(No Model.)

F. WAGNER.

CAR BRAKE.

No. 576,925. Patented Feb. 9, 1897.

Fig. 1.

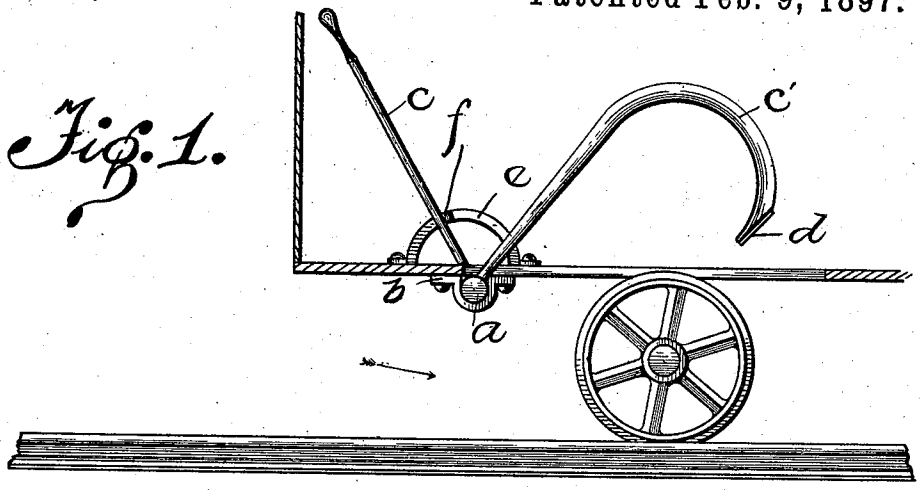


Fig. 2.

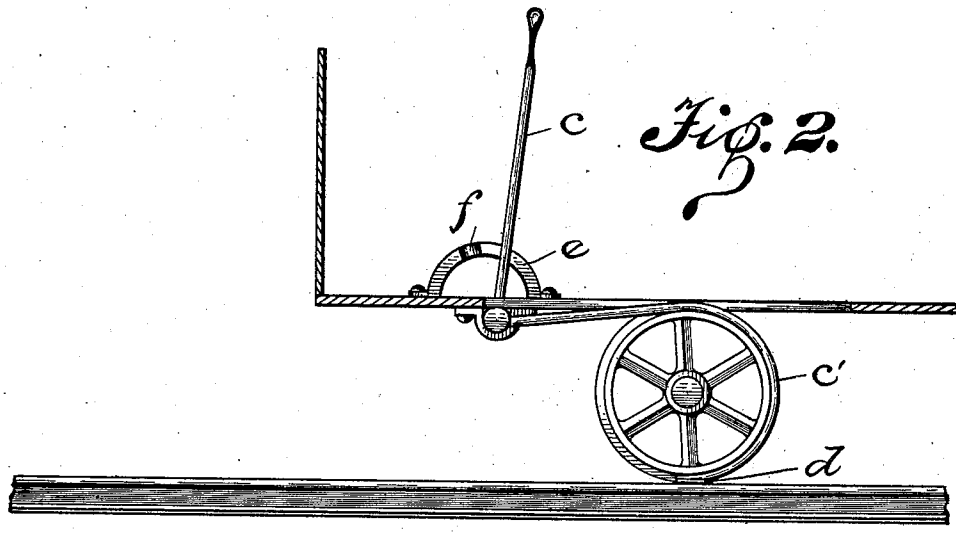
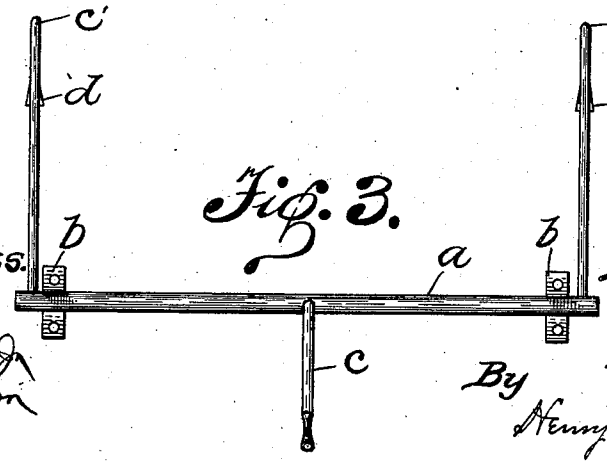


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRED WAGNER, OF CARNEGIE, PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 576,925, dated February 9, 1897.

