

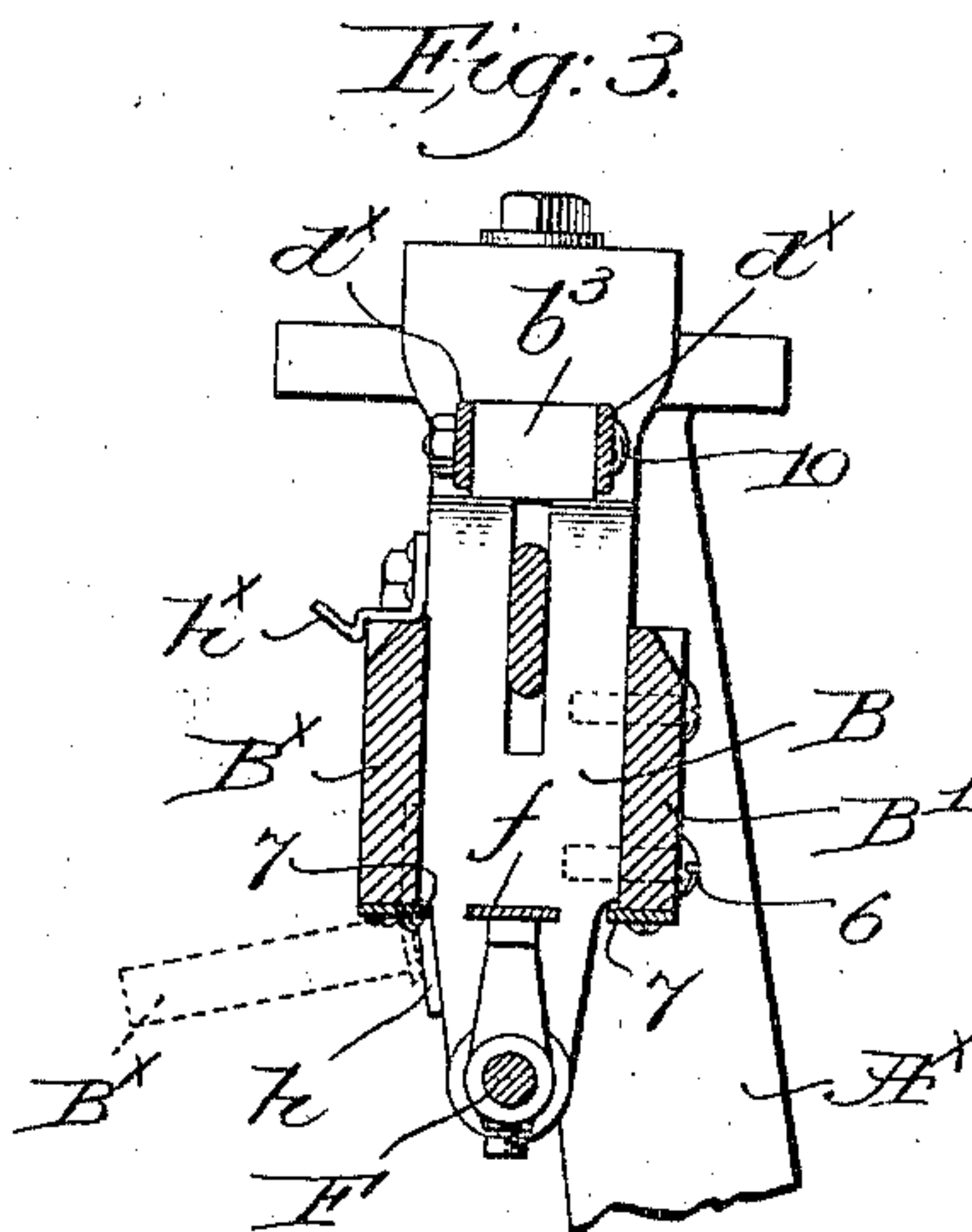
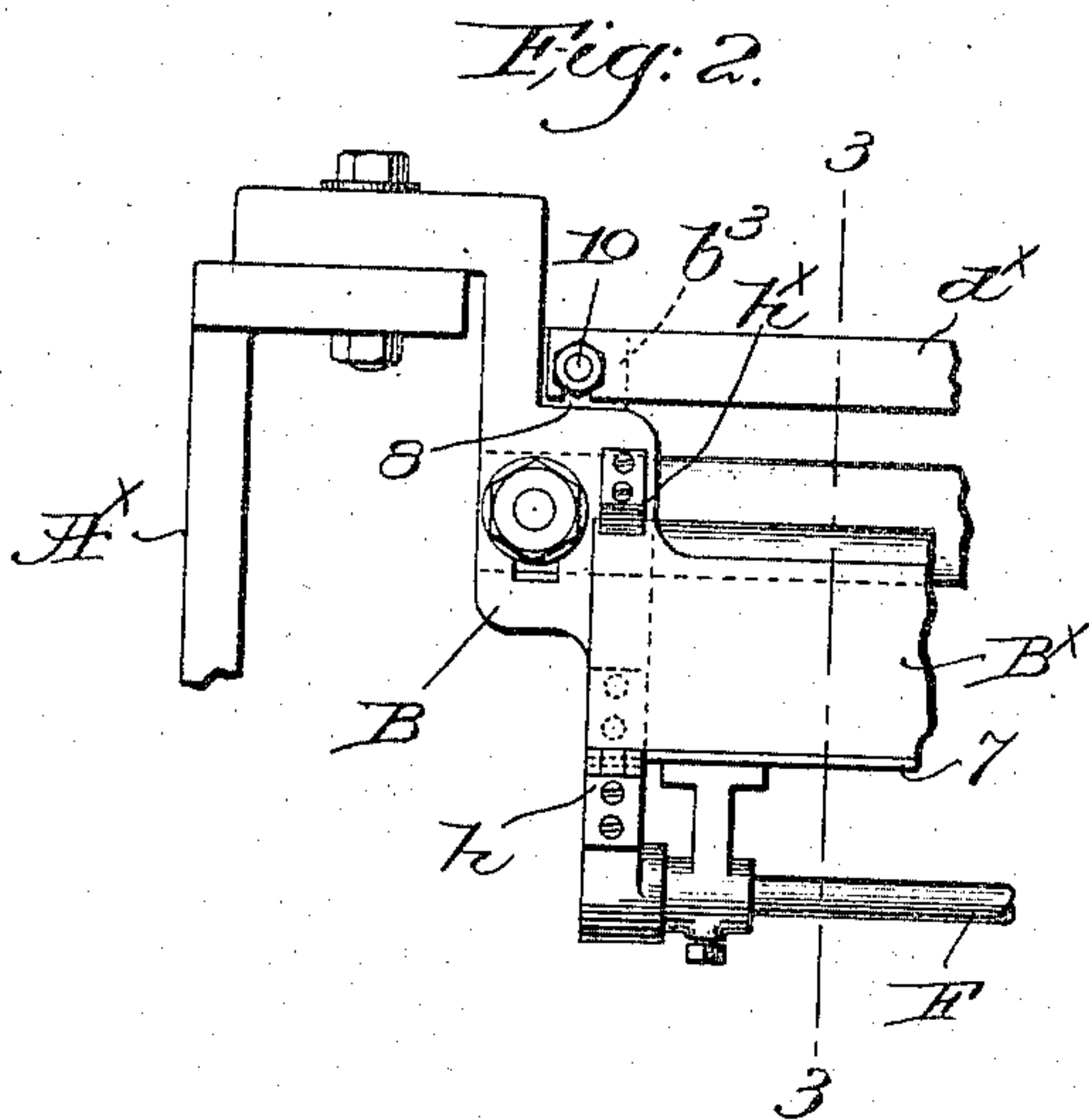
