

(No Model.)

2 Sheets—Sheet 1.

P. F. PETERSEN.
SAFETY CAR BRAKE.

No. 453,984.

Patented June 9, 1891.

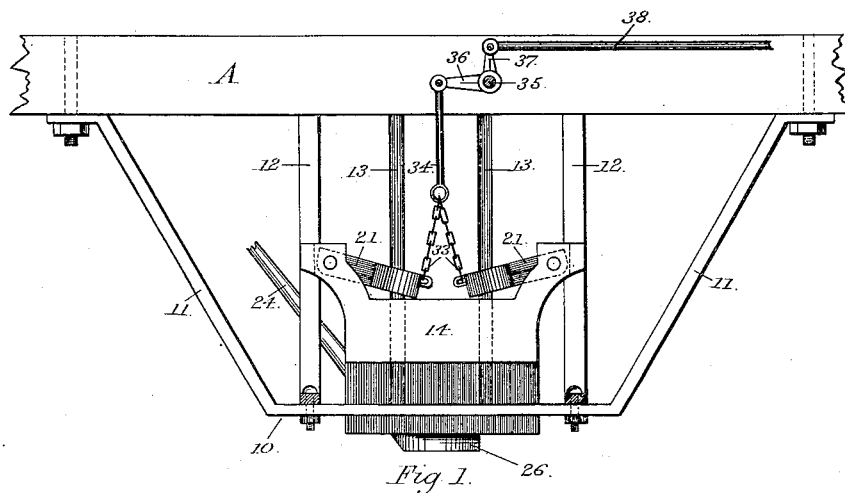


Fig. 1.

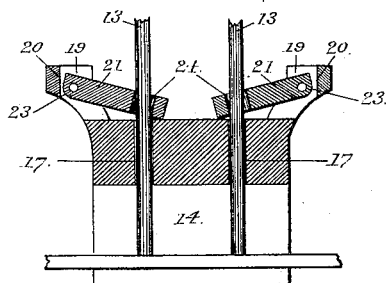


Fig. 2.

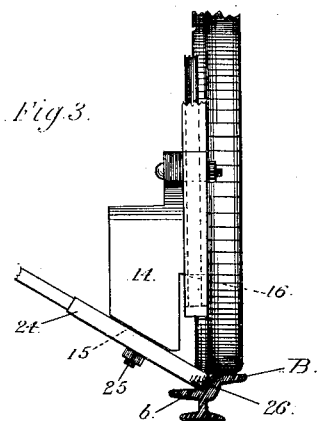


Fig. 3.

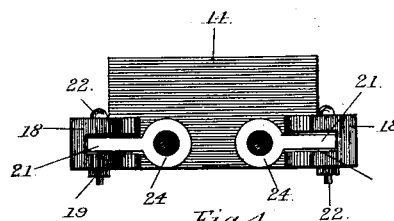


Fig. 4.

Witnesses.

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Inventor

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per Wm K White
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2 Sheets—Sheet 2.

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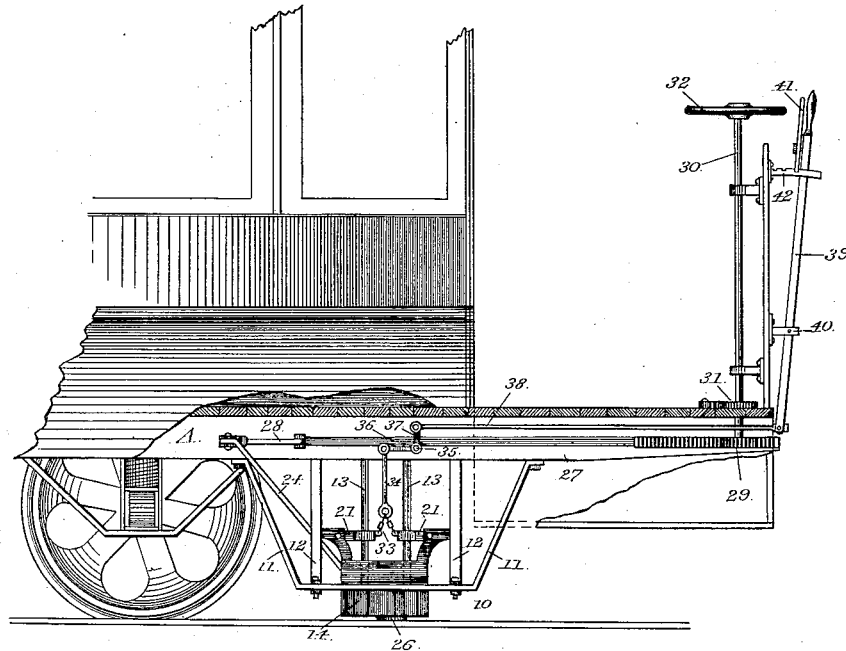


Fig. 6.

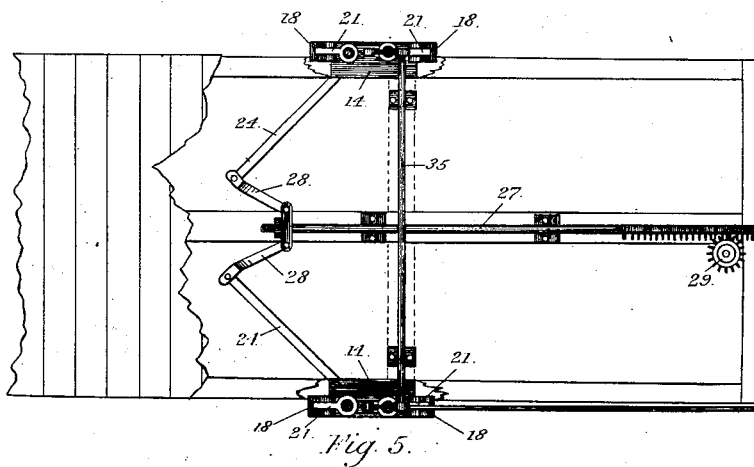


Fig. 5.

