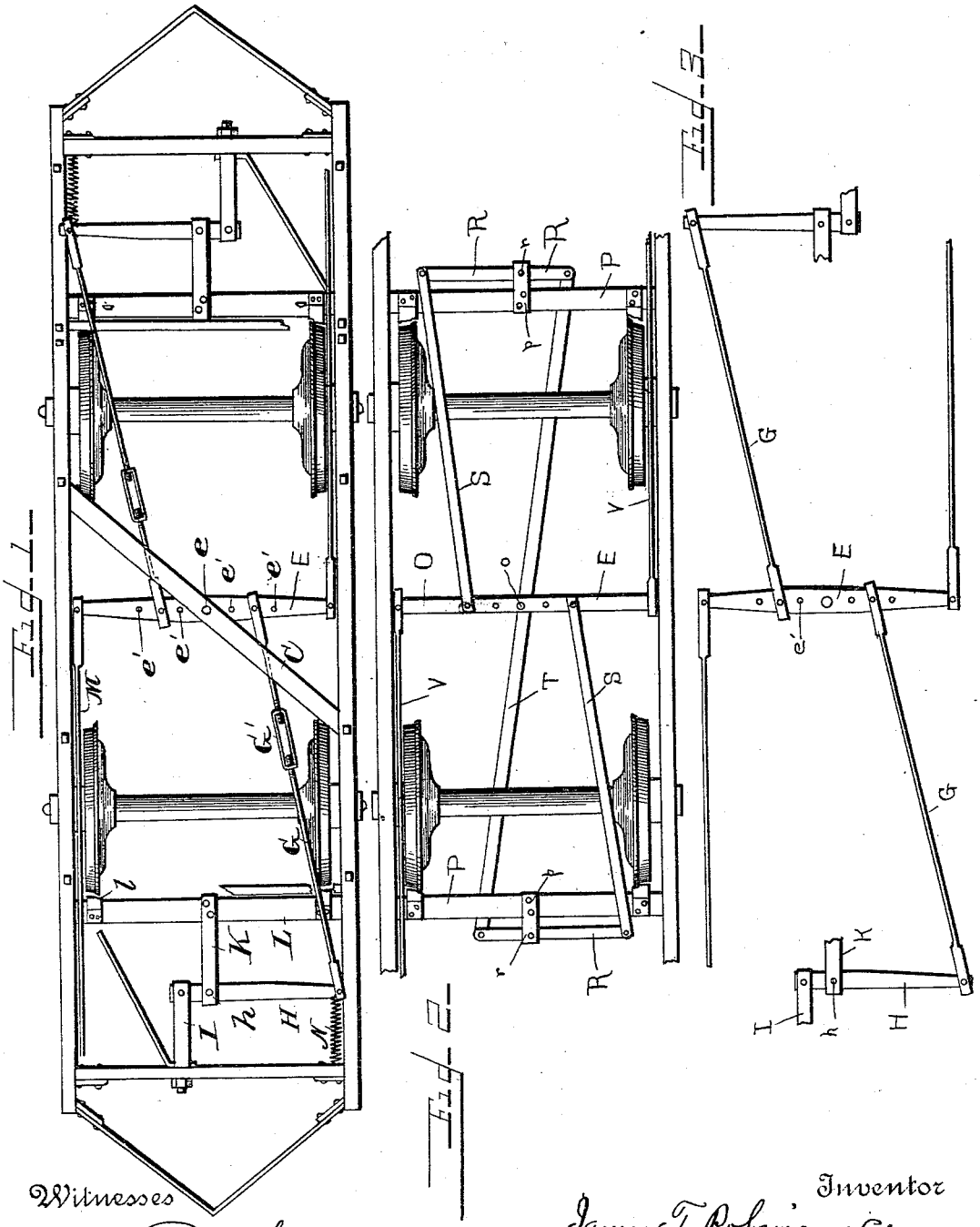
(No Model.)

J. T. ROBINSON.

CAR BRAKE.

