

No. 667,868.

Patented Feb. 12, 1901.

J. H. COOK.  
TROLLEY MECHANISM.  
(Application filed July 7, 1899.)

2 Sheets—Sheet 1.

(No Model.)

Fig. 2

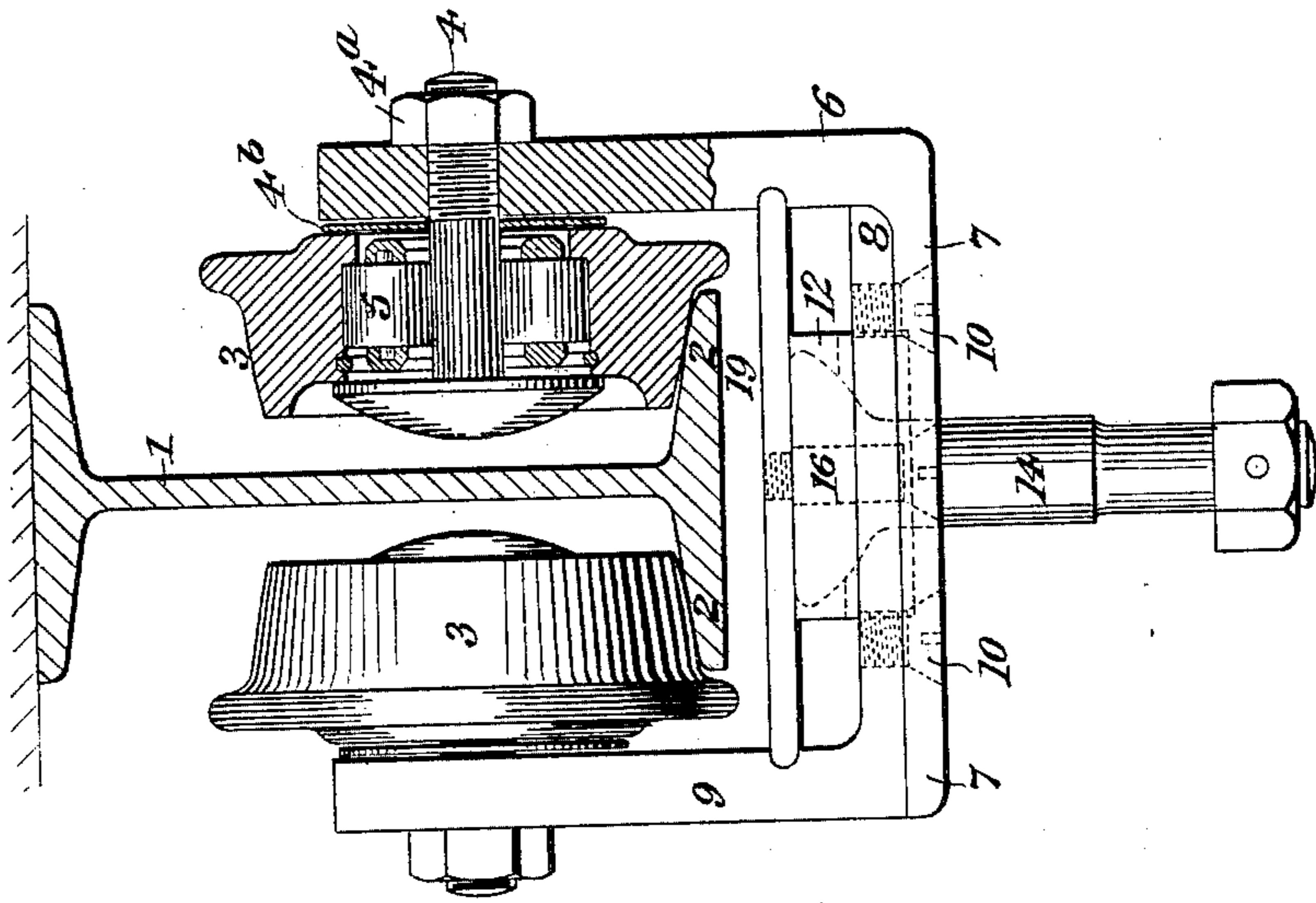
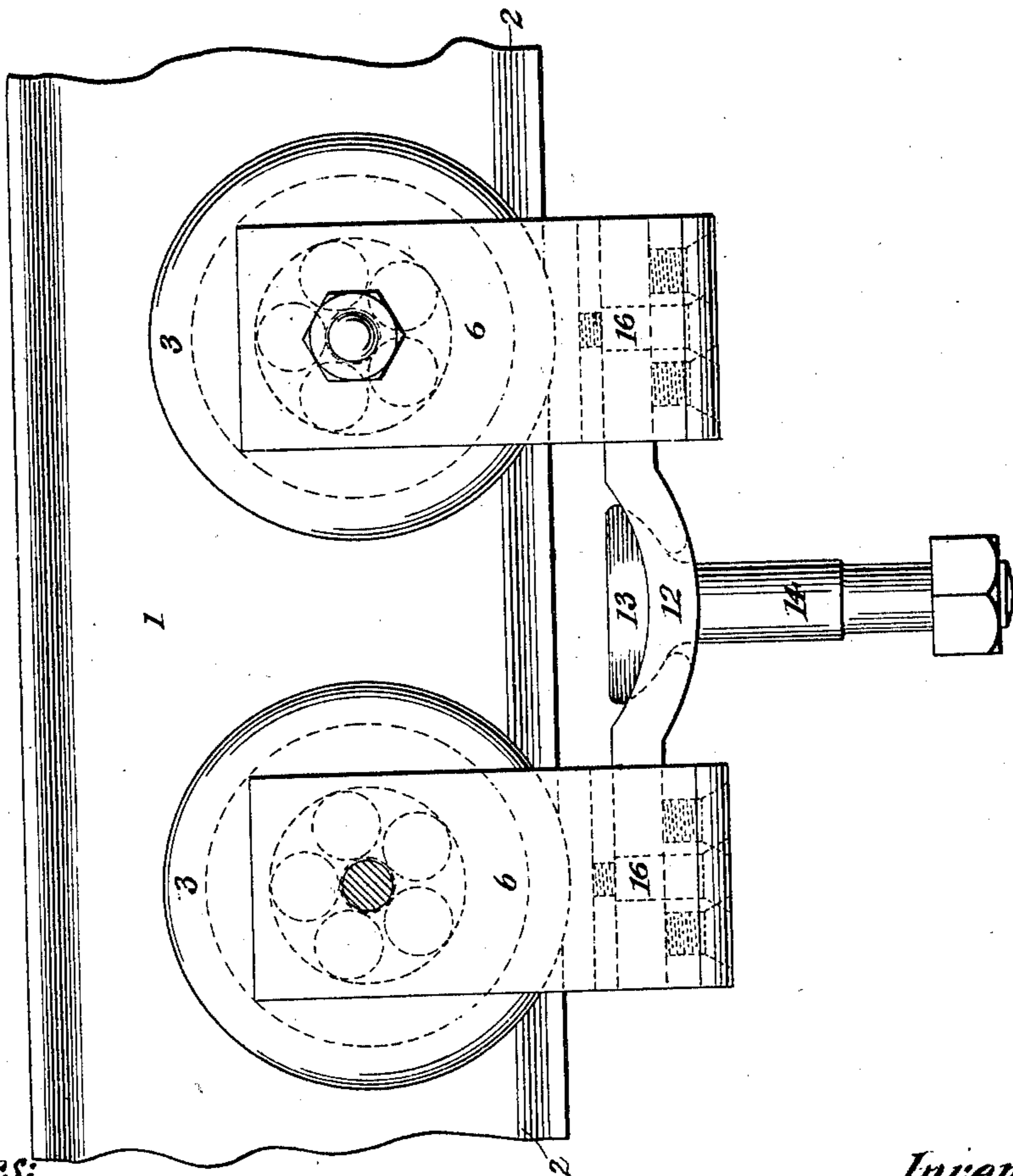


