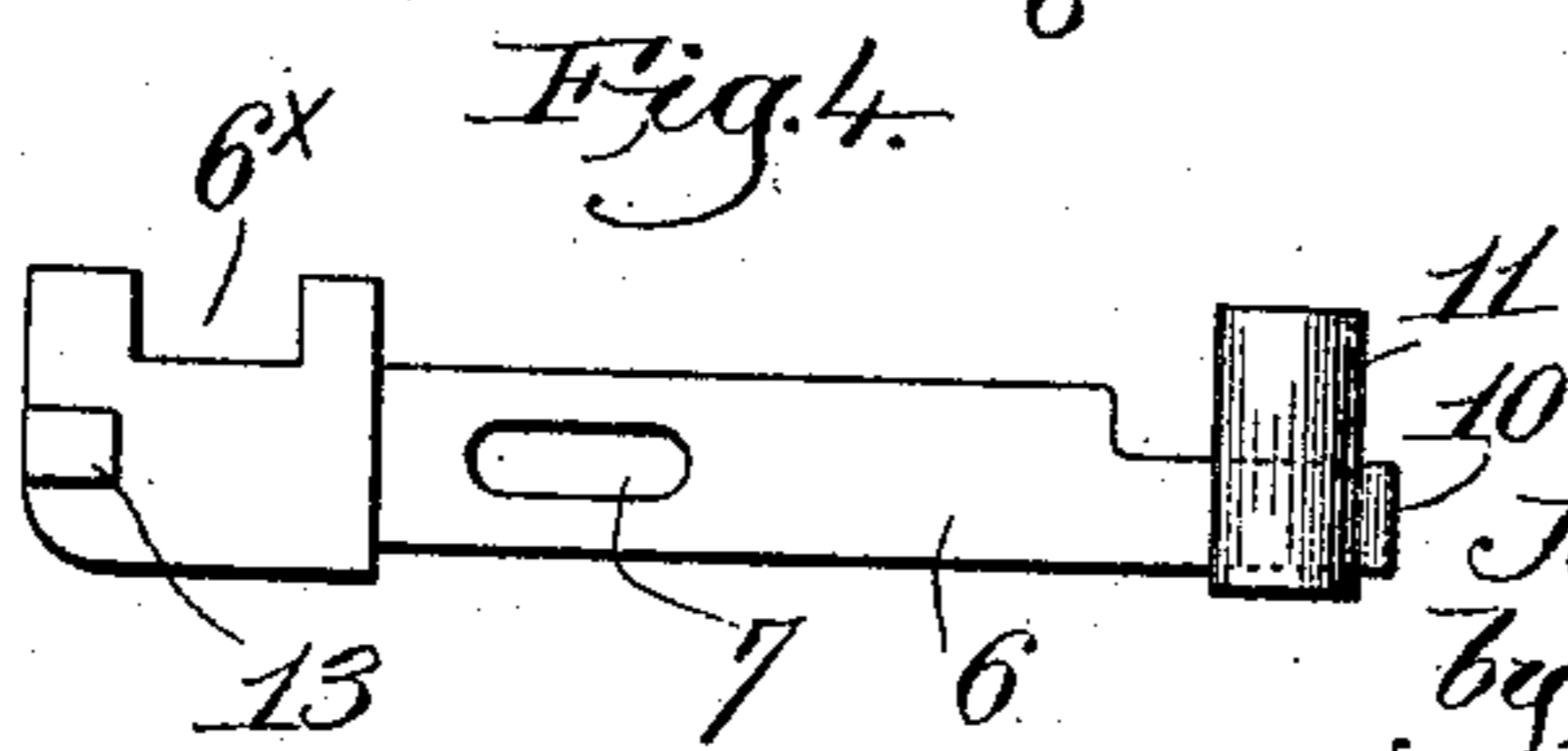
