

(No Model.)

2 Sheets—Sheet 1.

J. W. SIMS.
CHOCK BLOCK FOR TRAM CARS.

No. 403,894.

Patented May 21 1889.

Fig. 1.

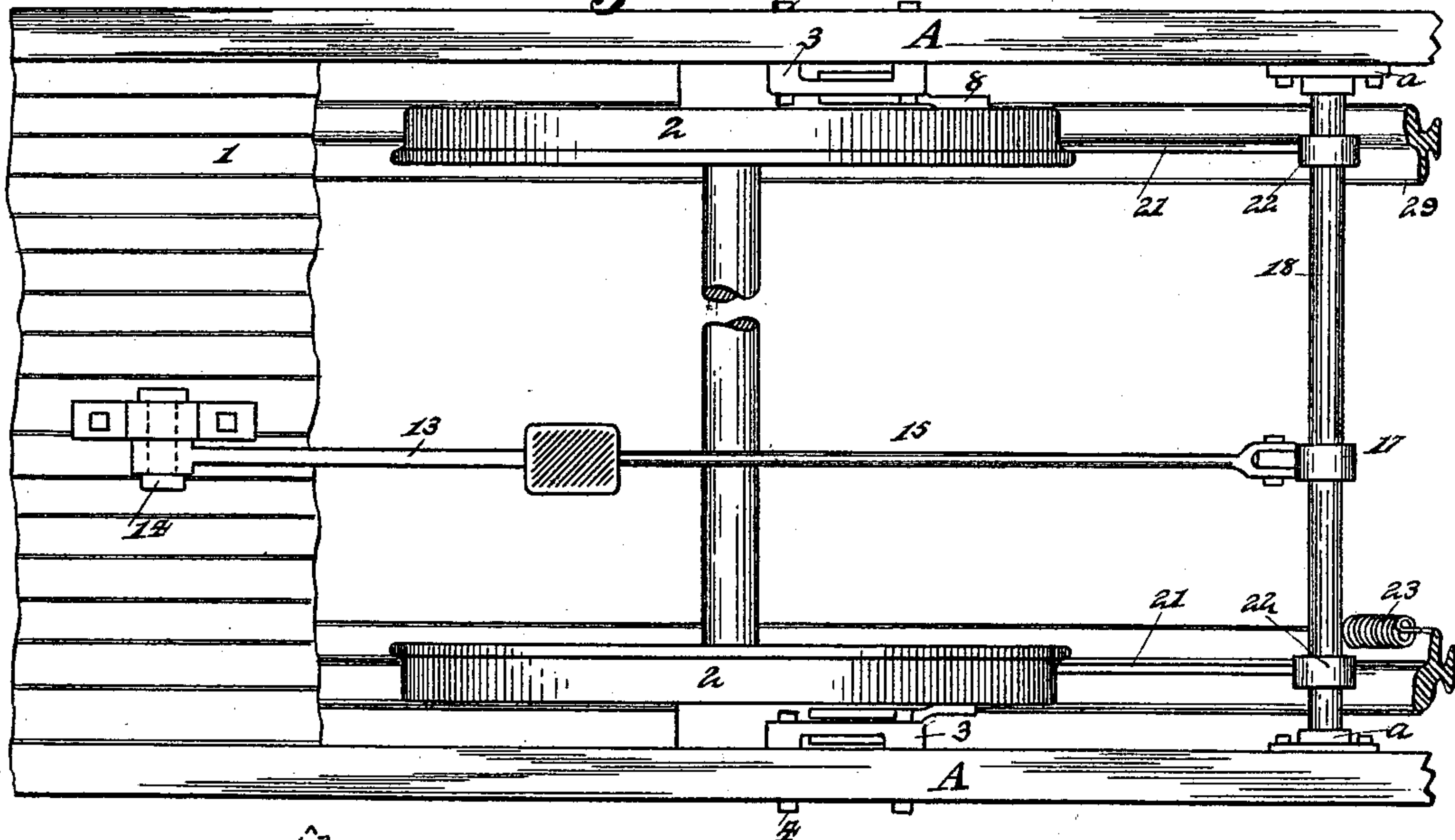
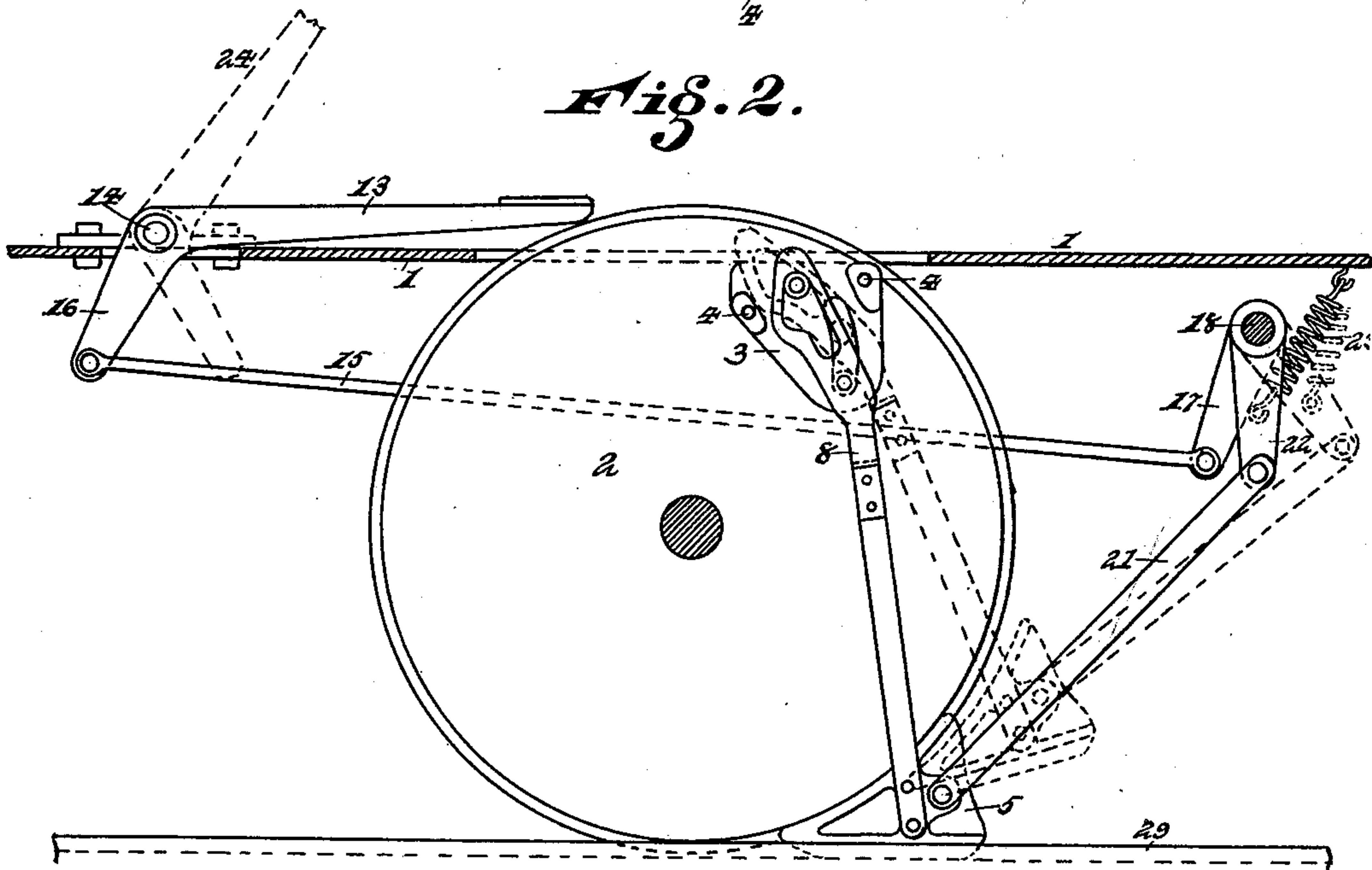


