

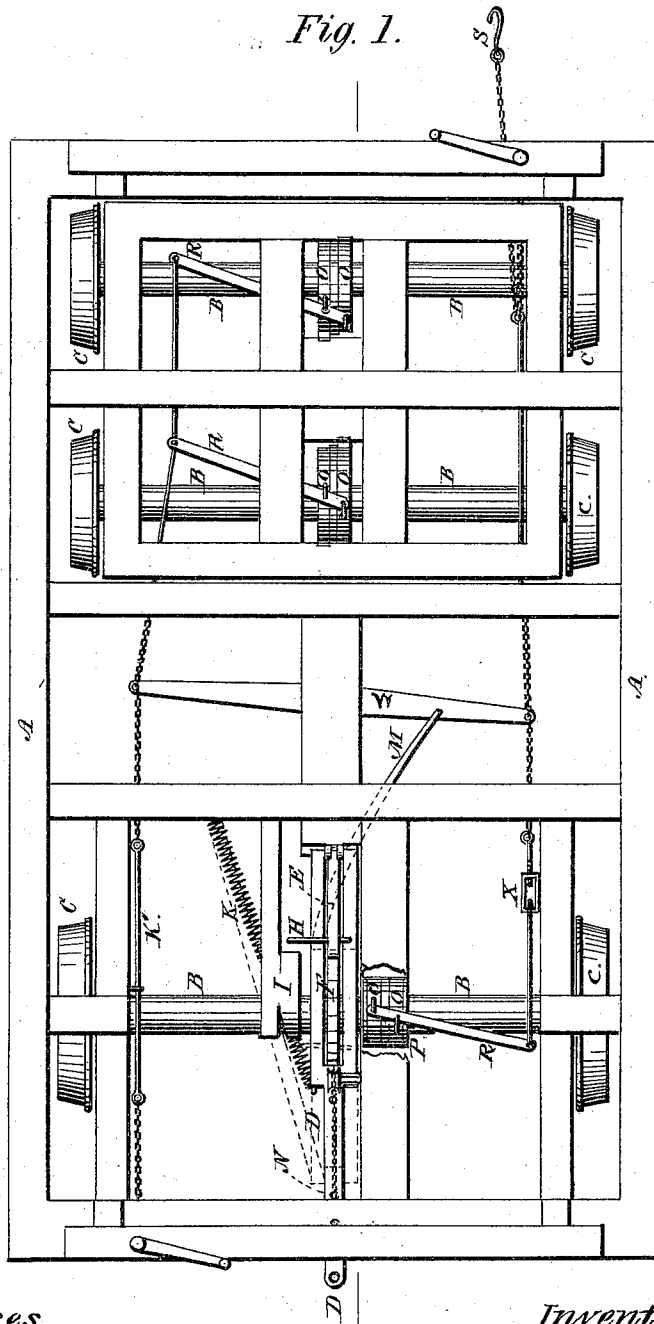
JOSEPH A. CODY.

Improvement in Combined Car Starter and Brake.

No. 125,119.

Patented April 2, 1872.

Fig. 1.



Witnesses.

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Inventor.

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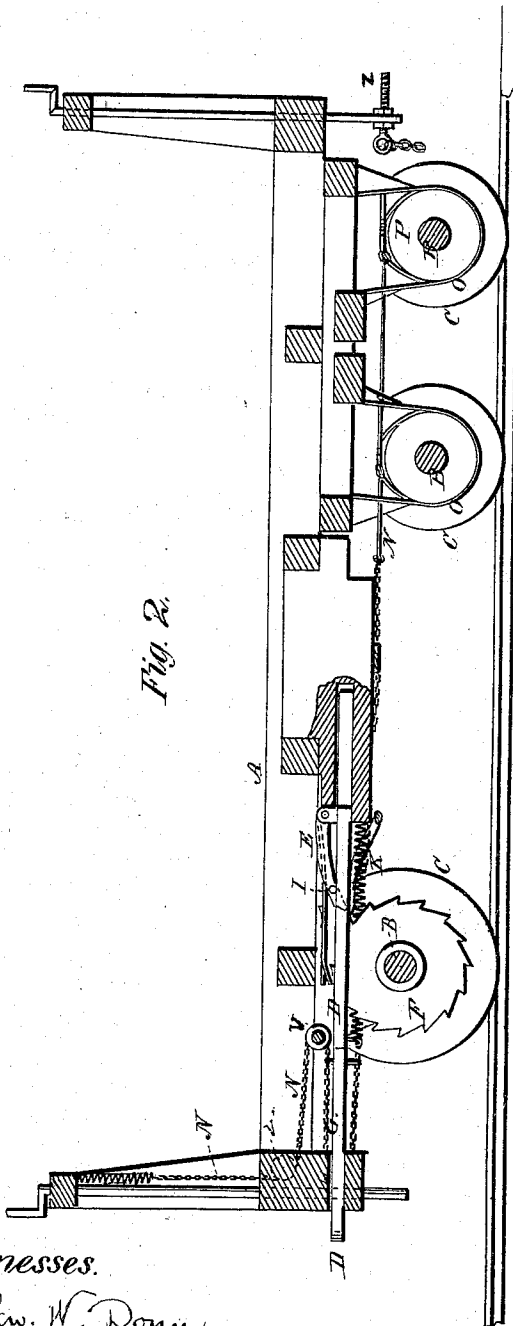


Fig. 2.

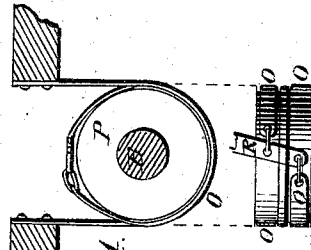


Fig. 4.

