

No. 686,048.

Patented Nov. 5, 1901.

G. J. GAHRING.

EMERGENCY BRAKE FOR STREET CARS.

(Application filed Mar. 25, 1901.)

(No Model.)

Fig. 1.

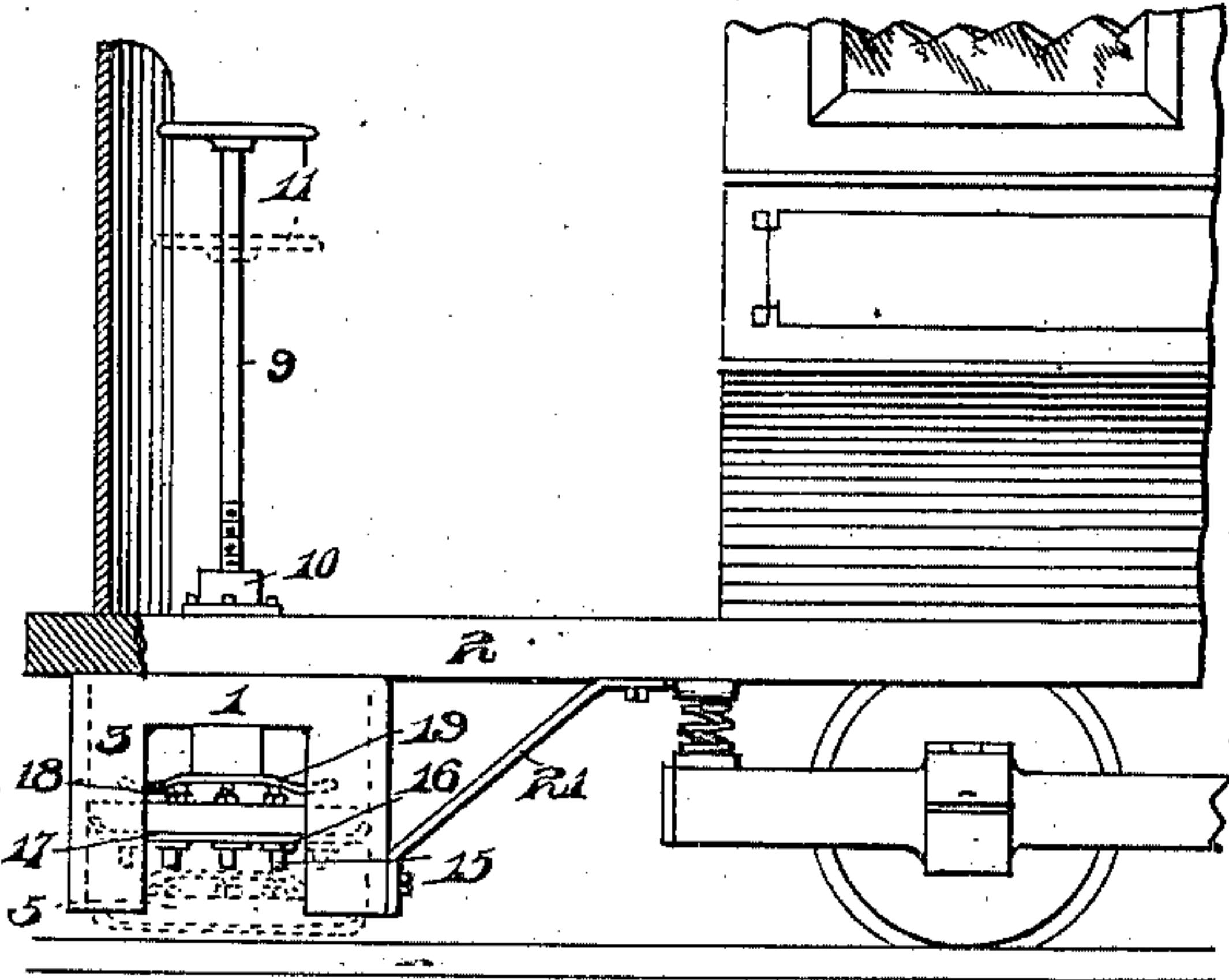


Fig. 2.