Fig. 2.



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J. Simmons

Inventor

J. Watson Sims

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Fig. 3.

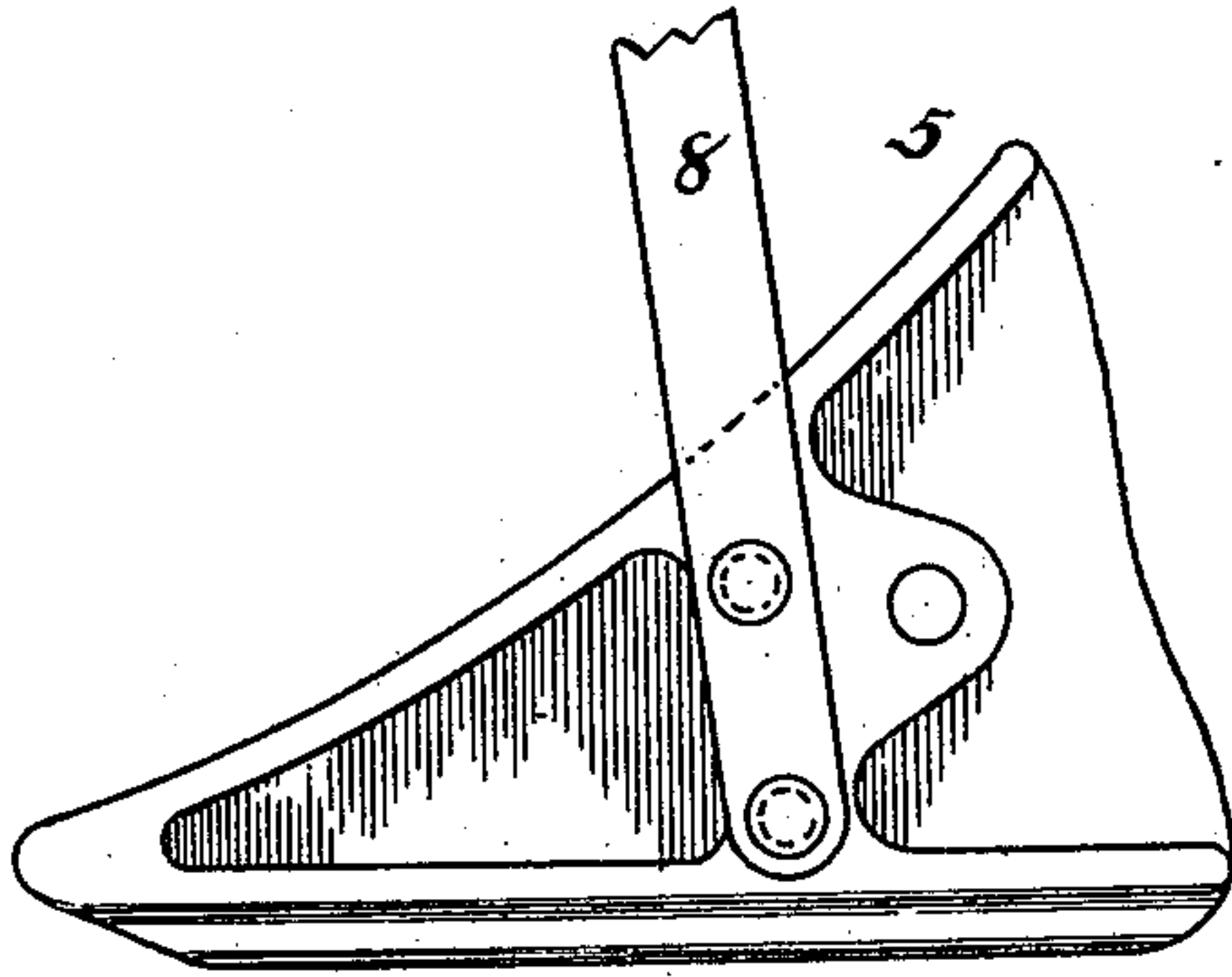


Fig. 4.

