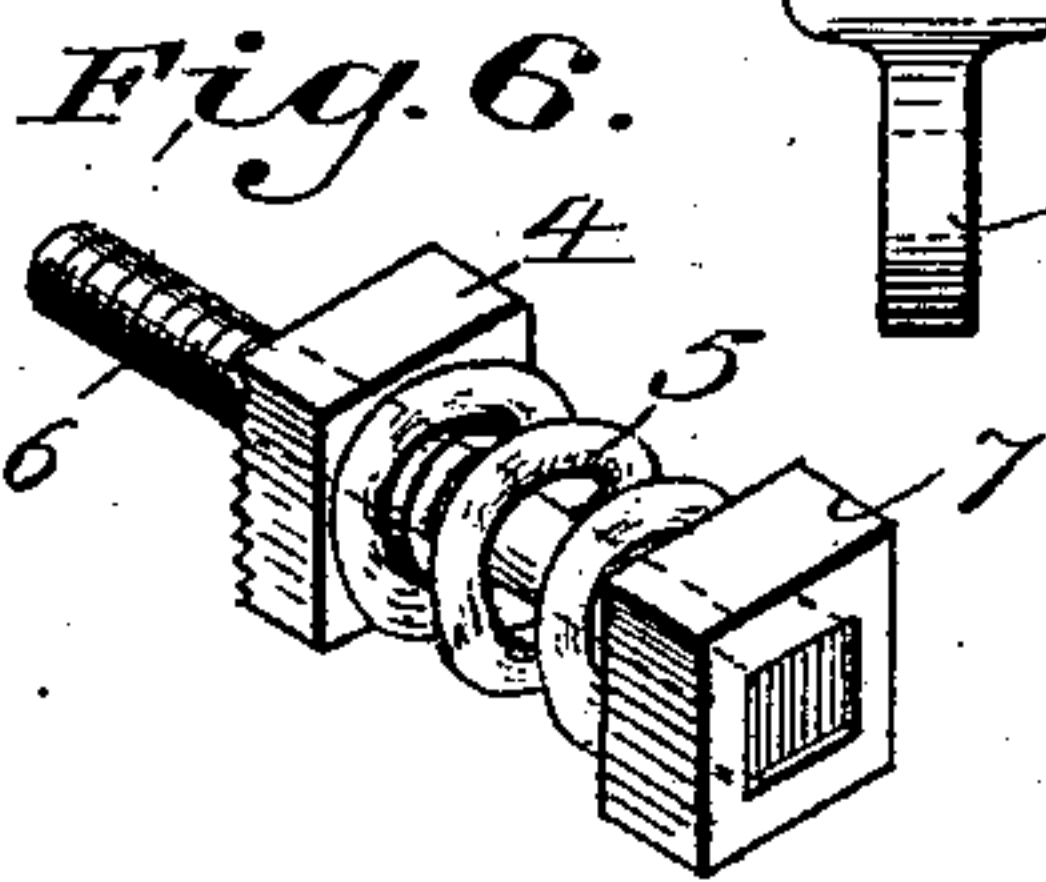