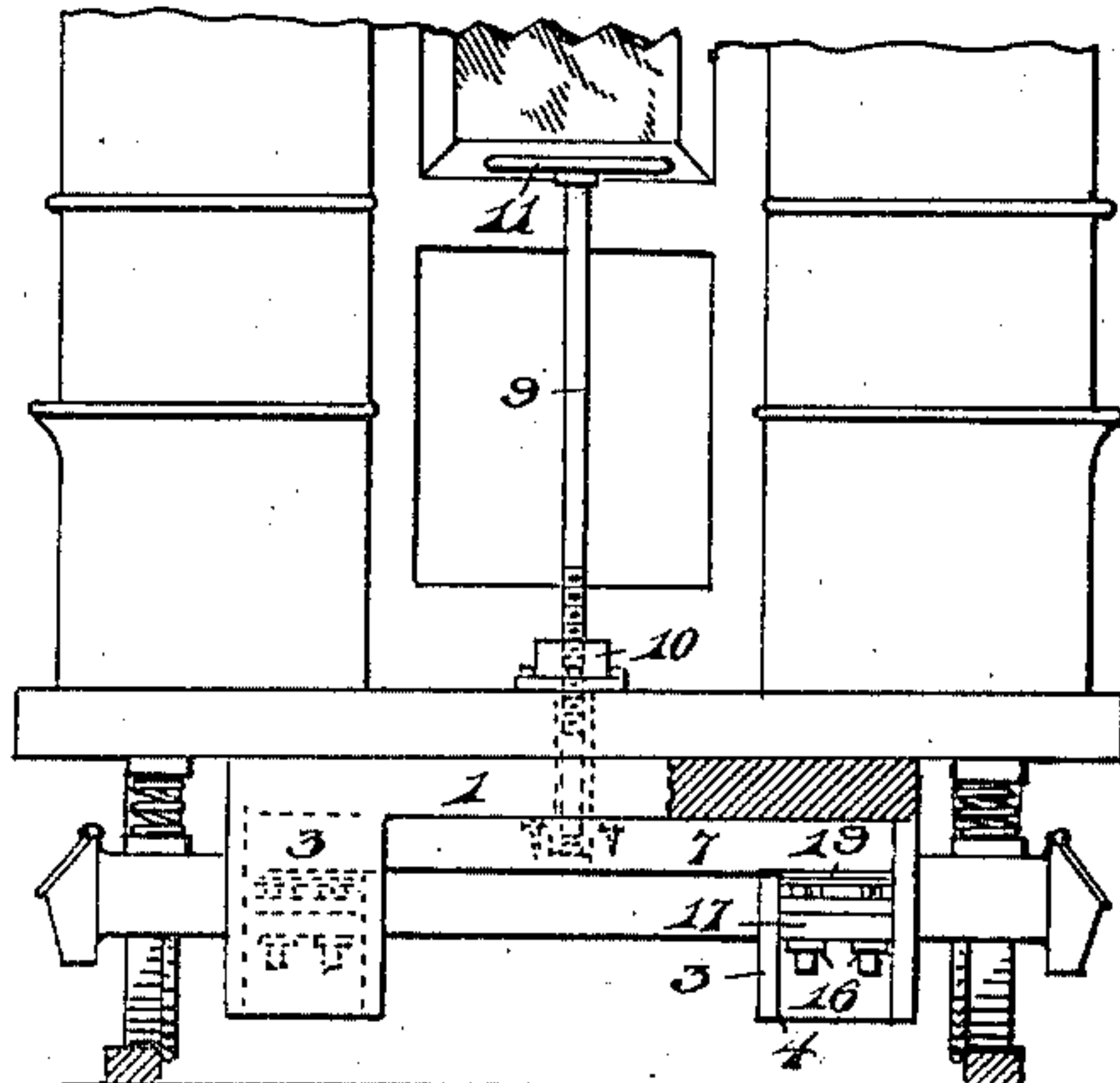


Fig. 3.

