

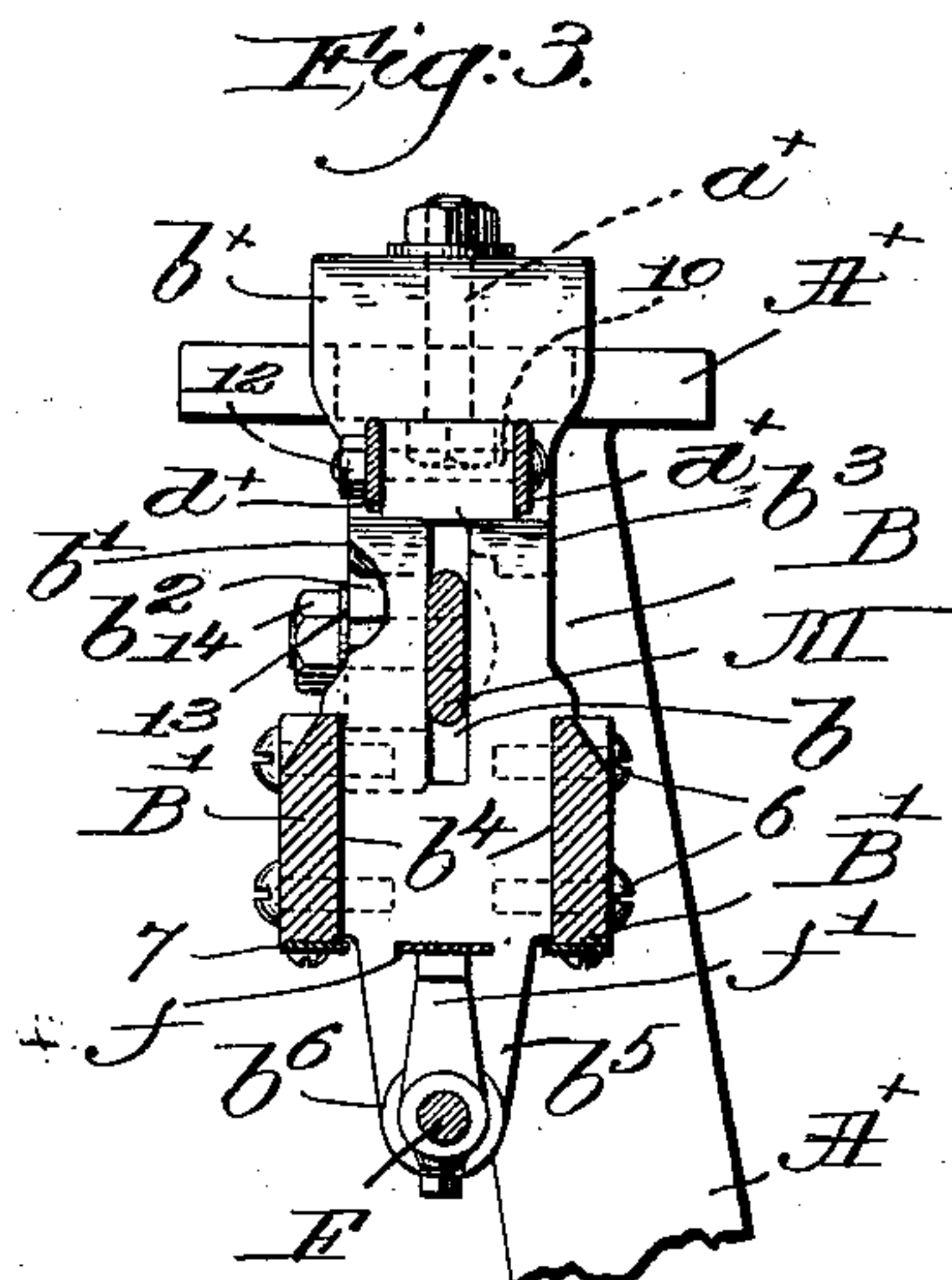