No. 458,497. Patented Aug. 25, 1891.



Witnesses
G. A. Taubenschmidt.
C. F. Bell.

Inventor
James T. Robinson.
Edwin S. Clarkson
Attorney

UNITED STATES PATENT OFFICE.

JAMES T. ROBINSON, OF ALTOONA, PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 458,497, dated August 25, 1891.

Application filed March 9, 1891. Serial No. 384,321. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. ROBINSON, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Car-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to car-brakes, and has for its object to produce a brake that will lock all the wheels of the car by applying power at either end; also, to so arrange the levers constituting the brake that they will when in position lie immediately under the car-body.

In the drawings which accompany and form part of this specification, Figure 1 is a plan view of the brake, showing it in position upon a car-truck. Fig. 2 is a modification. Fig. 3 is a detail view of the levers shown in Fig. 1.

A represents a car-truck of any approved pattern, and B the wheels thereof. Secured to the truck A is a brace-rod C, running diagonally across from one side of the truck to the other.

E is a lever, which is pivoted at *e* to the brace-rod C.

g g are rods which are pivotally secured to the lever E, and G G are also rods, which are connected to the rods *g g* by means of the screw-link G′. The rods G, by means of the screw-link, form a continuation of the rods *g*. Said rods are pivotally connected to lever H, which in turn is pivotally secured to a long bolt or rod I, connected to the end plank of the car-truck. This bolt or rod I forms the fulcrum of the lever H. Pivoted at *h* to the lever H is a lever K, which is rigidly secured at its other end to the brake-beam L, which carries the brake-shoes *l l*.

M M are pull-rods, which are pivoted, respectively, to the ends of the lever E. These rods M are suitably secured or connected to a suitable brake handle or lever or other source of power. The lever E has a series of pivot-holes *e*, in which the levers *g g* may be pivoted, the object of which is that by pivoting the levers *g* in these different holes the stroke or pull upon the brake-beams through the series of levers may be made longer or shorter, as the case may require.

X is a brace, which is secured to the end plank of the truck at Y and to the side of the truck at Z, thus bracing the end plank against the strain incident to applying the brakes.

N is a spiral spring secured to the end plank of the truck and to the lever H.

The operation is as follows: Power applied on the pull-rod M from either end of the car is transmitted to the lever E, thence to the rods *g* and G to the lever H, which, acting on its fulcrum, transmits the power to the lever K and thus to the brake-beam L, thereby applying the brakes. When the power is released, the levers are accelerated in their backward movement by spring N, thus quickly releasing the brakes. The purpose of the "screw-link" is to take up any slack in the levers which may occur from the stretching or any other cause.

In Fig. 2 is shown a slight modification of my brake, in which O is the central lever, pivoted at *o* to a suitable brace (not shown) corresponding to brace C in Fig. 1.

P P are the brake-beams, of suitable construction, and *p p* are braces, each secured rigidly to the brake-beams. These braces extend a suitable distance beyond the brake-beams, and pivoted to them at *r* is a lever R.

S is a long lever pivoted at one end to the lever R and at its other to the central lever O. The short arm of each lever R is connected by a long connecting-lever T.

V are the pull rods or chains.

The operation is as follows: Power being applied to rods V is transmitted to lever O, which partly turns, thus acting on levers S and R, the lever T holding the short arms of levers R together, thus throwing the power through the braces *p p* on the brake-beam and applying the brakes.

It is evident that many slight changes and alterations may be made in the relative construction and arrangement of the parts without departing from the spirit of my invention,

and hence I would have it understood that I do not confine myself strictly to the parts herein described.

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

1. In a car-brake, the combination, with the lever E, of the diagonally-disposed rods, and lever H, with its fulcrum I, and lever K, connected to the brake-beam, substantially as described.

2. The combination, with the rods M and lever E, of the diagonally-disposed rods, the levers H and K, and the spring N, all arranged and operating substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JAMES T. ROBINSON.

Witnesses:

J. WINFIELD PEUGH,

EMMETT CONRAD.