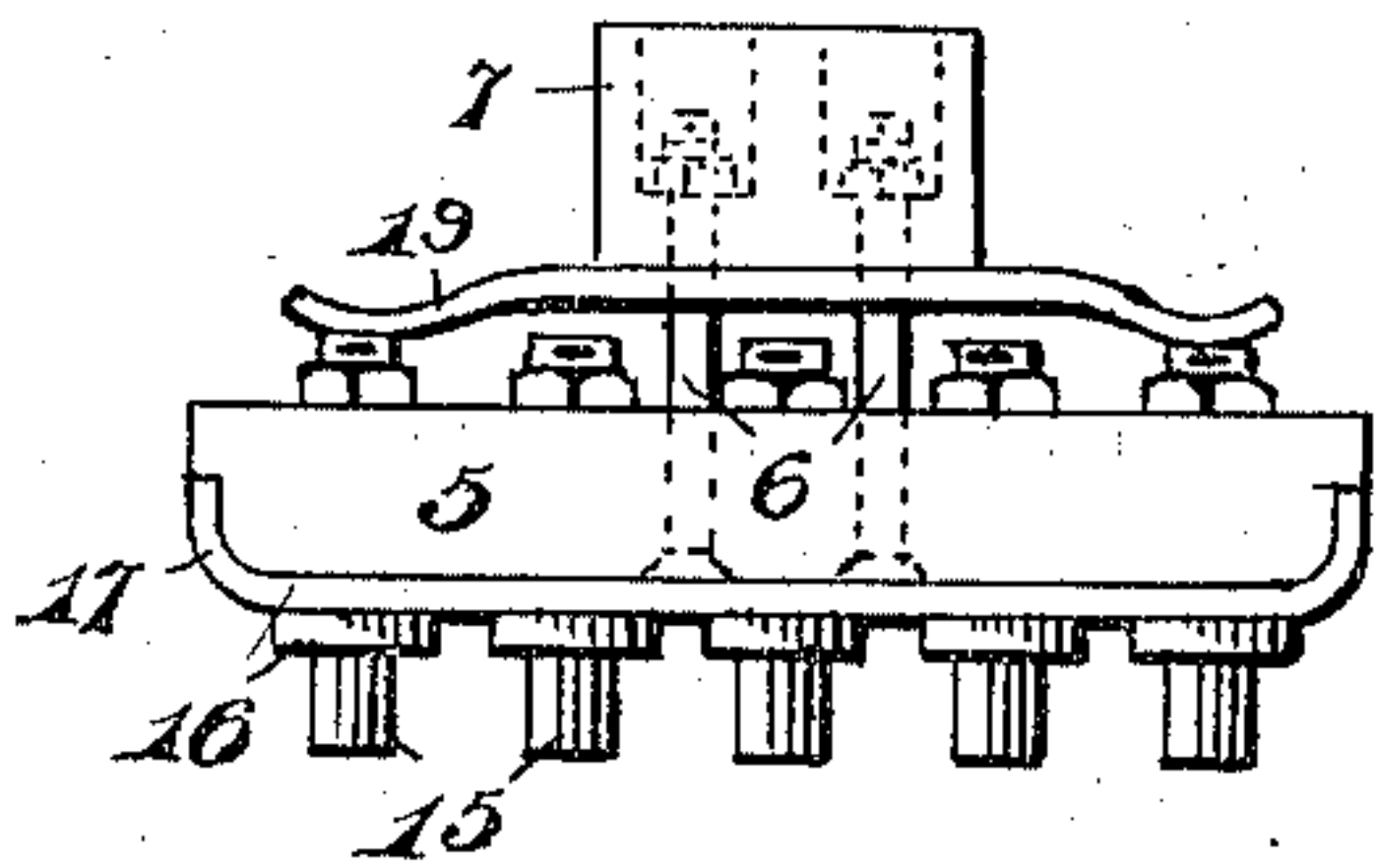


Fig. 6.

