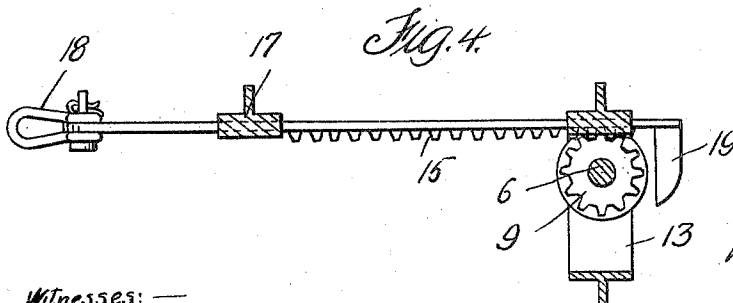
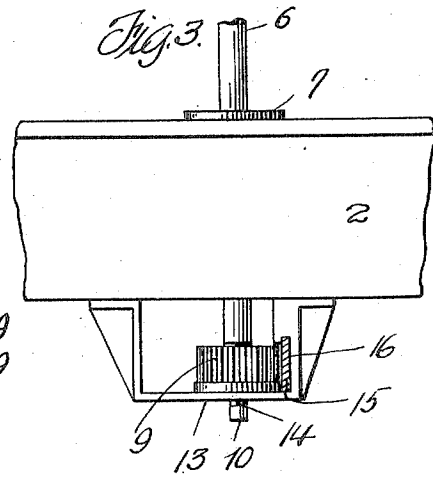
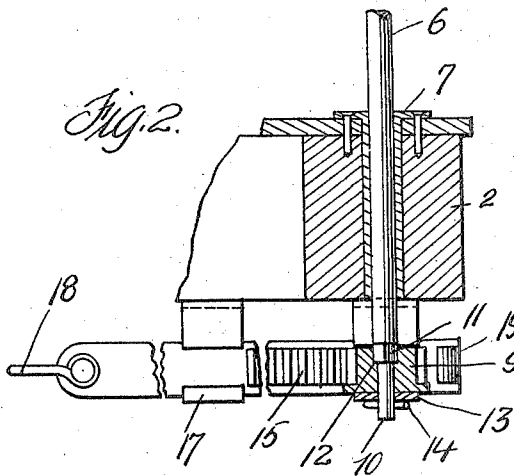
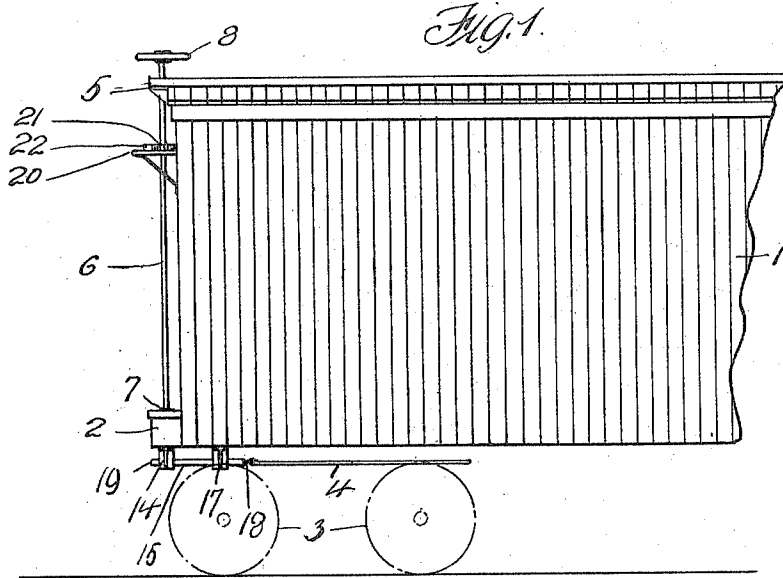


W. E. BALDWIN, JR.
BRAKE.
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948,155.

Patented Feb. 1, 1910.



Witnesses: —

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UNITED STATES PATENT OFFICE.

WILLIAM E. BALDWIN, JR., OF BROAD FORD, PENNSYLVANIA.

BRAKE.

948,155.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed October 13, 1909. Serial No. 522,408.

