

No. 897,345.

PATENTED SEPT. 1, 1908.

D. H. & A. BRAZIL.  
STREET CAR FENDER.  
APPLICATION FILED SEPT. 16, 1907.

2 SHEETS—SHEET 1.

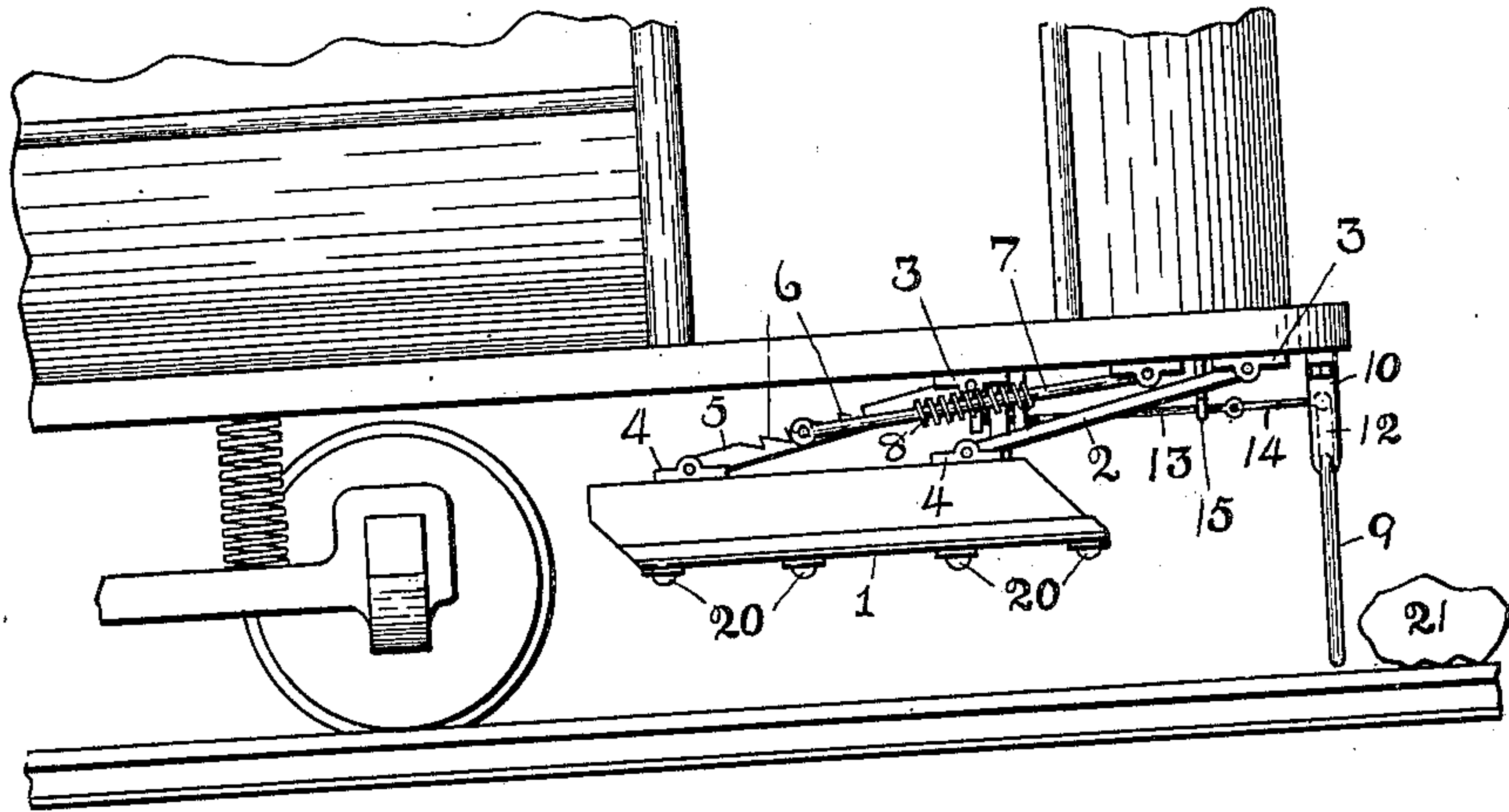


Fig-1-

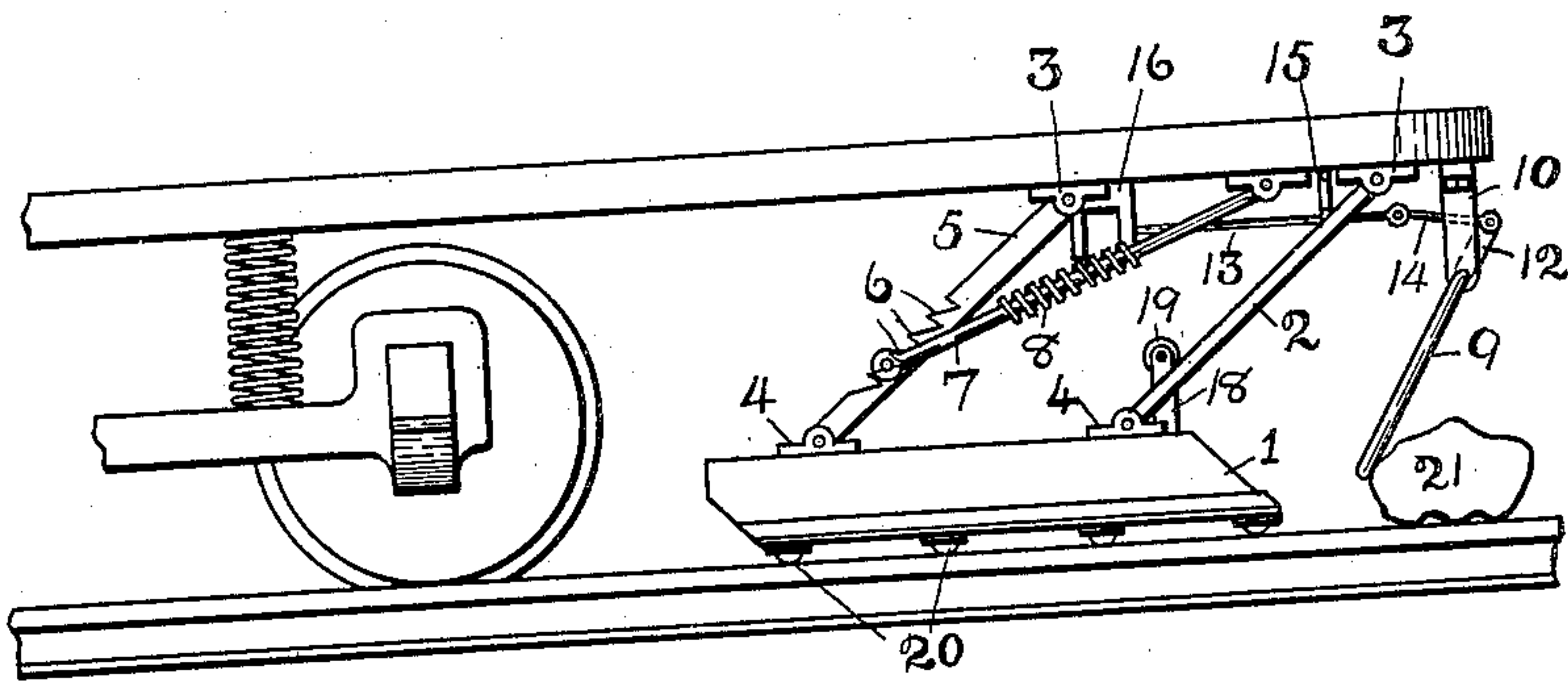


Fig-2-