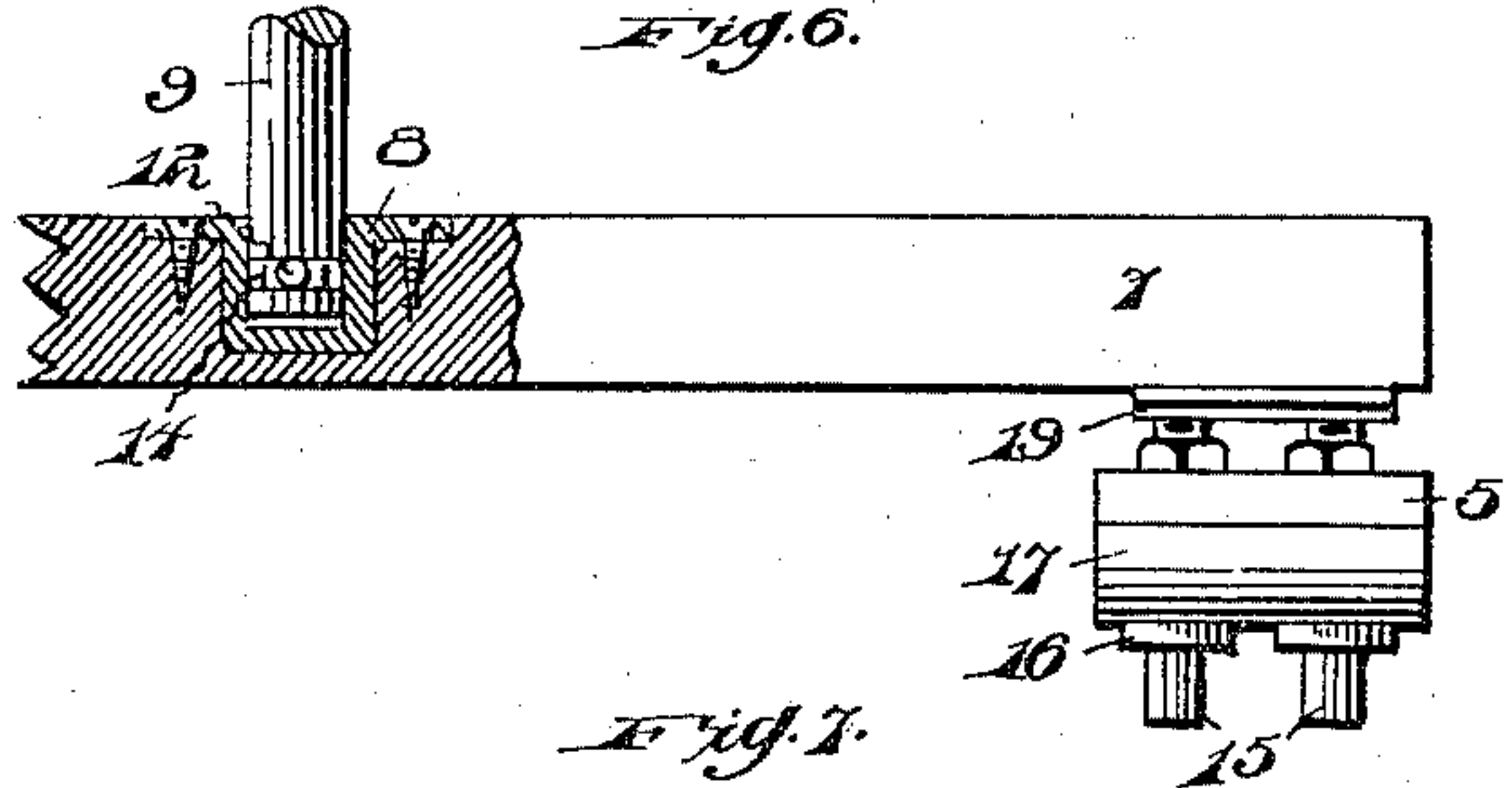


Fig. 4.