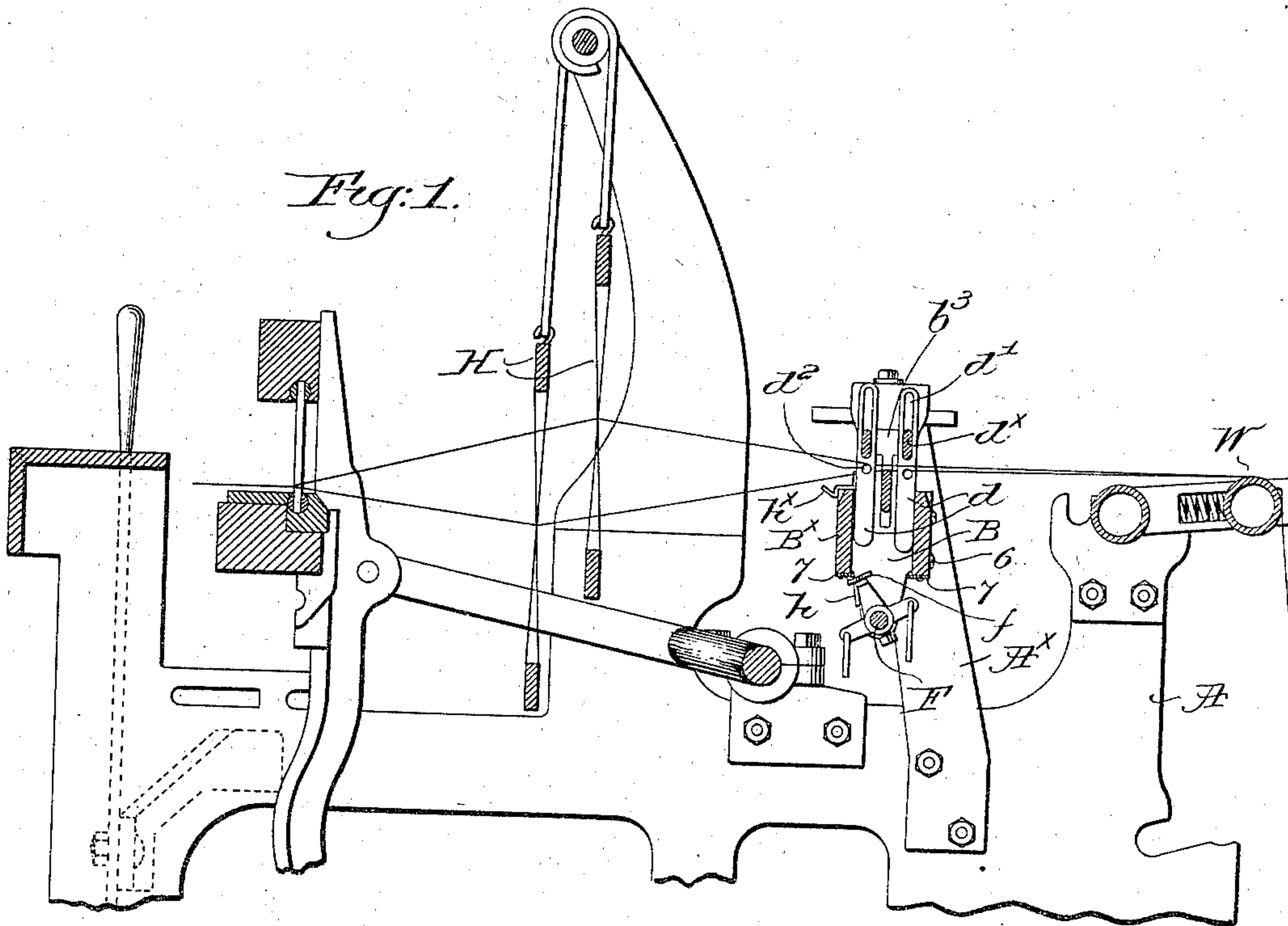
No. 748,168.