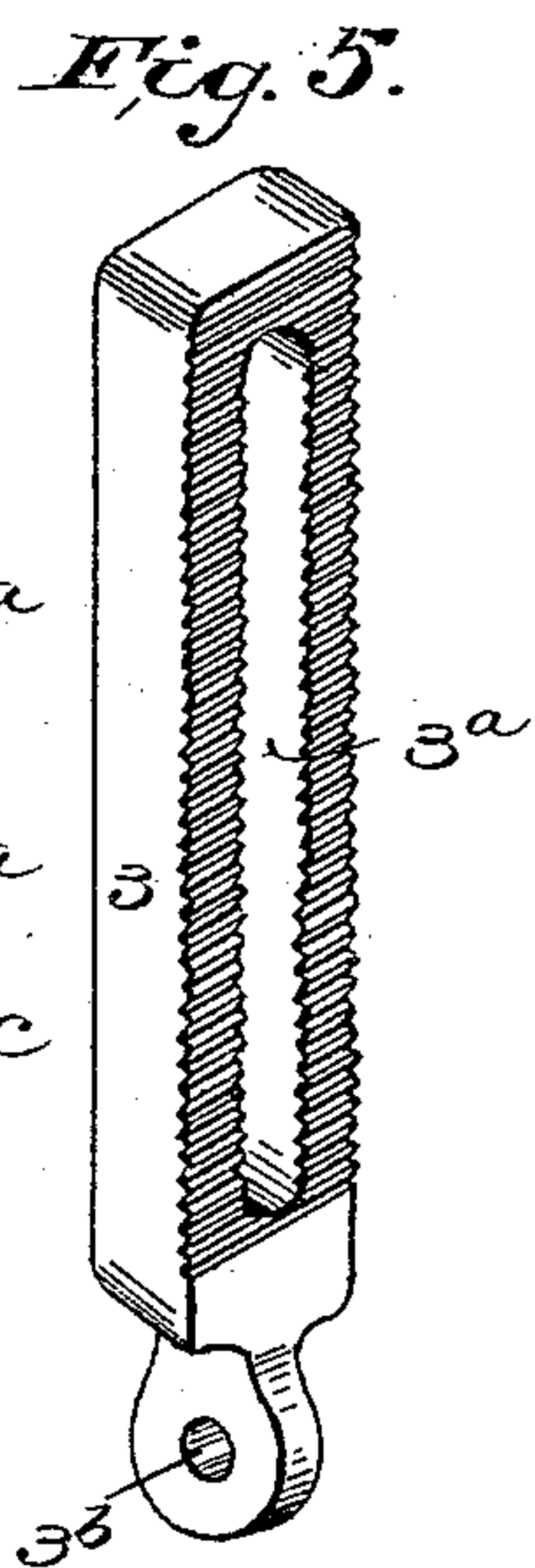