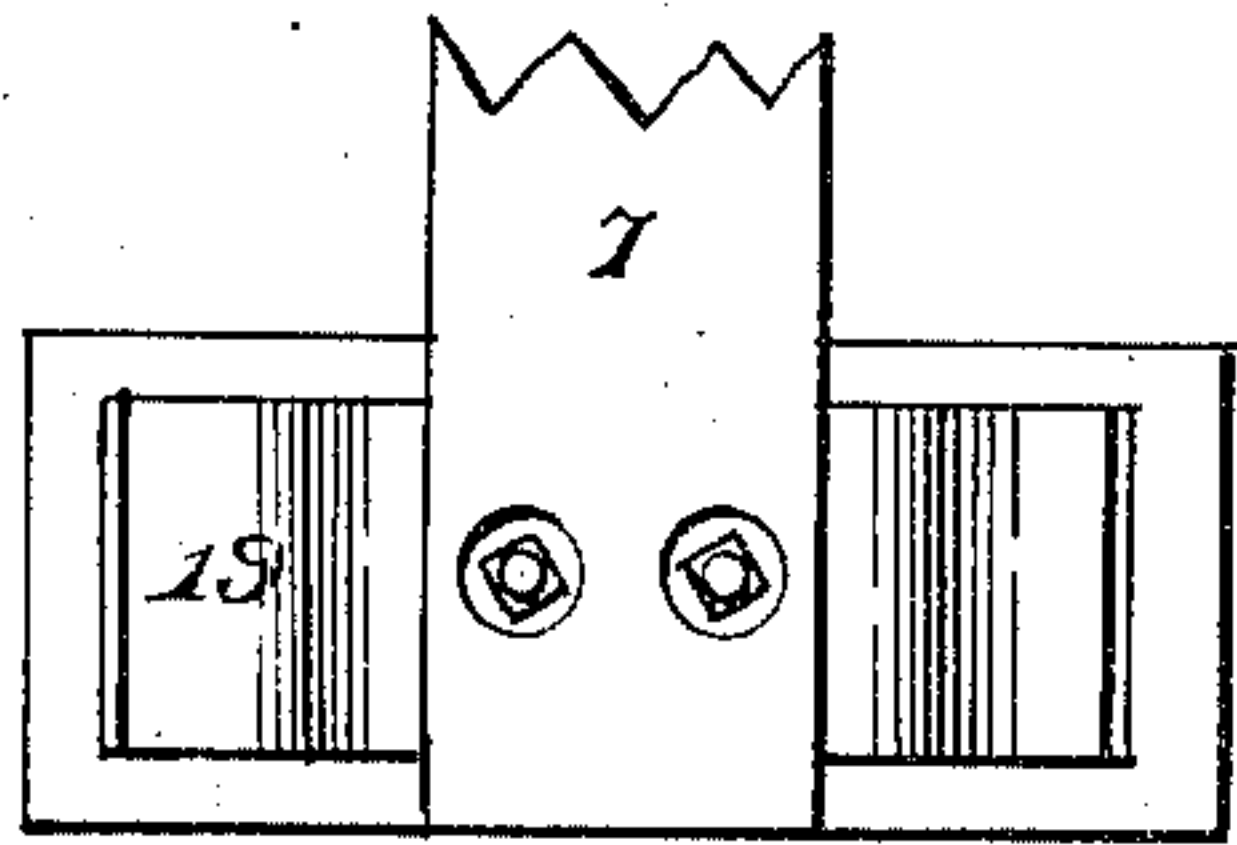


Fig. 7.

