A. M. ROUSE.

Car-Brakes.

No. 134,934. Patented Jan. 14, 1873.

Fig. 1.

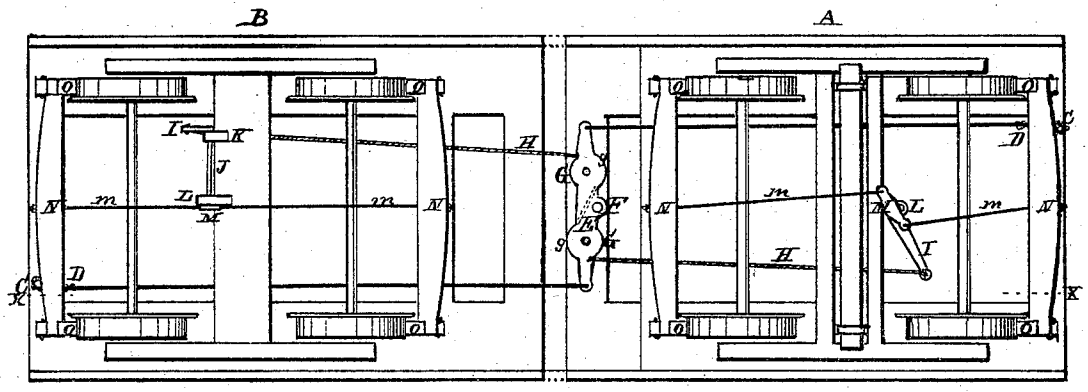


Fig. 2.

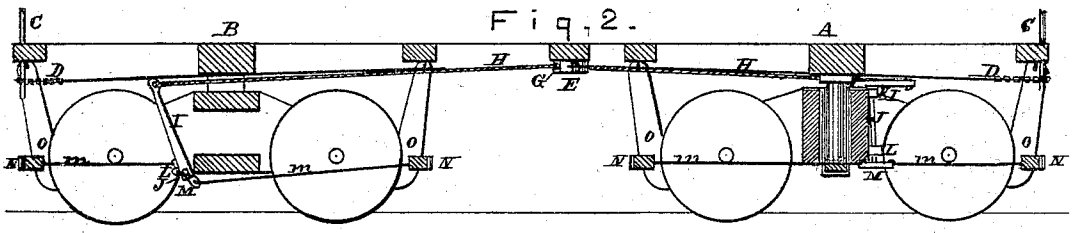


Fig. 3

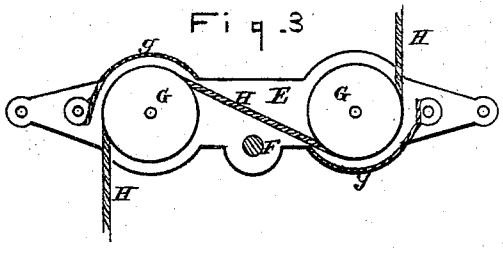


Fig. 4.

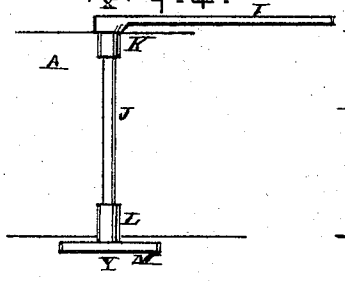
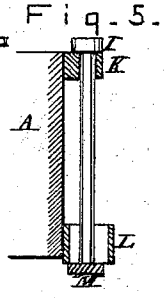


Fig. 5.



ATTEST

Walter Allen

W. H. Pearce

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UNITED STATES PATENT OFFICE.

ALBION M. ROUSE, OF SOUTH ST. LOUIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO CASIMER AMSLER, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN CAR-BRAKES.

Specification forming part of Letters Patent No. **134,934**, dated January 14, 1873.

To all whom it may concern:

Be it known that I, ALBION M. ROUSE, of South St. Louis, St. Louis county, Missouri, have invented certain Improvements in Railway-Car Brakes, of which the following is a specification:

My invention relates to means for equalizing the strain on the brakes of a pair of trucks, and for equalizing the pressure on the two brake-bars of each truck irrespective of any variation in the thickness of the shoes. The brakes of the two trucks are connected by a continuous wire rope or chain, and power is applied by means of an equalizing-lever of peculiar construction arranged between the trucks, the same carrying pulleys, around which said rope or chain is passed. The hand-shafts (or their equivalents) are connected to the equalizing-lever by rods or chains. The brake-bars of each truck are actuated through the medium of a central crank-shaft having a slotted bearing at one end to permit equalizing end play.

My equalizing devices may be applied to hand, steam, air, or electrical brakes, and to street-cars as well as railroad cars proper.

Figure 1 is a bottom view of two trucks with my brake applied thereto. Fig. 2 is a section on the line *x x*. Fig. 3 is an enlarged horizontal longitudinal section of the equalizing-lever. Fig. 4 is a side view of the equalizing-shaft. Fig. 5 is a section of the equalizing-shaft at the line *y y*.

A B are the frames of two car-trucks, to whose cross-timbers are attached to the parts of the brake. C are hand-shafts, which are turned by the brakesman, and upon whose lower ends are coiled the ends of the chains D in the ordinary manner. The other ends of the chains D are attached to the ends of the compensator or equalizer lever E, which turns on a fulcrum, F, attached to one of the trucks, or some point between the two. G are two rollers, (of the equalizer,) whose peripheries are grooved to receive the wire rope or chain H which passes around the pulleys, as shown in Fig. 3, so that the strain upon the lever E caused through the ropes or chains D is always equal on both ends of the rope H. The fulcrum F of the lever E is projected laterally thereof so as to permit the rope H to extend in a straight line from one pulley to the other. *g* are guard-plates to retain the rope H on the pulleys. These guards may, if preferred, be formed of a number of pins in place of the close plates. The ends of the rope H are attached to the lever-arms I upon each truck. The arms I extend at right angles from the ends of fulcrum-shafts J, turning in boxes K L. The box K has a circular or nearly circular socket-bearing for the shaft, but the journal-box L has an elongated or oblong socket to allow longitudinal play to that end of the shaft to equalize the pressure upon the two brake-bars of the truck. M is a cross-bar, to whose ends are fastened bars *m* extending to the two brake-bars N, so that as the shaft J is turned the shoes O are moved to or from the wheels; and should the shoes upon one bar be worn more than those upon the other, the end of the shaft J moves longitudinally toward the latter, (within the oblong box L,) and an equal pressure is consequently exerted on both brake-bars.

In applying my brake to street-cars, for instance, an equalizer, E, may be applied to the shaft J in place of the lever or cross-bar M, and the brake-bars connected by a wire rope, H, passing around the pulleys, as shown in Fig. 3; and in this case the lower end of the shaft may turn in a closely-fitting box, as the equalizer would do away with the necessity of the longitudinal movement before described.

The shaft J may either be perpendicular, as shown on truck A, and in Figs. 4 and 5; or may be horizontal, as shown on truck B, or inclined, as occasion may require, its action being the same in all cases.

I am aware that equalizers of the general forms above described have already been separately proposed. This much of my invention is, therefore, disclaimed.

Claim.

The following is claimed as new:

The combination, as herein specified, of equalizing-lever E, pulleys G, rope or chain H, levers I, crank-shafts J M, slotted bearings L, and connecting-rods *m* for applying and equalizing the pressure on the two brakes of a pair of trucks, and on the two brake-bars of each, as herein set forth.

Witnesses: ALBION M. ROUSE.

SAML. KNIGHT,

JAMES R. MULLEN.