Application filed February 14, 1896. Serial No. 579,283. (No model.)

To all whom it may concern:

Be it known that I, FRED WAGNER, a citizen of the United States of America, residing at Carnegie, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Brakes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in brakes, and relates more particularly to that class known as "emergency-brakes," employed on street-cars and the like in addition to the regular brakes, to be used when it is desired to stop the car suddenly.

The invention has for its object the construction of a brake of the above-described class that will be extremely useful in preventing accidents and the like, as a car equipped with my improved brake may be stopped almost instantly, if so desired, even when running at a high rate or speed.

A still further object of the invention is to construct a brake, as above described, that will be extremely simple in its construction, strong, durable, effectual in its operation, and comparatively inexpensive to manufacture.

With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts, to be hereinafter more specifically described, and particularly pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like letters of reference indicate similar parts throughout the several views, in which—

Figure 1 is a cross-sectional view of a portion of a car, showing the brake in its normal position. Fig. 2 is a similar view showing the brake applied to the wheels. Fig. 3 is a top plan view of my brake.

In the drawings, *a* represents the main shaft, which is supported by clamps *b b*, attached to the underneath side of the car. An operating-lever *c* is provided, which is preferably secured to the shaft *a* at or near the center, so as to make the pressure equal on both sides when applying the brake. Curved brake arms or rods *c'*, of resilient material, are provided near the ends of the shaft *a* or at any point so that they will be directly over the bearing portion of the wheels. These brake-arms are provided at their free ends with a flat portion *d*, which is slightly wider and thicker, so as to form a shoe to engage the rail.

A rack *e* is provided on the platform of the car and carries a cam *f*, which engages the operating-lever and retains the brake in its normal position.

The operation of my improved emergency-brake will be readily apparent from the views of the same which I have shown in the drawings.

When the posts have been secured to their respective positions, as shown in Fig. 1 of the drawings, the brake will be in its normal position and will not interfere with the working of the ordinary brake in any manner. In case it is desired to check the speed of the car suddenly the operator will grasp the handle of the operating-lever and by pulling backward on the same will force the operating-lever past the cam *f* and force the brake-rods downward until the free end of the same comes into engagement with the bearing portion of the wheel, when a slightly-harder pressure on the operating-lever, together with the bearing of the wheel on the free end of the rod, will cause the same to spring sufficiently to allow it to pass the point of contact on the wheel and descend to the rail. When the shoe *d* engages the rail and wheel, the friction of the wheel, which is traveling in the direction of the arrow in Fig. 1, will draw the shoe under and cause the wheel to ride on the shoe, and the brake-rod being of resilient material will engage the periphery of the wheel.

When it is desired to release the brake, a push backward on the operating-lever will raise the brake to its normal position again and the cam will retain the same in this position.

In cases where the cars are not turned at the end of the line the brakes may be applied to both ends of the car, so as to provide an emergency-brake at all times.

I desire to call particular attention to the use of my improved emergency-brake in case where accidents are liable to occur, such as the car getting beyond the control of the mo-

torman or a person is liable to be struck by the car. The ordinary brakes are not sufficient to prevent the accident, while by the use of my improved brake the car can be stopped almost instantly, if desired, or as occasion should require. I also desire to call attention to the fact that the same can be operated without in any manner interfering with the ordinary brake and can be applied to the car with but little cost. Furthermore, the brake is extremely simple, there being no weak parts liable to break or get out of order easily.

It will be noted that various changes may be made in the details of construction of my improved emergency-brake without departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a brake, a shaft secured by clamps to the under side of the car, said shaft having near its center an operating-lever and carrying near its ends curved brake-rods adapted to engage the bearing portion of the wheels when the brake is applied substantially as shown and described.

2. In a brake, a shaft secured to the underneath side of the car, said shaft carrying curved brake-rods provided on their free ends with a flat portion adapted to engage the rail, an operating-lever secured to the shaft, and extending through the floor of the car and a rack carrying a cam adapted to engage the operating-lever and retain the brake in its elevated position substantially as shown and described.

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

FRED WAGNER.

Witnesses:
A. M. WILSON,
H. E. SEIBERT.