

(No Model.)

F. H. D. NEWHARD.

CAR BRAKE.

No. 335,380.

Patented Feb. 2, 1886.

Fig. 1.

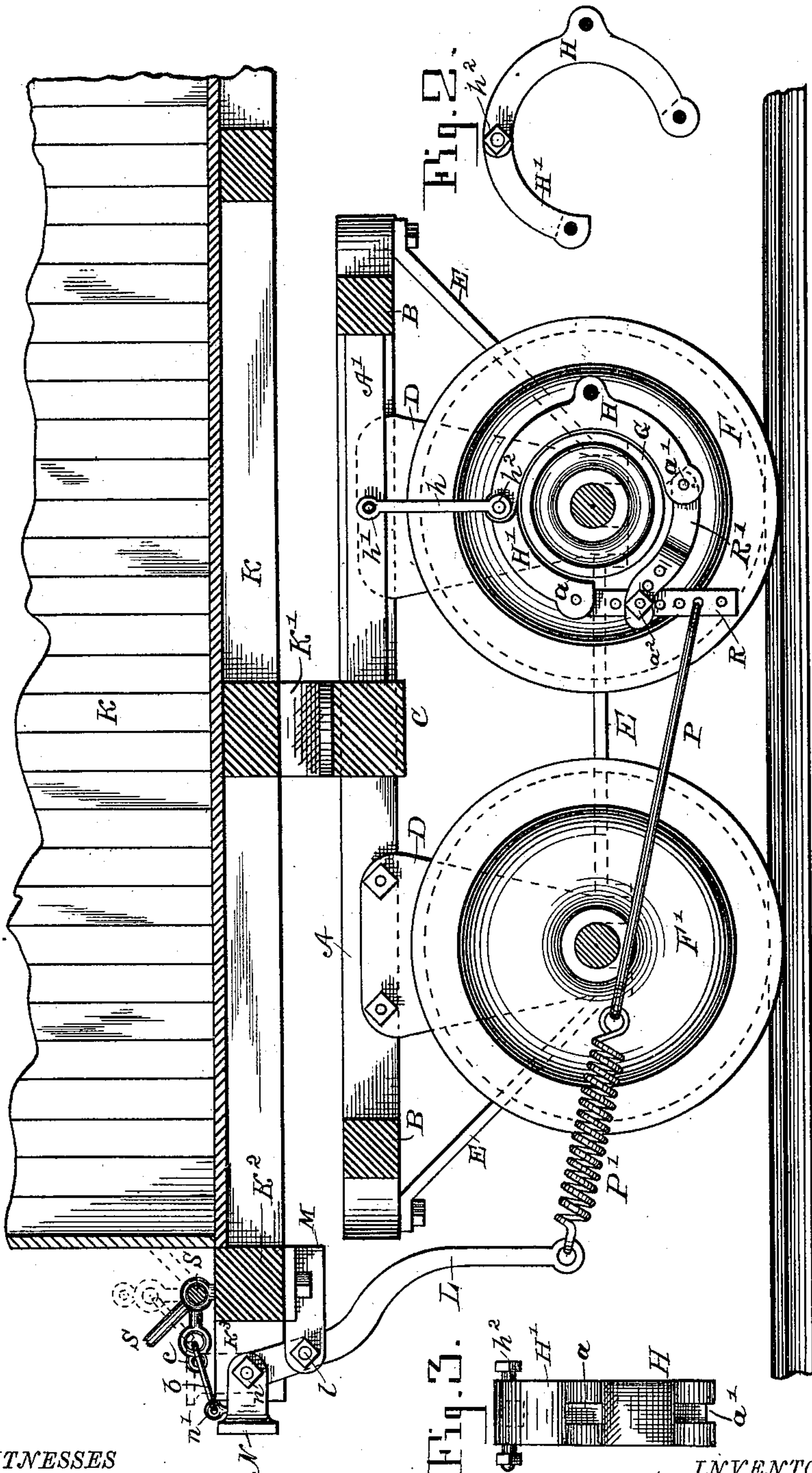


Fig. 2.

