(No Model.)

E. T. SCHOONMAKER.

CAR BRAKE.

No. 413,330. Patented Oct. 22, 1889.

Fig. 1.

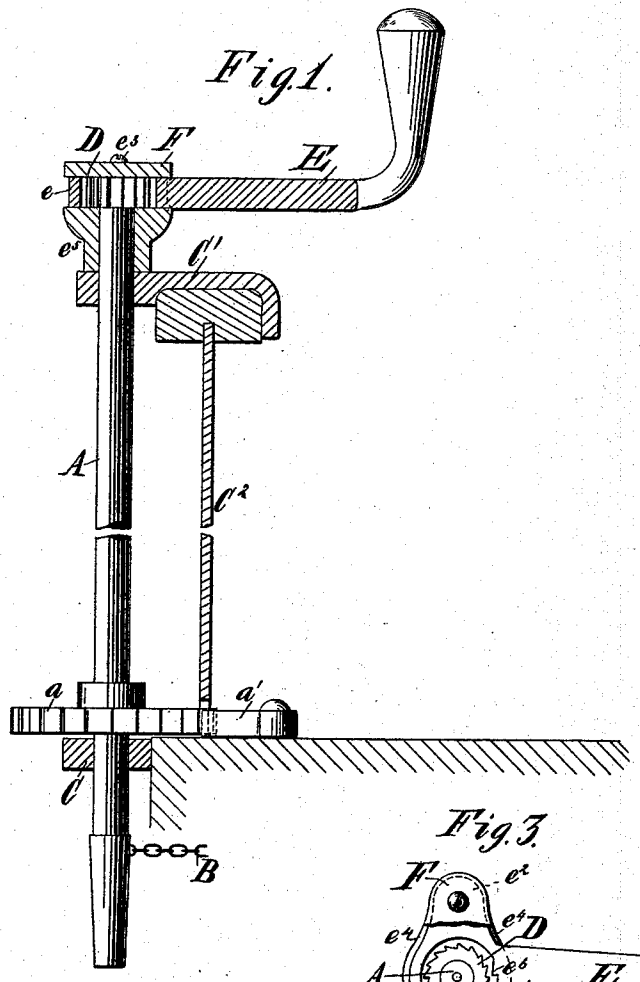
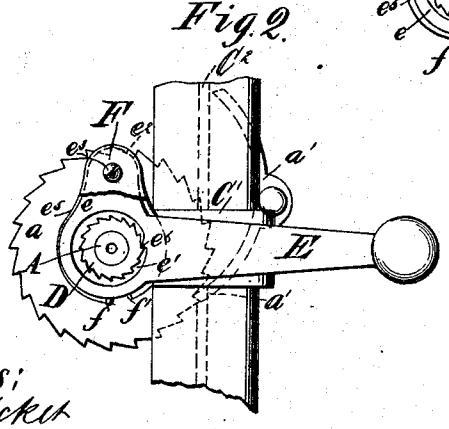


Fig. 3.

Fig. 2.



Witnesses:
John Bickel
Geo. Barry.

Inventor:
Edward T. Schoonmaker
by attorneys
Brown & Griswold

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

EDWARD T. SCHOONMAKER, OF NEW YORK, N. Y.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 413,330, dated October 22, 1889.

Application filed August 16, 1889. Serial No. 320,977. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. SCHOONMAKER, of New York, in the county and State of New York, have invented a certain new and useful Improvement in Car-Brakes, of which the following is a specification.

My improvement relates more particularly to means for operating a car-brake, and is especially adapted for use with car-brakes employed upon street-cars.

I will describe in detail a car-brake embodying my improvement, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of means for operating a car-brake, embodying my improvement. Fig. 2 is a plan or top view of the same. Fig. 3 is a detail view in plan showing certain of the parts in a different position from that in which they are shown in Figs. 1 and 2.

Similar letters of reference designate corresponding parts in all the figures.