PATENTED DEC. 29, 1903.

J. V. CUNNIFF.
WARP STOP MOTION MECHANISM.

APPLICATION FILED OCT. 21, 1903.

NO MODEL.



Witnesses,
Edward H. Allen.
J. Wm. Lutton

Howard;
 John V. Curriff.
 by Leasby, Oregon.
 always

UNITED STATES PATENT OFFICE.

JOHN V. CUNNIFF, OF NEW BEDFORD, MASSACHUSETTS, ASSIGNOR TO
DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION
OF MAINE.

WARP-STOP-MOTION MECHANISM.

SPECIFICATION forming part of Letters Patent No. 748,168, dated December 29, 1903.

Application filed October 21, 1903. Serial No. 177,854. (No model.)

To all whom it may concern:

Be it known that I, JOHN V. CUNNIFF, a citizen of the United States, and a resident of New Bedford, county of Bristol, 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 letters on the drawings representing like parts.

This invention relates to warp-stop-motion mechanism wherein the breakage of a warp-thread is made effective to automatically effect the operation of a stopping instrumentality by or through the movement into active position of a detector normally sustained in inactive or inoperative position by the thread when intact.

More particularly my invention relates to mechanism of such type wherein the detectors are each controlled by a single warp-thread and are mounted independently of the shed-forming mechanism—as, for instance, in the apparatus shown and described in United States Patent 699,117. In such apparatus the lower ends of the detectors depend between front and back plates extended across the loom and which serve as back-stops for released detectors, the latter very generally being arranged in two banks or series, as shown in said patent.

