

(No Model.)

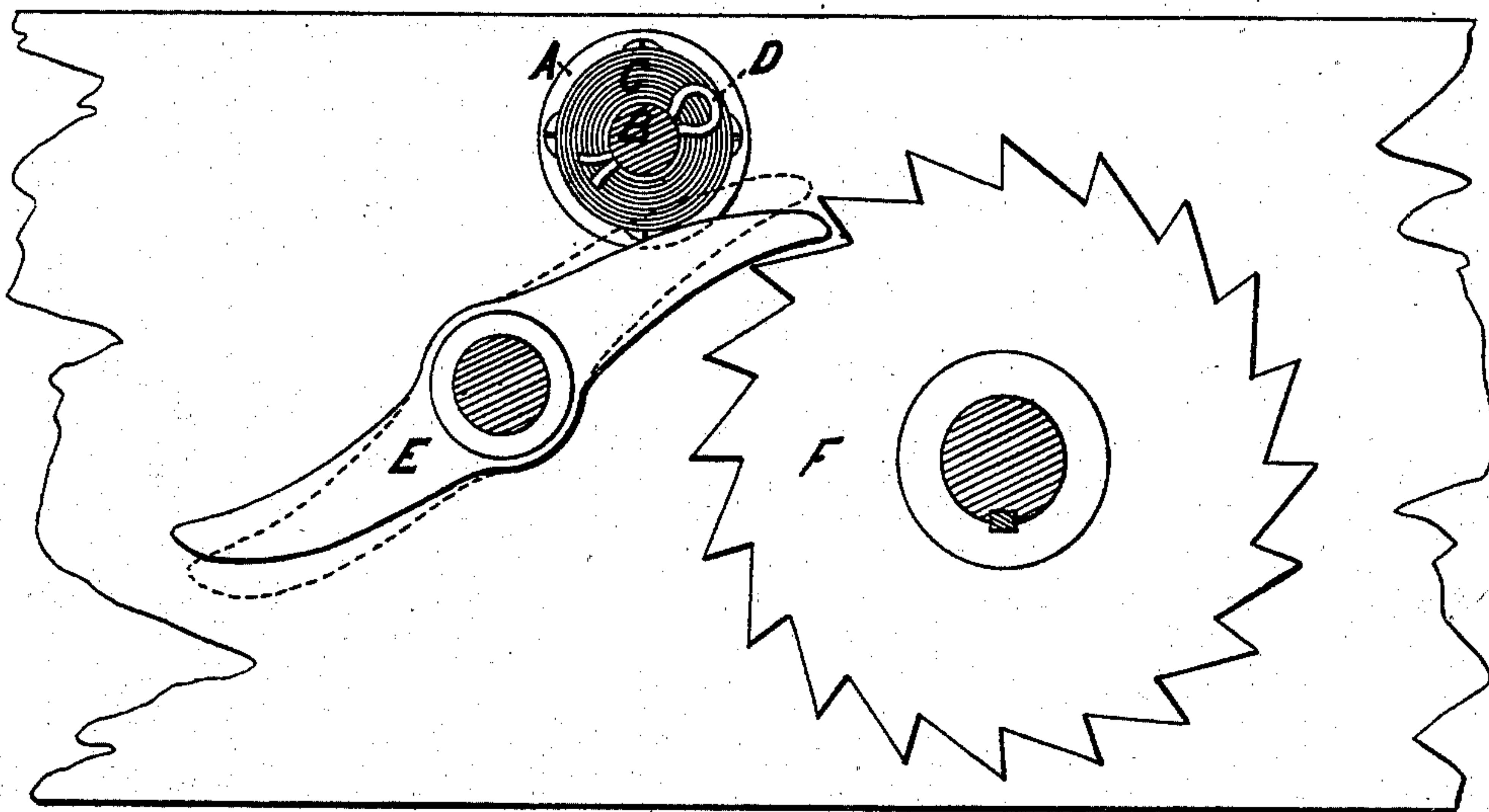
W. S. SAMPSON & J. C. SCHOONOVER.

CAR BRAKE.