Fig. 1



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Fig. 5

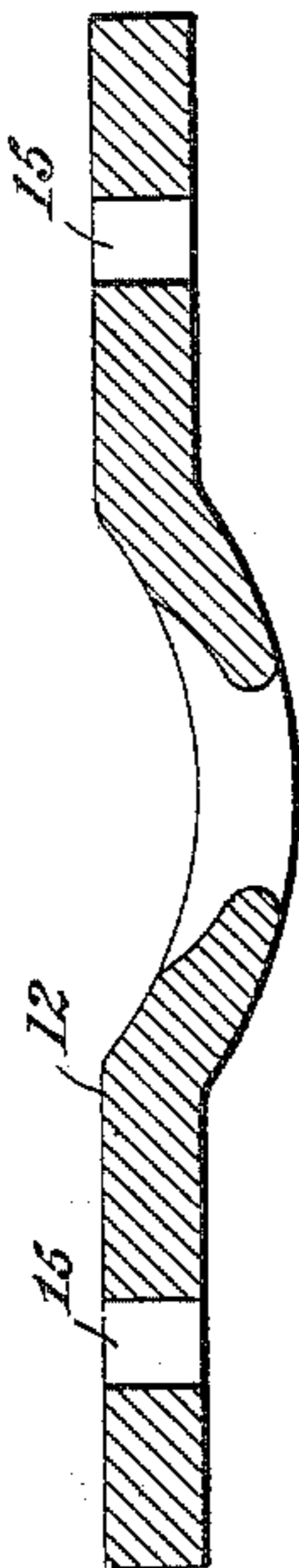


