

(No Model.)

O. SPIESS.

CAR BRAKE.

No. 280,255.

Patented June 26, 1883.

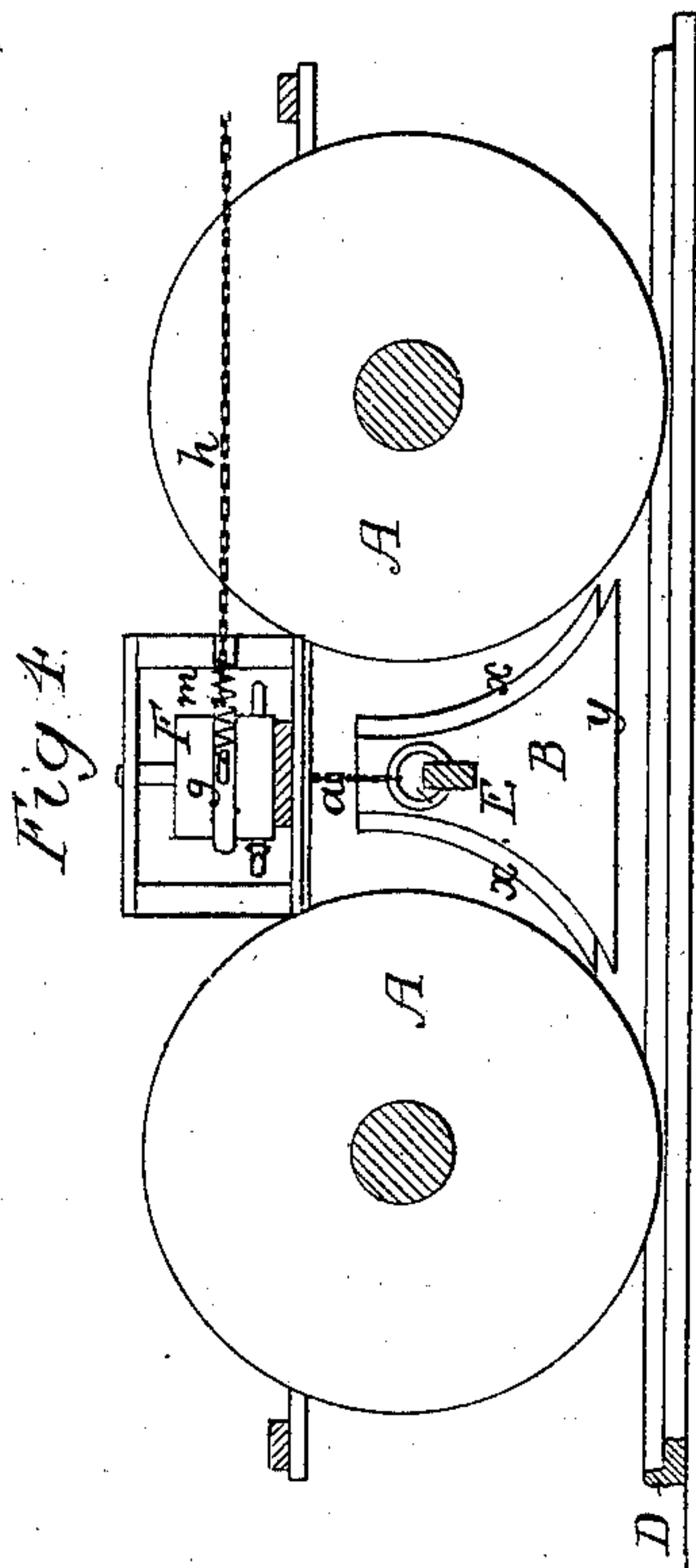


Fig 6.

