

A. J. CHEVRETTE.
 THREAD CUTTING MECHANISM FOR LOOMS.
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Fig. 1.

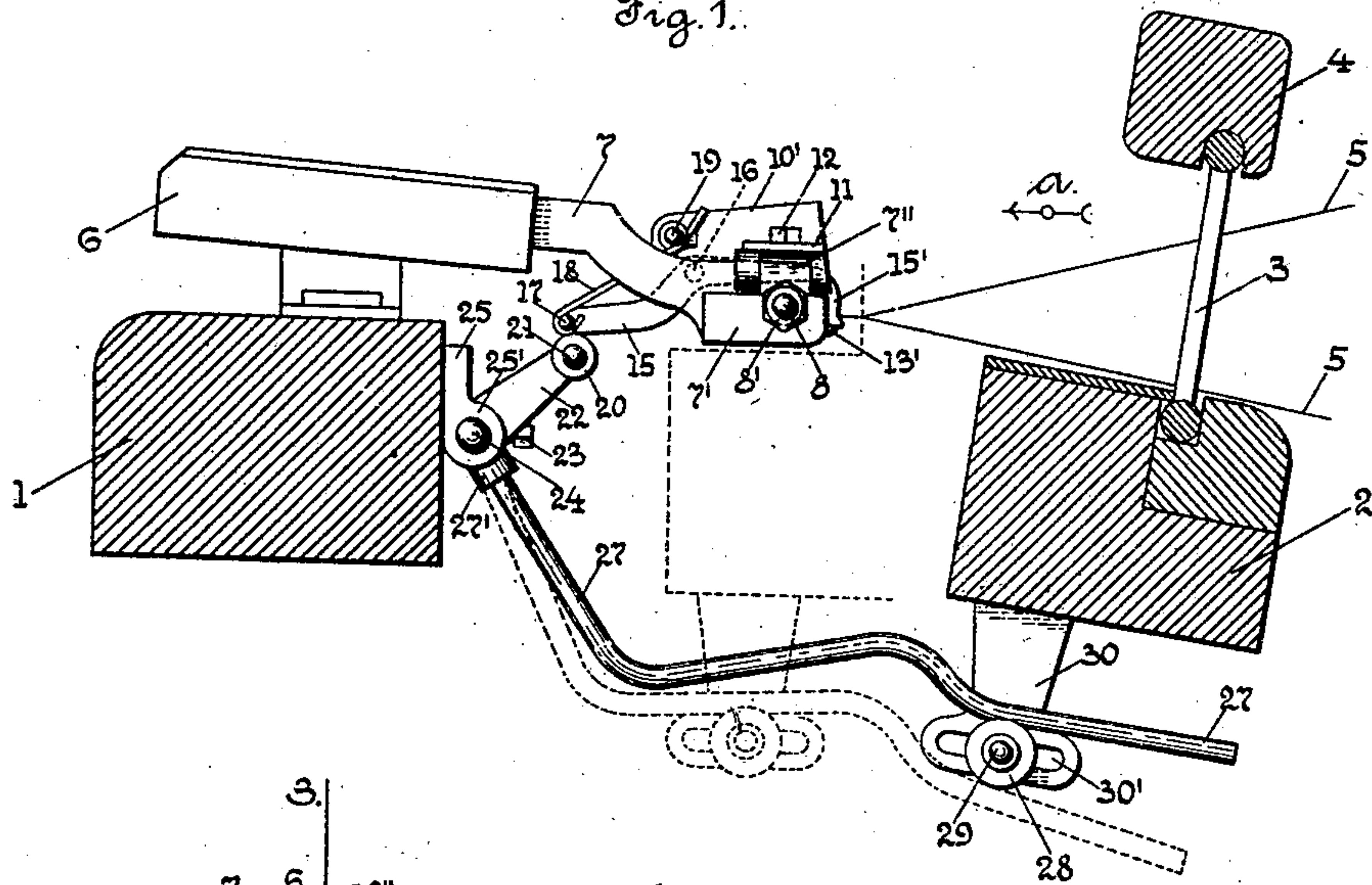


Fig. 2.