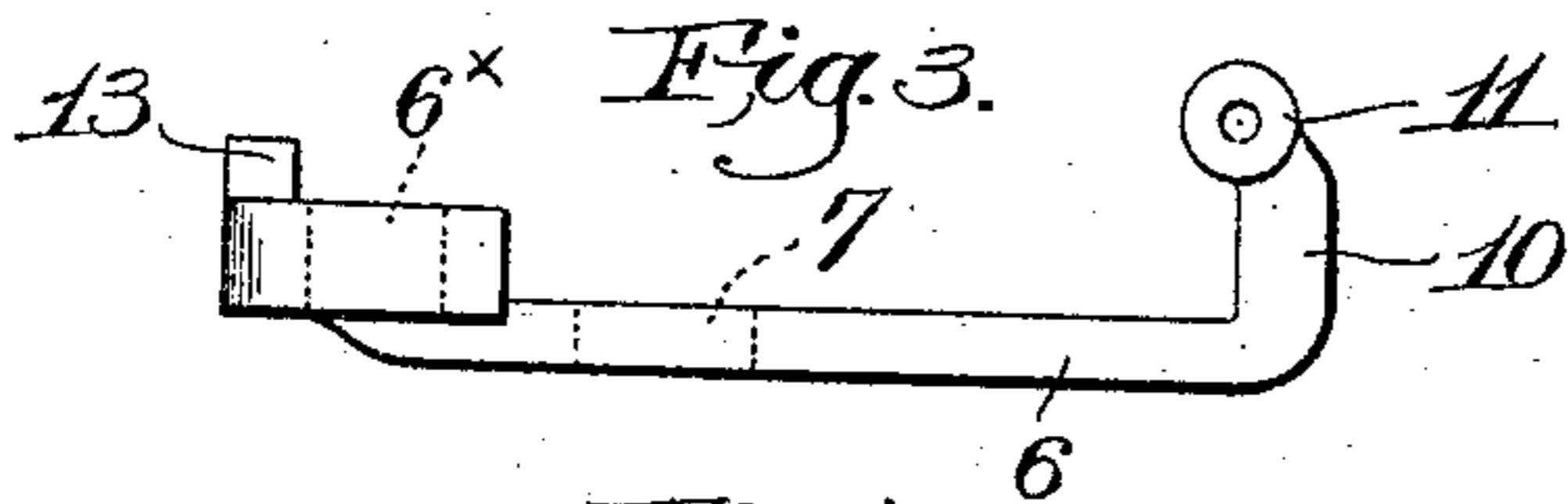
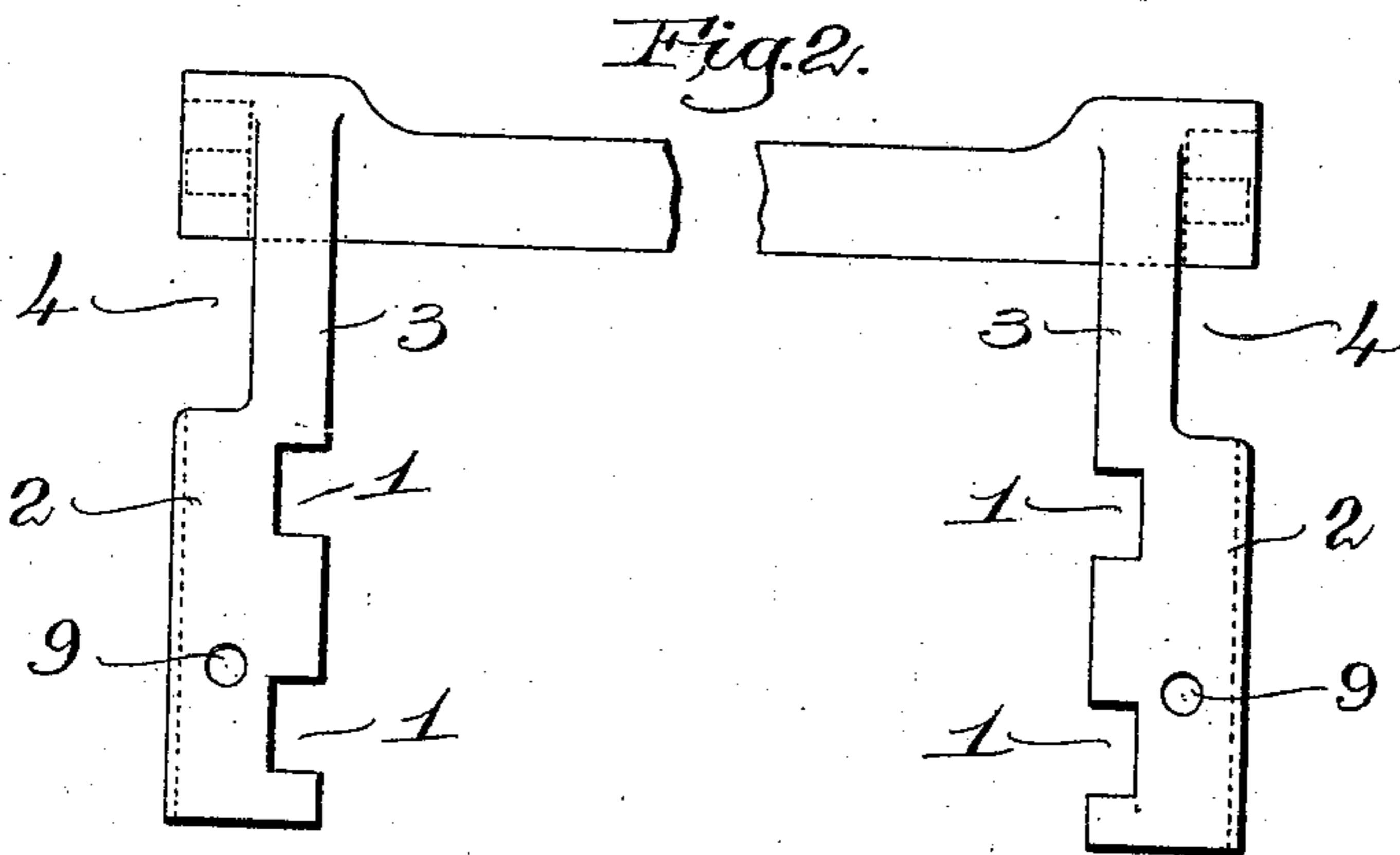