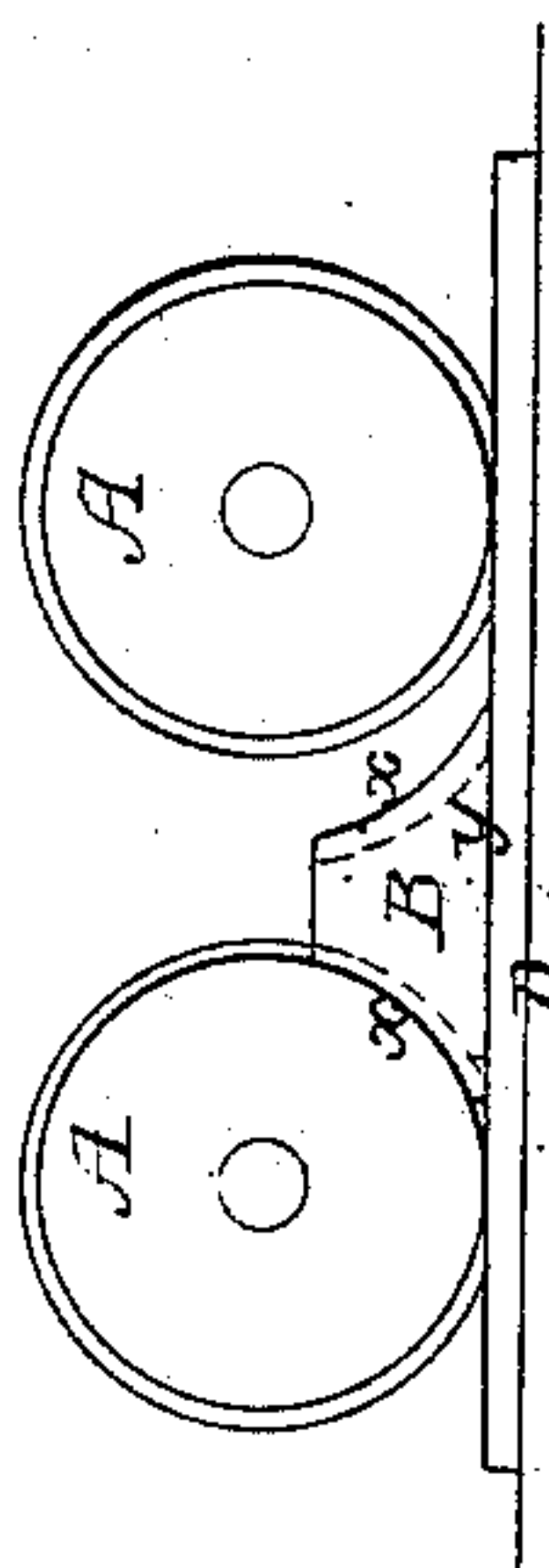