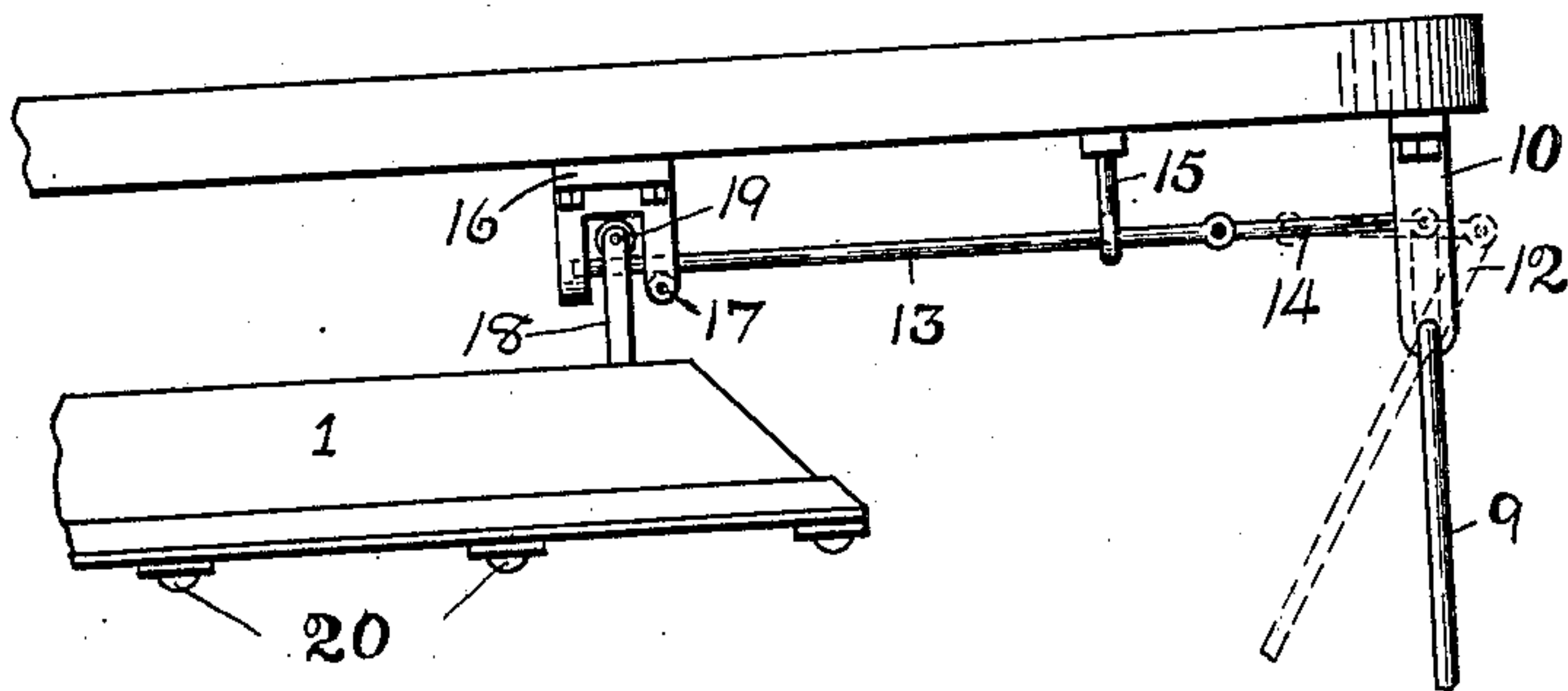


Fig-3-

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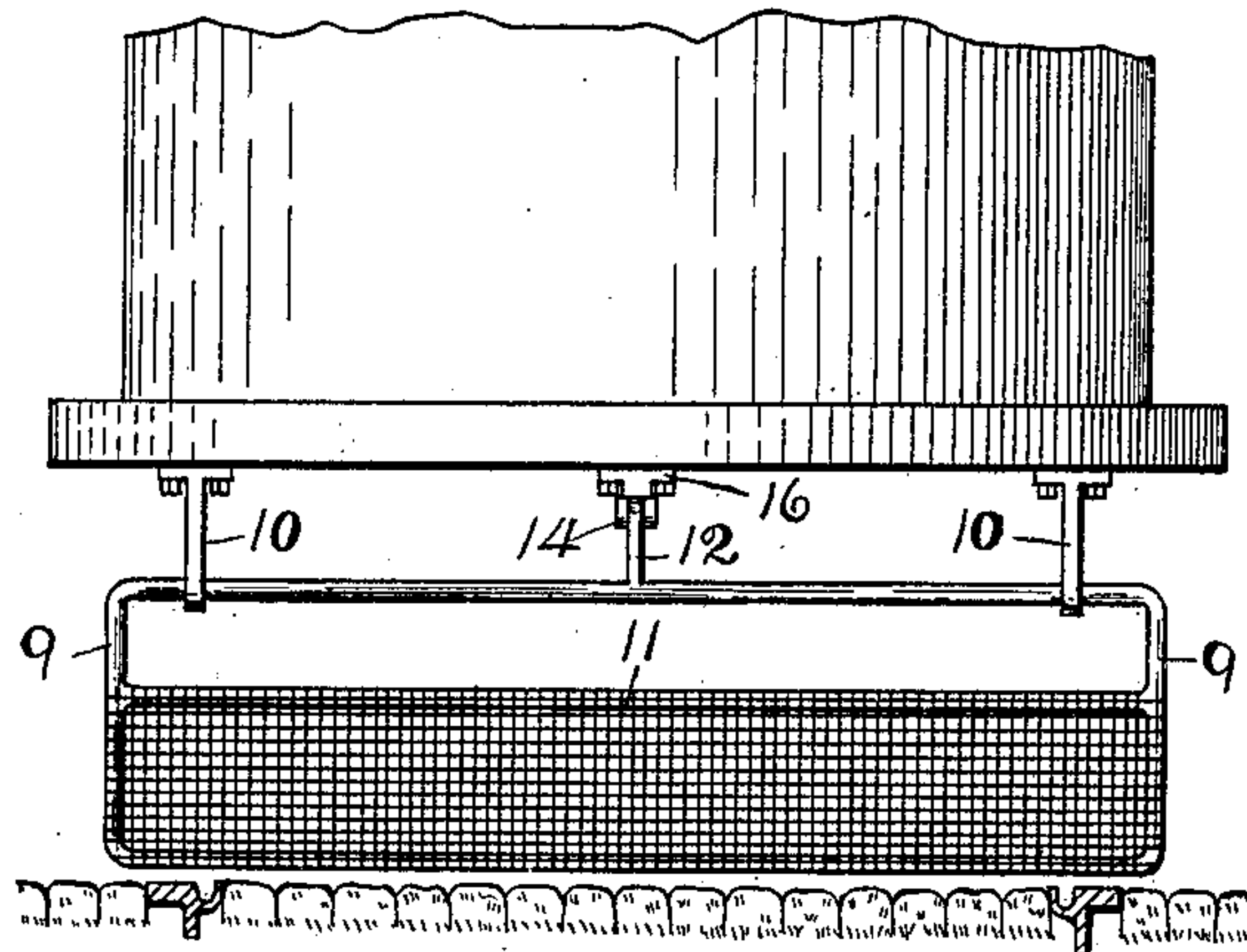