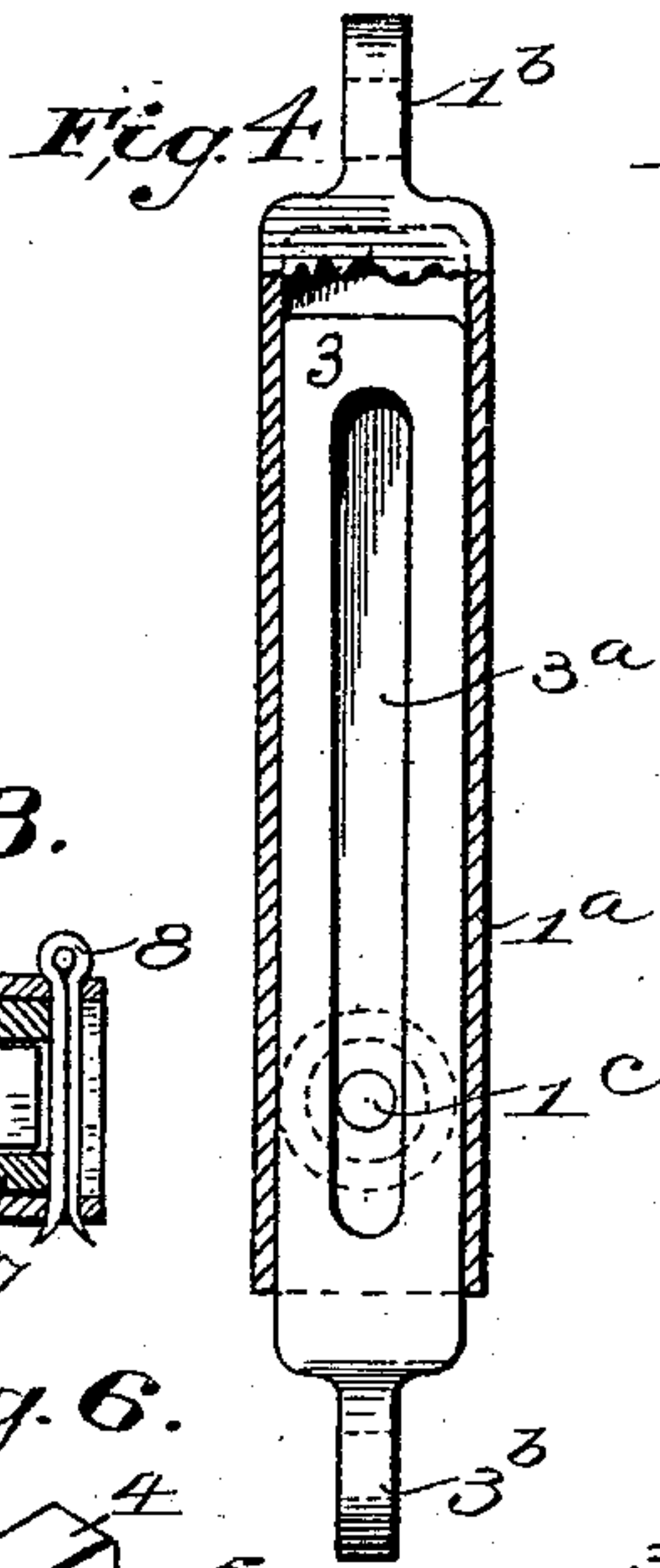
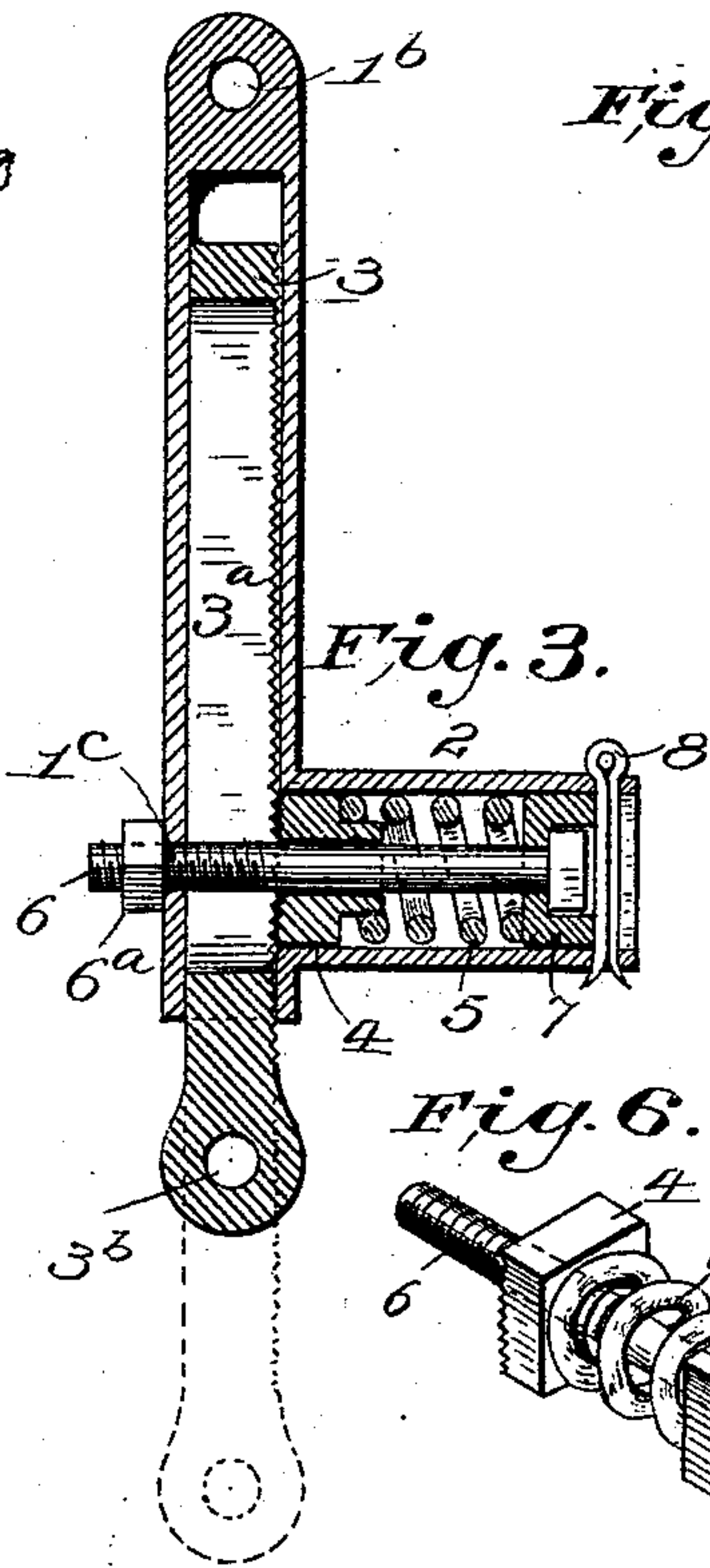
