D. H. DOTTERER.

Car Brake.

No. 85,074. Patented Dec. 22, 1868.

Fig. 1,

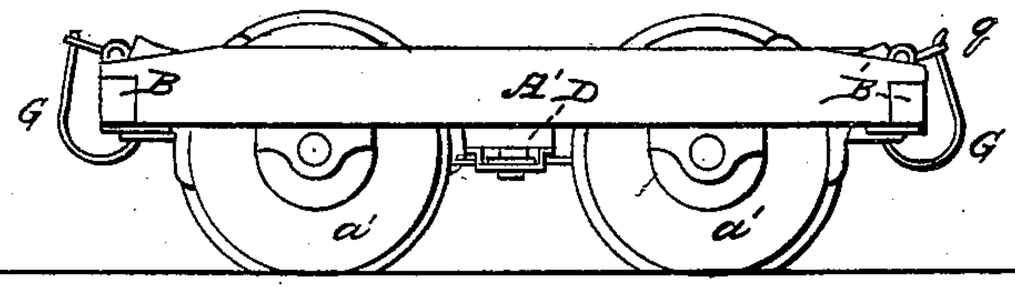


Fig. 2,

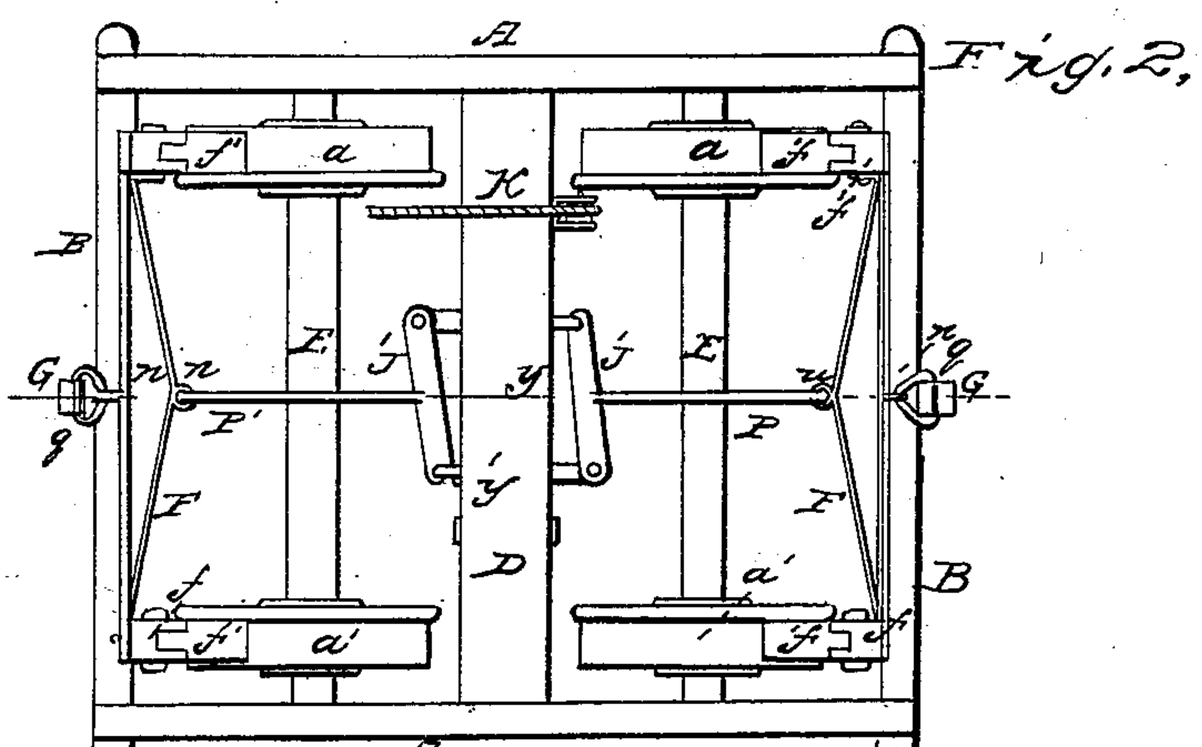


Fig. 3,

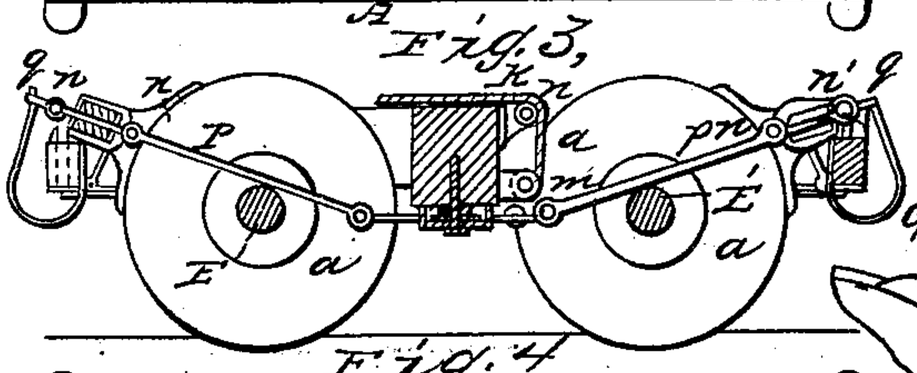


Fig. 4

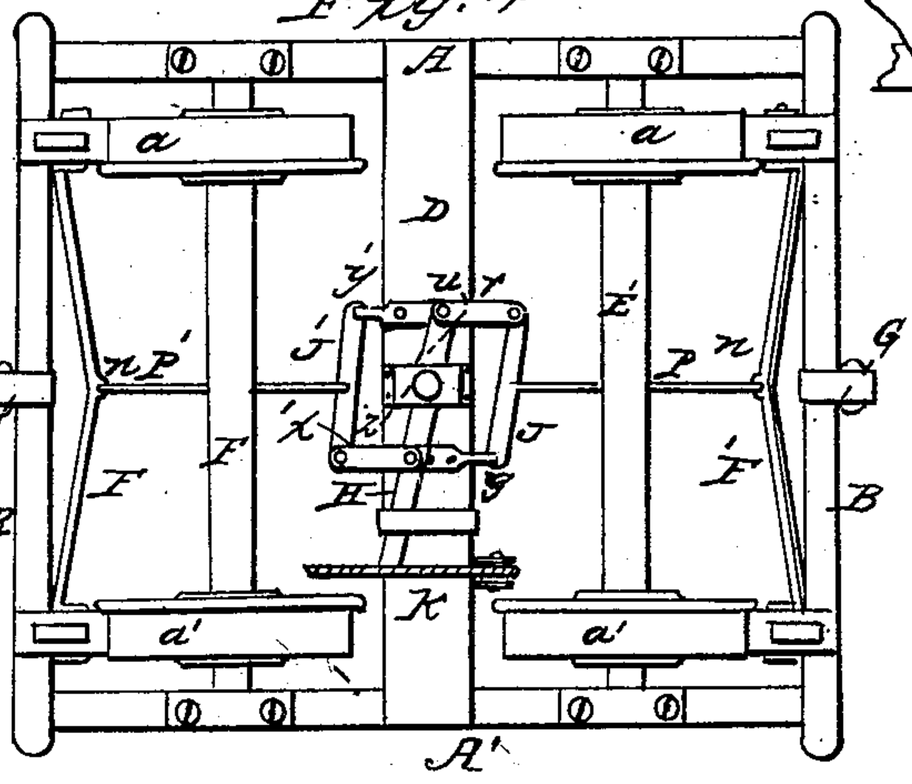