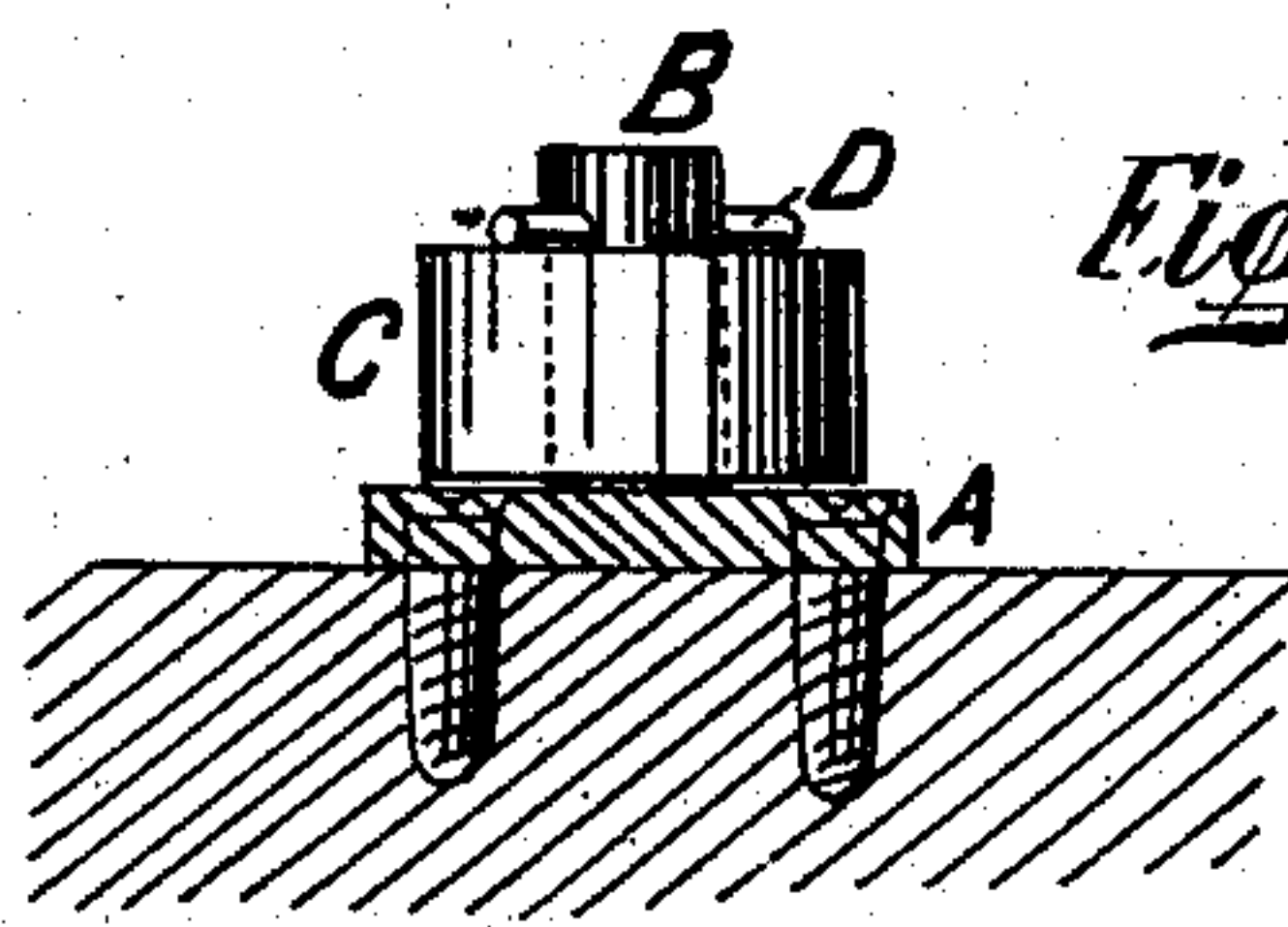
No. 249,486.

Patented Nov. 15, 1881.