A designates a brake-shaft, upon which is secured near its lower end a ratchet-wheel a, with which a dog a' is adapted to be engaged, as is usual. To the lower portion of the shaft A is secured one end of a chain B, which chain leads to the brake in the usual manner. The shaft A is journaled in bearings C C', the former secured upon the platform or flooring of the car and the latter upon the upper side of the dash-board C^2. Upon the upper end of the shaft A is rigidly secured a ratchet-wheel D.

E designates a crank by which the shaft A is to be turned to apply the brake. One end of the crank is provided with an enlargement e, which enlargement has extending vertically through it an aperture e', here shown as cylindrical. A portion e^2 of the enlargement e is extended to one side thereof, as here shown, at approximate right angles to the length of the main portion of the crank E. The portion e^2 is pivoted, as here shown, by means of a screw e^3 upon a projection e^4, forming part of a sleeve or hub e^5, which is loosely mounted upon the shaft A. The crank E may be swung freely upon the pivot e^3. Extending from the inner wall of the aperture e' is a tooth e^6.

In Fig. 2 I have shown the tooth e^6 as engaging one of the teeth upon the ratchet-wheel D. This is accomplished by so swinging the crank E that the tooth e^6 will become so engaged. When thus engaged, the shaft A may, by turning the crank E, be rapidly rotated to wind up the chain B, and thus apply the brakes. When it is desired to release the brake, the crank E is swung upon its pivot, so as to disengage the tooth e^6 from the teeth upon the ratchet-wheel D. As soon as this has been done, the tension upon the chain B will cause the rotation of the shaft A in a reverse direction, and thus take off the brake. It will be observed that all that is necessary to cause the engagement and disengagement of the tooth e^6 from the ratchet-wheel D is to impart a slight longitudinal movement to the crank E.

In Fig. 3 I have shown the tooth e^6 disengaged from the ratchet-wheel D.

It is quite desirable to prevent a too extended longitudinal movement of the crank E, in order that when the tooth e^6 has been released and the ratchet-wheel D is rotating in the reverse direction the latter will not contact with the side walls of the aperture e'. I have shown a convenient stop for accomplishing this, consisting of a projection f on the enlargement e, extending into a notch f', formed in the sleeve or hub e^5. This notch is only of sufficient width to admit of a movement of the crank E, which will remove the tooth e^6 from the wheel D, as the projection f will contact with the side wall of the notch. This contact also prevents the wheel D from striking the side wall of the aperture e'. In the example of my improvement shown, a cap F is arranged to extend over the top of the enlargement e, and thus incloses the ratchet-wheel D.

It will be seen that by my improvement the brake may be readily released without any reverse motion of the crank. Of course, if, instead of placing the ratchet-wheel D upon the shaft A, the tooth e^6 were placed on said shaft and the inner wall of the aperture e' were provided with ratchet-teeth, the result would be the same, as in either event a longitudinal movement of the crank would cause the engagement of the crank with the shaft.

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

1. The combination, with a brake, of a shaft having near its upper end a projection, a crank pivoted upon said projection so as to be capable of longitudinal movement toward and from said shaft, said crank and shaft, the one being provided with a ratchet and the other with a tooth for engaging the ratchet, substantially as specified.

2. The combination, with the shaft A, having mounted upon it the sleeve or hub e^5, of the crank E, pivoted upon said sleeve or hub so as to be capable of longitudinal movement toward and from the shaft, the ratchet-wheel D on said shaft, and the tooth e^6 upon the crank for engaging said ratchet-wheel, substantially as specified.

3. The combination, with the shaft A, provided with the sleeve or hub e^5, of the crank E, pivoted upon said sleeve or hub so as to be capable of longitudinal movement toward and from said shaft, the tooth e^6 on said crank, the ratchet-wheel D on the shaft, and a stop for preventing a too extended longitudinal movement of the crank, substantially as specified.

EDWARD T. SCHOONMAKER.

Witnesses:
S. G. LAURENCE,
W. F. RANDALL.