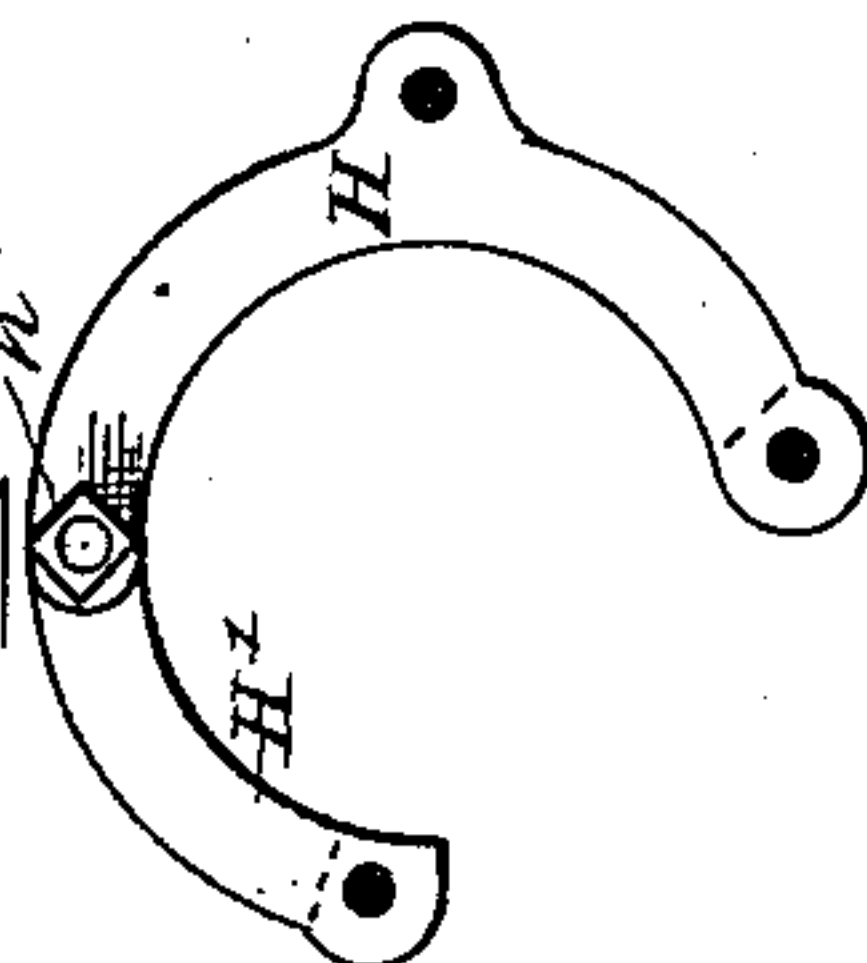
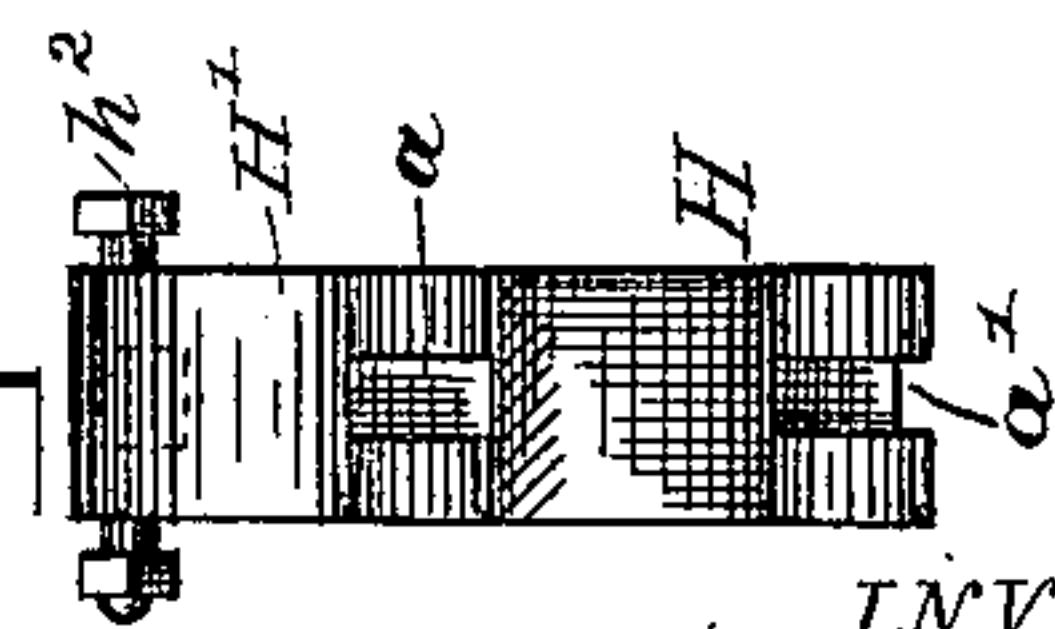


Fig. 3.