Fig. 6

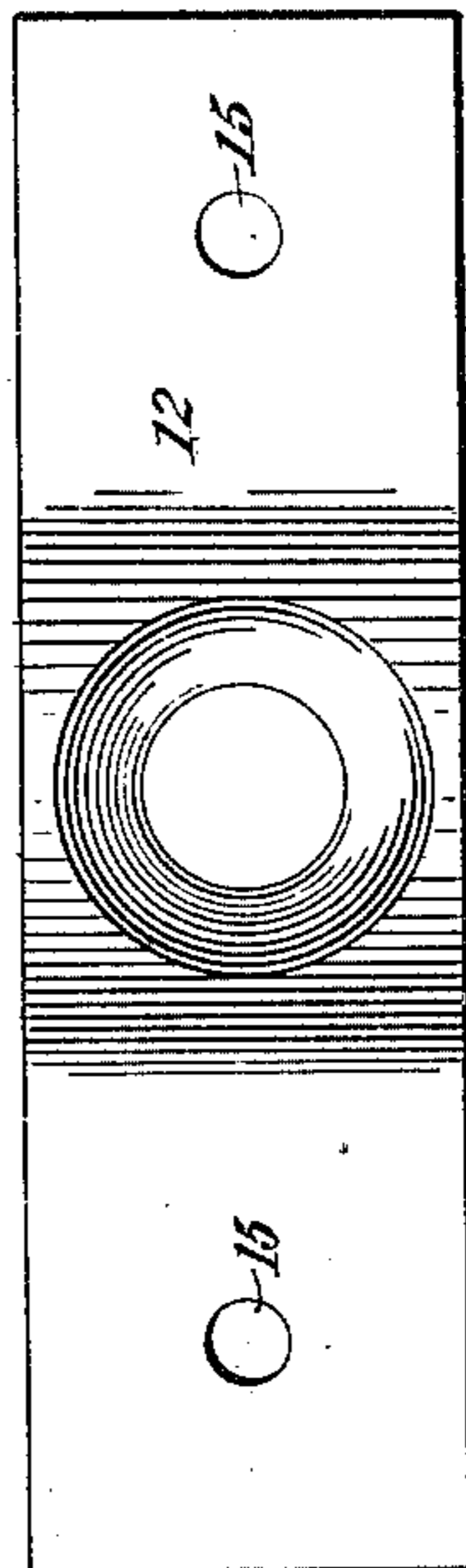


Fig. 7

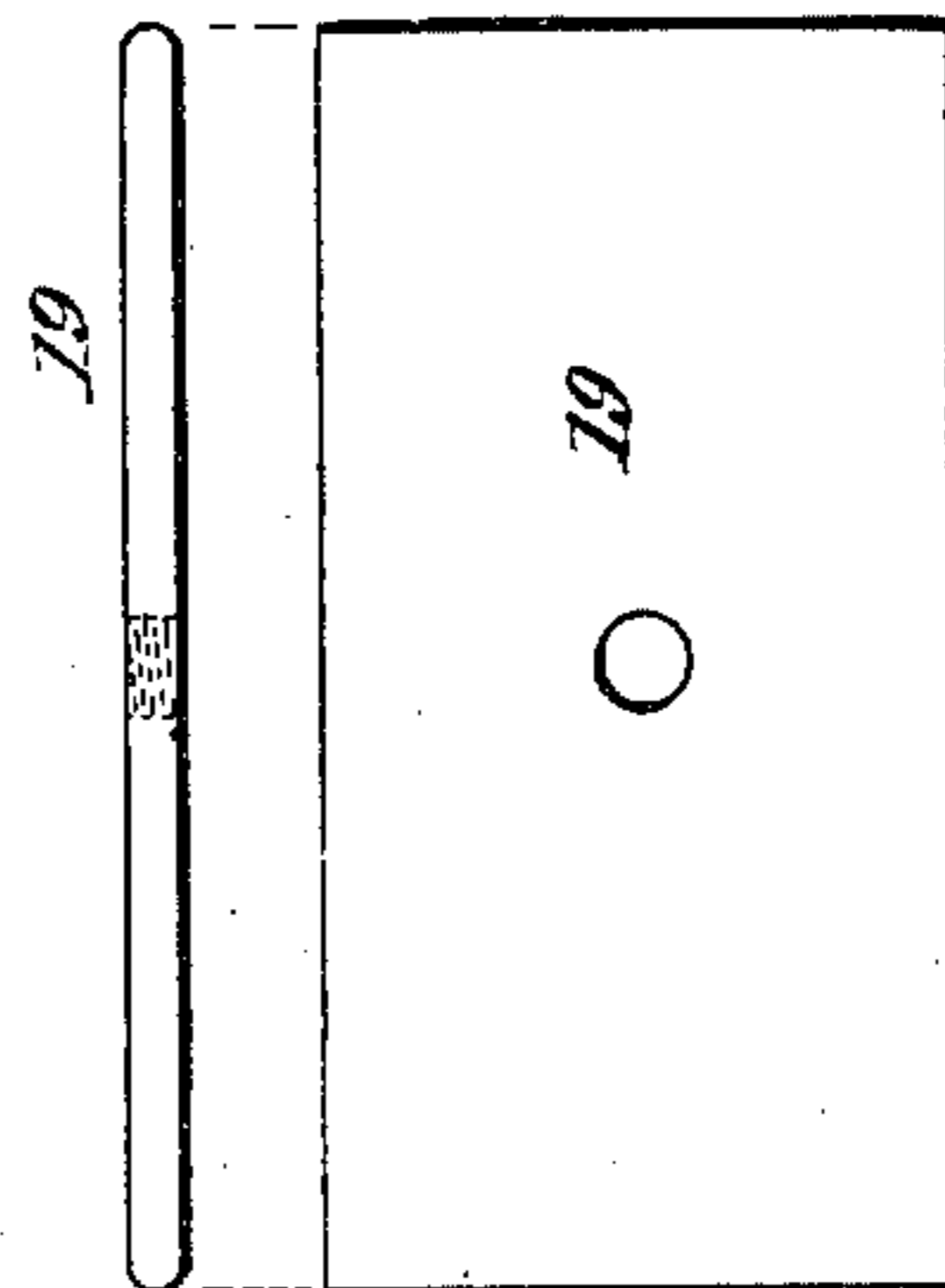