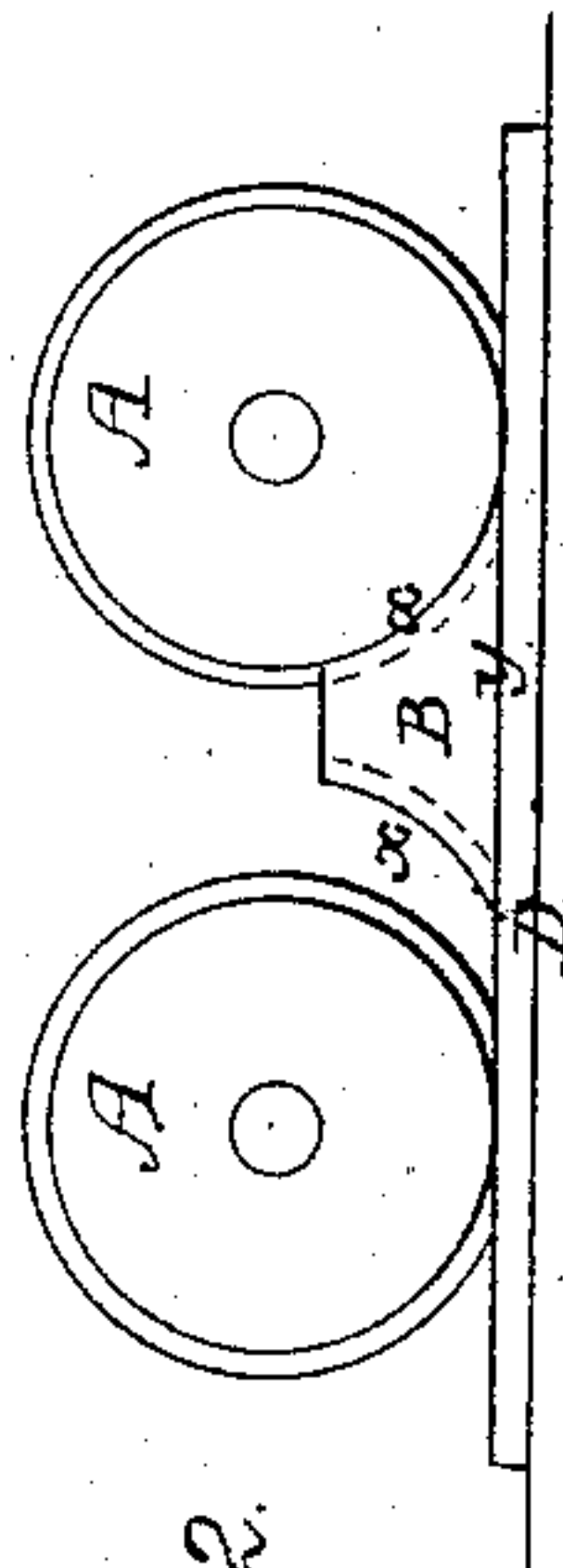
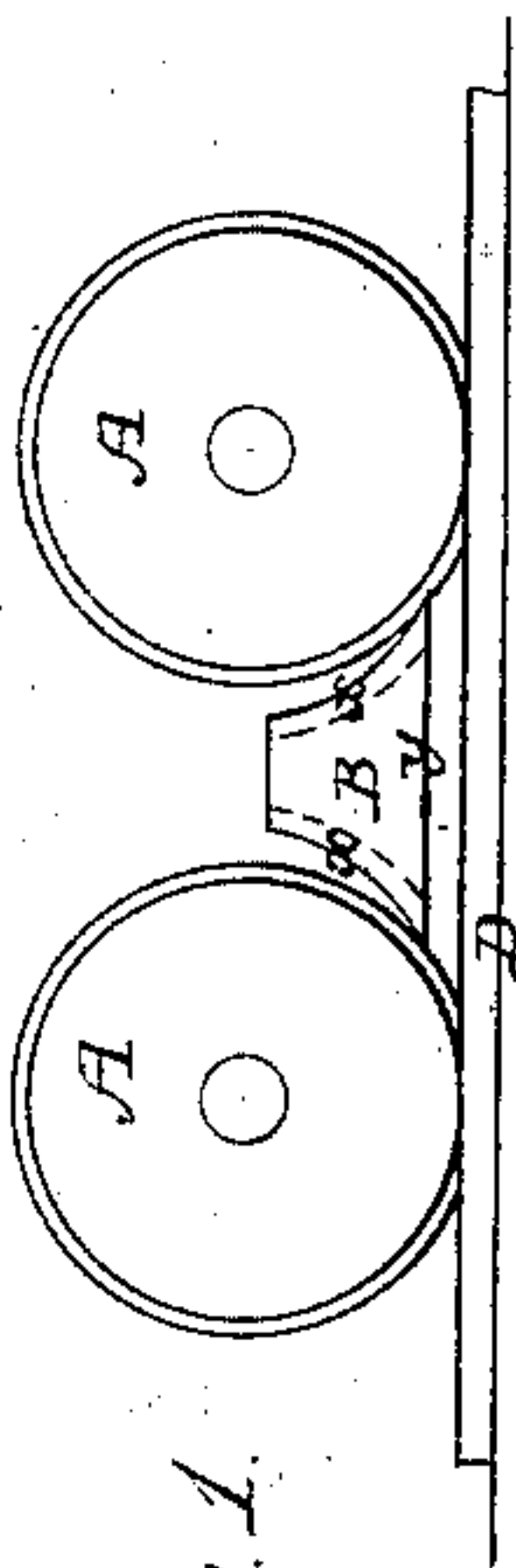