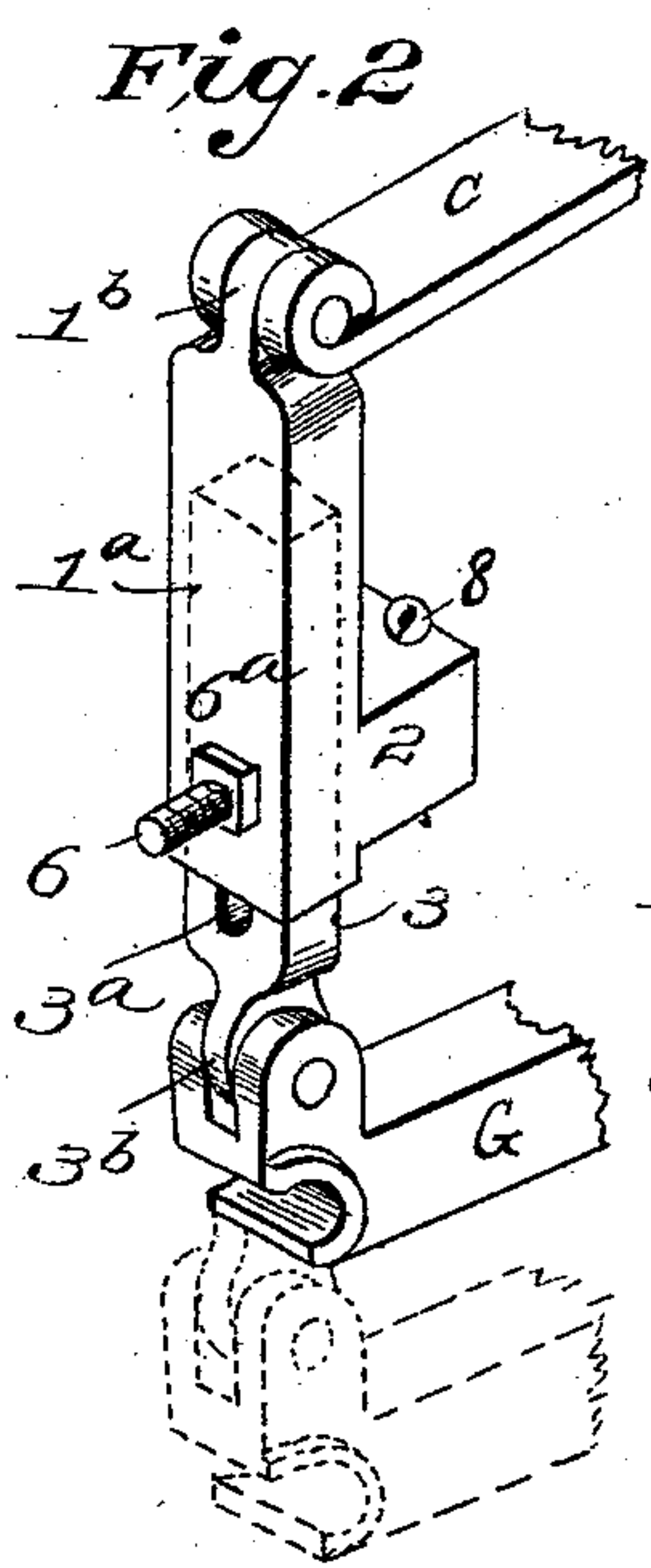