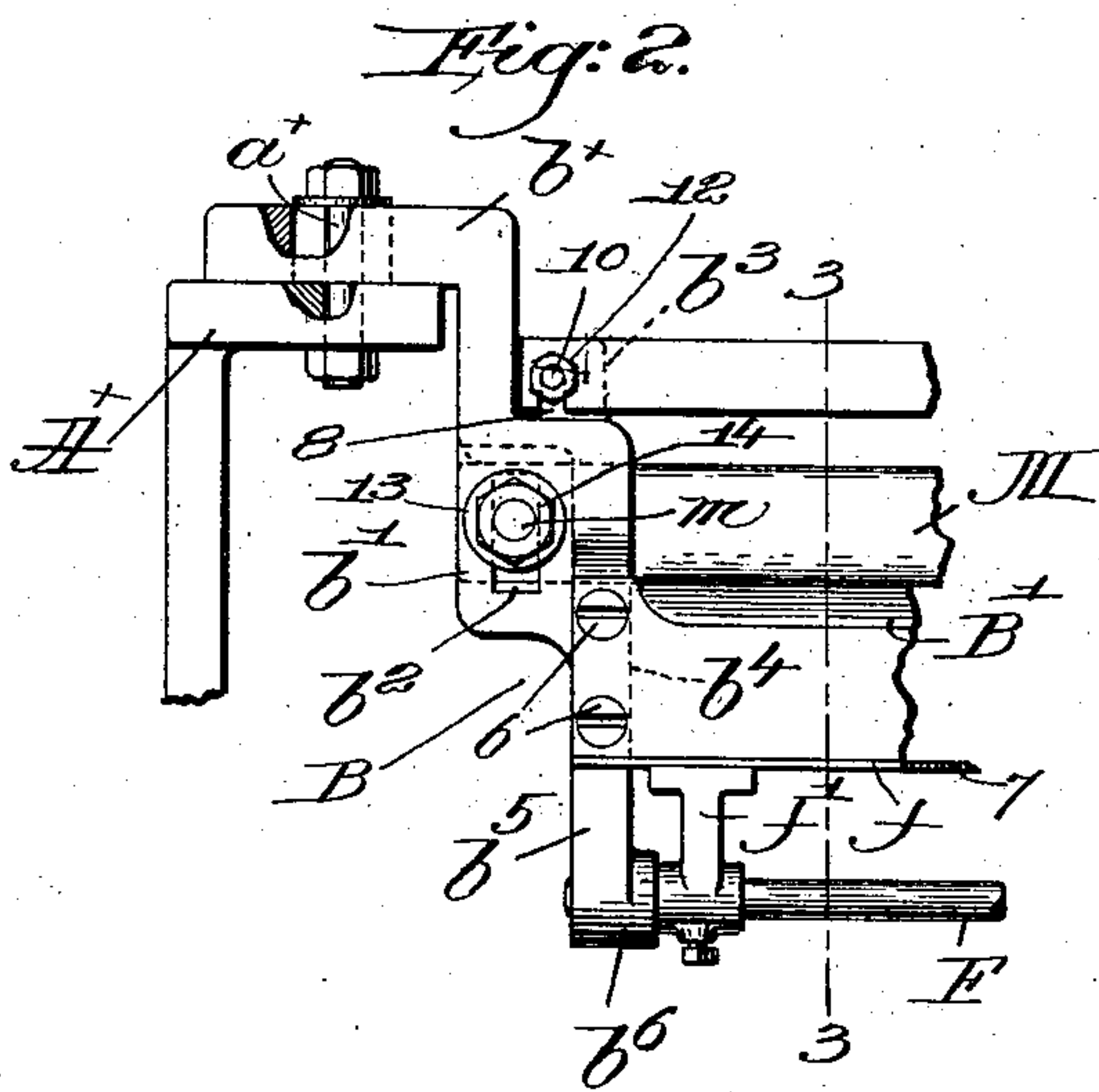