Fig. 3

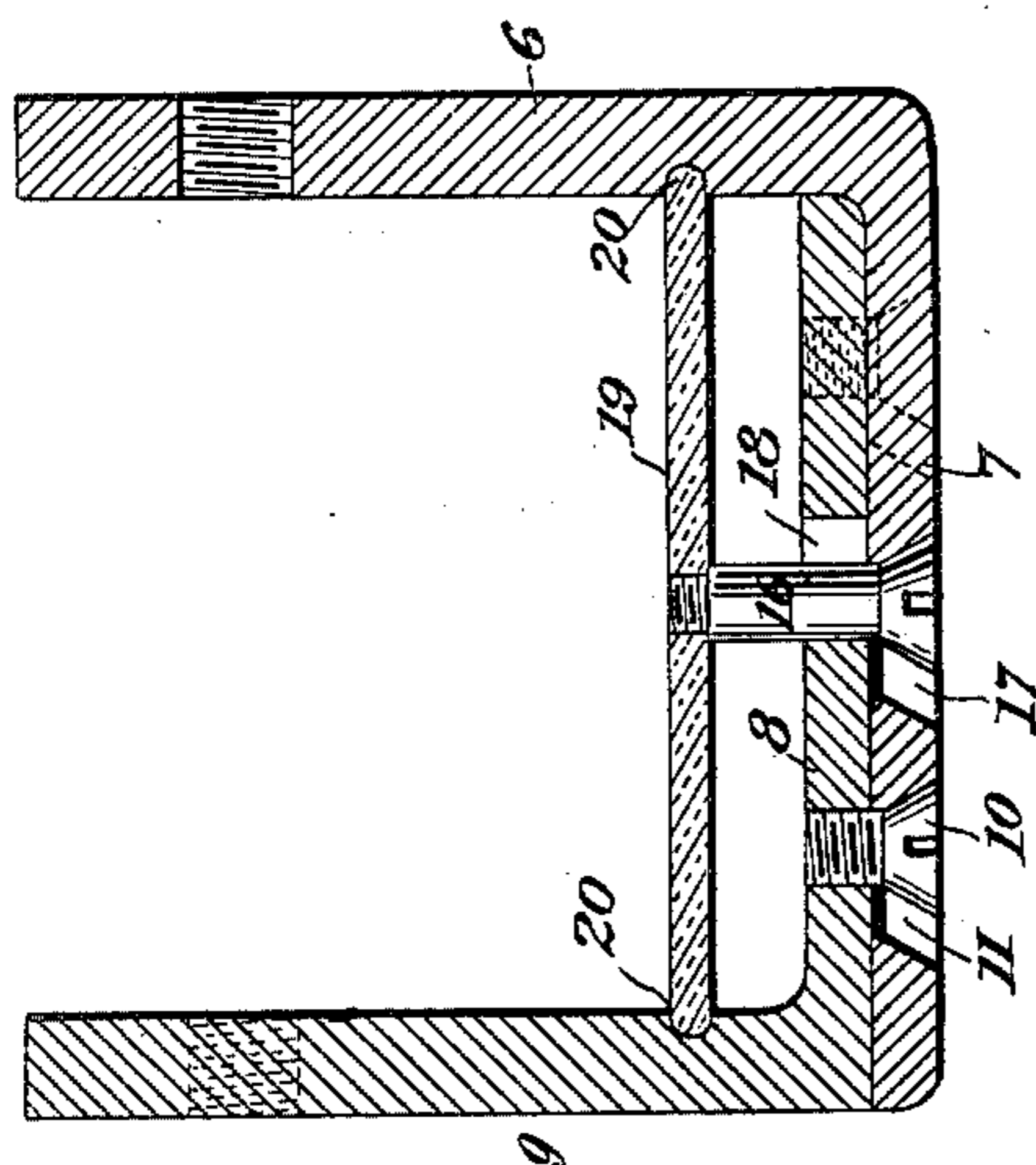
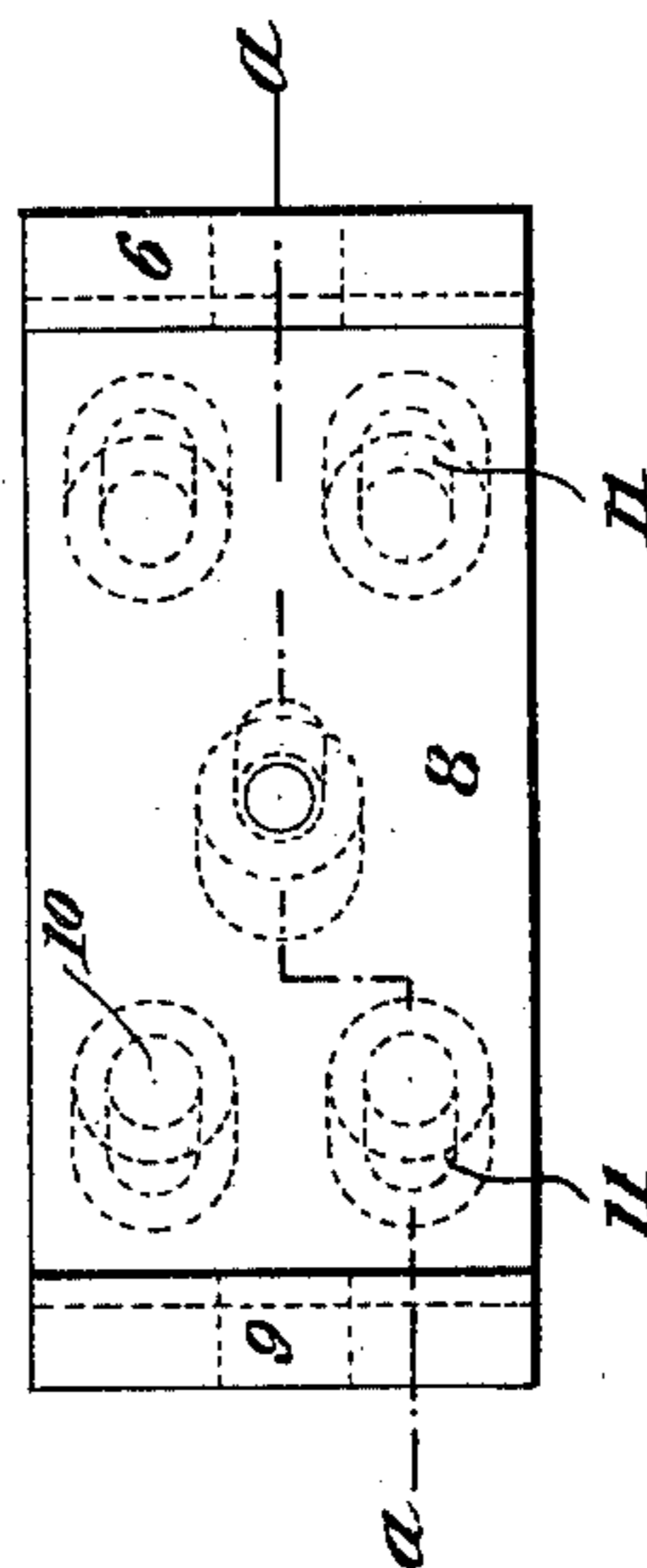


