

C. H. HOWARD & H. M. PFLAGER.  
RAILROAD CAR BRAKE.  
APPLICATION FILED APR. 20, 1910.

966,446.

Patented Aug. 9, 1910.

Fig. 1.

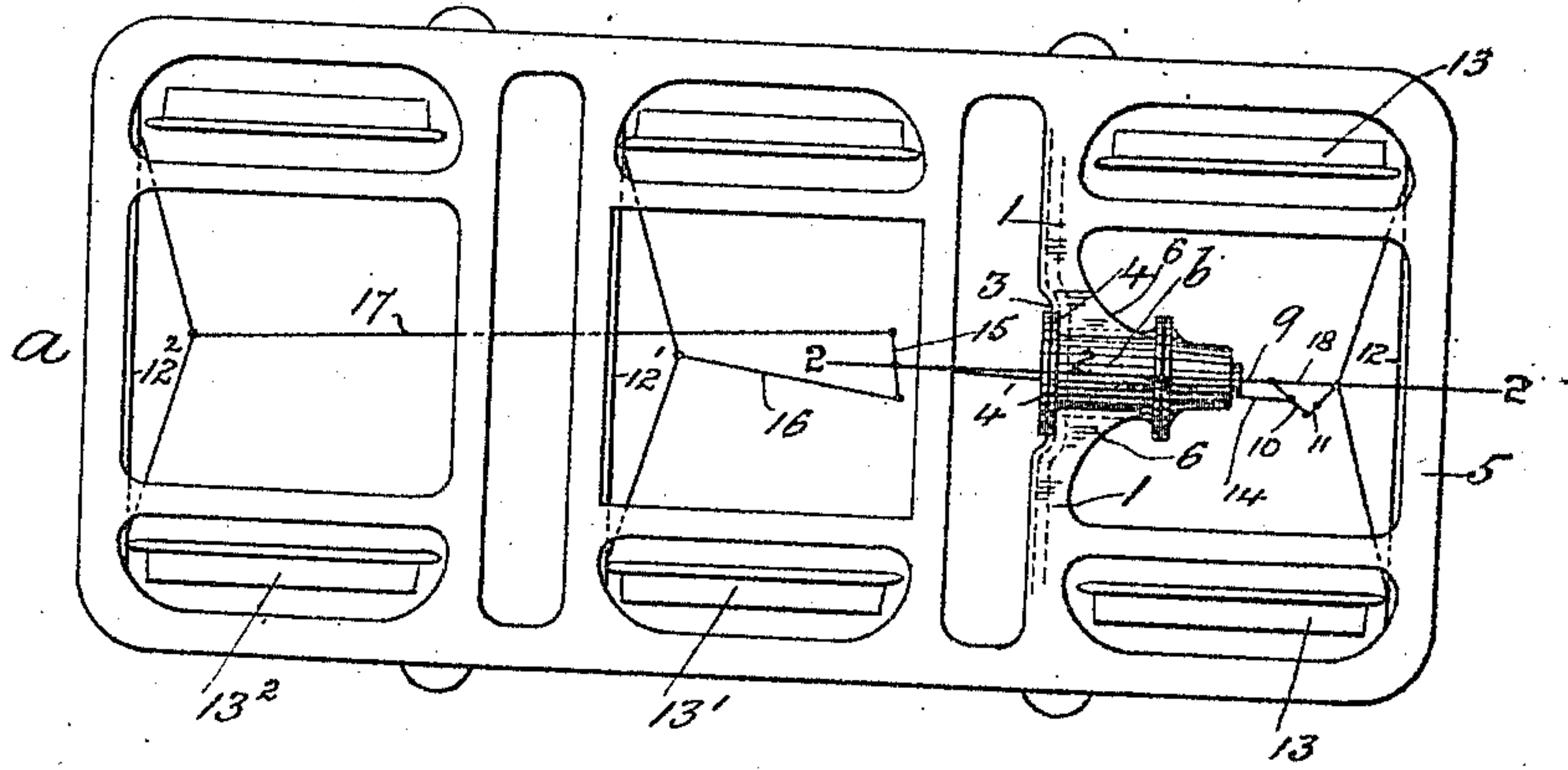


Fig. 2.