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UNITED STATES PATENT OFFICE.

PETER F. PETERSEN, OF DAVENPORT, IOWA, ASSIGNOR OF ONE-HALF TO
WILLIAM O. SCHMIDT, OF SAME PLACE.

SAFETY CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 453,984, dated June 9, 1891.

Application filed October 2, 1890. Serial No. 366,910. (No model.)

To all whom it may concern:

Be it known that I, PETER F. PETERSEN, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented a new and useful Car Safety-Brake; of which the following is a specification.

My invention relates to a safety-brake which may be additional to the usual car-brake for use in descending hills or grades; and the object of my invention is to stop the car and prevent further movement down the grade when the brake is set. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figures 1, 2, 3, and 4 are detail views of parts of my device. Fig. 5 is a plan view of my device, the floor of the car being removed. Fig. 6 is a side view of my device attached to a car.

Similar letters and figures refer to similar parts throughout the several views.

I attach a frame underneath the car-body A, consisting of the horizontal bar 10, provided with supports 11 11, brace-bars 12 12, and vertical rods 13 13, which are supported between the body of the car and the horizontal bar 10 and are parallel with each other. The block 14 is beveled on its bottom surface, as shown at 15 in Fig. 3, and its front upper portion projects so as to form the shoulder, as at 16, (shown in Fig. 3,) such shoulder being about the width of the horizontal bar 10. The upper projecting portion of the block 14 is provided with two vertical perforations 17 to accommodate the vertical rods 13, as shown by the sectional view of said part of the block in Fig. 2. At each upper front corner of the block 14 are projecting ears 18, which ears are provided with longitudinal grooves 19, the end walls of such grooves being vertical, as at 20 in Fig. 2. Within the groove of each ear is a bar 21, pivotally attached by the bolt 22, the lower corner of which is rounded, as at 23, as shown in Fig. 2, and the opposite end of such bar is perforated, as at 24. To the beveled portion of block 14 is pivotally attached a bar 24 by the bolt 25. Such bar projects outwardly from the block, and at its outer end its form is eccentric, as at 26, as shown in Figs. 1 and 3. The rack 27 is sup-

ported underneath the car-body, its inner ends being pivoted to the bars 28 28, one of each of which is pivoted to the inner end of a bar 24, as more fully shown in Fig. 5, and the teeth at its outer end registering with the toothed wheel 29, supported underneath the car-platform upon the vertical shaft 30, which shaft is also provided with the ratchet-wheel 31 and a dog of usual construction, (not illustrated in the drawings,) and also a handle or wheel 32 for turning such shaft.

The inner ends of the bars 21 are attached to the respective ends of a short chain 33, which chain is attached centrally to a bar 34. The rock-shaft 35 is supported beneath the body of the car crosswise thereof, such rock-shaft being provided at each end with the short horizontal arm 36, to which the upper end of a bar 34 is pivoted. At one end the rock-shaft is also provided with a vertical arm 37, at the upper end of which is pivoted the end of the draw-rod 38, which extends to the front end of the platform of the car, where it is pivoted to the bottom of the lever 39, which lever is pivoted to the front railing of the platform at 40, as shown in Fig. 6. Such lever is also provided with the spring-pawl 41 and rack 42.

The block 14 is by means of the lever 39 and its connections lowered so that the eccentric part 26 of a bar 24 may be in substantially a horizontal line with the depressed or side portion of a rail B, as shown at B in Fig. 3. The bars 21 are brought to a horizontal position by this operation, as shown in Fig. 6. Their outer ends being in contact with the vertical walls 20 in the ears 18 tends to prevent the block 14 from sliding upward. The operator then turns the wheel 29 by its shaft and handle, so as to draw the rack 27 forward, and through its connections the arms 24 are swung inward and forward, while the eccentric portions at 26 are swung outward and backward against the portion of the rail at b. When the operator has forced these parts 26 against the sides of the opposite rails, my device being on opposite sides of the car, as shown in Fig. 5, so as to stop the car, he may retain such pressure against the rails by securing the dog in the ratchet-wheel 31.

From the description here given persons

skilled in the art will understand the construction and operation of my device, the form of which may be varied without departing from the scope of my invention.

5 What I claim as new, and desire to secure by Letters Patent, is—

1. In a carsafety-brake, the arms pivotally supported beneath the car-body on opposite sides, the outer ends arranged to bear against
10 opposite innersides of the rail, the inner ends connected with a rack, and the rack supported longitudinally to the car-body, and arranged to draw the inner ends of such arms forward and

to retain them in such position, substantially as described.

2. In a carsafety-brake, the combination of
15 the pivotally-supported arms 24, the blocks 14, supported in frames to the car-body, the pivoted bars 21, the rack, the toothed wheel and its shaft, the rock-shaft, the draw-rod, 20 and the lever, substantially as described.

PETER F. PETERSEN.

Witnesses:

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W. W. HUMPHREY.