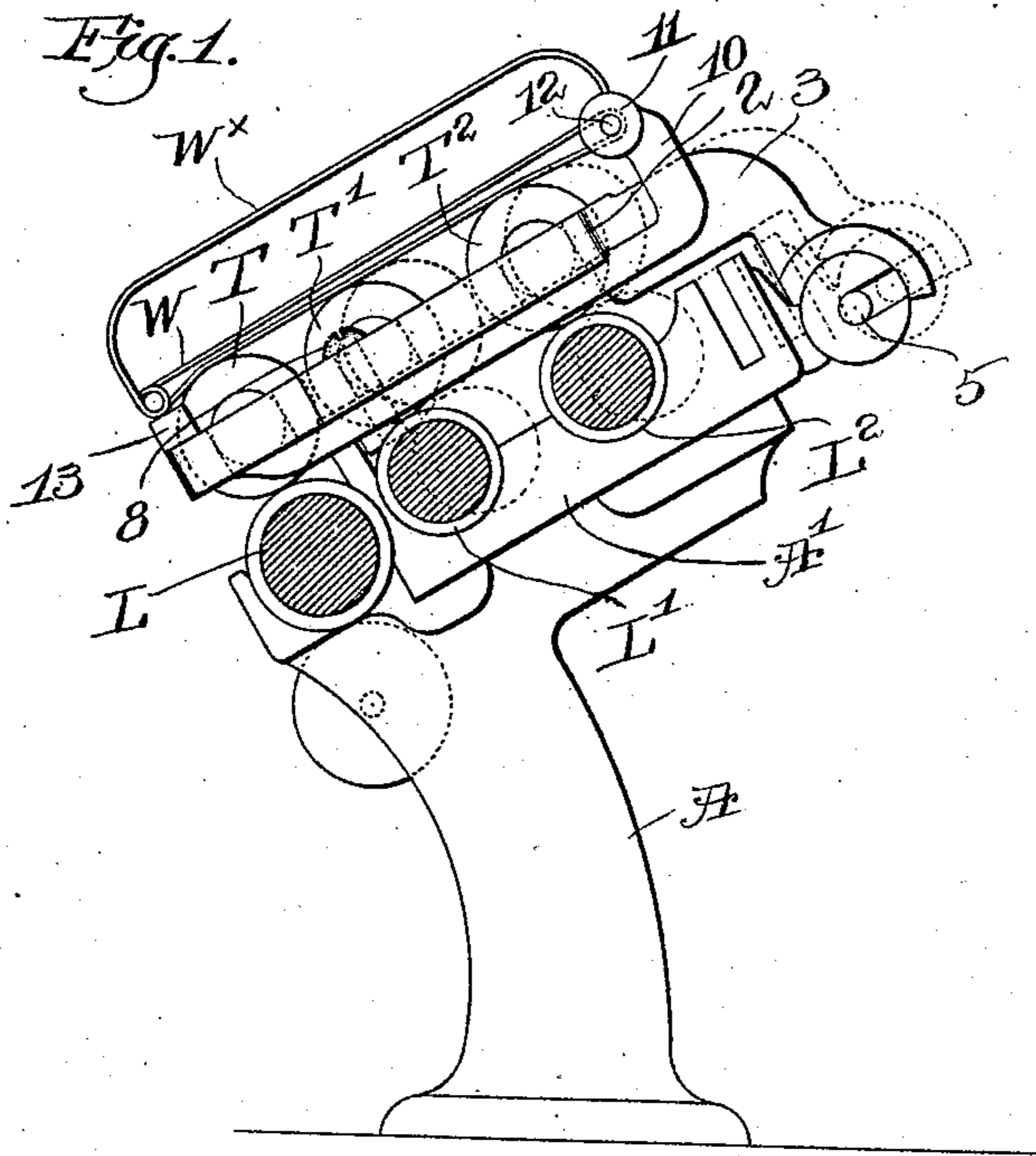