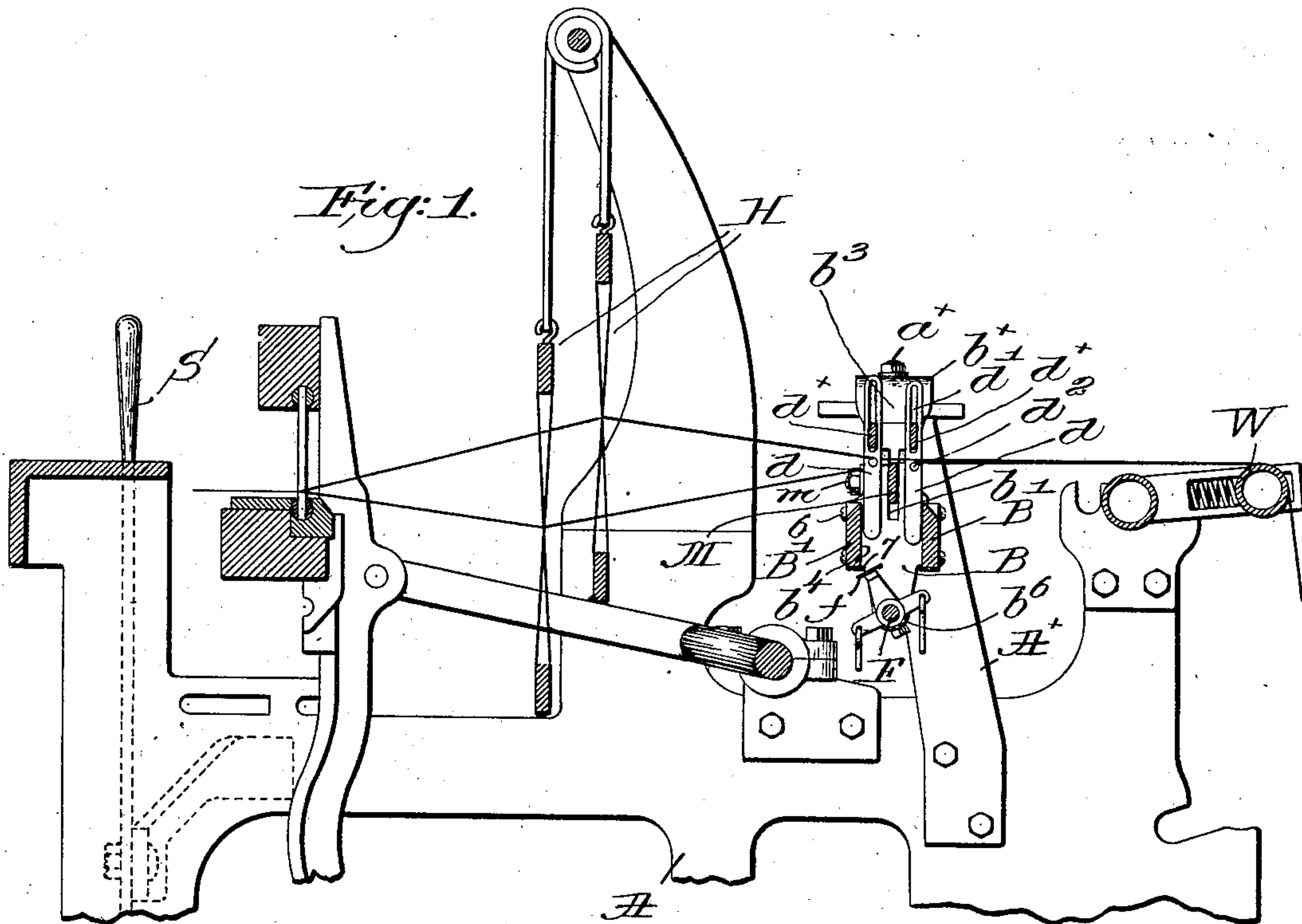
No. 699,117.