Fig. 4



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# UNITED STATES PATENT OFFICE.

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## TROLLEY MECHANISM.

SPECIFICATION forming part of Letters Patent No. 667,868, dated February 12, 1901.

Application filed July 7, 1899. Serial No. 723,060. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. COOK, a citizen of the United States, residing at the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented a certain new and useful Improvement in Trolley Mechanism, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

The present invention relates to specific improvements in trolley mechanism adapted to run on what are known as "I-beams" or "double-flanged" beams, and is for use in overhead track mechanism in such places as provision-markets, factories, gun-emplacements, ammunition-depots, &c., or particularly where heavy loads are to be transported from one place to another, and therefore requiring as a transmission-rail a strong structure, such as a building I-beam or T-beam.

The features of improvement have to do with a trolley mechanism having two pairs of trolley-wheels adapted to engage an I-beam, said pairs of wheels being independently adjustable to cause the same to adapt themselves to the I-rail, particularly in cases of deflection or curving of the rail from the rectilinear.

I am aware that trolley mechanism of the general type suggested having one pair of wheels movable relatively to the other pair is old, as also that trolley-wheels in pairs or otherwise have been adapted to I-beam rails.

The essential object of the invention is to utilize two such pairs of wheels without any framework between the frame parts of the separate pairs and yet to connect the separate frames or yokes of said pairs on the swivel plan and in such manner that no essential tilting action of the frame relatively to the connecting member can ensue.

The invention consists generally of two pairs of trolley-wheels adapted to ride on the flanges of an I-beam, each pair being separately connected together by one framework, as also of a connecting or load-carrying bar attached to each of said frameworks.

Referring to the drawings, Figure 1 is a side elevation of an I-beam and one form of trolley mechanism embodying the present improvements and invention. Fig. 2 is a cross-

section of the same, one trolley-wheel and its supports being sectioned centrally and the other shown in full. Fig. 3 is a cross-section of the supporting-frame of one pair of trolley-wheels, the section being taken on the plane *a a* of Fig. 4, Fig. 4 being a plan view of the mechanism of Fig. 3. Fig. 5 is a central longitudinal section of the connecting-bar, Fig. 6 being a plan view of the same. Fig. 7 is an edge view and a plan view of the pivot and bearing-plate, to be hereinafter more fully referred to.

Referring to the figures in detail, the numeral 1 represents a double-flanged or an I beam, and 2 2 the flanges of the same, on which run the trolley-wheels, which I-beam is supposed to be attached to a ceiling, overhead wall, or other similar supports, its lower flange edges being left free to be utilized as the track for the trolley mechanism.