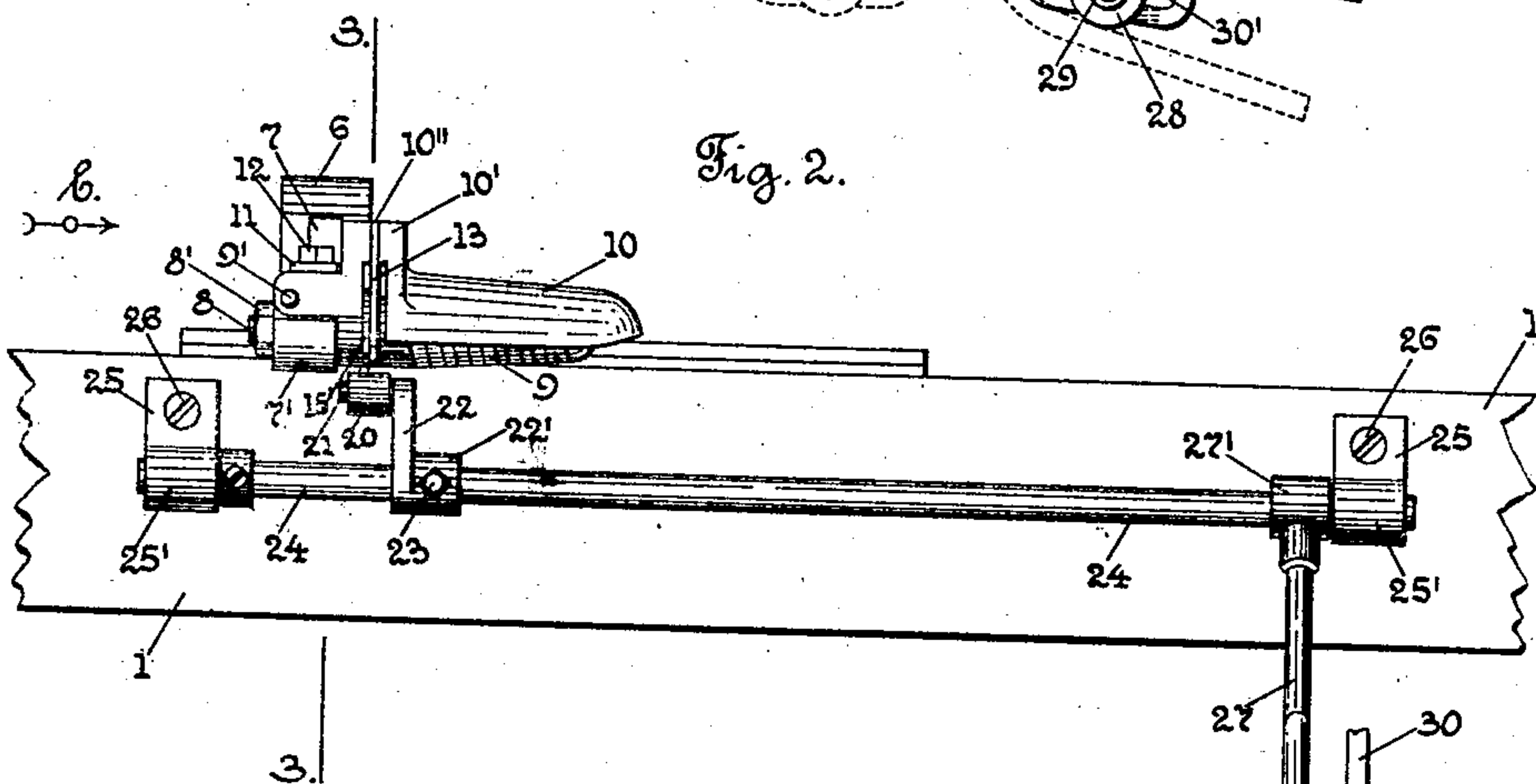
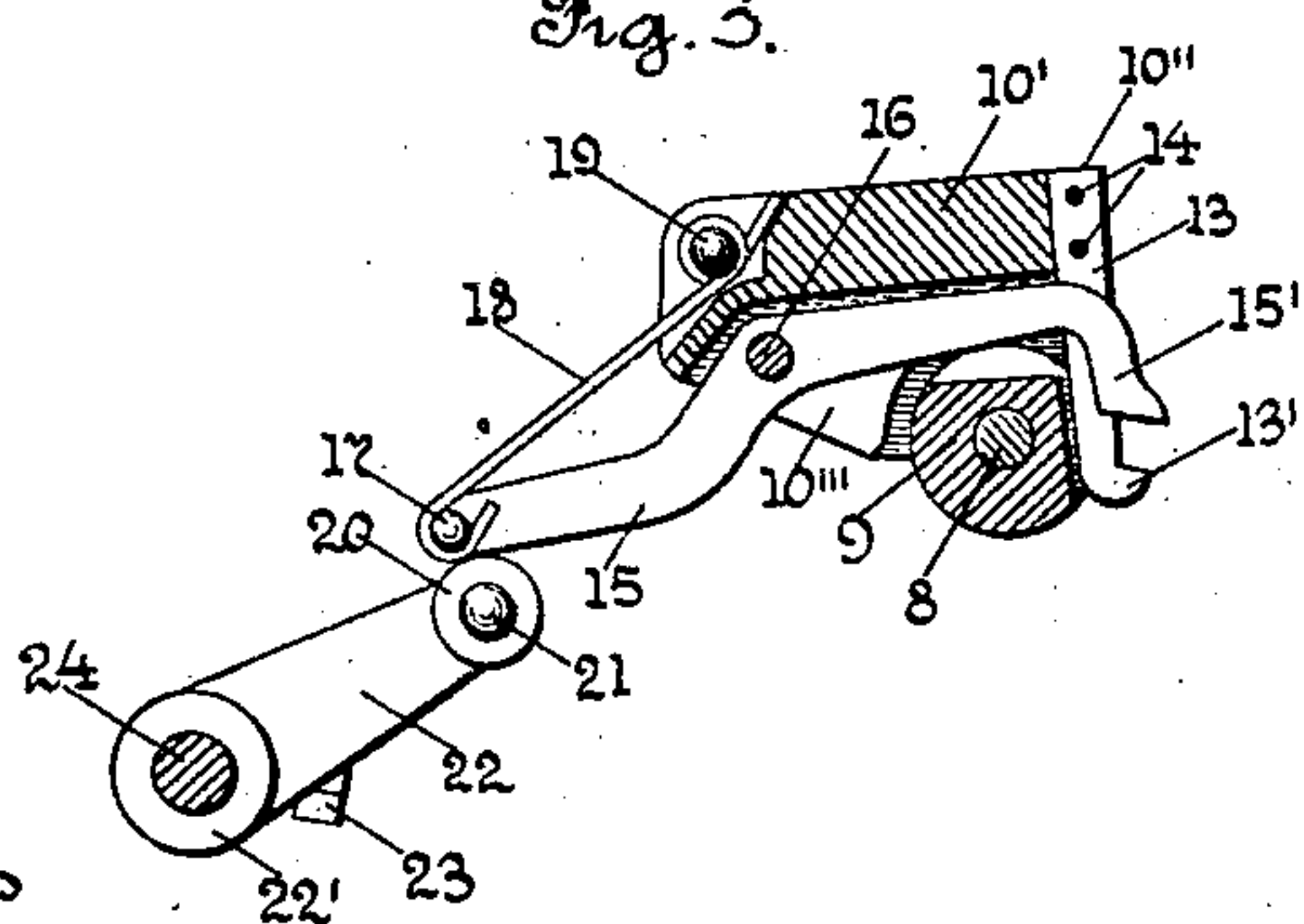


