S. F. DIMOCK.

Car Brake.

No. 64,409. Patented May 7, 1867.

Fig. 2.

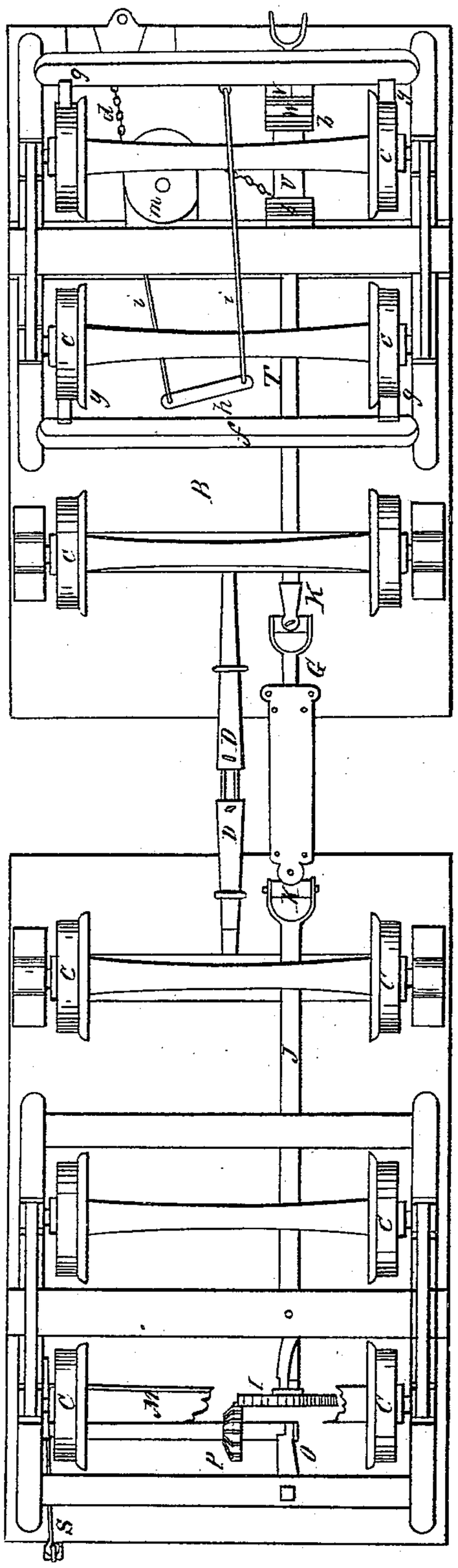
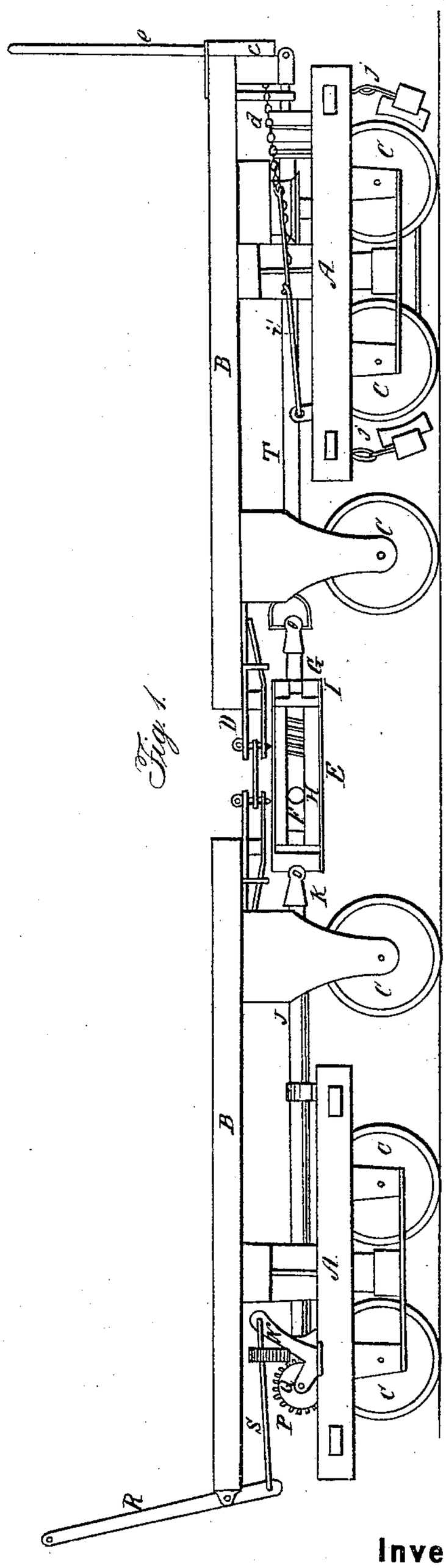


Fig. 1.



Witnesses:

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United States Patent Office

S. F. DIMOCK, OF SPENCER, OHIO.

Letters Patent No. 64,409, *dated May* 7, 1867.