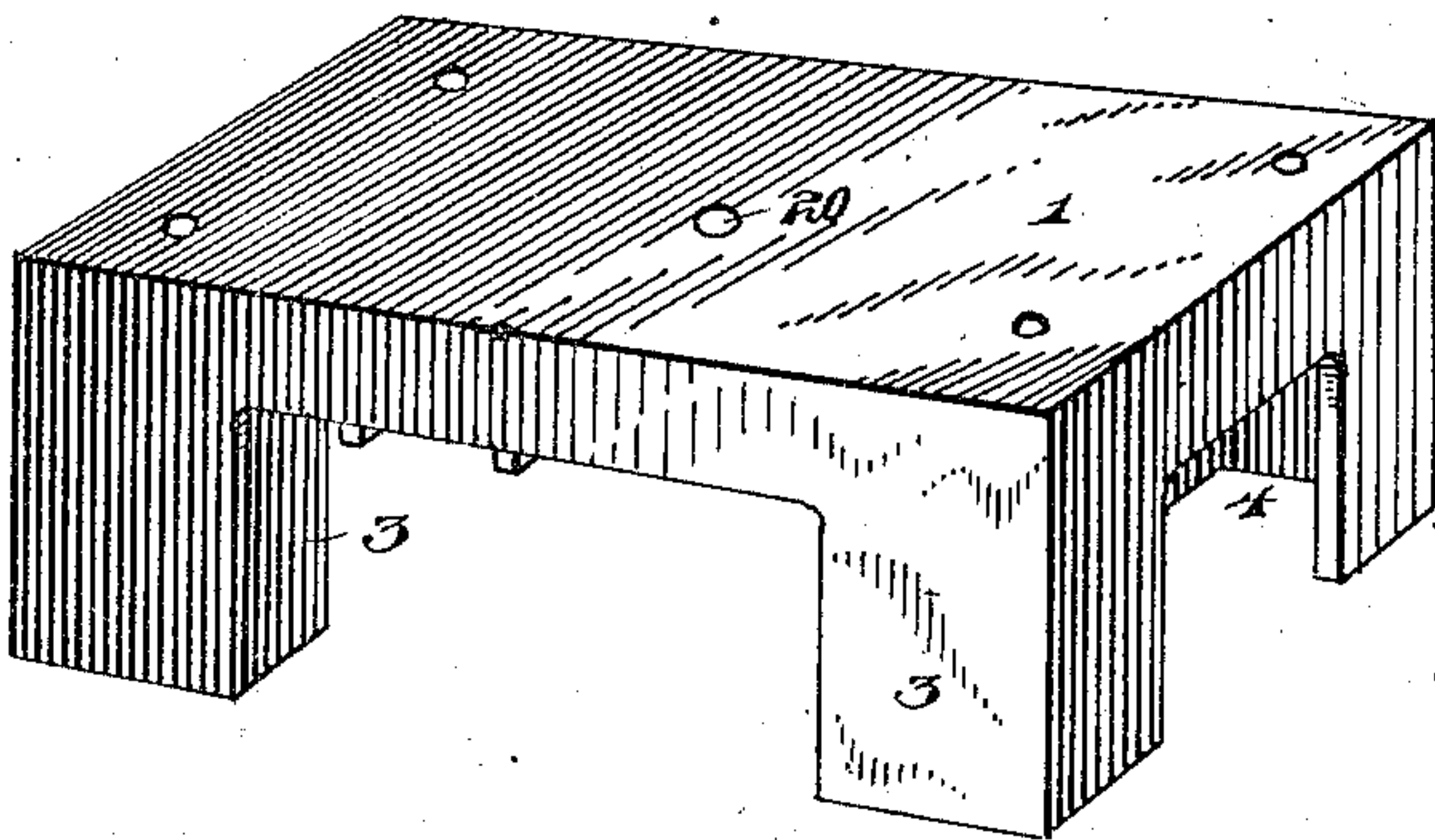
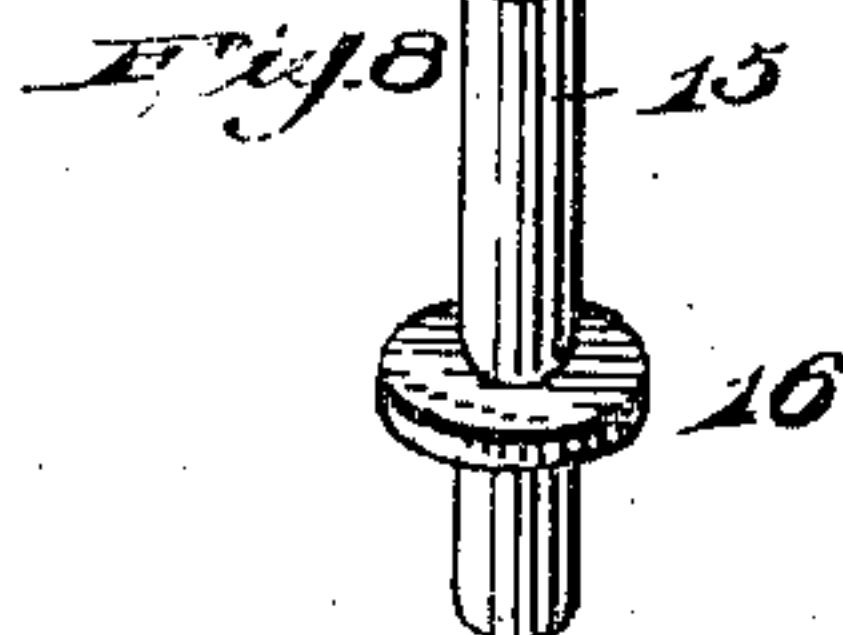