Fig. 5,

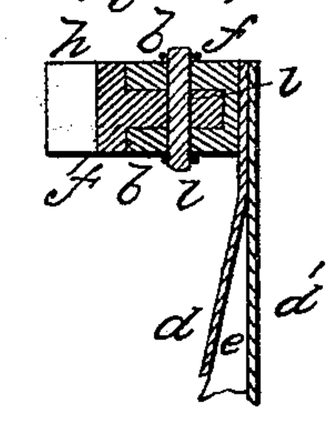


Fig. 6,

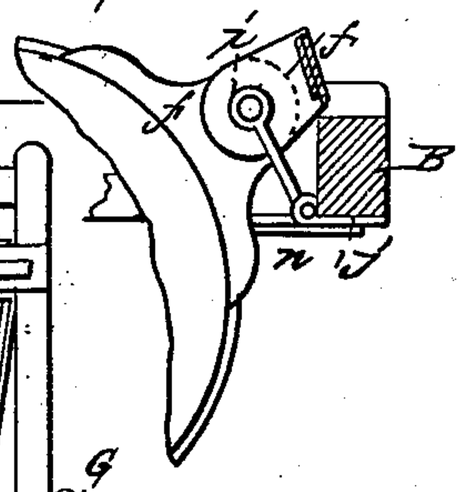
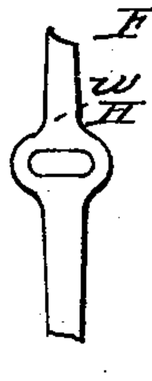


Fig. 7,



WITNESSES:

Wm. A. Steel

Frank Ober

INVENTOR:

D. H. Dotterer

By his Atty

H. Loeser

United States Patent Office.