Fig-4-

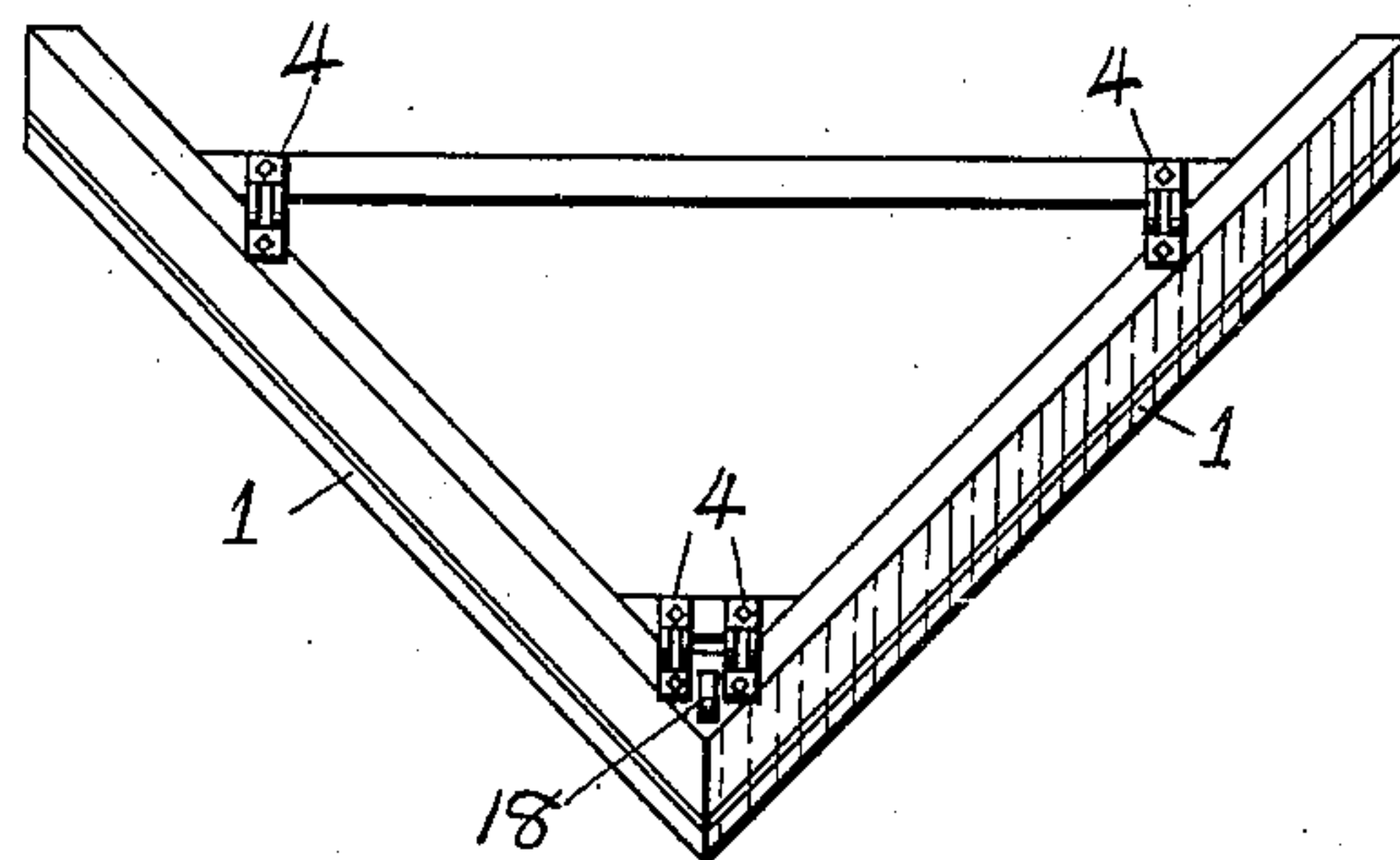


Fig-5-

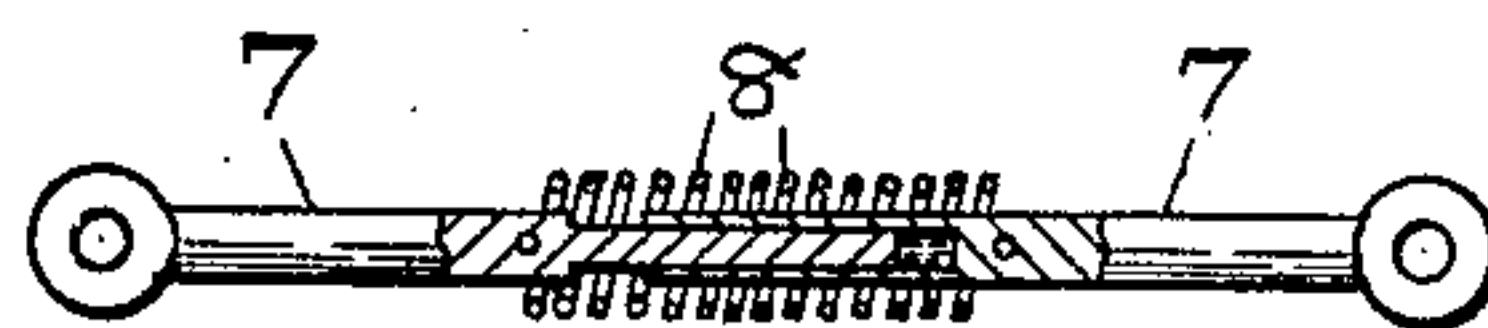


Fig-6-

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# UNITED STATES PATENT OFFICE.

DAVID HARTWELL BRAZIL AND ALEXANDER BRAZIL, OF MONTGOMERY, ALABAMA.

## STREET-CAR FENDER.

No. 897,345.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed September 16, 1907. Serial No. 393,165.

*To all whom it may concern:*

Be it known that we, DAVID HARTWELL BRAZIL and ALEXANDER BRAZIL, citizens of the United States, residing at Montgomery, county of Montgomery, and State of Alabama, have invented a new and useful Street-Car Fender, of which the following is a specification.

This invention relates to apparatus for protection against the loss of life from street cars and against the danger of derailment of cars; and the objects of our improvement are, safety to pedestrians, simplicity and strength of construction, and effectiveness in operation. These objects we attain by means of the mechanism illustrated in the accompanying drawing, in which;

Figure 1 is a side elevation; Fig. 2, a side elevation; Fig. 3, a detail side view; Fig. 4, a detail view; Fig. 5, a detail plan view of the pilot; and, Fig. 6, a detail view of the locking bar.

Similar reference numerals refer to similar parts throughout the several views of the drawing.

