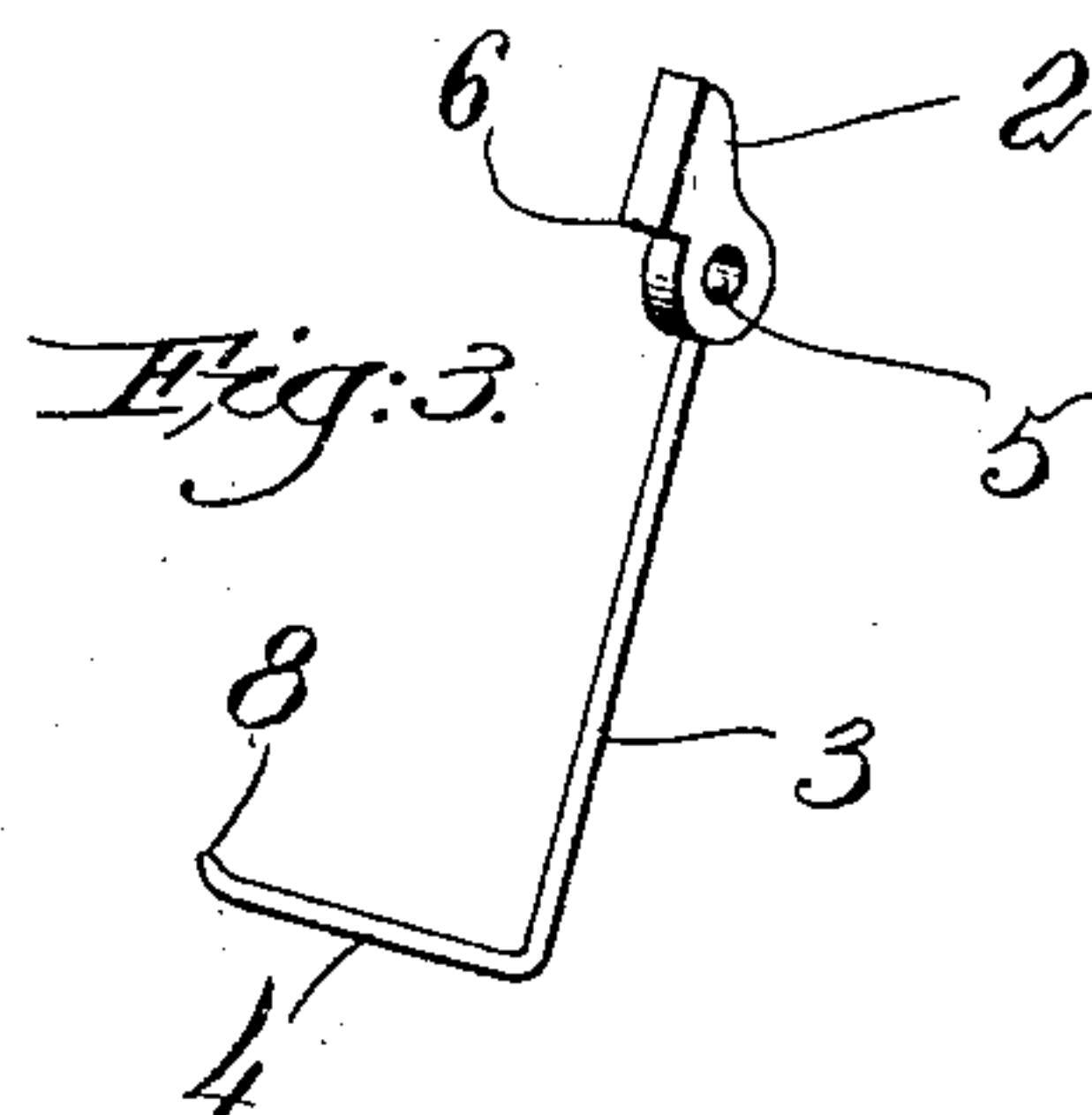
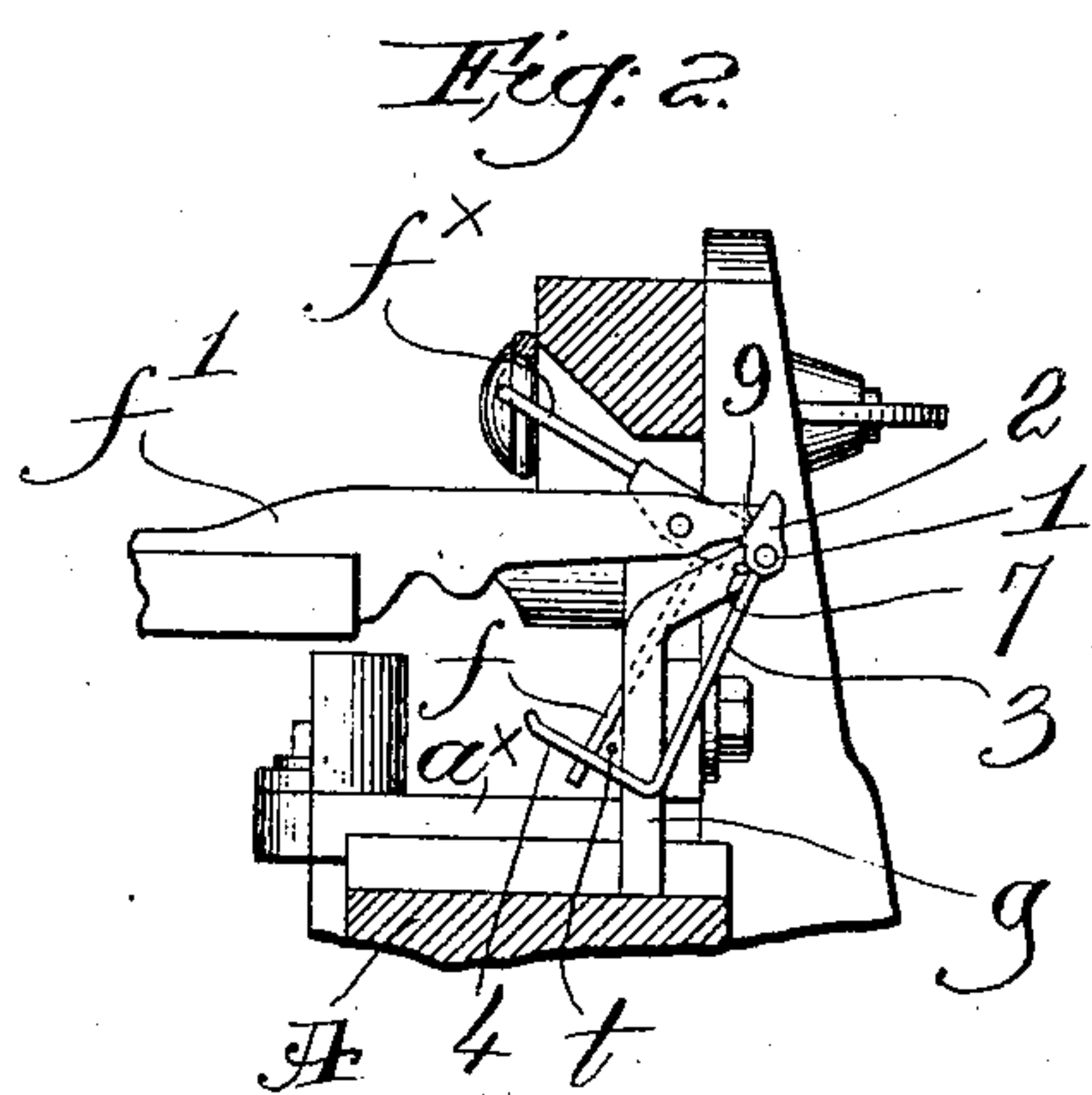