*Fig: 1,*



*Fig: 2,*



*Witnesses:*

*Ernest A. Hagen*  
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*Inventors.*

*Wm S. Sampson*  
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# UNITED STATES PATENT OFFICE.

WILLIAM S. SAMPSON, OF BROOKLYN, AND JOHN C. SCHOONOVER, OF NEW YORK, N. Y.

## CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 249,486, dated November 15, 1881.

Application filed August 22, 1881. (No model.)

*To all whom it may concern:*

Be it known that we, WM. S. SAMPSON, of the city of Brooklyn, county of Kings, State of New York, and J. C. SCHOONOVER, of the city, county, and State of New York, have invented certain new and useful improvements for operating the mechanism attached to brakes for cars and other vehicles, of which the following is a specification.

Our invention relates to that class of brakes having a vertical rod, a ratchet-wheel attached to that rod, and a pawl or dog engaging with the cogs of the wheel when the same is pressed by the foot.

The purpose of our improvement is to supersede the use of the foot for pressing against the pawl when the brake is to be set up and substitute therefore an automatic means of accomplishing the same purpose. We accomplish this end by employing a yielding substance situated so as to impinge against the pawl and press the engaging end into the scores of the ratchet-wheel as each score presents itself in the revolution of the wheel.

In the accompanying drawings, Figure 1 is a plan view of a ratchet-wheel, a pawl or dog, and our improvement in the practical position for operating upon the pawl, the whole shown as mounted upon a section of a common foot-board. Fig. 2 is an elevation of our improvement, showing its attachment to the foot-board.

The letters of each figure refer to corresponding parts.

In Fig. 1 A is the bed-plate of our improvement; B, the upright post or stud; C, an elastic sleeve dropped over and surrounding the stud B, and D a pin to fasten same.

E is a pawl or dog, and F a ratchet-wheel keyed to the brake-rod.

Both ratchet-wheel and pawl are now in general use.

The operation of our improvement is as follows: As the ratchet-wheel F revolves, each cog in succession pushes the engaging end of pawl E outward against the elastic substance C, as per dotted line for the extreme of movement, and as fast as pawl E is released the elasticity of sleeve C throws it back to the holding-point for the ratchet, and this outward-and-return motion continues as long as the wheel is made to revolve.

The process of letting off the brake is to strain up the brake-wheel a short distance, as is now done to accomplish the same purpose;

press the foot against the lever end of the pawl and hold it freed from the cogs of the wheel, when the tension of the brake will run the ratchet-wheel back to the point of rest.

The majority of cars using the brake to which this improvement mainly applies are cars where the brake is manipulated by a wheel from the roof, and where the pawl of the ratchet-wheel is fixed to a foot-board on the end of the car and some distance below the roof. This location of the checking-gear of the brake requires the brakeman either to sit upon the roof of the car, where his foot may reach the pawl, or to stand upon the foot-board for the same purpose. Either of these positions is of great hazard to the brakeman in case of the sudden checking of the speed of the train, and, in consequence of the time consumed to gain his feet upon the top of the car at a sudden call for more and many brakes, of great hazard to train and men combined.

It is obvious that when the danger-signal is given to the employes of a train life and property are preserved in proportion to the time consumed to bring the train to a halt. It is also obvious that this time is longer or shorter, in proportion to the rapidity with which brakes are put on, and to the number of brakes applied.

The sole aim of our improvement is to enable the brakeman to put on his brake from the roof of the car without hazard to himself. This contingency secured, brakes will be applied rapidly and many in number, thereby guaranteeing safety to life and to property.

We are aware that the employment of springs to force the engaged end of the pawl into the scores of a ratchet-wheel for a car-brake is not new; hence we do not claim such, broadly.

Having thus fully described our invention, what we desire to claim, and secure by Letters Patent, is—

In combination with a car-brake, ratchet-wheel F, and a pawl, E, a vertical post or stud, B, supporting an elastic sleeve, C, for the purpose and substantially as herein set forth and described.

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JOHN C. SCHOONOVER.

Witnesses:

ROBT. J. GRIFFITH,  
BENJ. F. GERDING.