

W. C. SMITH.

Car Truck.

No. 107,115.

Patented Sept. 6, 1870.

Fig. 1.

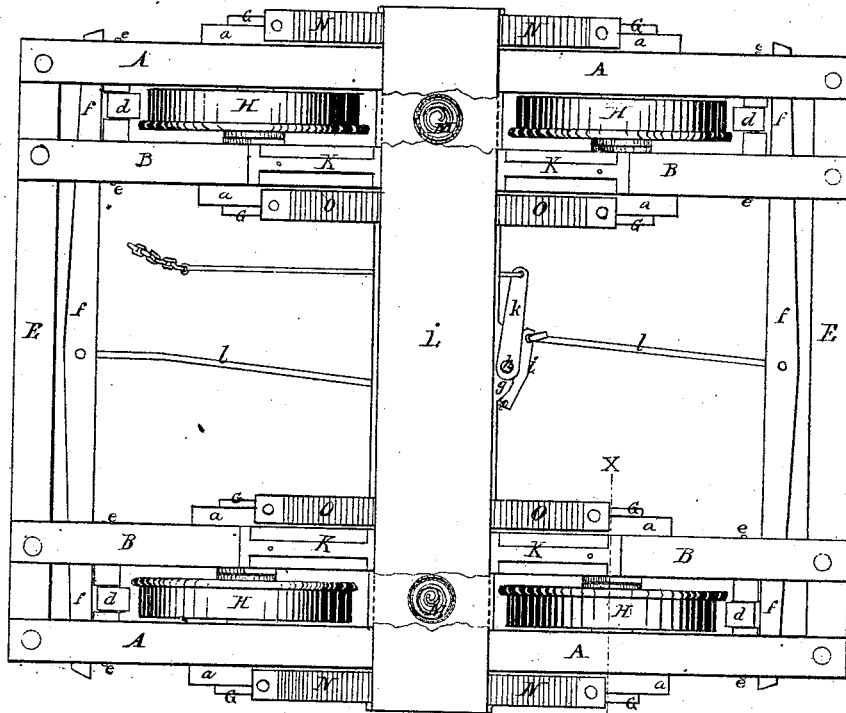


Fig. 2.

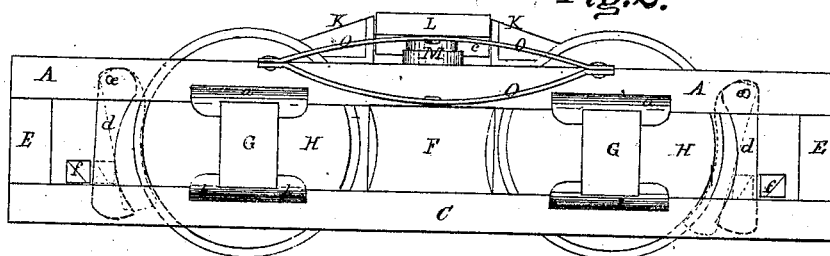
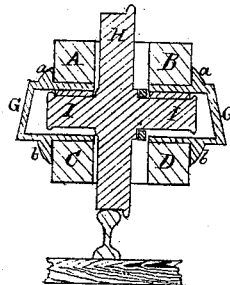


Fig. 3.



Witnesses

George E. Buckley  
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WILLIAM C. SMITH, OF NEW BRITAIN, PENNSYLVANIA.

Letters Patent No. 107,115, dated September 6, 1870.

## IMPROVEMENT IN SAFETY-TRUCK AND 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, WILLIAM C. SMITH, of New Britain, Bucks county, Pennsylvania, have invented a new and improved Safety-Truck and Car-Brake; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use my invention, reference being had to the accompanying drawing which forms a part of this specification, and in which—

Figure 1 is a plan view of my improved truck and car-brake, the upper bolster being broken away to show the springs on which it rests between the wheels.

Figure 2 is a longitudinal elevation of the same; and

Figure 3, a transverse section of one side of the truck, taken on the line *x x* of fig. 1.

The same parts are denoted by the same letters in all the figures.

The truck is composed of two sets of upper sills, *A A B B*, and two sets of lower sills, *C C D D*, all bolted to the cross-beams *E E* and main bolster *F*.

Each upper sill is further connected rigidly with its corresponding lower sill by the axle-boxes *G G*. These boxes are cast with top and bottom flanges *a b*, as shown in section in fig. 3, for the reception of an upper and a lower sill, to both of which each axle-box is bolted.

The wheels *H H H H* have short independent axles *I I I I*, whose journals run in the axle-boxes *G G*.

*K K K K* are brackets bolted to the inside upper sills, for the reception of the movable bolster *L*, on which the car-body rests.

The bolster *L* may be supported by springs *M M*, which rest on the main bolster *F*, and are situated between and in line with the wheels, and also by springs *N N O O*, the springs *N N* being attached to the bolster *F* just outside of the outer sills, and the springs *O O* attached to bolster *F* just inside of the inner sills.

The bolster *L* may be made with an offset or shoulder, *c*, on each side, to prevent lateral jarring and wear, and the brackets *K*, being situated close to the

bolster, take up the concussion produced by the cars bumping together, thereby relieving the springs from strain. This arrangement of bolster, brackets, and springs, however, forms no part of my invention, though it may be conveniently employed in connection therewith.

The lower sills of the truck may be made to come within three inches of the rails, so as to act like a cow-catcher in clearing the road of obstructions.

The brake-blocks *d d* are suspended from pins *e e*, so as to hang clear of the wheels, when not pressed against them by the brake-beams *f f*, which slide on the lower sills of the truck.

Within the box *g*, bolted to the main bolster *F*, turns a rock-shaft, *h*, provided with a double arm, *i i*, and a lever, *k*.

The double arm is connected to the brake-beam by links *l l*, and the lever *k* is connected with the brake-staff in the usual manner.

The brake is operated by means of the ordinary brake-wheel.

When released, the blocks resume their usual position, pressing back the brake-beams.

The arrangement of brake-beams, links, and levers, shown in the drawing may be obviously modified, so as to apply brakes to both sides of the wheels, or to operate the brakes of the other truck of a car, as may be desired.

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

1. The safety-truck, composed of the upper and lower sills, cross-beams, and bolster, all arranged as shown and described.

2. The combination of the axle-boxes, constructed as described, with the upper and lower sills of the truck.

3. The combination, operating as shown and described, of the lower sills of the truck with the brake-beams.

WM. C. SMITH.

Witnesses:

WM. R. WRIGHT,  
GEORGE E. BUCKLEY.