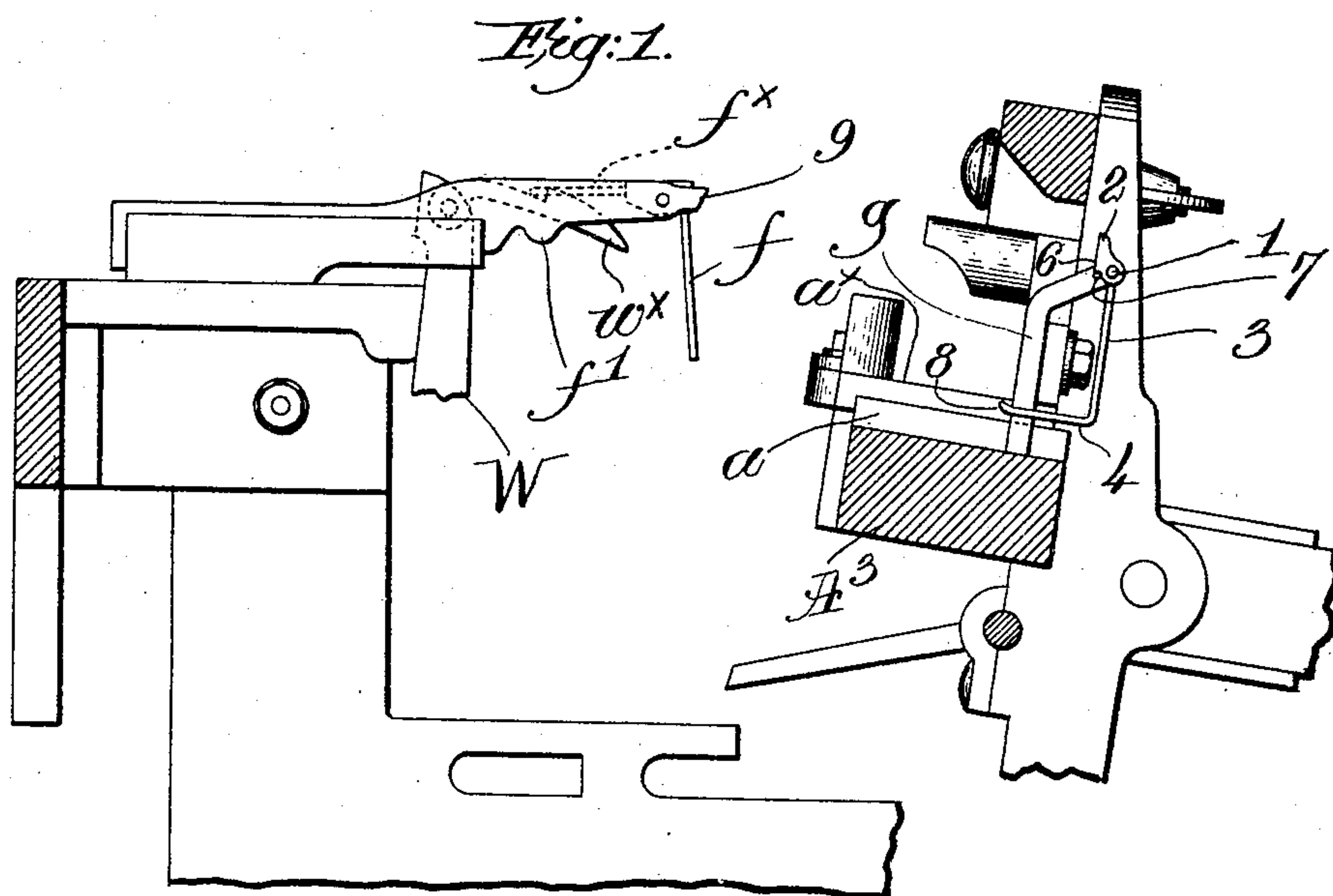