WITNESSES

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CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 335,380, dated February 2, 1886.

Application filed November 11, 1885. Serial No. 182,440. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN H. D. NEWHARD, a citizen of the United States, residing at Hokendauqua, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of this improvement is to provide railroad-cars with automatic brake mechanism that will be operated by the momentum of the cars when the train is moving forward, and that can be readily made inactive in order to prevent the same from interfering with the backward movement of a train, as occasion may require, or for shifting the cars in making up trains, or for other purposes. These results are attained by the means illustrated in the drawings herewith filed as part hereof, in which the same letters of reference denote the same parts in the different views.

Figure 1 is a sectional side elevation of a freight-car and truck provided with brake mechanism embodying the features of my improvements. Fig. 2 is a side elevation of the brake-shoes detached. Fig. 3 is a front view of the same.

A B C D E is an ordinary truck-frame.

F F' are the truck-wheels.

G is a friction-disk suitably secured to the wheel-axle.

H H' are the brake-shoes, articulated together at h^2 and to hangers h , which are articulated to a beam, A', affixed to the truck end beam, B, and bearing-beam C.

R is a lever pivoted within and to the slotted end a of the brake-shoe H', and provided with a series of perforations, as shown, for a purpose hereinafter explained.

R' is a bifurcated link-plate, pivoted within and to the slotted end a' of the brake-shoe H, and pivotally connected at a^2 to the lever R.

K is the car, supported on the truck-frame by the bearing-beam K'.

K² is the pulling-beam of the car, provided with the usual bumpers, K³.

M is a bracket bolted to the pulling-beam, as shown, and provided with a bifurcated projection for the reception of a lever, L, pivoted thereto, as shown at l .

N is a buffer articulated at n to the lever L,

and connected by means of an eye, n' , and link b with a doubly-perforated arm, c , of a shifting-rod, S, secured to the pulling-beam K² by means of eyes, as shown.

P is a rod, connected by means of an eye in its rear end with the lever R on the brake-shoe H', and at its forward end to a spiral spring, P', which is also connected, as shown, to the lever L.

The brake mechanism herein described may, if deemed advisable, be applied to both the trucks from opposite ends of the car.

Additional bumpers should be applied to the pulling-beam K² in positions to correspond with that of the buffer N, affixed to the lever L on the adjacent car.

The operation is as follows: When the steam is shut off from the engine and the brakes are applied to the latter, the cars in the train will advance on each other. The buffers N will engage with the bumpers or buffers on the adjacent cars, the upper end of the lever L will be moved inward, the lower end outward, and the brake-shoes H H' will be made to bear on the friction-disk G by reason of their connection through the lever R and link R', and their connection with the lever L through the rod P and spring P', which latter will relieve the jar of the contact of the buffers and bumpers and prevent such contact from breaking the parts or their connections, and the brake-shoes will be applied to the friction-disk G with the force involved in the tension of the spring P'. After the train is stopped and the bearings of the buffers on the bumpers are relieved, the tension of the spring P' will cause the parts to react and take their normal positions, as shown. By reason of the perforations in the lever R and plate R' the shoes may be adjusted closer to the disk G to compensate for wear, and the rod P set out on the lever R and greater leverage given to the brake-applying mechanism. By adjusting backward the shifting-rod S, affixed to the pulling-beam K², as indicated by the dotted lines in Fig. 1, the buffer N will be given a vertical position which will prevent its contact with the bumper on the adjacent car, in which case the brake mechanism will be made inactive and the entire train may be moved backward, and any or all of the cars shifted from one track or train to another, as occasion may require. Chain-

connection may be made from the perforated arm *c* of the rod *S* to the top of the car, so the brake mechanism may be made active or inactive without the operator descending from the top of the car to the shifting-rod *S*, which is intended for use for the purpose mentioned when the operator is on the ground.

The only change that will be needed to apply the mechanism herein described to the cars now in use will be to add to the truck-frame the beam *A'* for suspending the brake-shoes *H H'*, and providing the truck with wheels and axle having a friction-disk, as shown.

Having explained the features of my improvement, what I claim as new, and desire to secure by Letters Patent, is—

The brake-shoes articulated to each other and to hangers suspending them from the truck-frame, and connected to each other substantially in the manner shown, in combination with the friction-disk on the axle, and the rod, spring, and lever affixed to the pulling-beam of the car, as and for the purpose set forth.

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

FRANKLIN H. D. NEWHARD.

Witnesses:

THOMAS F. BUTZ,
JAMES B. SNYDER.