

No. 682,553.

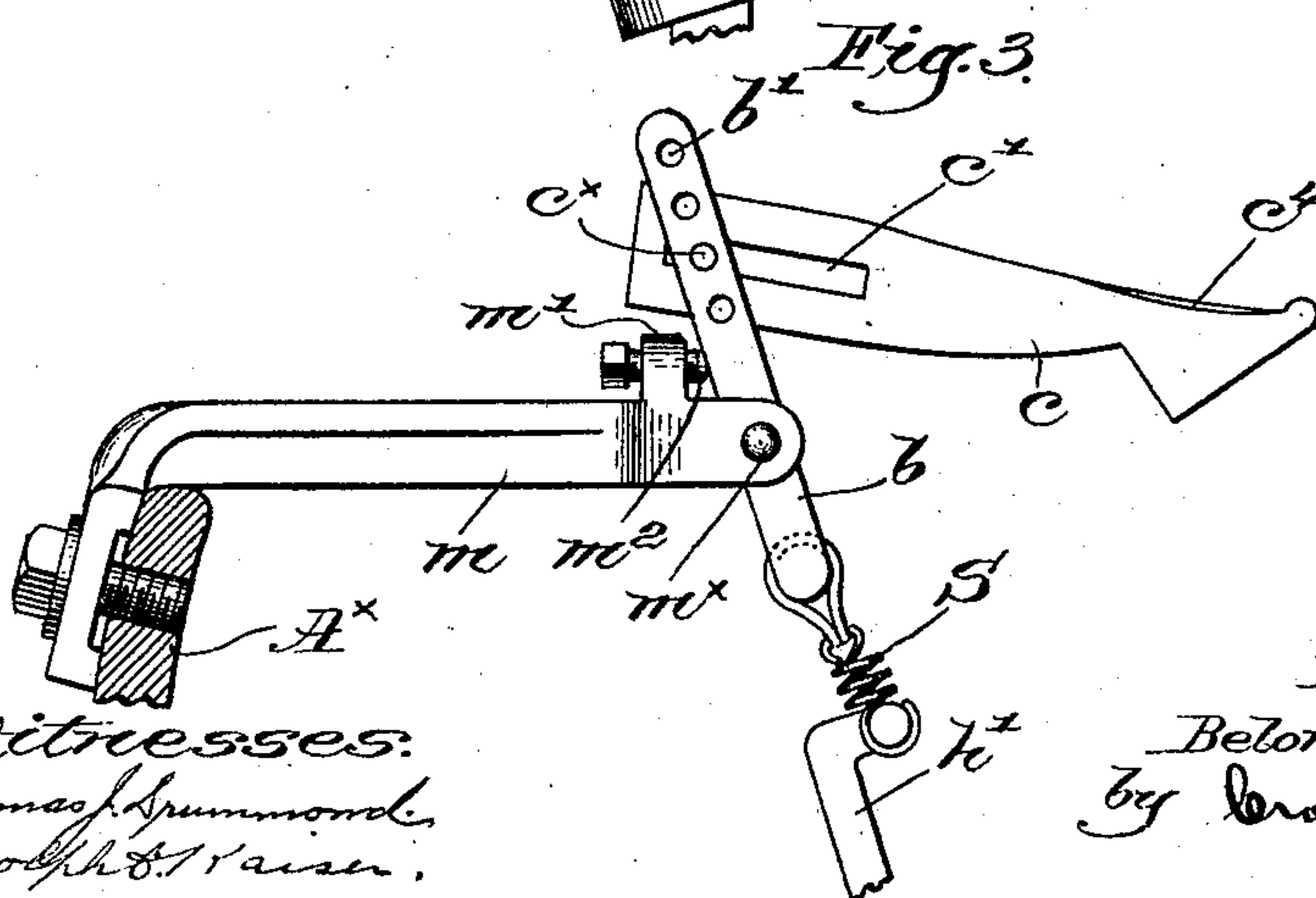
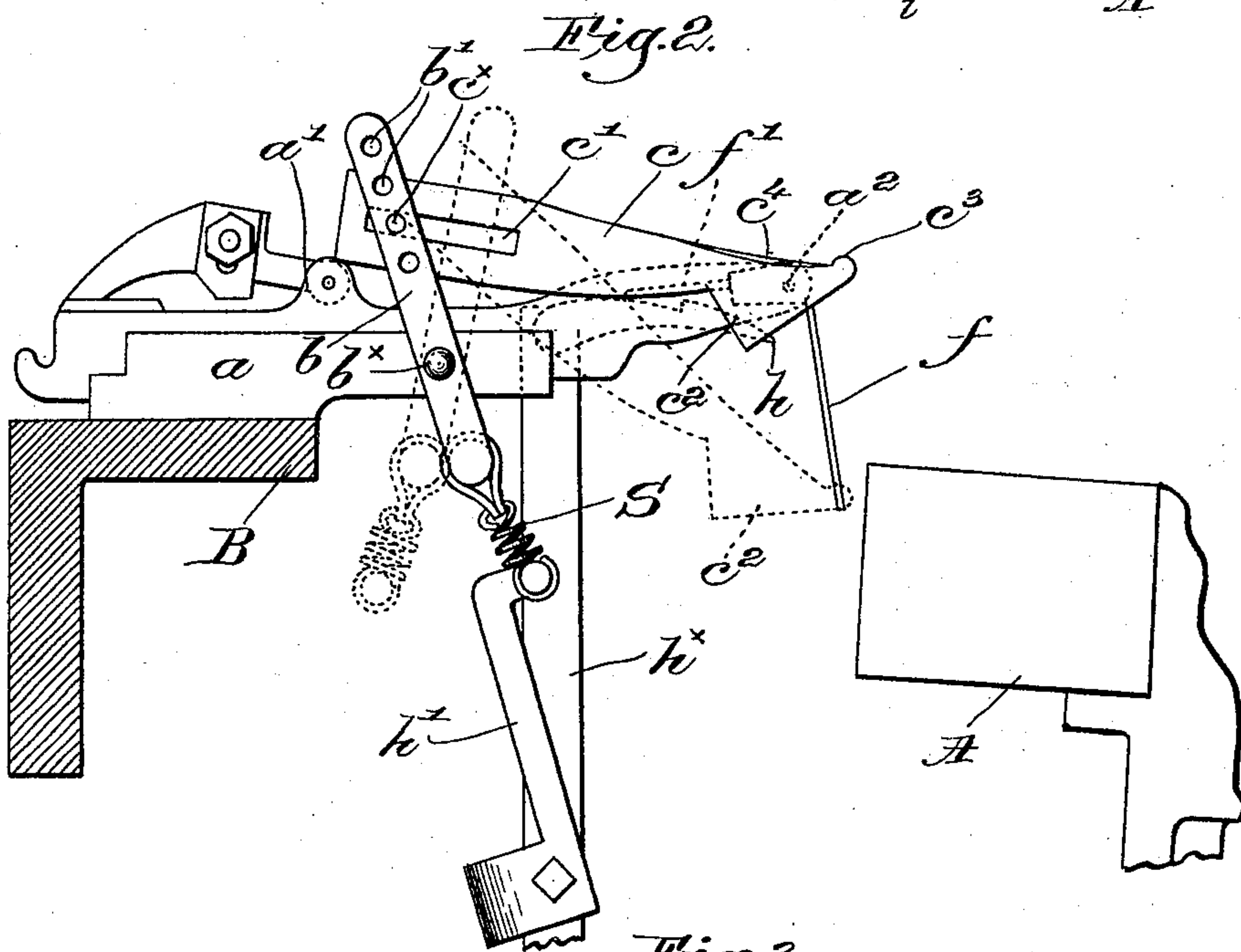
