(No Model.)

M. V. MEYERS.

CAR BRAKE.

No. 307,405. Patented Oct. 28, 1884.

Fig. 1.

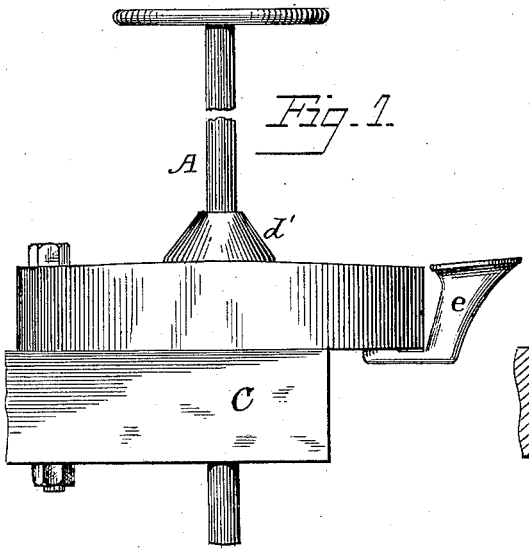


Fig. 2.

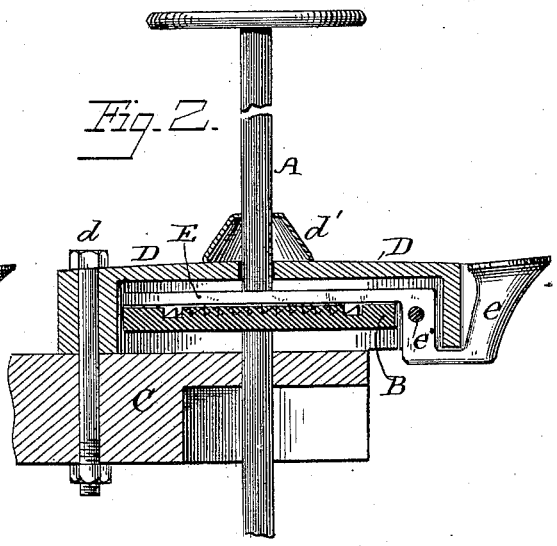


Fig. 4.

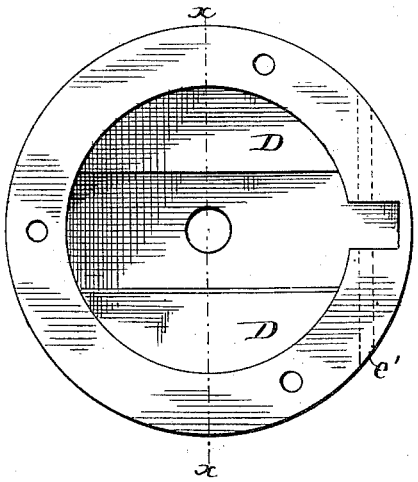


Fig. 5.

Fig. 3.

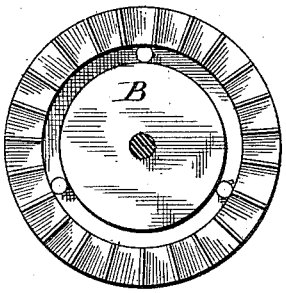
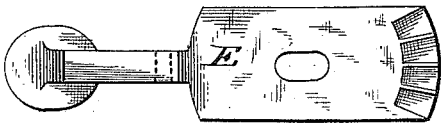


Fig. 6.



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UNITED STATES PATENT OFFICE.

MARTIN V. MEYERS, OF COLUMBUS, OHIO.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 307,405, dated October 28, 1884.

Application filed July 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, MARTIN V. MEYERS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Improvement in Car-Brakes, of which the following is a specification.

My invention relates to improvements in car-brakes in which a vertical shaft having the brake-chain attached thereto and adapted to be wound thereon is revolved by a brake-wheel at its upper end, and is held in place by means of a ratchet-wheel and pawl, to which my invention more particularly relates; and the objects of my invention are, first, to provide means whereby the brake is set automatically; second, to cover the ratchet-wheel and pawl in such manner as to exclude rain or snow therefrom, and thus prevent the clogging of the parts. I attain these objects in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved car-brake. Fig. 2 is a sectional view of the ratchet-covering, showing my invention in position for operation. Fig. 3 is a plan view of the ratchet-wheel. Fig. 4 is a view of the under side of the ratchet covering or cap. Fig. 5 is a sectional view taken on line *x x* of Fig. 4, and Fig. 6 represents the pawl.

Similar letters refer to similar parts throughout the several views.

A represents the brake-shaft, of the usual construction, on which is rigidly fixed at a point near the top of the car a ratchet-wheel, B, having a circular arrangement of teeth on its upper surface, said teeth being preferably slightly flattened at their edges.

C represents the end of the top or roof of a car, through which the brake-shaft A passes, and to which is bolted by means of bolts *d d d* a circular cap or cover, D, its upper surface being slightly conical, and provided with a central opening, through which the shaft A passes. The cover D is formed with the central portion of its under surface depressed to receive the ratchet-wheel B and pawl E. This cover is preferably secured to the top of the car near and somewhat overlapping its end. The pawl E is formed of a piece of flattened metal, with a central slot for the passage of the shaft, having on its lower surface a segmental arrangement of teeth projecting therefrom, as shown in Fig. 6 of the drawings, and is loosely bolted or pivoted at *e'* in the side of the cap or cover D, which overhangs the end of the car, its outer end passing downward and outward beneath the side of the cap, and thence upward to form a lever. The teeth forming the segment upon the under surface of the pawl are normally engaged with the teeth upon the wheel B, and at each partial revolution of the brake-shaft become engaged with the succeeding teeth of the ratchet, dropping by its own weight. When it is desired to disengage the pawl from the ratchet, a slight pressure upon the outer extremity of the pawl-lever with the foot, and at the same time a partial turn of the brake-wheel to the right with the hands in order to disengage the teeth of the pawl from the ratchet, will elevate the pawl into a sub-depression formed in the cap for its reception and allow the wheel to reverse until the brake-chain is unwound. On the right side of this sub-depression an oblique offset is cut, having its greater surface, which is about one-eighth of an inch, at the end nearest the segment, and against the shoulder thus formed rests the side of the pawl while the teeth are engaged, thus preventing the pawl from slipping into the sub-depression by a mere pressure on the lever; but by a partial turn of the brake-wheel the pawl is disengaged from the shoulder and may be raised into the depression.

In order to further prevent the passage of snow or water into the cap D, I inclose that portion of the brake-shaft immediately above and adjoining the cap D with a smaller cone-shaped cap, *d'*, which is adapted to turn off the water.

It is well known that when water is allowed to reach the pawl or ratchet of a brake it is liable to freeze and clog the parts. This, as will be seen, is obviated by the use of my invention. The cap D also presents a bearing for the brake-shaft, making the use of the plates or stirrups usually used unnecessary.

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

1. The combination, with the cap or ratchet-

cover D and a combined pawl and lever hinged in the side thereof, of the brake-shaft and ratchet-wheel having a circular arrangement of teeth upon its upper surface, substantially as and for the purpose specified.

2. The combination, with the cap or ratchet-cover D and small cap *d'*, of the brake-shaft A, ratchet B, pawl and lever E *e*, and bolts *d*, substantially as and for the purpose specified.

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