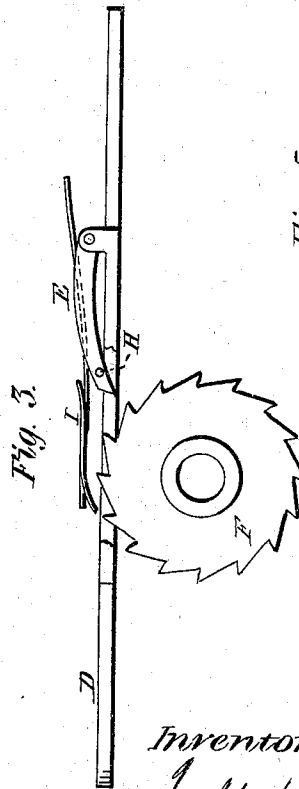


Fig. 3.

Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOSEPH A. CODY, OF NEW YORK, N. Y.

IMPROVEMENT IN COMBINED BRAKES AND STARTERS.

Specification forming part of Letters Patent No. 125,119, dated April 2, 1872.

To all whom it may concern:

Be it known that I, JOSEPH A. CODY, of the city, county, and State of New York, have invented new and useful Improvements in Car Starters and Brakes in Combination; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing forming a part of this specification.

My invention relates to car starters and brakes, constructed in a manner to be operated simultaneously together, or separately, as hereinafter more fully set forth.

To enable others skilled in the art to make and use the same, I will proceed to describe, referring to the accompanying drawing, in which—

Figure 1 represents a top view of a car-truck with my starter and brake attached. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is the draw-bar, pawl, ratchet-wheel, and spring. Fig. 4 is a drum or band-wheel, showing a section of the lever connected to the bands. Fig. 5 is a draw-bar, which may be used in place of the slotted bar, shown in Fig. 3.

A is a car-frame; B, axles; C, wheels, all constructed in any of the known ways. D is a draw-bar of iron or any suitable material, slotted to receive the pawl E, which is pivoted at its rear end to the draw-bar, while its loose end may fall upon its ratchet-wheel F. The ratchet-wheel is secured firmly to the axle. Through the pawl passes the pin H, its end projecting over the draw-bar, as shown in Fig. 1. Adjacent to the longer end of the pin H is a guide, I. This may consist of a rigid arm pivoted at its rear end to part of the car-frame, or of a spring-arm rigidly attached to the same point. In either case, the guides must fall or press down in such relation to the projecting arm H that when said arm moves forward it shall pass under the guide, and thus keep the pawl in contact with the ratchet; and, further, so that, when the pin H moves backward, it shall pass over the guide, and thus raise the pawl out of contact with the ratchet. A suitable form of the guide to effect this purpose is shown in Fig. 3. The draw-bar may be retracted by a suitable spring, as shown at K. The brake apparatus connected with this draw-bar is as follows: Upon the

axle is fixed a drum, P. Around these are brake-straps O O, which are attached at the ends—one upon one side, and one upon the other—to a suitable part of the car or truck, as shown in Fig. 4. The loose ends are wrapped about the drum in opposite directions, and are brought near each other and attached to a lever, R, as shown in Figs. 4 and 1. The proportions and arrangement are such that backward draft upon the long arm K will apply both brake-bands, one acting to the lever as fulcrum, and one as weight. This lever R is attached to a horizontal centrally-pivoted lever, W, which are like those in common use, and may have ordinary chains and rods to connect with brake-shafts or pulleys on the platform. Further, a rigid bar, M, is riveted to the draw-bar, and projects backward, its end (which may be slotted to embrace it) abutting against the lever W. These parts are so adjusted to each other that the backward thrust of the draw-bar operates, through the rigid bar m, levers W and R, and their connections, to apply the brakes O O. To the forward end of the draw-bar I attach a chain or rope, which is carried over pulleys V V' upward within the guard to the rail, to which it may be connected by a spring in order to keep the tension. It is intended that this rope or chain shall be within reach of the driver's hand, if on a street-car, and should then be provided with a loop to draw upon. Its action will be to force back the draw-bar and upon the brake-shaft. I have provided an adjustable eyebolt, it being specially necessary in my improved brake and starter that there should not be much slack chain. This eyebolt is provided with a threaded shank, which passes through the perforated lower end of the brake-shaft, with nuts upon each side, so that the length of the eyebolt may be adjusted to increase or diminish the tension of the chain. I have provided a branch chain, S, for connection with other cars when the device is applied to a train, so that the brakeman on one car may apply the brakes to several. Ordinary turn-buckles may be applied, as shown at X, to regulate the tension between the levers.

The operation of my brake and starter will be clear from the foregoing description. When the draw-bar is drawn forward, the pin H passes under the guide, the pawl engages with

the ratchet, and the draft is applied to turn the wheels, acting thus with increased leverage. The spring K draws back the bar, and its action may be assisted by the driver drawing the rope N. The pin H being thus lifted with the pawl by the guide I, all noise upon the ratchet of rattling is avoided. Further, in sudden stopping of the power, whether of locomotive or horses, the draw-bar is pushed back with force, and, through the bar M, applies the brakes, or operates together with the ordinary brake-shaft on the platform for that purpose.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The pawl E, draw-bar D, pin H, and

guide I, constructed and operating as described.

2. The bar M, rigidly connected to the draw-bar, abutting against lever N, and operating in connection with draw-bar and brake, as set forth.

3. The pulley V V', chain N, combined with draw-bar D, and operating as set forth.

4. The band-brakes O, levers R and W, bar M, and connecting-chains, combined and operating in connection with the draw-bar and attachments, as set forth.

5. The adjustable eyebolt, applied to the brake-shaft, as herein set forth.

Witnesses: JOSEPH A. CODY.

JOHN DANE, Jr.,

EDM. F. BROWN.