3 3 represent the trolley-wheels of one pair of the trolley mechanism, each one of these wheels being supported on an axis-rod 4 through the medium of the antifriction-rollers 5. Said axis-rod is fixed in the upright arm 6 of the yoke or framework holding these wheels in relative position, the wheels being adjustable on said axis-rod by means of the nut 4<sup>a</sup> and a bearing plate or washer 4<sup>b</sup> of thickness or duplication suitable to effect the adjustment necessary. The arm 6 is provided with a base-plate 7, constructed to lap and join a similar base-plate 3 of the opposite arm 9, carrying the other trolley-wheel, in manner as described for the first wheel. These two base-plates 7 and 8 are fixed one to the other by screws 10 or equivalent means, in this case the screws being threaded in the base-plate 8 and their heads bearing in the plate 7, which latter plate is provided with the slots 11, (see Fig. 4,) so that the arms 6 and 9, carrying the trolley-wheels may be adjusted relatively to and from each other, to effect the proper position of the trolley-wheels in accordance with the form and lateral extension of the I-beam flanges 2 2.

12 indicates the connecting or load bar, which is in general form, as to its ends, of a flat plate construction, as shown in Figs. 5 and 6. Preferably its middle or the part

thereof intermediate between the two pairs of trolley-wheels is depressed or socketed so as to receive the rounded head 13 of the suspension-rod 14, which carries the load to be transmitted by the trolley mechanism. It is to be noted that this rod and its head and the socket are shaped so as to form a universal swivel-joint beneath the load and the said connection-bar 12. This is for the purpose of permitting swaying of the load without essentially affecting a corresponding movement of the trolley-wheels on the rail. The said connecting-plate is pierced at each end by holes 15, through which run the pivot-screws 16, slots 17 and 18 in the said base-plates 7 and 8 being provided to allow for the adjustment of said plates and so that said screws 16 may be maintained in central position. This pivot-screw is threaded to engage the bearing and pivot plate 19, which is substantially a large washer whose function is to provide, together with the upper face of the plate 8, a broad bearing for the ends of the connection-plate 12 and especially for the purpose of preventing said plate rocking relatively to the yokes or frameworks of the separate pairs of trolley-wheels, or vice versa.

It will be seen by the foregoing description and drawings that the supporting-yoke of each pair of wheels is independent of the other in its action of supporting its wheels and holding and adjusting the same on the I-beam and that the yoke of each pair is rigidly held against deflection relatively to the other by the connecting swivel-bar, as also that each of said yokes is free to swivel on said connecting-bar to suit the conditions of deflections of the track.

What is claimed as new is—

1. In a trolley mechanism for I-beam tracks, two pairs of trolley-wheels each pair being mounted in the arms of a yoke, and a con-

necting or load-carrying plate pivotally attached at each end to the said yokes. 45

2. In a trolley mechanism for I-beam tracks, two pairs of trolley-wheels, each pair being pivotally secured to the arms of a yoke, means for adjusting the arms of each yoke relatively, and a plate pivotally attached to the yokes of the separate pairs of wheels. 50

3. In a trolley mechanism, two pairs of trolley-wheels each pair being pivotally carried by a separate yoke, a connecting-bar pivotally attached at each end to a yoke, and a load-carrying mechanism carried by said bar between said pairs of wheels. 55

4. In combination in a trolley mechanism, two pairs of trolley-wheels, separate yoke mechanisms each carrying a pair of said wheels, the connecting-plate 12 pivotally attached to each said yokes, and the bearing pivot-plates 19 and pivots 16 engaging the yoke and said plates. 60

5. In combination in a trolley mechanism, two pairs of trolley-wheels, separate yoke mechanisms each carrying a pair of said wheels, the connecting-plate 12 pivotally attached to each said yoke, and the bearing-plates 19. 70

6. In combination in a trolley mechanism, the trolley-wheels 3 pivotally mounted on the yoke-arms 6 and 9, the base-plates 7 and 8 to said arms, and means for adjustably securing said plates together. 75

7. In a trolley mechanism, two pairs of trolley-wheels each pair of wheels being pivotally mounted on the arms of a yoke mechanism, means for adjusting said wheels on their pivots relatively to each other, and means for adjusting said arms relatively to each other. 80

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