Fig. 3.



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UNITED STATES PATENT OFFICE.

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THREAD-CUTTING MECHANISM FOR LOOMS.

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Specification of Letters Patent.

Patented Apr. 19, 1910.

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To all whom it may concern:

Be it known that I, AUGUSTIN J. CHEVRETTE, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Thread-Cutting Mechanism for Looms, of which the following is a specification.

My invention relates to a thread cutting mechanism for looms, and particularly for weft replenishing looms, in which it is necessary to cut the filling or thread, after a bobbin has been inserted into a shuttle to take the place of the practically or substantially exhausted bobbin.

The object of my invention is to provide an improved thread cutting mechanism for looms of the class referred to, having a stationary jaw, and a movable jaw, both mounted in front of the lay, and having mechanism to positively move the movable jaw into operative position to cut the thread on the backward movement of the lay, and to allow the movable jaw to be moved into its inoperative position on the forward movement of the lay.

I preferably combine my improved thread cutting mechanism with a loom temple of any ordinary construction, but it may be used independently of and separate from the loom temple.

I have shown in the drawing a detached portion of a loom, and a loom temple, and my thread cutting mechanism combined therewith, sufficient to enable those skilled in the art to understand the construction and operation thereof.

Referring to the drawing:—Figure 1 is a cross sectional view of the breast beam, and the lay of a loom, with a temple and my thread cutting mechanism combined therewith. The temple is shown in the position it occupies when the thread is being cut. Fig. 2 is an inner view of the breast beam, and the temple and my thread cutting mechanism, and parts connected therewith, shown in Fig. 1, looking in the direction of arrow *a*, same figure. Fig. 3 is, on an enlarged scale, a section on line 3, 3, Fig. 2, looking in the direction of arrow *b*, same figure, showing the cutting mechanism detached.

In the accompanying drawing, 1 is the breast beam, 2 the lay, 3 the reed, 4 the hand-rail.

5 are two warp threads.

The loom temple in this instance consists of the stand 6 secured on the upper side of the breast beam 1. The temple shank or bar 7 is yieldingly held in the stand 6, and is adapted to have a longitudinal reciprocating movement therein. The bar 7 has the enlarged portion or head 7', to receive a bolt 8, on which is mounted, to have a rotatable motion, the roller or bur 9. A nut 8' is secured on the bolt 8. The cap 10 is adapted to extend over the roller 9, and is hinged at 9' on an ear 7'' on the head 7'. A plate 11 and screw 12 hold the cap 10 in position.