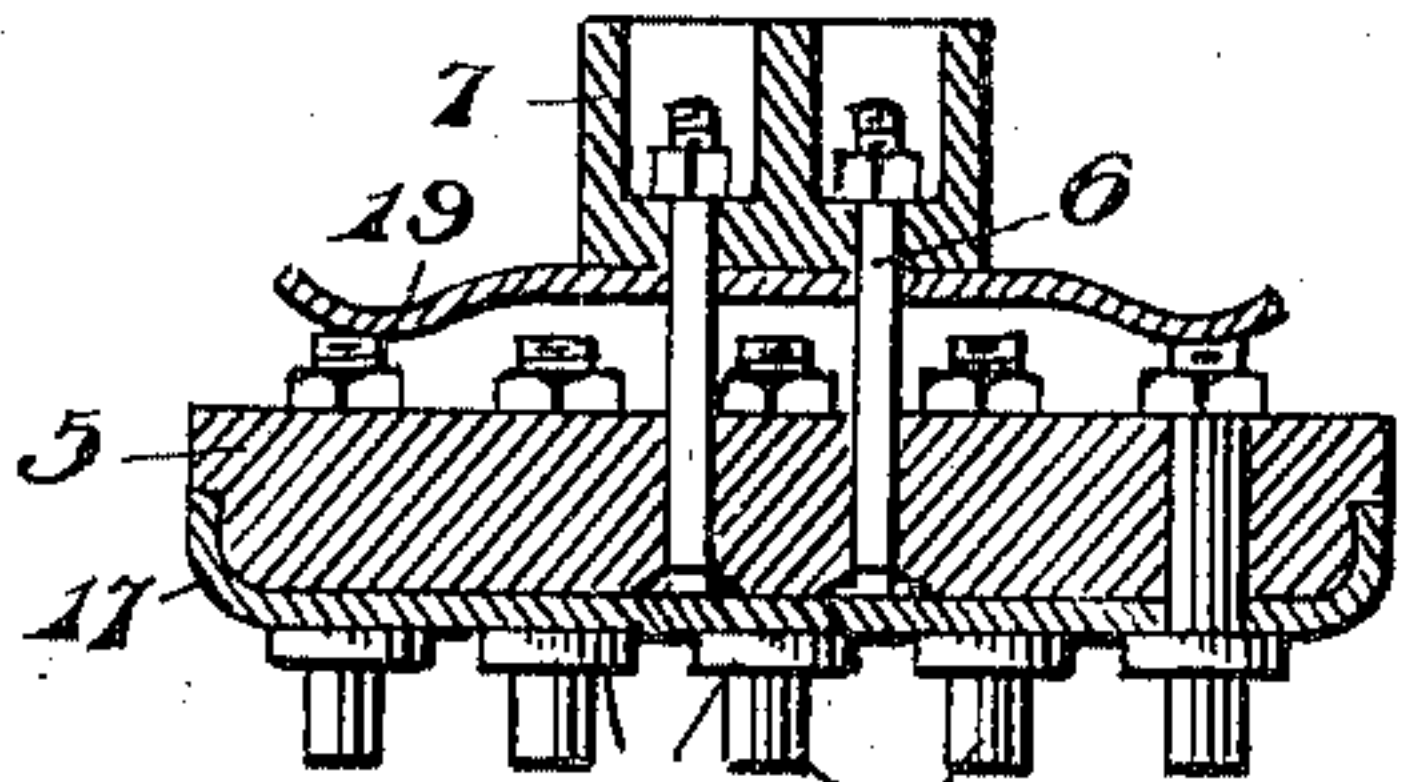