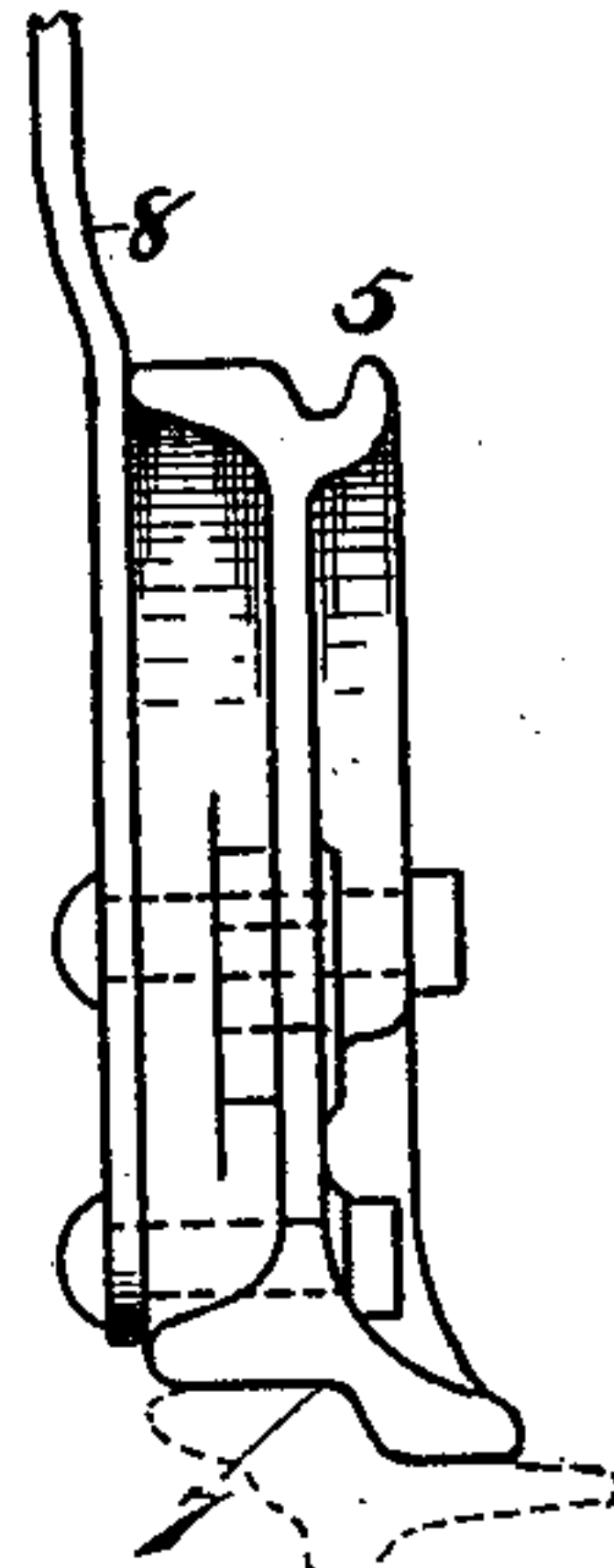


Fig. 5.