No. 842,483.

PATENTED JAN. 29, 1907.

J. T. MEATS.  
TOP ROLL CLEARER FOR SPINNING FRAMES.  
APPLICATION FILED OCT. 20, 1906.



Witnesses:  
Thomas Drummond  
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# UNITED STATES PATENT OFFICE.

JOHN T. MEATS, OF TAUNTON, MASSACHUSETTS.

## TOP-ROLL CLEARER FOR SPINNING-FRAMES.

No. 842,483.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed October 20, 1906. Serial No. 339,776.

*To all whom it may concern:*

Be it known that I, JOHN T. MEATS, a citizen of the United States, and a resident of Taunton, county of Bristol, State of Massachusetts, have invented an Improvement in Top-Roll Clearers for Spinning-Frames, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of novel means for supporting the top roll clearer of a spinning-frame and also for relieving the top rolls of a part of the weight of the clearer.

The top-roll clearer is of the type shown in United States Patent No. 825,584, granted July 10, 1906, to Chandler, a flat web or band or a plurality of such bands of textile material being held at front and rear in a cover which is mounted on the frame, the textile material resting on the top rolls and removing lint, &c., therefrom.

In the patent referred to the clearer is pivotally mounted on the cap-bar; but in practice I have found it important that the clearer should maintain a constant position with relation to the front top roll.

As will be understood by those skilled in the art, the journals of the middle and back top rolls are guided and controlled as to their position by the cap-bar, and the front top roll is guided by cap-bar slides, which are adjustably mounted on the cap-bar. This construction is employed because for different lengths of staple in the fiber to be spun the middle and back rolls are moved toward or away from the front roll, and when the top-roll clearer is mounted on the cap-bar, as has been customary heretofore, any change in the position of the middle and back rolls causes a change in the position of the top-roll clearer with relation to the front roll. To obviate this variable relation between the top-roll clearer and the front roll, I have herein so mounted the clearer that its position is unchanged relatively to the front roll entirely irrespective of the changes which may be made in the distance between the front roll and the middle and back rolls. So, too, in spinning very fine yarn it is sometimes very desirable to have as little weight as possible on the top rolls, and I have herein provided means for supporting the top-roll clearer in such a way that the top rolls are relieved of a portion of its weight.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a partial transverse section of a sufficient portion of a spinning-frame to be understood, with one embodiment of my invention applied thereto. Fig. 2 is a top plan view, centrally broken out, of the cap-bar. Fig. 3 is a side elevation of one of the cap-bar slides detached. Fig. 4 is a top plan view thereof.

The pedestal A, having a fixed bearing for the front lower roll L, the middle and back lower rolls L' L<sup>2</sup>, supported in bearings on the head or cap A', movably mounted on the top of the pedestal, and the top rolls T T' T<sup>2</sup> may be and are all of well-known construction.

The usual journals of the middle and back top rolls T' T<sup>2</sup> rest in the usual guides or sockets 1 1, formed in the end fingers 2 of the cap-bar, Fig. 2, the neck portion 3 of each finger in the present embodiment of my invention being reduced in thickness to leave an external clearance-space 4, Fig. 2, for a purpose to be described.

As shown in Fig. 1, the cap-bar is pivotally connected at 5 with the head or cap A', as usual, so that any movement of the head to vary the distance between the roll L and rolls L' L<sup>2</sup> will effect a corresponding change between the roll T and rolls T' T<sup>2</sup>.

Such change is made for different lengths of staple in the fiber to be spun, as will be manifest to those skilled in the art, and in Fig. 1 two positions of the middle and back rolls are shown in full and dotted lines, respectively.