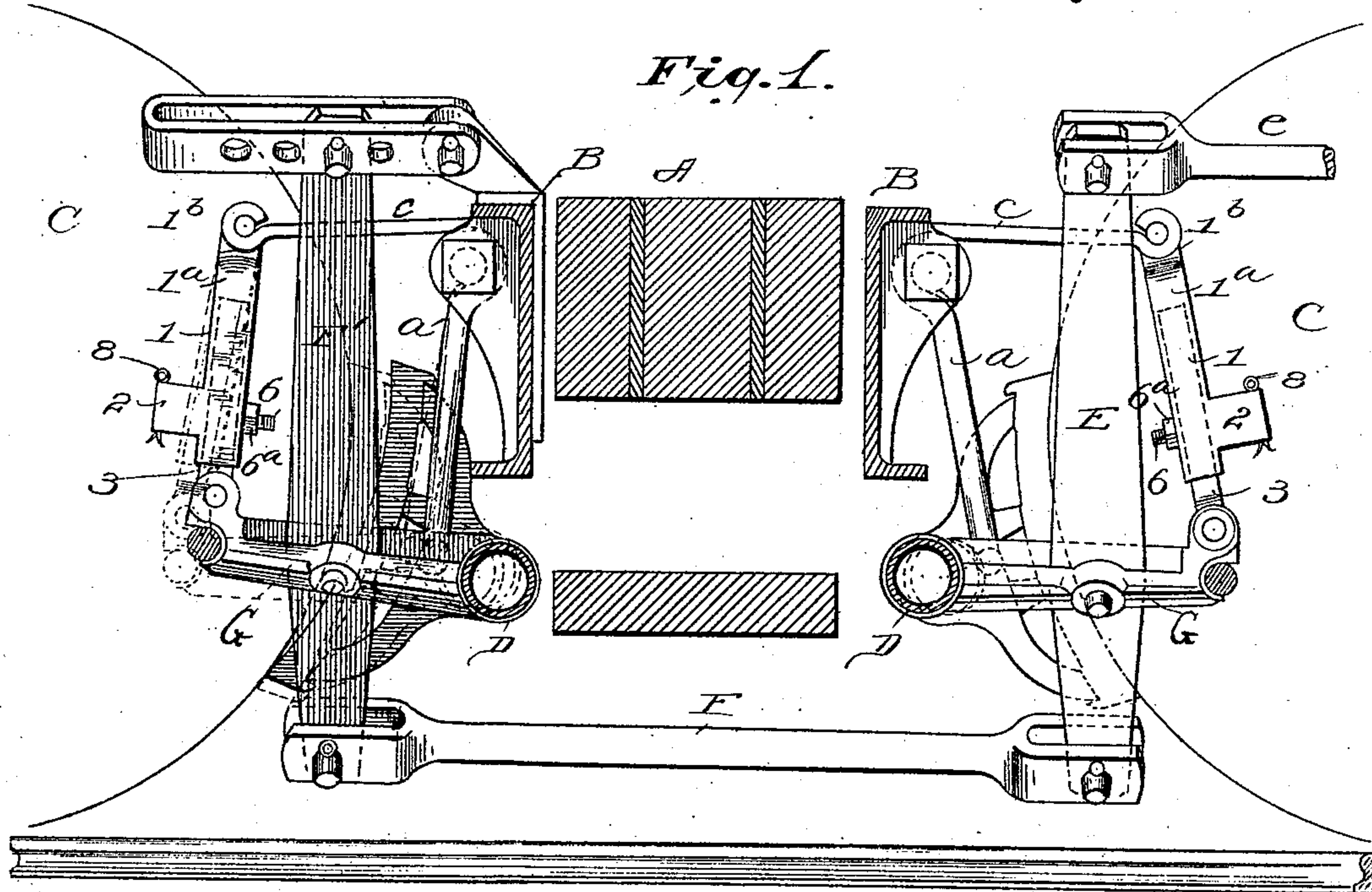