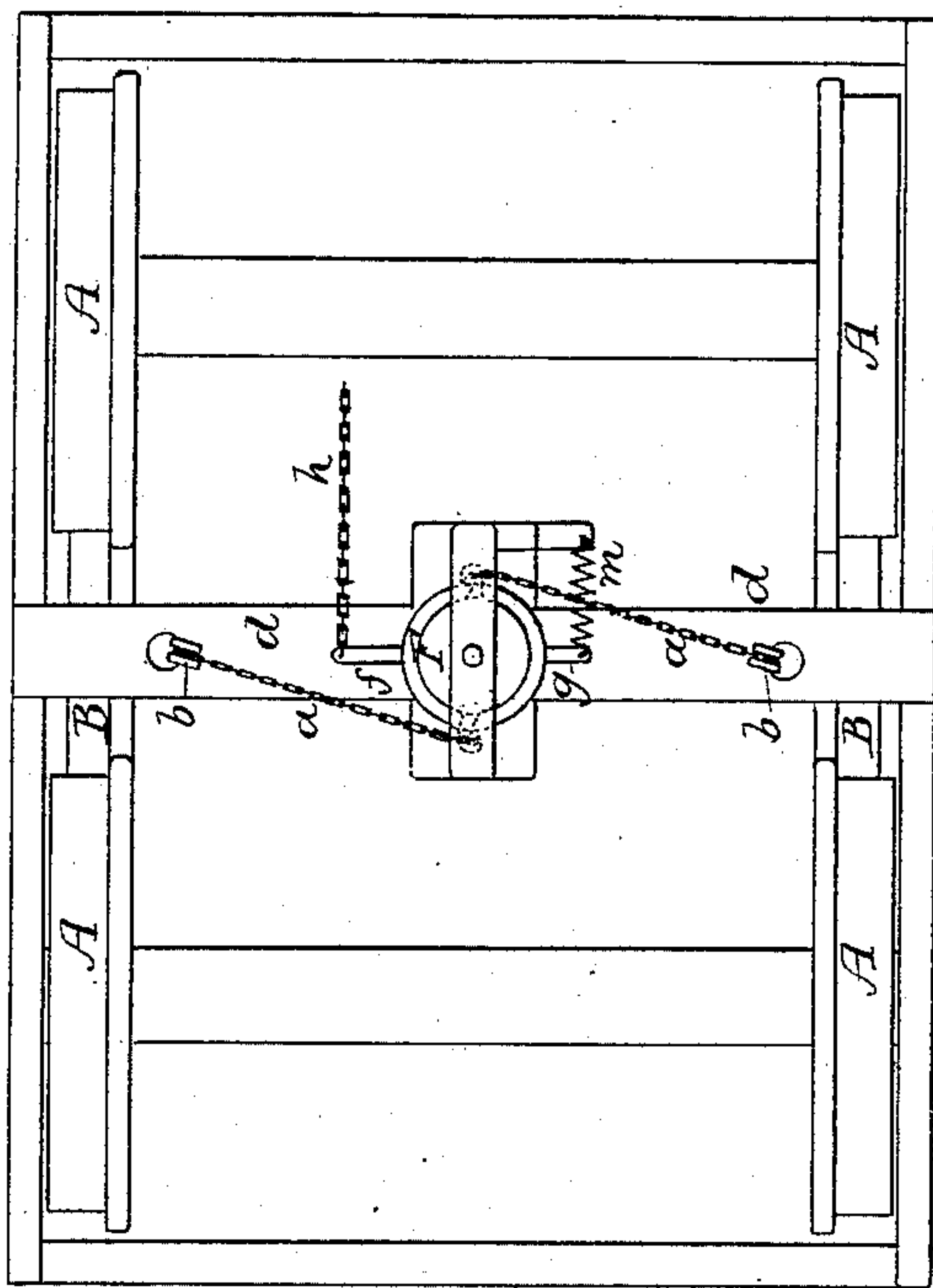