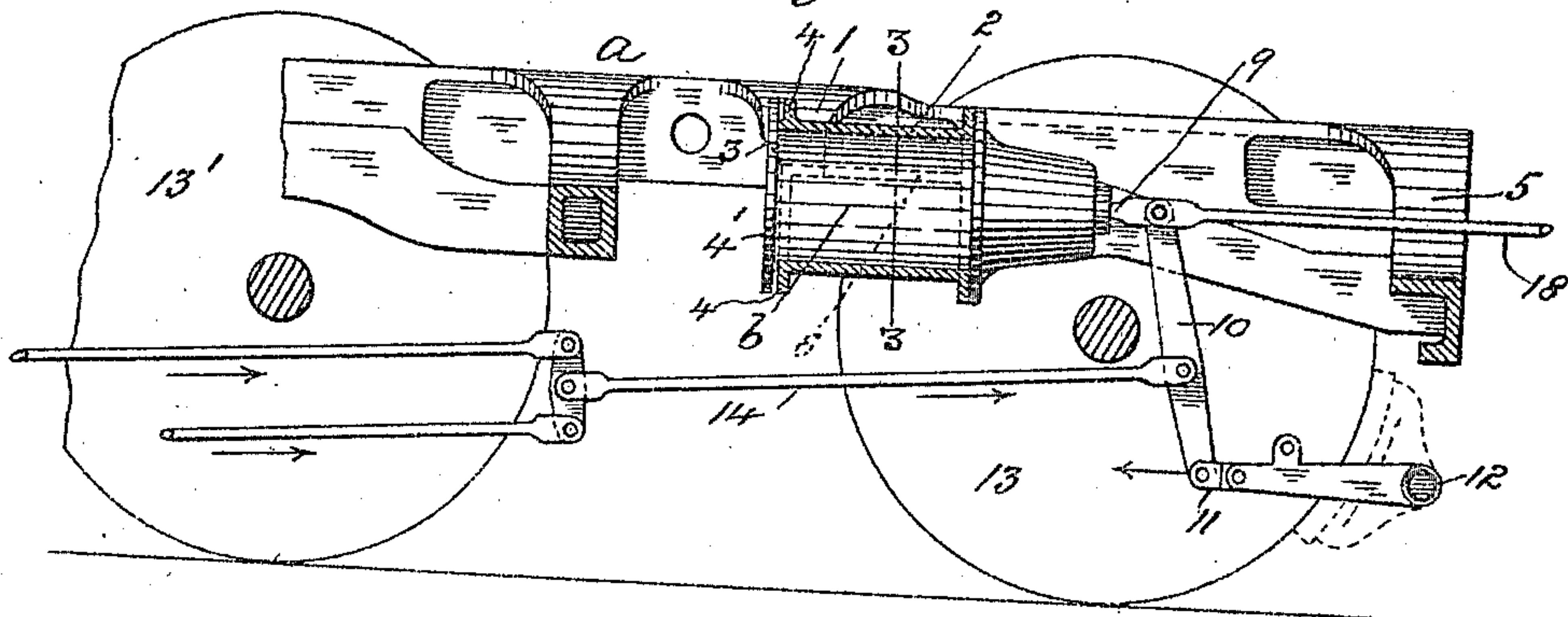


Fig. 3.