(No Model.)

H. B. ROBISCHUNG.  
HANGER FOR BRAKE BEAMS.

No. 543,703.

Patented July 30, 1895.



Witnesses  
*Am. S. Dye.*  
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Inventor  
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# UNITED STATES PATENT OFFICE.

HENRY B. ROBISCHUNG, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO THE  
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## HANGER FOR BRAKE-BEAMS.

SPECIFICATION forming part of Letters Patent No. 543,703, dated July 30, 1895.

Application filed January 15, 1895. Serial No. 535,031. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY B. ROBISCHUNG, a citizen of the United States, residing at Kalamazoo, in the county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Suspension-Hangers for Brake-Beams; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical central section of a freight-truck with inside-hung brakes, the beams being suspended centrally by third suspension-hangers embodying my invention. In this figure the right-hand brake is shown in its proper relation to the wheel when the brakes are applied and the left-hand brake is shown with the beam and strut tilted, so that the shoe is eccentric to the wheel or only bears on the wheel at the bottom. The object of Fig. 1 is to show the function and operation of a third suspension-hanger embodying my invention. Fig. 2 is an elevation in perspective of a suspension-hanger embodying my invention, the upper support and end of the truss-rod of the brake-beam broken away, and the dotted lines indicating the extended position, while the full lines show the normal position of the hanger or link. Fig. 3 is a longitudinal central section of the hanger, the dotted lines showing the position of the rack-bar or plunger when drawn out. Fig. 4 is an elevation at right angles to the sectional view, Fig. 3, the shell or casing broken away to show the plunger or rack-bar with the elongated slot, the yielding grip or ratchet-block being removed. Fig. 5 is a detached perspective view of the plunger or rack-bar, and Fig. 6 is a detached perspective view of the yielding grip or ratchet-block which engages the rack-bar.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of the third or suspension hanger employed with trussed brake-beams, and has for its object the automatic adjustment of the beam when the same has been improperly hung or when from any other cause the beam has assumed a position where the brake-shoe is eccentric to the wheel when the brakes are applied.

Brake-beams of the usual forms are, as is well understood, commonly suspended by two lateral hangers or links, one at or near each end, and the brake-levers being substantially in line with the brake-heads the shoes are at liberty to assume their proper relation to the wheel and the beam is substantially free from torsional strain; but in case of trussed brake-beams or those of similar form where the weight and the brake-lever are forward of the beam proper or in advance of the brake-heads the practice has been to employ a third (or central) suspension-hanger, and in order to accommodate slight irregularities in hanging, &c., this suspension-hanger has been supported from or attached to a leaf spring-arm secured to and projecting from the truck. The use of the spring-arm is not only expensive, but unreliable and unsatisfactory in many respects, and is only available to correct errors in hanging where the third suspension-link is too short.

In the case of all beams where the weight is forward, and especially in trussed beams, in order to avoid torsional strain on the strut in applying the brakes the plane of the beam or strut should be horizontal or parallel with the track, and as car-wheels vary in diameter and there is a difference in the distance above the track at which the beam on different cars is suspended the brake-head, especially on trussed beams, is or should be so set with relation to the plane of the beam or strut as to bring the shoe concentric to the wheel when the plane of the beam or strut is in a horizontal plane or parallel with the track. It will be at once evident to those skilled in the art that the proper relation of shoe to wheel and plane of beam or strut to track is easily liable to derangement by other causes as well as by improper length or adjustment of the third suspension hanger or link.

To overcome the several difficulties and disadvantages hereinbefore set forth and to insure that the shoe shall be or become concentric to the wheel at all times when the brakes are applied, I provide a telescoping or extensible third suspension-hanger adapted to retain its adjusted position after the brake is released, and any hanger having such characteristic embodies the main feature of my



invention. Furthermore, as it is desirable to so maintain the adjustment when thus automatically obtained as that it will remain positive until called upon to readjust itself to new relations of the beam and wheel, I combine with the extensible hanger on its plurality of movable sections an automatically-yielding locking device adapted to yield under excessive force applied to the hanger or link, and such a construction or its equivalent embodies a second feature of my invention.

There are other minor features of invention pertaining to the particular construction chosen for illustration, all as will hereinafter more fully appear.

I will now proceed to describe one form of my suspension-hanger more specifically, so that others skilled in the art to which it appertains may apply the invention.

In the drawings, A indicates the bolster of the truck; B B, the channel-irons; C C, the wheels; D D, the brake-beams, suspended in the usual manner by the lateral hangers *a a* and by a central or third suspension-hanger 1 embodying my invention, the latter attached above to the arm or bracket *c*.

*e* indicates the pull-rod, E the "live" lever, F the lower connecting-rod, and F' the "dead" lever, the general construction and arrangement of which are so well and generally understood as to preclude the necessity for further description.