The journals of the front top roll T rest in guides or sockets 6<sup>x</sup> in the cap-bar slides, one of the slides being shown at 6, Figs. 1, 3, and 4. Said slides are shown as provided with elongated longitudinal slots 7, through each of which a clamping-bolt 8 is passed into a hole 9, Fig. 2, in the adjacent finger of the cap-bar, so that the roll T can be maintained in proper coöperative relation with the lower roll L.

The top-roll clearer (see Fig. 1) is of the type shown in the Chandler patent referred to, the textile web or band W being supported at front and rear on the downturned portions of the cover W<sup>x</sup>, the textile material resting upon the top rolls and removing lint, &c., therefrom.

In order that the clearer shall maintain a constant position with relation to the front top-roll T, I have herein so mounted it that its relative position will not be altered by a change in the adjustment of the middle and back rolls. To this end I have upturned the rear end of each cap-bar slide 6 at 10 and provided the upturned part or ear 10 with a transverse hub or bearing 11, the ear passing up through the clearance 4 of the cap-bar end finger, with the hub well above the neck 3 of the cap-bar. The two hubs 11 are thus alined at opposite ends of the cap-bar, and the pintles 12 of the top-roll clearer are pivotally mounted in the hubs, so that the clearer is made to partake of any change in the adjustment of the cap-bar slides. Hence the relative position of the clearer and the front roll T remains constant, which is very important, in order that the clearer may properly perform its work. I also provide a positive closed pivotal connection or fulcrum for the top-roll clearer, a safer construction than the open-slot structure used in the Chandler structure.

In spinning very fine yarn it is sometimes desirable to have as little weight as possible on the top rolls, and to take off from such rolls a desirable portion of the weight of the clearer I have formed an upright lug or projection 13 on the outer end of each cap-bar slide to support the front or outer end of the clearer, as shown in Fig. 1. By this means the weight of the clearer-cover  $W^x$  is altogether taken off the top rolls, the tightness of the web or band W determining the pressure or frictional action upon the top rolls.

My invention is not restricted to the precise construction and arrangement herein shown and described, as the same may be modified or varied in different details by those skilled in the art without departing from the spirit and scope of my invention.

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

1. In a spinning-frame, a cap-bar, middle and back top rolls guided thereby, the front top roll adjustably connected with the cap-bar, and a hinged top-roll clearer mounted to maintain a constant position relative to the front top roll.

2. In a spinning-frame, top rolls, means to vary the distance between the middle and back rolls and the front roll, and a hinged top-roll clearer mounted to maintain a constant

position relative to the front roll irrespective of the distance between it and the middle and back rolls.

3. In a spinning-frame, top rolls, a cap-bar in which the middle and back top rolls are guided, guides for the front top roll adjustable on the cap-bar, and a hinged top-roll clearer adjustable simultaneously with said guides.

4. In a spinning-frame, top rolls, means to vary the distance between the middle and back rolls and the front roll, and a top-roll clearer pivotally mounted on said means.

5. The combination, with a cap-bar and middle and back top rolls controlled as to their position thereby, a front top roll, and slides adjustable on the cap-bar to control said roll, of a top-roll clearer pivotally mounted on the slides.

6. The combination, with middle and back top rolls, and a cap-bar by which they are controlled, of a front top roll, guiding means therefor adjustably mounted on the cap-bar, and a top-roll clearer pivotally mounted on said means.

7. The combination, with middle and back top rolls, and a cap-bar by which they are controlled, of a front top roll, guiding means therefor adjustably mounted on the cap-bar, a top-roll clearer pivotally mounted at its rear end on said means, and a support on said means for the front end of the clearer, to relieve the top rolls of a portion of the weight of the clearer.

8. In a spinning-frame, a cap-bar, middle and back top rolls guided thereby, longitudinally-adjustable slides mounted on the cap-bar, each slide having its rear end upturned outside the cap-bar and provided with a bearing, a front top roll guided by the slides, and a top-roll clearer having pintles pivotally mounted in the bearings on the slides.

9. In a spinning-frame, a cap-bar, middle and back top rolls guided thereby, front top-roll guide members longitudinally adjustable on the cap-bar and upturned at their rear ends above the cap-bar, and a top-roll clearer fulcrumed on the upturned portions of said members.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN T. MEATS.

Witnesses:

THOMAS G. COX,  
JAMES C. BIRNEY