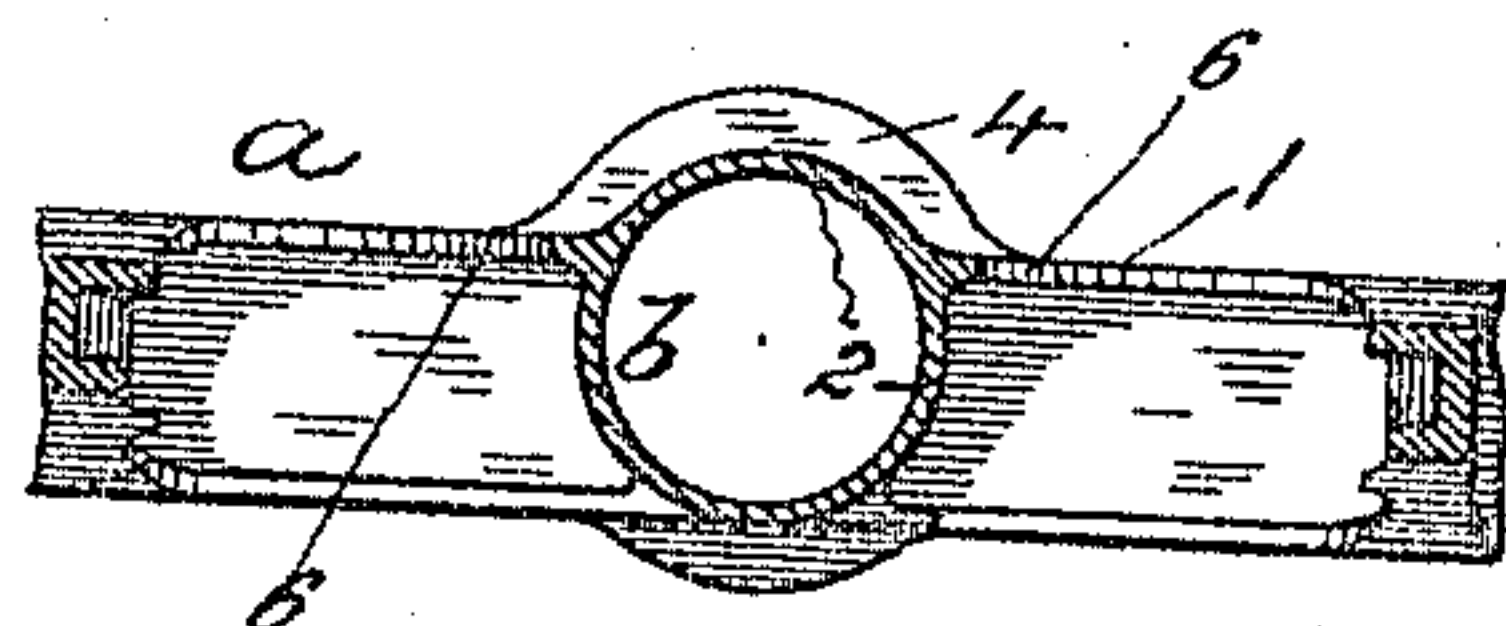
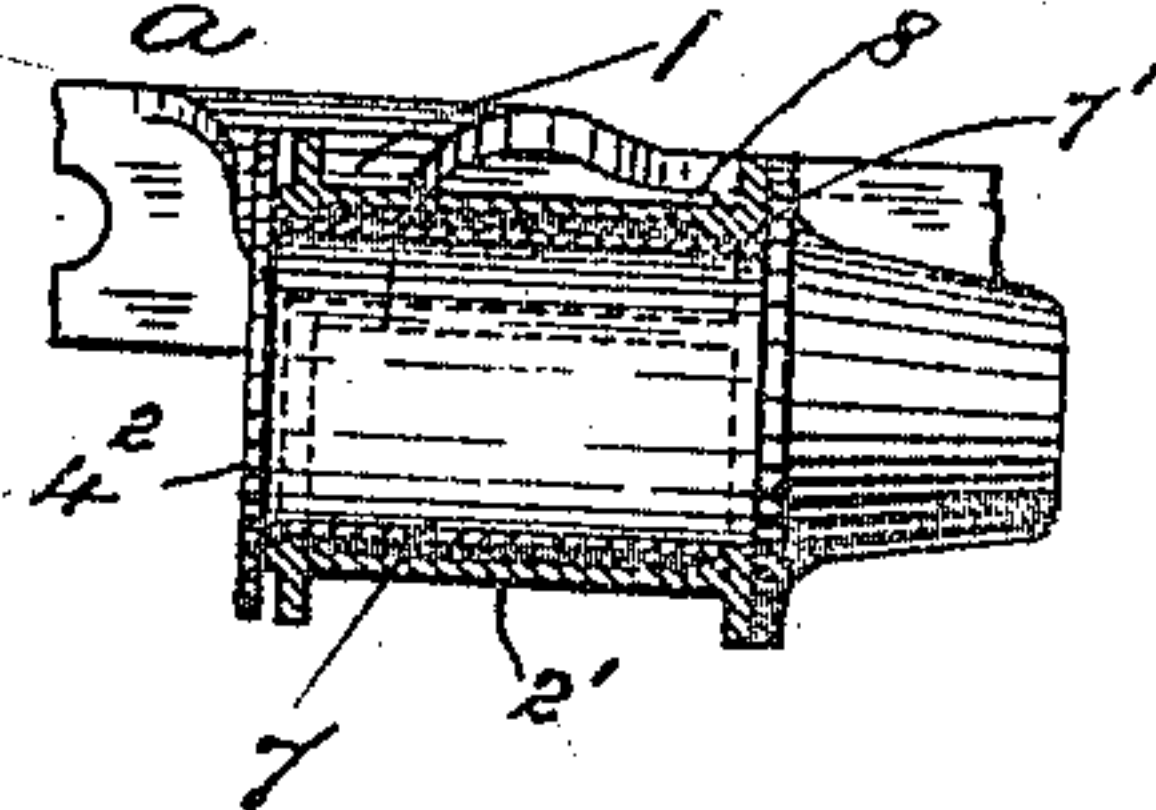