No. 782,946.

PATENTED FEB. 21, 1905.

A. E. BENSON.
FILLING FORK MECHANISM FOR LOOMS.

APPLICATION FILED OCT. 3, 1904.



Witnesses,
Edward G. Allen.
S. Wm. Lutton.

Inventor:
Arthur E. Benson,
by Mosley Sugony.
attys.

UNITED STATES PATENT OFFICE.

ARTHUR E. BENSON, OF MAGNOLIA, MISSISSIPPI, ASSIGNOR TO DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A CORPORATION OF MAINE.

FILLING-FORK MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 782,946, dated February 21, 1905.

Application filed October 3, 1904. Serial No. 226,932.

To all whom it may concern:

Be it known that I, ARTHUR E. BENSON, a citizen of the United States, and a resident of Magnolia, county of Pike, State of Mississippi, have invented an Improvement in Filling-Fork Mechanism for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object the production of simple and effective means to prevent the filling from passing under the filling-fork of a loom on the detecting-pick.

When the filling passes under the hook, and thereby gets behind it, the filling is broken as the lay goes back, or it is wrapped around the fork on the next shot of the shuttle, making an imperfection in the cloth and fouling the fork, so that it cannot operate properly. By my present invention such faults are completely obviated and the filling is also held in the very best possible position for the proper tilting of the fork.