D. H. DOTTERER, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 85,074, *dated December* 22, 1868; *antedated December* 5, 1868.

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, D. H. DOTTERER, of Philadelphia, Pennsylvania, have invented an Improvement in Braking-Apparatus for Railway-Cars; and I do hereby declare the following to be a full, clear, and exact description of the same.

The main feature of my invention consists in arranging the brake-beams so far above the centres of the axles of a truck of a railway-car, and so connecting them, by means of links, above the beams of the truck, that the cumbrous appliances demanded by the usual plan of suspending brake-beams may be dispensed with.

In order to enable others skilled in the art to make and apply my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a side view of a car-truck with my improvement;

Figure 2, a plan view;

Figure 3, a vertical section on the line 1–2, fig. 2;

Figure 4, an inverted plan view; and

Figures 5, 6, and 7, detached views of part of the braking-apparatus, drawn to an enlarged scale.

A and A′ are the side-beams,

B and B′, the transverse end-bars, and

D, the centre-beam of a railroad-car truck, which has the usual hangers or bearings for the axles E and E′, the latter being provided with the usual flanged wheels, *a a′*.

F and F′ are two brake-beams, the former being situated adjacent to the transverse beam B, and the other to the beam B′ of the truck, each brake-beam being connected at each end to the truck by two links, *b* and *b′*, as shown in fig. 6.

Each brake-beam consists of two light iron bars, *d* and *d′*, fig. 5, the latter being straight, and the former being so bent that the two bars are apart in the middle, but gradually approach each other towards the opposite ends, where they meet each other, a packing, *e*, of wood, being fitted to and secured in the space between the bars.

To the bars *d* and *d′*, at each end of each brake-beam, is secured a forked block, *f*, and to the latter is hinged a shoe, *f′*, adapted to one of the flanged wheels of the truck. (See figs. 5 and 6.)

It is to the pin *i*, by which the block and sleeve are hinged together, that the upper ends of the links *b b′*, previously alluded to, are connected, the lower ends of the links being connected to a pin on a plate, *j*, secured to the under side of one of the beams, B or B′, of the truck, to which is also secured a plate, *m*, for maintaining the shoe in its proper position.

At the centre of each brake-beam are eyes, *n* and *n′*, and the latter is connected, by a link, *q*, to the end of a bent spring, G, secured to the beam B, the tendency of the said spring being to draw the shoes of the brake-beam away from the rims of the wheels.

Between a plate, *t*, and the under side of the central beam D of the truck, and to a pin passing through the said plate, is loosely hung a horizontal lever, H, the short arm, *w*, of which is connected by a link, *x*, to the outer end of the lever J, the opposite end of which is connected to a plate, *y*, secured to the beam D. Another lever, J′, is connected at one end to a plate, *y′*, on the beam D, the other end being connected, by a link, *x′*, to the lever H, at the opposite side of the fulcrum from the link *x*, but at the same distance from the fulcrum.

The long arm of the lever H is limited in its movements by a staple, *j′*, secured to the beam D, and has an eye at its outer end, for attachment to the operating rope or chain K, the latter passing over pulleys, *m* and *n*, and thence to the windlass on the platform of the car.

A rod, P, is connected to the lever J at a point midway between the opposite ends of the latter, the other end of the link being connected to an eye, *n*, on the brake-beam. In like manner, the lever J′ is connected to the brake-beam F by the rod P′.

By arranging the brake-beams, with their shoes, in the position illustrated and described, instead of suspending them from the truck in the usual manner, the many cumbrous appliances demanded by the latter arrangement are avoided, and general compactness of parts insured.

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

1. The brake-beams F and F′, arranged above the beams of the truck, and connected thereto by links, substantially in the manner described.

2. The brake-beam, composed of two bars, *d d′*, and intervening packing-piece, and provided at the ends with blocks, *f*, to which are hinged the shoes *f′*, all substantially as set forth.

3. The horizontal lever H, hung to a pin on the truck, but having a lateral play thereon, in combination with the system of levers and rods herein described, or their equivalents, by which the movement of the said lever H is imparted simultaneously to both brake-beams, as set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

D. H. DOTTERER.

Witnesses:

JOHN WHITE,

C. B. PRICE.