Fig. 4.



WITNESSES

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# UNITED STATES PATENT OFFICE.

CLARENCE H. HOWARD AND HARRY M. PFLAGER, OF ST. LOUIS, MISSOURI, ASSIGNORS  
TO DOUBLE BODY BOLSTER COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF  
NEW JERSEY.

RAILROAD-CAR BRAKE.

966,446.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed April 20, 1910. Serial No. 556,544.

*To all whom it may concern:*

Be it known that we, CLARENCE H. HOWARD and HARRY M. PFLAGER, citizens of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Railroad-Car Brakes, of which the following is a specification.

Our invention relates particularly to the brake-cylinder of the car air brake-gear, which is usually attached to the car body, and is in the nature of an improvement or modification of our invention for which we have made application for Letters Patent on the 9th day of April, 1910, Serial Number 554,350, for improvement in railroad cars, in which the air brake-cylinder is attached to the car truck-frame, and our invention has for its object to simplify the construction.

It consists essentially in forming the body of the air brake-cylinder integral with the car truck-frame, as hereinafter particularly described and claimed, reference being had to the accompanying drawing forming part of this specification, whereon,

Figure 1, is a top plan view of a six-wheeled car truck-frame having an air brake-cylinder combined therewith according to our invention, and representing diagrammatically an arrangement of brake-gear in connection with the push-rod of the cylinder, and with the pull-rods of the said gear for applying the brakes to the car-wheels; Fig. 2, a vertical longitudinal section therethrough to enlarged scale on line 2, 2, in Fig. 1; Fig. 3, a vertical transverse section through the brake-cylinder on line 3, 3, in Fig. 2, and corresponding side elevation of the outside transom (broken away) of the truck-frame with which the cylinder in the present case is preferably combined, and Fig. 4, a view of the cylinder corresponding to Fig. 2, showing a modification thereof.

Like letters and numerals of reference denote like parts in all the figures.