When a new warp is inserted in the loom, it is now necessary in placing in position the supporting-bars for the detectors to lift the bars up over the front plate, and in so doing the warp-threads are very apt to get crossed under the bottom of the warps, making a difficult tangle to straighten out.

My present invention has for its object the production of means whereby such tangling may be avoided, and to this end the front or “cover” plate, as it is sometimes termed, is so mounted that it can be temporarily turned down out of the way when it is necessary to place the detector supports or bars in position.

Figure 1 is a transverse sectional view of a portion of a loom with one embodiment of my present invention applied thereto, the warp-stop-motion-controlling detectors being shown. Fig. 2 is an enlarged detail, in front

elevation, of one of the supporting-brackets for the warp-stop-motion mechanism, showing one end of the front or cover plate and the means for holding it in operative position; and Fig. 3 is a section on the line 3-3, Fig. 2, the cover-plate being shown turned down by dotted lines.

The loom-frame A is provided at each side with a stand A^x , to which is secured a fixed bracket B between the harnesses H and whip-roll W, each bracket having near its top an inwardly-extended lug b^3 , having parallel back and front vertical faces, the brackets at their lower ends supporting a feeler rock-shaft F, carrying a feeler f , Fig. 1, all substantially as in the patent referred to. A seat b^4 on the rear edge of each bracket receives an upright plate B' , extended from one to the other bracket and held securely in place by screws 6, a serrated plate 7 being secured to the bottom edge of said plate.

Herein two detector supports or bars d^x are extended through longitudinal slots d' in stop-motion-controlling detectors d , each having a warp-eye d^2 , Fig. 1, and each support has a notch 8 in its lower edge at each end (see Fig. 2) to hook over the shank of a clamping-bolt 10, passed through the lug to clamp the supports thereon, substantially as in the patent referred to. The feeler f normally vibrates in an arc below the detectors, which depend in front of the plate B' , the latter serving as a back-stop for a released detector of the back series or bank when engaged by the feeler in well-known manner.

Herein I have shown a front or cover plate B^x , similar to the plate B' and also having a serrated plate 7 on its bottom edge, said front plate extending across the loom in front of the detectors and serving as a back-stop for a released detector of the front series. In the patent referred to the front plate is rigidly secured to the brackets B; but in accordance with my present invention I pivotally connect the plate B^x to the brackets by suitable hinges, one of which is shown at h in the drawings. One leaf of each hinge is rigidly secured to the front edge of the bracket and the other leaf to the plate B^x , adjacent its lower edge, so that when the plate is swung

down into dotted-line position, Fig. 3, its downward movement will be stopped by engagement with the bracket. A spring-catch h^x is mounted on each bracket, preferably to engage the upper edge of the plate when swung into upright normal position

When it is desired to insert a new warp in the loom, the front plate is released and permitted to swing down, whereupon the detector-supports d^x can be easily placed in position, with no obstruction to the movement of the lower ends of the detectors to proper position, without any chance of the warp-threads getting under their ends and becoming crossed or tangled. The plate B^x is then swung into upright position and retained in place by the catches h^x , as shown in the drawings.

The construction is simple and easily operated and efficiently carries out the object desired.

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

1. In a warp stop-motion for looms, brackets fixedly mounted on the loom sides, detector-supports detachably connected with the brackets, detectors cooperating with the warp-threads and having elongated openings through which said supports extend, parallel plates between which the lower ends of the

detectors depend, and pivotal connections between the front plate and the brackets, whereby said plate may be swung down out of the way to permit ready positioning of the detector-supports.

2. In a warp stop-motion for looms, a series of stop-motion-controlling detectors cooperating with the warp-threads, a detachably-mounted detector-support extended across the loom, a pivotally-mounted front or cover plate behind which the lower ends of the detectors depend, and means to normally retain said plate in upright operative position.

3. In a warp stop-motion for looms, a series of stop-motion-controlling detectors cooperating with the warp-threads, a detector-support extended across the loom, opposed, fixed brackets on which said support is detachably mounted, a front or cover plate behind which the lower ends of the detectors depend, pivotal connections between the lower edge of said plate and the brackets, and a catch to engage and normally retain the plate in upright, operative position.

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

JOHN V. CUNNIFF.

Witnesses:

JOSEPH I. DA TERRA,
HENRY C. HATHAWAY, Jr.