1 indicates an extensible third suspension hanger or link pivotally connected above to an arm or bracket *c* and below in like manner to the forward part or nose of the strut G. This suspension hanger or link 1 is preferably composed of two telescoping sections, the outer section or casing 1<sup>a</sup> provided above with an eye 1<sup>b</sup>, by which it is suspended, and below and on one side with an open pocket 2 for the reception of a yielding grip or spring-supported ratchet block 4, opposite which pocket is a bolt-hole 1<sup>c</sup> for the passage of a bolt 6. The second section 3 is preferably in the form of a rack-bar or plunger having a longitudinal (or elongated) central slot 3<sup>a</sup> for the passage of a bolt, at its lower end an eye 3<sup>b</sup> for pivotal connection with the brake-beam, and on the side corresponding with the open pocket 2 a series of ribs or transverse corrugations with which a yielding grip or ratchet block engages to temporarily lock the plunger or ratchet-bar in a given or assumed position, and so retain it until force is applied to the plunger 3.

4 indicates a grip-block or ratchet-block movably arranged in the open pocket 2 and provided on one face with a series of ribs or corrugations adapted to engage those on the side of the plunger 3 and having a central bolt-orifice for the passage of a bolt. The grip or ratchet block is yieldingly supported by a spring 5 which is backed by a follower 7 cupped to receive the head of a bolt 6 which passes through the follower 7, the spring 5,

the grip or ratchet block 4, the elongated slot in plunger or rack-bar 3, the bolt-hole 1<sup>c</sup>, and is provided with a nut 6<sup>a</sup>, so that said bolt 6 not only serves to regulate the yielding pressure of the grip on the movable section of the extensible hanger, but also serves to unite the parts, and as a safety device to prevent the separation of the telescoping sections.

In order to prevent the accidental displacement of the bolt 6, a cotter-pin 8 may be used in the open end of pocket 2.

In setting up the extensible hanger, all that is necessary to be done is to insert the plunger or slotted rack-bar 3 within the casing 1<sup>a</sup>, the grip or ratchet block 4 within the pocket 2 and bearing on the plunger, the spiral spring 5 within the pocket back of the grip or ratchet block, the follower 7 within the pocket back of the spring, and then pass the bolt 6 through the several parts securing it and obtaining the required pressure on spring 5 and grip-block 4 by tightening up the nut 6<sup>a</sup>, after which the cotter-pin 8 may be passed through the pin-holes near the outer or open end of pocket 2.

The hanger when in use will be supported from the truck and connected with the brake beam, substantially as hereinbefore specified, and will operate as follows: If for any reason the plane of the beam (strut) is inclined to the track (its nose being above or below the normal plane) and the shoe is eccentric to the wheel, as soon as the leading end of the shoe comes in contact with the wheel and the power to apply the brakes is continuously applied the extensible hanger will either elongate or shorten up, as the case may require, until the plane of the beam (strut) assumes a horizontal position and the shoe becomes concentric with the wheel, the grip or spring ratchet block yielding to permit the necessary movement of the sections 1<sup>a</sup> and 3 on each other for that purpose. The position thus assumed by the sections (length of link or hanger) will thenceforth remain unchanged so long as the conditions remain the same.

Having thus described the nature, operation, and advantages of my invention, what I claim, and desire to secure by Letters Patent, is—

1. An automatically adjustable suspension hanger for brake-beams provided with means for maintaining the adjustment thereof, substantially as and for the purposes specified.

2. In an extensible hanger for brake-beams, the combination of a plurality of movable sections, and a yielding grip device, substantially as and for the purposes specified.

3. In an extensible hanger for brake-beams, the combination of a plurality of movable sections, and a spring actuated grip block; substantially as and for the purposes specified.

4. In an extensible hanger for brake-beams, the combination of a case section provided with a grip pocket, a plunger section arranged in the case section, and a spring actuated



grip block arranged in the grip pocket and engaging the plunger section; substantially as and for the purposes specified.

5 5. In an extensible hanger for brake-beams, the combination of a plurality of telescoping sections, one having an elongated slot, and a yielding grip block; substantially as and for the purposes specified.

10 6. In an extensible hanger for brake-beams, the combination of a case provided with a grip pocket, a plunger provided with an elongated slot and arranged in said case, a spring

supported yielding grip block arranged in the grip pocket of the case, and a through bolt which connects the parts; substantially as and 15 for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 7th day of January, 1895.

HENRY B. ROBISCHUNG.

Witnesses:

E. T. WALKER,  
P. J. CUNNEEN.