IMPROVED CAR-BRAKE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, S. F. DIMOCK, of Spencer, in the county of Medina, and State of Ohio, have invented certain new and useful improvements in Combined Car-Coupling and Brakes; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of the cars with the brake attached.

Figure 2 is a view of the under side of the same.

Like letters of reference refer to like parts in the different views presented.

A, fig. 1, is the car frame; B, the platform; C C, the wheels and axle upon which the frame is mounted, and D the coupling, all of which are or may be constructed in the ordinary manner, and to which is attached the brake above referred to. This brake consists of the adjustable link E, fig. 1, which is an oblong square frame, provided with a longitudinal slot, F, on each corresponding side. In one end of this link is a hole in which slides a rod, G. The inner end of this rod is provided with four arms arranged at right angles to each other, and on which is placed a friction-roller, H. These rollers are made to roll in the slots referred to, so the rods may work backward and forward, as will hereafter be described. The end of the link is also provided with a pair of friction-rollers, I, fig. 1, the length of which is that of the width of the link, and are placed parallel to each other. Between these the rod G moves in a groove cut around the middle of each roller, as shown in fig. 1, in which *a* is the groove. J is a shaft, one end of which is connected to the adjustable link E by a universal joint, K. M, fig. 2, is a shaft, one end of which is journalled to the adjustable stay N, fig. 1, and the other to the rigid stay O, fig. 2. Near the inner end of this shaft is placed and keyed the bevel-wheel P, which meshes into the wheel L. To the outer end is keyed the plain wheel Q, so placed in relation to the truck-wheel C as to run upon its periphery for a purpose hereafter shown. R is a lever by means of which the adjustable stay N is operated, it being connected to the same by the link S. To the opposite end of the adjustable link, above described, is connected another shaft T, fig. 2, by a universal joint. In the opposite end of this shaft is placed a spool, U, between the washers *b*. This spool is free upon the shaft, but is made more or less tight to the shaft by the washers between which it is placed. The outer washer is pressed against the end of the spool by the nut V, between which and the washer is interposed a rubber one, W. By this it will be seen that the spool can be tightened more or less to the shaft by screwing up or loosening the nut, as the case may be. This arrangement of shafts, spool, &c., is placed in connection with the ordinary brake, as shown in the drawing. *c*, fig. 1, is the spool, around which the brake-chain *d* is wound; by the platform hand-wheel and shaft *e* the brake is operated. *f f* are the cross-bars, to the end of which the rubbers *g* are fixed, and forced against the wheels by the lever *h* and links *i i'*. *i'* is hooked to the chain, as shown in fig. 1, and operates the brakes by the platform-wheel referred to. The chain is also connected to the spool U, and around which it winds, first passing partially around the friction-roller *m* in order to apply the brakes, which is done as follows: By pulling the lever R, fig. 1, in the direction of the car, causes the adjustable stay to force the wheel Q upon the wheel C. The action of the two wheels is such as to turn the shaft M, which also turns the shaft J by the geared wheels P L. The shaft J, being connected to the shaft T by the universal joints and adjustable link above described, is thereby made to turn at the same time, and in so doing carries with it the spool U, and by this means winds up the chain, thus drawing the brakes upon the wheels independent of the hand-wheel and shaft on the platform. On releasing the action of the wheels, the shafts cease to turn, and the spring *j* forces the brakes from the wheels by the unwinding of the chain from the spool, or the slipping of the spool on the shaft, which, however, may be so screwed up by the nut referred to, as to be almost rigid; but by having it so as to slip by any extraordinary strain, the brakes are prevented from being broken, yet, at the same time, will accomplish all the necessary effects under ordinary circumstances. By this arrangement it will be seen that only one person is required to operate the brakes, all and at one time, and that quite independent of the ordinary brake, but with which it may be operated conjointly, if so desired. This arrangement is applicable to any number of cars, and can be applied with equal power and facilty as the single brake, and with less labor, as the wheels of the cars are made to operate it, and at the same time the action of the two wheels on each other serves as a brake in connection with the general application of the whole apparatus. By using the adjustable link E and universal joints, there can be no displacement of

the brake by the violent lateral movement of the cars, or by the slack in coupling them together; thus the rod G will move into the links on the cars coming together, or traverse outward, as the case may be, thus adapting itself readily to all the various movements of the rolling train, without in the least interfering with the safety of the brakes.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The adjustable link E, rollers H and I, in combination with the rod G, shaft T, spool U, arranged and operating substantially as and for the purpose set forth.

2. The adjustable link E, rollers H and I, in combination with the shafts J W, and gearing P and L, arranged and operating as and for the purpose substantially set forth.

3. The shafts J M, gearing P and L, in combination with roller Q, adjustable stay N, wheel C, arranged as and for the purpose substantially as specified.

S. F. DIMOCK.

Witnesses:

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