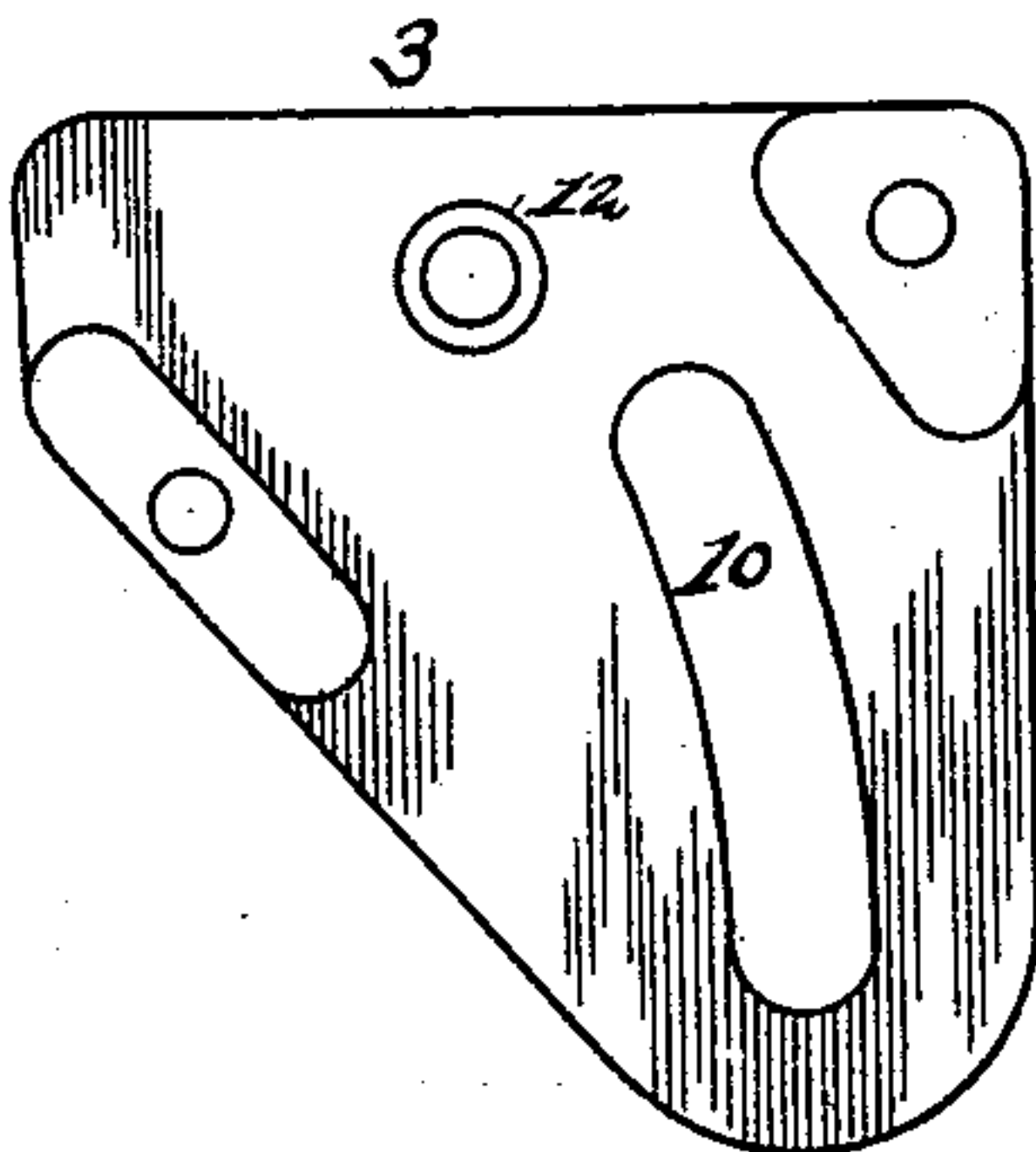


Fig. 6.

