 shoe; a rock shaft; an operating connection for said rock shaft to said brake shoe, one member of the toggle being connected to said rock shaft; an operating lever; a toggle connection therefor to said rock shaft arranged 50 so that said brake is actuated when said actuating lever is shifted in either direction; and a releasing spring for the said brake.

In witness whereof, we have hereunto set 55 our hand and seal in the presence of two witnesses.

CHARLES G. MAHANA. [L. S.]
WILLIAM S. HOVEY. [L. S.]
CHARLES B. STEBBINS. [L. S.]

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."