Referring to Figs. 1, 2, and 3, *a* represents a six-wheeled car truck-frame, preferably composed of cast steel, and from a member of which, preferably an outside transom 1, projects the ordinarily equipped air brake-cylinder *b* having its cylindrical body 2 horizontally arranged and cast or otherwise formed integral with the transom 1, the inner side of the latter being in the present

case preferably, formed with a recess 3 and adapted thereat to form the rear flanged end 4 of the cylinder *b* to which the head 4' is bolted in the ordinary manner, while the overhanging portion of the cylinder body 2, between the transom 1 and the end member 5 of the truck-frame *a* is preferably, reinforced and united on each side to the top member of the transom 1 by a horizontally arranged strengthening rib 6 extending the entire length of the cylinder *b*.

For obviating the necessity of machine work in boring the cylinder body 2, its cylindrical wall 2' (see Fig. 4) may be fitted longitudinally with an internal bush or lining 7 of suitable metal and formed around the latter except for a suitable distance, as a bearing therefor, from each end of the body 2', with a circular recess 8, the head 4' in this case fitting air-tight against the rear end of the bush 7, and the front end of the latter preferably butting against a circular shoulder 7' on the inside of the wall 2' thereat as shown.

Any suitable means carried by the car truck-frame *a* may be used in connection with the brake-cylinder *b* for applying the brakes to the car-wheels, preferably in the present case as shown in our application for patent, dated April 11, 1910, Serial Number 554,749, for improvement in railroad cars, in which the push-rod 9 of the brake-cylinder *b* is coupled at its outer end between the transom 1 and the end member 5 of the truck-frame *a* to the upper end of a vertically (or thereabout) arranged main pull-lever 10 to the lower end of which is coupled the inner end of a pull-rod 11 having its outer end connected with the brake-beam 12 for applying the brakes to the corresponding end wheels 13 of the truck, while to the main pull-lever 10 midway between its connection with the push-rod 9 and pull-rod 11 is coupled one end of the pull-rod 14 which connects at its other end with the equalizer 15, and the latter by the pull-rods 16 and 17 with the brake-beams 12' and 12'', of the middle and other end wheels 13' and 13'', respectively, of the car-truck in the usual well-known manner.

For applying the brakes to the wheels by the ordinary hand brake-gear carried by the car body, the main pull-lever 10 is coupled at its upper end conjointly with (or adjacent to) its connection with the outer



end of the push-rod 9 of the brake-cylinder 6, to the corresponding end of a horizontally arranged rod 18 which connects with the ordinary hand brake-gear (not shown) on the car body, whereby, the main pull-lever 10, the cylinder push-rod 9 being free, is moved by the hand brake-gear in the same direction for pulling on the rods 11, 16, and 17, and thereby applying the brakes to the wheels 13, 13', and 13", as in the case of the air brake-gear.

What we claim as our invention and desire to secure by Letters Patent is:—

1. In a railroad car, a truck-frame having the body of an air brake-cylinder integral therewith.

2. In a railroad car, a truck-frame having the body of a brake-cylinder of the car air brake-gear integral therewith, and means carried by the said frame for connecting the push-rod of the said cylinder with the pull-rods of the said gear.

3. In a railroad car, a truck-frame having the body of a brake-cylinder of the car

air brake-gear integral therewith, and means carried by the said frame for connecting the push-rod of the said cylinder with the pull-rods of the said gear, and with the hand brake-gear on the car body.

4. In a railroad car, a truck-frame having the body of a brake-cylinder of the car air brake-gear integral therewith, and a lever coupled to the push-rod of the said cylinder, and to the pull-rods of the said gear.

5. In a railroad car, a truck-frame having the body of a brake-cylinder of the car air brake-gear integral therewith, a lever coupled to the push-rod of the said cylinder and to the pull-rods of the said gear, and a rod coupled to the said lever and connected with the hand brake-gear on the car body.

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