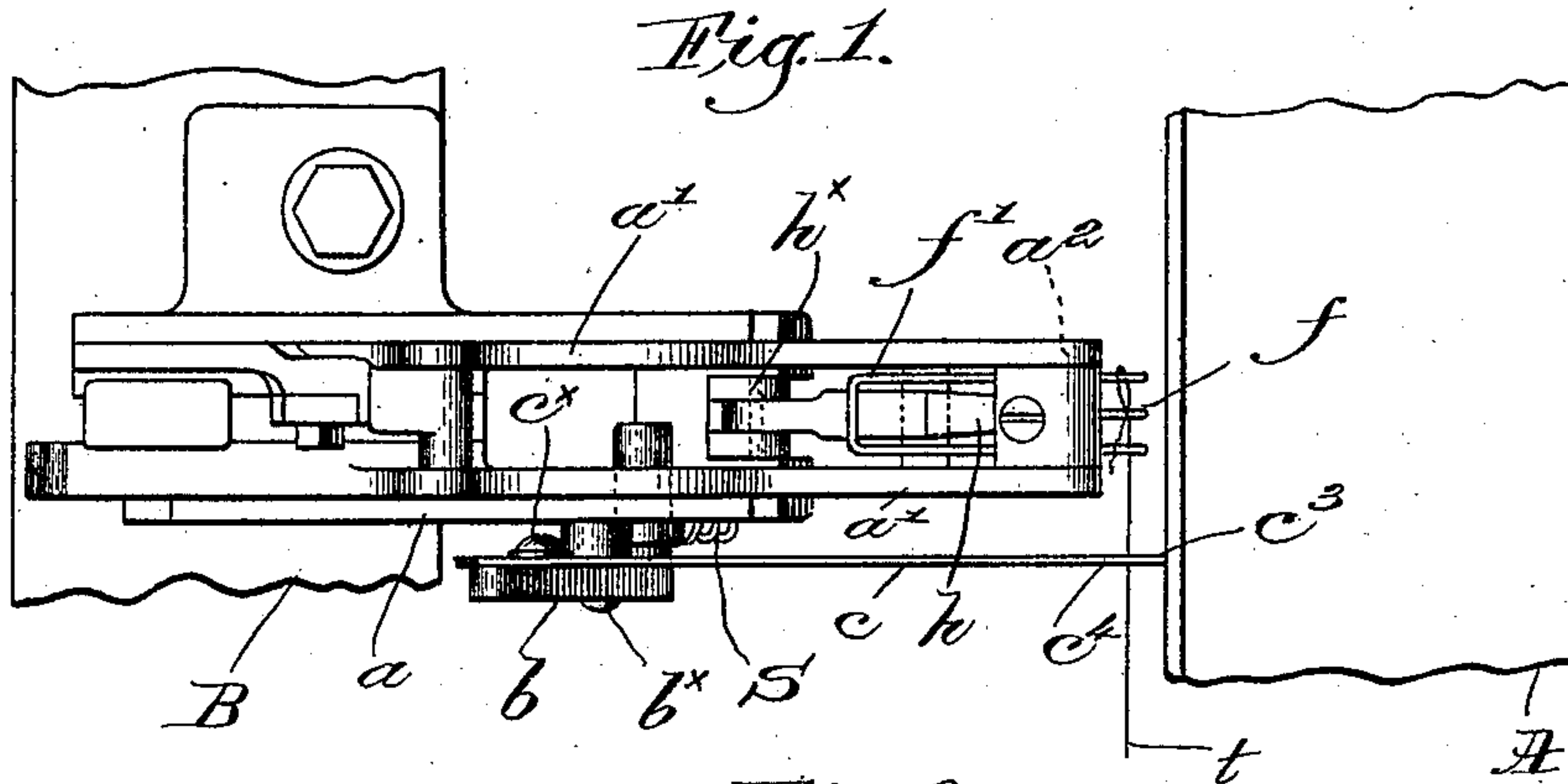
Patented Sept. 10, 1901.