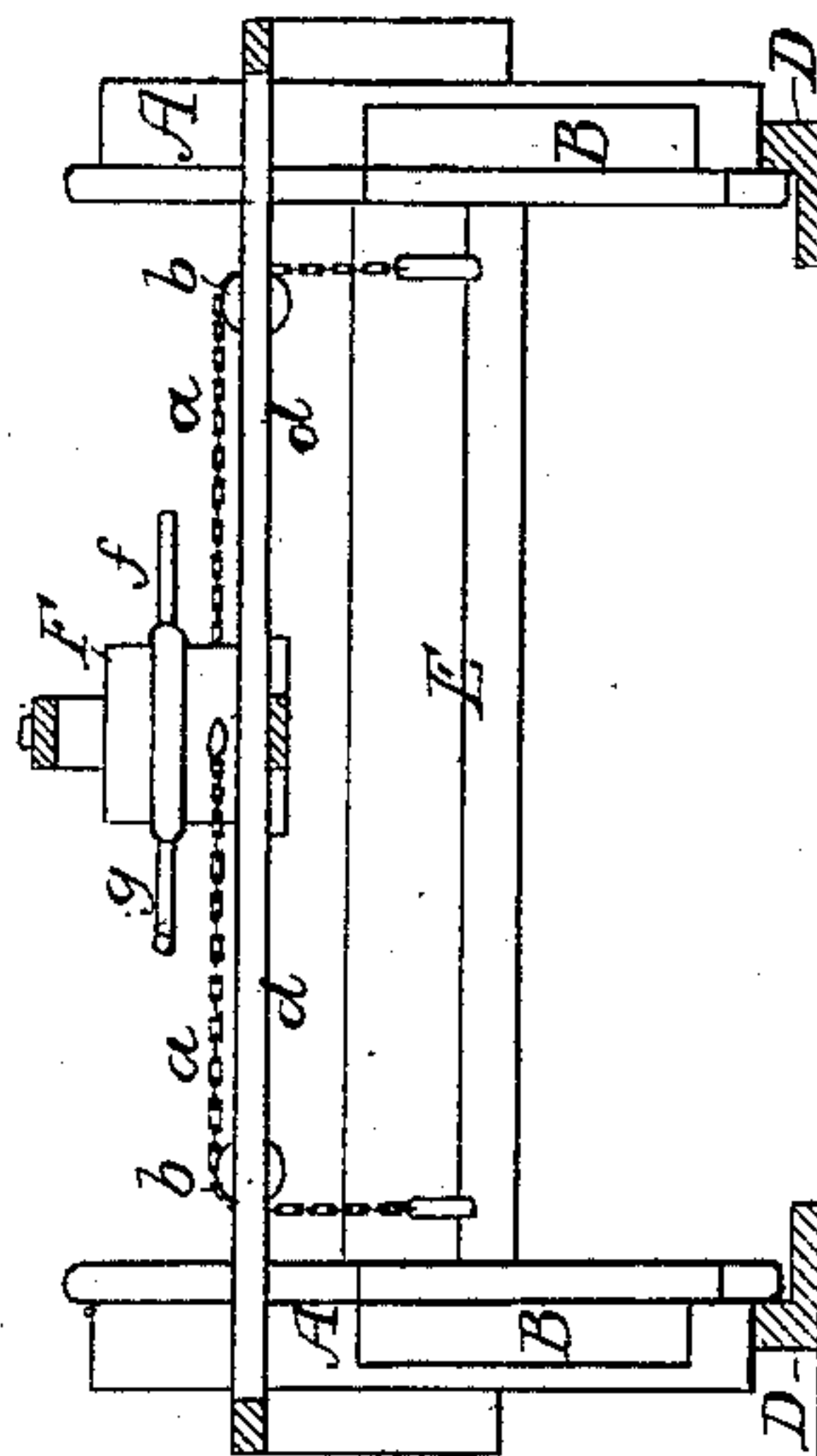