To all whom it may concern:

Be it known that I, WILLIAM E. BALDWIN, Jr., a citizen of the United States of America, residing at Broad Ford, in the

county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Brakes, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to brakes and more particularly to that class of hand-operated brakes used in connection with the rolling stock of railroads.

The invention has for its object to provide a brake operating mechanism that will be positive in its action, inexpensive to manufacture, easily applied to the present type of car, and highly efficient as a means of moving the brake-rods of a car.

The above object and such others as may hereinafter appear are attained by a construction which is shown in the accompanying drawing and which will be hereinafter described in detail and then claimed.

Reference will now be had to the drawing wherein like numerals of reference designate corresponding parts throughout the several views, in which:—

Figure 1 is a side elevation of a portion of a car equipped with a brake mechanism constructed in accordance with my invention. Fig. 2 is an enlarged view illustrating a portion of the mechanism in elevation and a portion in section. Fig. 3 is an end view of the portion of a car equipped with the brake operating mechanism, and Fig. 4 is a plan of a portion of the mechanism.

In the drawings 1 denotes a portion of the body of a car having an end thereof provided with a sill 2. The car is adapted to be supported by trucks, one of which designated 3 is shown, and in connection with the trucks of the car brake-shoes (not shown) are used and are adapted to be actuated by the movement of brake-rods 4, one of which has been shown in connection with the car 1 of the drawings.

The end of the car body 1 at the roof thereof is provided with a bracket or bearing 5 for a vertical brake-shaft 6, which extends through a sleeve 7, carried by the car sill 2. The upper end of the brake-shaft 6 is provided with a hand-wheel 8, and it has been the practice to connect the brake-rod 4 to the lower end of the shaft 6 by a chain or

cable adapted to wind and unwind upon the lower end of the brake-shaft. My invention aims to obviate the necessity of using such a flexible connection which is unreliable, susceptible to breakage, and a continual source of trouble in the maintenance of rolling stock. In lieu of the flexible connection I provide the lower end of the brake-shaft 6 with a pinion 9, which is suitably mounted upon the reduced end 10 of said shaft. It is preferable to make a portion of the shaft rectangular, as at 11 to fit in a similar socket 12 provided therefor in the upper face of the pinion 9, whereby said pinion will rotate with the shaft 6. As a means for holding the pinion 9 upon the shaft 6 a depending bracket 13 is used and a cotter-pin 14. The bracket 13 is secured to the bottom of the sill 2 and the cotter-pin 14 is arranged transversely of the shaft 6 beneath the bracket. The bracket 13 also serves as a bearing for a longitudinally arranged rack 15 adapted to mesh with the pinion 9. One side of the bracket 13 is recessed, as at 16 to receive the rack 15, and the bottom of the car is provided with an additional depending bracket 17 for the rack 15. One end of the rack is provided with a pivoted link 18 to which the brake-rod 4 is connected, while the opposite end thereof is provided with a right angular projection 19 adapted to limit the movement of a rack in one direction. It is preferable to use the ordinary platform 20, ratchet-wheel 21 and pawl 22 for locking the brake-shaft 6 in adjusted position, these last three mentioned elements being located in proximity to the roof of a car, whereby a brakeman can stand upon the platform 20 and operate the shaft 6.

It is apparent from the novel construction of my brake operating mechanism that the brake-rod 4 can be moved to set the brakes by few rotations of the shank 6, and that less power is required than in connection with the ordinary type of brake operating mechanism.

Having now described my invention, what I claim as new is:—

In a brake operating mechanism, the combination with a brake-rod adapted to set the brakes of the car, and a vertical revoluble shaft supported from the car and when operated adapted to move the brake-rod, of depending brackets carried by the car, one of said brackets provided at one side with a

recess, a longitudinal rack movably mounted
in said recess and in the other of said brackets
and adapted to connect with the brake-
rods, a pinion mounted upon the lower end
5 of said brake-shaft and adapted to be rev-
olubly supported by one of said brackets to
mesh with said rack, and a projection car-
ried by one end of said rack and adapted to

limit the movement of said rack in one di-
rection, substantially as described. 10

In testimony whereof I affix my signature
in the presence of two witnesses.

WILLIAM E. BALDWIN, Jr.

Witnesses:

ARCH BALDWIN,
WALTER RAMSEY.