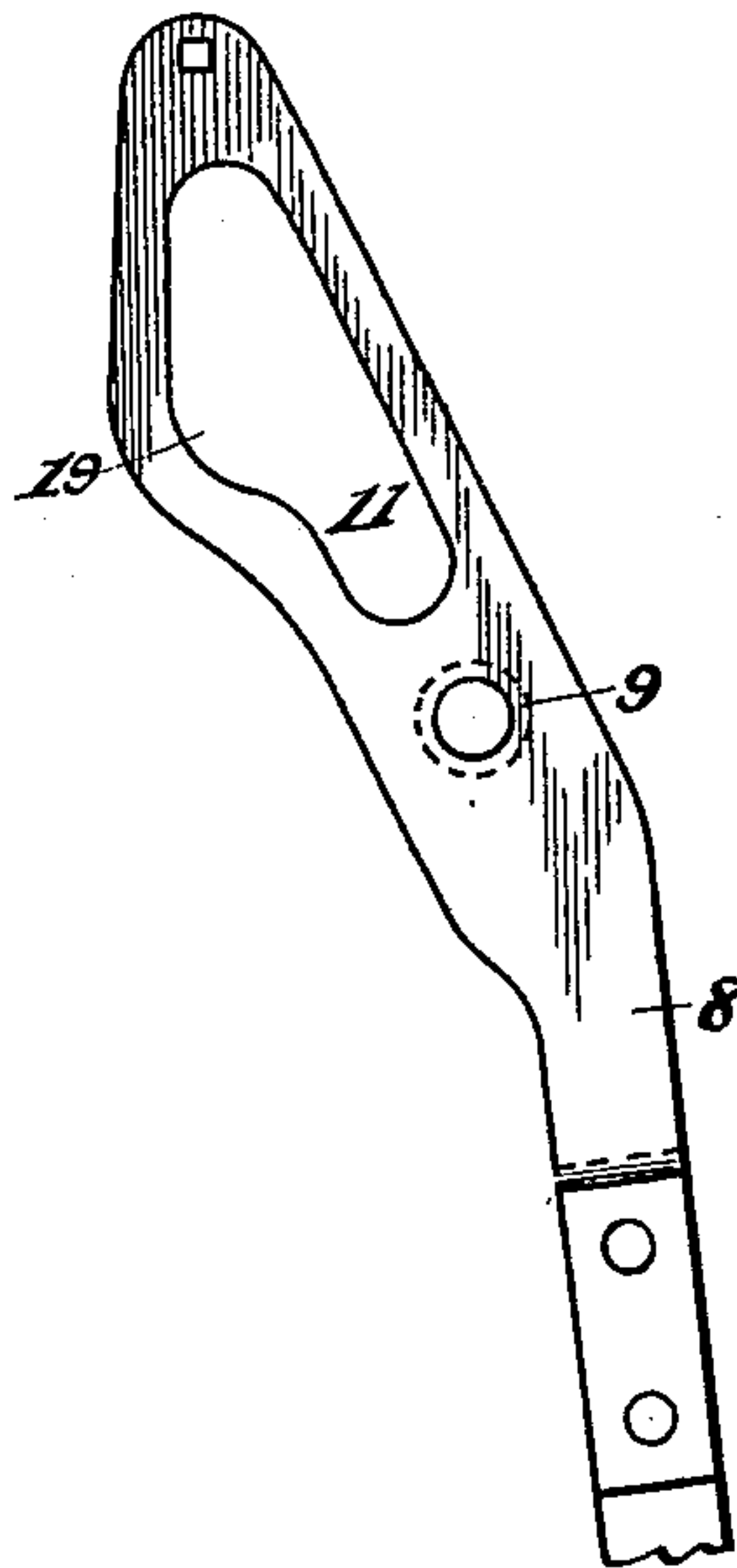
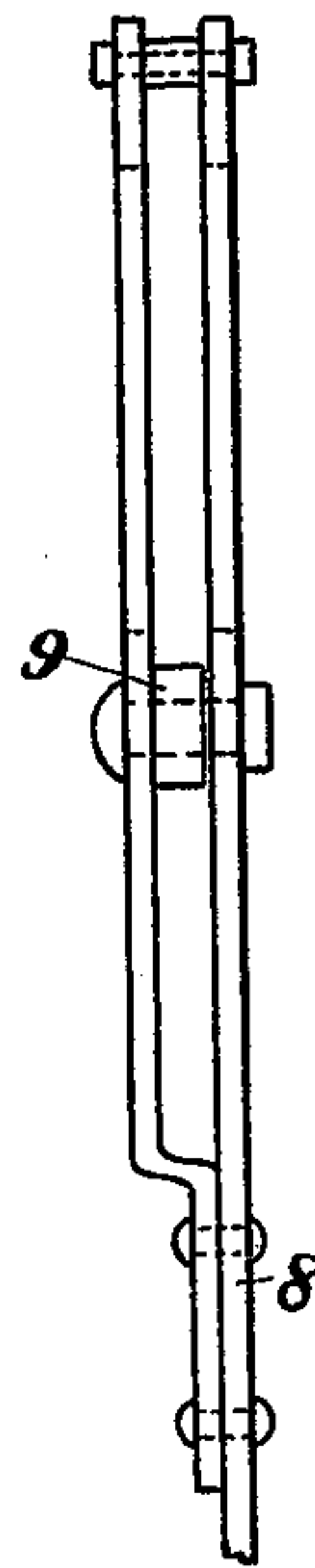


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOSEPH WATSON SIMS, OF CINCINNATI, OHIO.

CHOCK-BLOCK FOR TRAM-CARS.

SPECIFICATION forming part of Letters Patent No. 403,894, dated May 21, 1889.

Application filed July 2, 1888. Serial No. 278,793. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WATSON SIMS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Tramway-Car Chock-Blocks, of which the following is a specification.

The object of my invention is to provide a chock for cable-car wheels and other similar tramway-cars which can be readily applied to the track and wheels in the rear of the wheel to prevent it from going backward when it is stopped in ascending an incline.

Another object of my invention is to provide a suitable chock which will engage with the track and the tread of the wheel, so as to secure greater frictional resistance, due to the shape of the chock.

Another object of my invention is to provide suitable means for readily operating said device, all of which will be fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a skeleton top plan view with the floor of the car partly removed. Fig. 2 is a side elevation of my improvement attached to a car in position for use, with the side sill and the bed of the car removed, so as to show the parts. Fig. 3 is a side elevation of the chock. Fig. 4 is a rear elevation of the same. Fig. 5 is an elevation of a bracket. Fig. 6 is a side elevation of the lifting-lever. Fig. 7 is an edge elevation of the same.