Fig 5.



Witnesses  
James F. Jobin  
Harry Smith

Inventor  
Oscar Spiess  
by his Attorneys  
Howson & Long

# UNITED STATES PATENT OFFICE.

OSCAR SPIESS, OF PHILADELPHIA, PENNSYLVANIA.

## CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 280,255, dated June 26, 1883.

Application filed April 23, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR SPIESS, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain  
5 Improvements in Car-Brakes, of which the following is a specification.

The object of my invention is to so construct a car-brake that when the brake-shoes are applied not only will the wheels be locked, but  
10 friction will be exerted on an extended surface of the rails, so that the stoppage of the car can be effected in less time than when the sliding of the wheels on the rails is the only retarding influence.

15 In the accompanying drawings, Figures 1, 2, and 3 are diagrams illustrating the principle on which the invention is based; Fig. 4, a longitudinal section of a truck with the improved brake; Fig. 5, a transverse section of  
20 the same, and Fig. 6 a plan view.

A general understanding of the principle of the invention may be had on reference to Figs. 1, 2, and 3, in which A A represent a pair of  
25 car-wheels, and B a brake-shoe located between the wheels, and having opposite segmental faces *x x* and horizontal lower face, *y*, the faces *x* being of the same curve as the rim or tread of the wheel, and the face *y* being parallel with the tread of the rail D. When the  
30 shoe B is elevated, it hangs centrally, and is free from contact with the rim of either wheel, or with the rail, as shown in Fig. 1. When the shoe is dropped onto the rail, however, the rim of one or other of the wheels is brought  
35 into contact with one of the faces *x* of the shoe, depending upon the direction in which the car is running, as shown in Figs. 2 and 3. The effect of this is to stop the rotation of the wheel, which slides with the shoe upon the  
40 rail, the under surface, *y*, of the shoe presenting a large frictional area, and exercising a powerful retarding effect on the movement of the car.

45 The mechanism which I employ for operating the brake-shoes is shown in Figs. 4, 5, and

6. The opposite shoes B B are connected by a transverse bar, E, which is suspended by a pair of chains, *a a*, these chains passing over pulleys *b* on a transverse bar, *d*, of the truck, and being connected to a central drum, F, on  
50 said bar, so that on turning the drum in one direction the shoes will be elevated, and on turning it in the opposite direction said shoes will be permitted to fall.

On the drum F are radial arms *f* and *g*, the  
55 arm *f* being connected by a chain, *h*, to the usual braking apparatus of the car, (not shown in the drawings,) and the other arm, *g*, being connected to one end of a spiral spring, *m*, the  
60 opposite end of which is connected to a fixed stud on the truck. When there is a draft on the brake-chain, the drum will be turned so as to permit the shoes B to fall onto the rails; but as soon as the draft on the chain ceases the  
65 spring *m* will restore the drum to its original position and effect the elevation of the brake-shoes.

Instead of using a spring such as shown, a spring coiled around the spindle of the drum and connected at one end to said drum and at  
70 the opposite end to the truck may be employed, if desired; but a spiral spring connected to an arm on the drum is preferred, as it is more accessible and more easily replaced or repaired  
75 in case of injury.

I claim as my invention—

The combination of a railroad-car truck and its wheels with a brake-shoe suspended between each pair of wheels, and having opposite segmental faces *x* and horizontal lower  
80 face, *y*, and with mechanism for raising and lowering the shoe, substantially as set forth.

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

OSCAR SPIESS.

Witnesses:

HARRY L. ASHENFELTER,  
HARRY SMITH.