B. JANELLE.

WEFT FORK CLEARER FOR LOOMS.

(Application filed Apr. 27, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

BELONIE JANELLE, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR OF TWO-THIRDS TO HERMAN F. STRAW AND HARRY E. PARKER, OF SAME PLACE.

WEFT-FORK CLEARER FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 682,553, dated September 10, 1901.

Application filed April 27, 1901. Serial No. 57,707. (No model.)

To all whom it may concern:

Be it known that I, BELONIE JANELLE, a citizen of the United States, and a resident of Manchester, in the county of Hillsboro and State of New Hampshire, have invented an Improvement in Weft-Fork Clearers for Looms, 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 means for clearing the weft-fork of filling which may catch or collect thereupon and prevent its proper operation.

In the operation of a loom it sometimes happens that the weft will break near the weft-fork on the beat-up of the lay, and the suddenly-released weft end, connected at its other extremity with the cloth, will wrap around or foul the fork, preventing the proper operation thereof, so that the loom will continue to run and make bad places in the cloth. I have herein provided means for removing automatically from the weft-fork weft collected thereupon, so that the fouled fork is promptly cleared and restored to operative condition.

Figure 1 is a top or plan view of a portion of a loom embracing the weft-fork and cooperating devices with one embodiment of my invention applied thereto. Fig. 2 is a cross-sectional view of the loom, but showing in side elevation the weft-fork mechanism and the clearer therefor; and Fig. 3 is a side elevation of a modification of my invention to be described.