The 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 transverse sectional view of a portion of a loom with one embodiment of my invention applied thereto, the lay being shown as swung back. Fig. 2 is a similar view, but showing the operation of my invention as the lay beats up on the detecting-pick; and Fig. 3 is a perspective view, enlarged, of the guard to be described.

Referring to Figs. 1 and 2, the lay A^3 , having a fork-grid g thereon and transversely recessed at a in its race-plate a^x for the reception of the ends of the tines of the filling-fork, the filling-fork f , its slide f' , and the weft-hammer W , having a hook w^x to engage the fork-tail f^x upon failure of the filling, may be and are all of well-known construction. In accordance with my present invention I pivotally mount a guard on the grid at the inner side thereof on a pin 1, the guard comprising a metallic head 2, having a depending body 3,

preferably made of stiff wire, and terminating in a forwardly-extended foot 4. The head has a hole 5, Fig. 3, to receive the pin, and a shoulder 6 for a purpose to be described.

When the parts are in non-acting position, the foot lies in the recess across the lay and just below the top of the race-plate a^x , as in Fig. 1, and at such time the shoulder 6 engages a stop 7 on the grid, preventing further backward swing of the guard. The upturned portion of the head 2 is located opposite the end of the fork-slide f' , as herein shown, and as the lay beats up the slide engages the head and tilts the guard into the position shown in Fig. 2. At such time the foot 4 is lifted above the race-plate a^x , and its front end extends forward across and beyond the fork, the ends of the tines projecting below the foot. On the detecting-pick the lifting of the foot elevates the filling t , Fig. 2, when the latter is intact to a position in front of the fork and above the lower ends of its tines, so that the filling cannot pass under them. In other words, the filling is "trapped" loosely between the fork, grid, and foot of the guard in the best possible position for the fork to engage and be tilted, the fork being shown as tilted by the filling in Fig. 2. As the lay goes back the foot and fork remain in coöperative relation until all danger of passage of the filling under the fork is past, and when the head 2 and the end of the fork-slide separate the guard returns to inactive position.

The front end of the foot is slightly upturned, as at 8, to prevent any tendency of the filling to pull forward off of the foot. When the guard is in active position, the body 3 by engaging the stop 7 will be prevented from tilting improperly. The end of the slide may be beveled, as at 9, if desired, to impart an easier sliding action when it engages the head of the guard.

My invention is not restricted to the precise construction and arrangement shown and described, as the same may be varied or modified 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 loom, a filling-fork having depending tines, and means to prevent automatically
5 the filling from passing under the fork-tines upon detecting movement thereof.

2. In a loom, a filling-fork mounted independently of the lay, a lay, a guard mounted thereon, and means to move the guard into
10 position to pass under and lift the filling in front of the fork and above the depending ends of its tines as the lay beats up on the detecting-pick.

3. In a loom, a filling-fork, and its slide
15 mounted independently of the lay, a lay, and a guard pivotally mounted thereon and having a bunter adapted to be struck by the slide on the forward beat of the lay, to cause the guard to pass under and engage the filling on
20 the detecting-pick and raise it above the ends of the fork-tines.

4. In a loom, a filling-fork, a lay having a grid opposite the fork, a guard pivotally
25 mounted adjacent the grid and having a portion thereof extended transversely across the

lay below the path of the filling, and means to rock the guard and lift the filling above the ends of the fork-tines on the detecting-pick.

5. In a loom, a filling-fork, a lay having a grid opposite the fork, a guard pivotally
30 mounted on the grid, and means to rock the guard and prevent the passage of the filling under the fork on the detecting-pick.

6. In a loom, a filling-fork, a lay having a cooperating grid, a guard pivotally mounted
35 on the latter and comprising a head and a depending body having a forwardly-extended leg adapted to extend transversely of and below the path of the filling, and means to strike the head and rock the foot on the forward beat
40 of the lay, whereby the foot lifts the filling above the ends of the fork-tines on the detecting-pick.

In testimony whereof I have signed my name
to this specification in the presence of two sub-
45 scribing witnesses.

ARTHUR E. BENSON.

Witnesses:

J. E. KEETON,

H. T. ROBERTS.