1 represents the floor of the car.

2 represents the car-wheel.

3 represents brackets attached to the side sills of the car and secured to said sills by bolts 4.

5 represents the chock, which is preferably made of the contour shown in Fig. 4, the upper side being of the proper contour to fit the rim of the car-wheel, the lower surface, 7, being of the proper contour to fit the track.

8 represents connecting-bars, on which the chocks are hung, which control the direction and movement of the chocks. The upper end is provided with a swiveling pin, 9, which moves in the slot 10 of the bracket 3. The slot is a segment and on a curve corresponding with the arc in which the chock 5 pref-

erably moves as it is elevated and depressed. Lever 8 is provided with a slot, 11, in which moves a swivel-pin, 12, attached to the bracket 3.

In order to operate the chock, I have provided the following instrumentalities:

13 represents a lifting and depressing bell-crank lever moving on the center 14, which is preferably attached to the floor of the car and in a convenient position for the operator.

15 represents a connecting-rod hinged to the crank 16 at one end and to the crank 17 at the opposite end. When it is desired to apply a chock to both wheels of the same axle, I provide a shaft, 18, which journals in brackets *a*, attached to the side sills, *A*, of the car, which carries crank-arm 17.

21 represents a connecting-rod hinged at the lower ends of the chock 5 and at the upper end of the crank 22 on shaft 18.

23 represents a spring with the tension adjusted so that it will assist in holding the chock 5 up when it is elevated, as shown by dotted lines, Fig. 2. A latch may be provided to hold the lever 13 up in position shown in dotted lines 24, Fig. 1, in place of the spring.

The operation of my device is as follows: The chock 5 is commonly held up in position shown in Fig. 2 by dotted lines 27. When it is desired to introduce the chock between the car-wheel and track 29, as shown in full lines, Fig. 1, the lever 13 is depressed, preferably by the foot, and the chock brought into position. Owing to the loose connection of the connecting-rods 8 to the hangers 3, there is lost motion enough to always allow the chock 5 to snugly fit the wheel and rail, which is brought into position just before the wheel has stopped turning. In this case there is no backward turning of the wheel, as the chock is in position when the car is stopped and prevents it moving backward, avoiding any accidents. After the car has started forward, the operator will remove his foot from lever 13 or such power as he may apply, and the spring 23 will raise the chock out into its normal position. It will be seen that, owing to the construction of the slots 10 and 11, connecting-rod 8, bracket 3, and the pins 9 and 12, the chock can be raised a greater distance and more nearly to a vertical line, and it can be

more easily released, because of the power thus obtained, and more easily and quickly raised. By making the slot 11 in arm 8 of such shape with the recess 19 it allows the
5 body of the car to raise and lower as the weight or load increases and decreases without affecting the chock when under the wheel. Thus the car may be loaded or empty and the chock will always swing in its proper place.

10 Having described my invention, what I desire to secure by Letters Patent is—

1. In combination with the chock 5, the connecting-rod 8, hinged to said chock and to the bracket 3, provided with slot 10 and stud 9, at-
15 tached to the connecting-rod 8 and turning in said slot 10, substantially as herein specified.

2. In combination with the chock 5, connecting-rod 8, provided with slot 11, and the bracket 3, provided with pin 12, projected into
20 said slot and forming a bearing for the raising and lowering, substantially as herein specified.

3. In combination with the chock 5, the connecting-rod 8, provided with slot 11 and pin

9, and the bracket 3, provided with slots 10 and pin 12, for guiding the movement of the chock 25 in raising and lowering, substantially as herein specified.

4. In combination with the chock 5, the connecting-rod 21, hinged to said chock and to the crank 17, connecting-rod 15, and lever 13, 30 whereby the chock is elevated and depressed, substantially as specified.

5. The chock 5, having its upper surface of a contour to fit the car-wheel, its lower surfaces of a contour to fit the track and rigidly 35 connected to the connecting-rod 8 and hinged to the connecting-rod 21, for elevating and depressing said chock, substantially as herein specified.

In testimony whereof I have hereunto set 40 my hand.

J. WATSON SIMS.

Witnesses:

CHAS. ANDERSON,
ROBERT ZAHNER.