All of the above mentioned parts may be of the usual and well known construction in loom temples.

I will now describe my improvements in thread cutting mechanism.

The upwardly extending portion 10' of the cap 10 which extends over the roller 9, is slotted at 10'' to receive a downwardly extending steel blade 13, which is secured at its upper end, in this instance by two rivets 14 in the cap 10, see Fig. 3. The lower end of the blade 13 is turned outwardly, as shown at 13', Fig. 3, to form one member or jaw of the cutting mechanism. A second steel blade, in the form of a lever 15, extends into the slot 10'' in the cap 10, and is pivotally mounted on a stud 16. One arm of the lever 15 extends toward and above the temple roller 9, see Fig. 3, and also downwardly, as shown at 15', to form the second member or jaw of the cutting mechanism. The other arm of the lever 15 is provided at its end with a stud 17, around which is bent the lower end of a spring wire 18; the upper end of the spring wire 18 is coiled around a stud 19 on the cap 10. The spring 18 acts in this instance to yieldingly move downwardly the outer arm of the lever 15, and consequently move upwardly the end 15', to open the jaws of the cutting mechanism, as shown in Fig. 3.

The outer arm of the lever 15 is adapted in this instance to be engaged by a roll 20 on a stud 21 on an arm 22. The arm 22 has its hub 22' adjustably secured by a bolt 23 near one end of a horizontally extending rock shaft 24. Each end of the shaft 24 is in this instance mounted in a boss 25' on a stand 25, secured in this instance to the inner side of the breast beam by a screw 26, see Fig. 2. The other end of the shaft 24 has secured thereon in this instance the hub 27' of a

curved shaped rod 27. The rod 27 extends rearwardly toward the lay, and is adapted to rest on and be raised by a roll 28, rotatably mounted on a stud 29 adjustably secured in an elongated slot 30' in the lower end of a stand 30 secured to the underside of the lay beam 2.

When the lay 2 moves to its rear position, as shown in Fig. 1, the raising of the rod 27 will rock the shaft 24 and the lever 22 thereon, and cause the roll 20 to engage the outer arm of the lever 15 and raise said arm, and consequently move down the inner arm, and bring together the two cutting jaws, and when a filling thread is between said jaws, cut the filling. As the lay moves forward to the position shown by broken lines in Fig. 1, the rod 27 is lowered, and the lever 15 is released, to allow the spring 18 to act to open the cutting jaws, as shown in Fig. 3.

The advantages of my improvements will be readily appreciated by those skilled in the art.

At every backward movement of the lay, the movable member of the cutting jaws or surfaces, is positively moved to cut the thread extending between the cutting jaws, and as the lay moves forward, the movable member of the cutting jaws is released, and allowed to move, to open the jaws or cutting surfaces, and release the thread.

It will be understood that the details of construction of my improvements may be varied if desired.

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

1. In a thread cutting mechanism, the combination with a reciprocating bar, a temple bur or roller, a stationary cutter mounted on said bar, a movable cutter, and a spring for moving the movable cutter, of a rock shaft mounted on the breast-beam, an arm on said shaft to move said movable cutter, and a second arm on said shaft extending toward the lay, and adapted to be moved through the movement of the lay, to cause the movable cutter to be moved into

operative position on the backward movement of the lay.

2. In a thread cutting mechanism, the combination with a reciprocating bar mounted on the breast beam, and having thereon a temple bur or roller, a stationary cutter, a pivotally mounted cutter, and a spring for moving the pivotally mounted cutter, of a rock shaft mounted on the breast beam, an arm mounted on said rock shaft to engage and move said pivotally mounted cutter, a second arm mounted on said rock shaft and extending toward the lay, and adapted to be engaged and moved by an arm or roll carried on the lay, to cause said pivotally mounted cutter to be moved into operative position on the backward movement of the lay.

3. In a thread cutting mechanism, the combination with a reciprocating bar, a cutter fast on said bar, a cutter movably mounted on said bar, a spring for moving said movable cutter in one direction, an arm pivotally mounted on the breast beam, to move said movable cutter, and a second arm connected with said first mentioned arm and adapted to be moved through the movement of the lay, to cause the movable cutter to be moved into operative position to cut the thread on the backward movement of the lay.

4. In a thread cutting mechanism, the combination with a reciprocating bar, a cutter fast on said bar, a cutter pivotally mounted on said bar, a spring for moving said pivotally mounted cutter in one direction, an arm pivotally mounted on the breast beam, to move said pivotally mounted cutter, and a second arm connected with said first mentioned arm and adapted to be moved through the movement of the lay, to cause the pivotally mounted cutter to be moved into operative position to cut the thread on the backward movement of the lay.

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