A pilot 1, preferably of similar form to that of the conventional pilots of locomotives, is normally suspended under the front platform of the car just forward of the front wheels and as near to the wheels as practicable without touching them, by means of parallel links 2 and 5. The links 2 and 5 are pivoted at one of their ends to pilot 1 in pivot bearings 4 and at their opposite ends to the under surface of the platform of the car by means of pivot bearings 3. The rear links 5 are notched at 6, and a locking bar 7 is mounted on either side of the car and adapted at its free end to drop into notches 6 in bar 5 and pivoted at its opposite end to the under surface of the car. Bar 7 is provided with a spring 8 and divided into two parts which are slidably connected and are so arranged that spring 8 draws the ends or parts together. Thus bar 7 is adapted to be elongated somewhat and rendered somewhat yielding by spring 8. Any suitable yielding bar 7 may be used, the special construction being immaterial. A pendent bracket 16 is secured to the under surface of the front platform for the purpose of suspending pilot 1. Bracket 16 is bifurcated transversely so that a rear and front pendent ear result. The ears of the bracket are also bifurcated longitudinally relative to the car body to provide the passage through them of a trigger-rod 13. The lower

end of the fork formed by the forward ear of bracket 16 is closed by means of an antifric-tion roller 17. A standard 18 is secured to the upper surface of pilot 1, preferably at the apex, by means of which pilot 1 is suspended in bracket 16. Standard 18 is bifurcated longitudinally relative to the car and the upper end of the fork thus formed, closed by an antifric-tion roller 19. A suitable eye-bracket 15 is provided depending from the lower surface of the platform, and having its eye suitably formed to slidably receive bar 13. Immediately at the front of the platform of the car pendent brackets 10 are secured to the under surface. Brackets 10 are provided with eyes which form bearings for a swinging fender 9. Fender 9 is preferably made with a rectangular frame, the upper longer side of which is pivotally mounted in brackets 10, and is provided at its middle with an upward extending lever arm 12. The frame of swinging fender 9 is preferably covered with wire or other net 11. Arm 12 is pivotally connected with trigger-rod 13 by means of a link 14. Pilot 1 is provided on its under surface with rollers 20 adapted to roll upon the surface of the street when the pilot is down in operative position.

In operation, pilot 1 is normally suspended at some distance from the surface of the street by lifting it up until standard 18 enters bracket 16, and trigger rod 13 is pushed under roller 19. It will be understood that trigger-rod 13 now rests upon roller 17 secured in bracket 16 and carries fender 1 through the instrumentality of standard 18 and roller 19, which rests upon the rod. Links 2 and 5 keep pilot 1 always in parallel relation to the under surface of the platform of the car whether the pilot is up or down. When trigger-rod 13 is in position to carry the pilot suspended, swinging fender 9 hangs approximately perpendicular and its lower edge is quite near the surface of the street. When fender 9 encounters an obstruction, 21, the lower edge is stopped by the obstruction and its upper edge is carried forward by the car. This throws the fender to a slanting position as shown in Fig. 2. Arm 12 is moved forward, draws trigger-rod 13 forward, withdrawing it from engagement with roller 19. Pilot 1 now drops by gravity to the surface of the street behind the obstruction 21 and either carries it along in front of it or pushes it out to one side out of the path of the wheels of



the car. When the fender is dropped, the lower end of bars 7 slide down over the notches 6 in bars 5 and catch in the notches so that any tendency to push pilot 1 backward and upward is yieldingly resisted by the spring bars, but yet not rigidly resisted to such a degree that the apparatus would be broken by encountering an unyielding obstacle such as the uneven surface of the street. When the obstacle 21 has been removed, the men in charge of the car may again suspend pilot 1 and the car may proceed. It is obvious that with this fender there is no danger of derailment or wrecking the car. We are aware that fenders and scoops have been pivoted to the front end of the forward truck, having their forward edges when in action in contact with the surface of the street. These have had the tendency to raise the front wheels of the trucks from the track by coming in contact with the cobble stones and other unyielding obstructions in the street and thus forming a powerful lever. This danger is altogether obviated by our construction inasmuch as the pilot is dragged by links 2 and 5 instead of being pushed.

Having thus described our invention so

that any one skilled in the art pertaining thereto may make and use it, we claim— 30

1. In a car fender, a pilot suspended from the front platform of the car, a trigger for suspending said pilot bodily from the platform of the car, and downward and rearwardly inclined links connecting said pilot 35 with the platform of the car and adapting said pilot to be dragged by said platform of the car when released by said trigger.

2. In a car fender, the combination of a pilot normally bodily suspended above the surface of the street, a trigger for suspending said pilot, links slanting backward from the platform to said pilot and so connecting said pilot with the car as to drag the pilot when released and allow it to drop to the surface of the street, and a swinging fender 45 for contact with any obstruction, being swung and operating said trigger to release said pilot and allow it to drop into position to engage the obstruction.

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