Patented Apr. 29, 1902.

W. I. STIMPSON.  
WARP STOP MOTION MECHANISM.

(Application filed Dec. 11, 1901.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## WARP-STOP-MOTION MECHANISM.

SPECIFICATION forming part of Letters Patent No. 699,117, dated April 29, 1902.

Application filed December 11, 1901. Serial No. 85,485. (No model.)

*To all whom it may concern:*

Be it known that I, WALLACE I. STIMPSON, a citizen of the United States, residing at Milford, in the county of Worcester and State of Massachusetts, have invented an Improvement in Warp-Stop-Motion Mechanism, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

My present invention has for its object the production of certain novel features in connection with warp-stop-motion mechanism more particularly adapted for use with looms, the stop-motion mechanism being of the type wherein vertically-movable detectors are normally maintained inoperative by the warp-threads, a released detector effecting the operation of suitable stopping means.

Various novel features of my invention will be hereinafter described, and particularly pointed out in the following claims.

Figure 1 is a cross-section of a portion of a loom with one embodiment of my invention applied thereto. Fig. 2 is an enlarged front elevation, partly broken out, of one of the brackets for supporting the warp-stop mechanism; and Fig. 3 is a vertical section thereof on the line 3 3, Fig. 2, looking toward the left.

The loom-frame A is provided at each side with an L-shaped stand A<sup>x</sup> between the harnesses H and whip-roll W, Fig. 1, each stand supporting a bracket B of peculiar shape. Each bracket has at its upper end an ear b<sup>x</sup>, which is secured by a suitable bolt a<sup>x</sup> to the top of the adjacent stand A<sup>x</sup>, the upright body portion of each bracket having a centrally-located vertical slot b, Figs. 1 and 3, and a lateral web b' extended from the outer face of the body adjacent the slot. As shown in Figs. 2 and 3, this web is provided with a vertical slot b<sup>2</sup> for a purpose to be described, and above the slot b the bracket-body has an inwardly-extended lug b<sup>3</sup>, having parallel back and front vertical faces. The lower part of the body of the bracket is shaped to form seats b<sup>4</sup> on its front and back edges, and the depending end b<sup>5</sup> has a bearing b<sup>6</sup> for a

feeler rock-shaft F, to which are secured rocker-arms f', which carry at their free ends a transversely-extended feeler f, substantially as in United States Patent No. 673,824, dated May 7, 1901, the feeler being normally vibrated in any suitable manner—as, for instance, in said patent. The seats b<sup>4</sup> receive two parallel bars B', set on edge and extended from one to the other bracket and secured in place by suitable screws 6 6, plates 7, having their inner edges preferably roughened or serrated, being secured to the bottom edges of the bars B', the double-edge feeler f normally vibrating in a curved path below said plates 7.

I have herein shown two like detector-supports d<sup>x</sup>, which are extended through longitudinal slots d' in stop-motion detectors d, preferably made as thin flat metal strips having each a warp-eye d<sup>2</sup>, the detectors being shown only in Fig. 1. Referring now to Figs. 2 and 3, each detector-support is made with a notch 8 in its lower edge to constitute a hook-like end, which is hooked over the shank of a headed bolt 10, passed transversely through the lug b<sup>3</sup>, so that the two supports are sustained thereby, and by means of a nut 12 on the bolt they are clamped securely in place, while readily removable, if desired. The detectors are thus mounted in two parallel series between the harnesses and whip-roll, and they are prevented from lifting improperly by the supports d<sup>x</sup>, while the latter prevent a released detector from dropping to the floor when its warp-thread breaks. Herein I have shown the detectors as arranged to also effect the leasing of the warps, the threads for each harness passing through one of the series of detectors, thus dispensing with the usual lease-rods. I have provided a warp-support to sustain those warps in the lower plane of the shed, said support being shown as a flat bar M, set on edge between the two series of detectors and at its ends passed through the vertical slots b of the brackets B, the extremities of said warp-support resting against the rear faces of the bracket-webs b'. A headed bolt m is passed through the extremity of the warp-support and through the



slot  $b^2$  in the adjacent web, and by a washer 13 and nut 14 the warp-support is clamped securely in place. By loosening the nuts 14 the warp-support M can be vertically adjusted, so that its upper edge is at the desired height to properly support the warp-threads and to also take up slackness, so that a detector will not descend into the path of the feeler merely because its thread is too slack.

10 The loom is provided with usual stopping means, only one member of which is shown, the shipper-lever S, (see Fig. 1,) said stopping means being operated as in said patent referred to, when the vibratory movement of the feeler  $f$  is arrested by engagement with a released detector in either series, due to a broken warp-thread.

By the construction shown the warp-support is readily adjusted vertically, the detector-supports are conveniently held in place and are readily removable when necessary, and the structure is strong, firm, and durable.

When a detector is released and engaged by the feeler, one or other of the bars  $B'$  acts as a back-stop, the outer edge of the detector being held by the inner edge of the bottom plate 7, and the bars  $B'$  serve as guides for the lower ends of the detectors.

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

1. In a warp stop-motion for looms, two opposed fixed brackets each having a vertical slot and a lateral web also provided with a vertical slot, a warp-supporting bar mounted

in and vertically adjustable in the bracket-slots, a bolt extended through each end of said bar and the slot of the adjacent web, and a clamping-nut for each bolt, to maintain the bar in vertically-adjusted position.

2. In a warp stop-motion for looms, two opposed fixed brackets each having a vertical slot and an adjacent lateral web, an inwardly-extended lug on each bracket above the slot, detector-supports having hooked ends and located at the back and front of said lugs, a supporting and clamping bolt passed through each lug and on which the detector-supports are hooked, a warp-supporting bar having its ends extended through the bracket-slots, and means to clamp the ends of said bar in vertically-adjusted position on the adjacent webs.

3. In a warp stop-motion for looms, two opposed fixed brackets each having a vertical slot and an adjacent lateral web, an inwardly-extended lug on each bracket above the slot, detector-supports detachably clamped to said lugs at the back and front thereof, a vertically-adjustable warp-supporting bar extended through the bracket-slots, and means to clamp said bar at its ends to the adjacent webs.

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

WALLACE I. STIMPSON.

Witnesses:

GEORGE OTIS DRAPER,  
ERNEST WARREN WOOD.