Fig. 5.



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# UNITED STATES PATENT OFFICE.

GEORGE J. GAHRING, OF OIL CITY, PENNSYLVANIA.

## EMERGENCY-BRAKE FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 686,048, dated November 5, 1901.

Application filed March 25, 1901. Serial No. 52,750. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE J. GAHRING, a citizen of the United States of America, residing at Oil City, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Emergency-Brakes for Street-Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in emergency-brakes, and relates particularly to an emergency-brake adapted for use in connection with street-cars, the object being to provide a brake adapted to be used only when it is desired to stop the car more quickly than may be accomplished with the aid of the ordinary brakes.

Briefly described, my invention comprises a brake-beam which carries brake-shoes at each end, the beam and shoes being operative vertically and the shoes carrying pins or studs which are adapted to contact with the road-bed when the brake-beam and shoes are lowered. Means is connected to the brake-beam for elevating and lowering the same, and this feature, together with others entering into my invention, will be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

Figure 1 is a side elevation of a part of a car, partially in section, showing my improved emergency-brake in position in end elevation. Fig. 2 is a front view of the car and brake in position, a part of the brake mechanism being in section. Fig. 3 is an end view of the brake-beam, showing one of the brake-shoes in side elevation. Fig. 4 is a top plan view of one of the brake-shoes and a part of the brake-beam. Fig. 5 is a transverse vertical sectional view of the brake-beam and one of the brake-shoes. Fig. 6 is a side elevation of a part of the brake-beam, partially in longitudinal section, showing a part of the operating-rod or brake-staff with one of the brake-shoes in side elevation. Fig. 7 is a detail

perspective view of the frame within which the brake-beam and brake-shoes are mounted. Fig. 8 is similar view of one of the pins or studs carried by the brake-shoes.

To put my invention into practice, I provide a substantially rectangular frame 1, which is securely bolted or otherwise fastened to the underneath face of the car-platform 2, near the forward end thereof. This frame is cut away at the ends and also at the sides and has inwardly-extending wings or flanges 3 at the ends of the cut-away portion in the side, these inwardly-extending wings or flanges, together with the ends of the frame, forming guideways 4, in which the brake-shoes 5 operate. These brake-shoes are secured, by means of bolts 6, to the brake-beam 7, the latter having centrally arranged therein a socket 8 to receive the operating-rod or brake-staff 9. This brake-staff extends upwardly through the platform 2 and is threaded through the collar 10, carried on the platform. The said staff carries a suitable operating-wheel 11 on its upper end. At its lower end this staff is held within the socket 8 by means of a pin 12, which projects through the socket into the groove 14, peripherally arranged in the brake-staff 9 near its lower end. The brake-shoes 5 have secured therein a series of studs or pins 15, which have peripheral flanges 16, that engage the plate 17 and bind the latter to the lower face of the shoes, these studs or pins having threaded ends to receive securing-nuts 18. The bolts 6, which fasten the shoes to the brake-beam, pass through compression-springs 19, which serve to relieve the strain when the brake-shoes are suddenly forced into engagement with the road-bed. The upper ends of the bolts 6 are countersunk within the brake-beam, as shown in Fig. 5, so as to allow the brake-beam to lie flush against the frame 1 on its underneath face. The frame 1 is provided with a central aperture 20 to receive the brake-staff 9. I preferably attach to the rear face of the frame 1 braces 21, connected at their upper ends to the underneath face of the platform.

In operation it will be observed that when the brake-staff 9 is operated by means of the wheel 11 the brake-beam and shoes will be forced downwardly, so as to engage the pins



15 with the road-bed, effecting a sure and quick stop of the car.

Having thus fully described my invention, what I claim as new, and desire to secure by  
5 Letters Patent, is—

1. In an emergency-brake for street-railways, the combination of a rectangular frame secured to the underneath face of the car-platform, a brake-beam arranged therein, a  
10 brake-staff connected to said brake-beam, shoes connected to each end of the said brake-beam, guides formed at each end of the said frame, and springs engaging the said brake-shoes, substantially as described.

15 2. In an emergency-brake, the combination with a car, of a frame secured to the under-

neath face of the car-platform, a brake-beam arranged within said frame, a brake-staff connected to said brake-beam, shoes connected to the brake-beam and operating within  
20 guides formed therefor in the frame, studs or pins carried by said brake-shoes, and compression-springs arranged between the brake-shoes and brake-beam, substantially as described.

25 In testimony whereof I affix my signature in the presence of two witnesses.

GEORGE J. GAHRING.

Witnesses:

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E. E. POTTER.