Referring to Fig. 1, the breast-beam B has mounted upon it the guide a for the weft-fork slide a' , the latter having pivotally mounted thereupon at its inner end at a^2 the weft-fork f , the tail f' whereof is adapted to be engaged by the hook h of the weft-hammer h^x when by absence of filling the weft-fork is not tilted, and such parts may be and are of usual and well-known construction and operate in usual manner.

It sometimes happens that the weft will break on the beat-up of the lay A in such close proximity to the weft-fork that the suddenly-released weft end, held at its other extremity at the edge of the cloth, will snap

or fly around the tines of the fork and tilt it to prevent coöperation of its tail with the hook of the weft-hammer, and if the loom is provided with weft-replenishing mechanism the latter will not be operated and the loom will continue to run for several picks without having any filling laid in the shed, making thin places or imperfections in the cloth. To prevent this, I have provided clearing means for the fork, and in Figs. 1 and 2 I have shown a rocking support b , fulcrumed at b^x on the side of the guide a , the depending end of the support being connected, preferably by a yielding connection, as a spring S, with an upturned arm h' , rigidly secured to the weft-hammer, so that the vibration of the latter will rock the support on its fulcrum. A blade-like clearer c is shown as rigidly yet adjustably secured to the upper end of the support b by means of a clamp-screw c^x , which is extended through a longitudinal slot c' in the clearer into one of a series of holes b' in the support. The blade extends in parallelism with the fork-slide and adjacent the latter between the weft-fork and the edge of the cloth and is long enough to extend back as far as the fork, the clearer having a substantially triangular head c^2 , upturned at its apex to form a hook c^3 . The upper edge of the clearer adjacent the hook is beveled or sharpened, as at c^4 , for a purpose to be described, and by reference to full and dotted line positions of the clearer (shown in Fig. 2) its sweep or stroke will be evident, the vibration imparted thereto in a vertical plane being effected by the rocking of the support b . When the lay beats up, the clearer is above it out of the way, as shown in full lines, Fig. 2. Supposing a weft end t , Fig. 1, has fouled the fork, then on the next downward stroke the clearer-head will engage the weft between the fork and the edge of the cloth and will either push the weft off the lower ends of the tines or will break it, in either case freeing or clearing the fork. The downward stroke of the clearer is not effected soon enough to cause the clearer to engage the lay before the latter has moved back; but even if such engagement should for any reason occur the yielding connection S would stretch and no damage would result. Should

the downward stroke of the clearer for any reason fail to clear the fork, then the hook c^3 will pass below the weft, engage it, and draw it over the cutting edge c^4 as the clearer rises, thus severing the thread, and the same action will occur if the first engagement of the thread by the clearer takes place on the upstroke of the latter.

In Fig. 3 I have shown the support b differently mounted, a bracket m being bolted to the loom-frame A^x and rearwardly extended, the support being fulcrumed thereon at m^x . An upturned ear m' on the bracket is shown as provided with a screw m^2 , extended there-through in front of the support above its fulcrum to serve as a stop to limit the upward movement of the clearer, if desired.

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

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

1. In a loom, the weft-fork, and a clearer to automatically clear the fork of weft collected thereupon.

2. In a loom, the weft-fork, a clearer to engage and remove weft collected upon the fork, and means to vibrate the clearer in the direction of the length of the fork.

3. In a loom, the weft-fork, a clearer to clear collected weft therefrom, a rocking support on which the clearer is mounted, and means to rock the support.

4. In a loom, the weft-fork, a blade-like

clearer movable in a vertical plane adjacent the fork, to engage and remove a weft end caught on the fork, and means to move the clearer.

5. In a loom, the weft-fork, the weft-hammer, a clearer to clear the fork of a weft end caught thereon, and operating connections between the clearer and the weft-hammer, to actuate the former.

6. In a loom, the weft-fork, a blade-like clearer movable in a vertical plane adjacent the fork, to engage and remove a weft end caught on the fork, a rocking support on which the clearer is adjustably mounted, the weft-hammer, and connections between it and the support, to rock the latter and vibrate the clearer.

7. In a loom, the weft-fork, a vibratable, blade-like clearer adjacent the fork and having an upper cutting edge, and means to vibrate the clearer longitudinally of the fork, to remove weft caught thereupon.

8. In a loom, the weft-fork, a vibratable, blade-like clearer adjacent the fork and having an upper cutting edge, and an upturned hook at its extremity, and means to vibrate the clearer longitudinally of the weft-fork, to push therefrom weft on its downward stroke, or to engage and sever the weft on its upward stroke.

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

BELONIE JANELLE.

Witnesses:

DAVID CROSS,

HARRY E. LOVEREN.