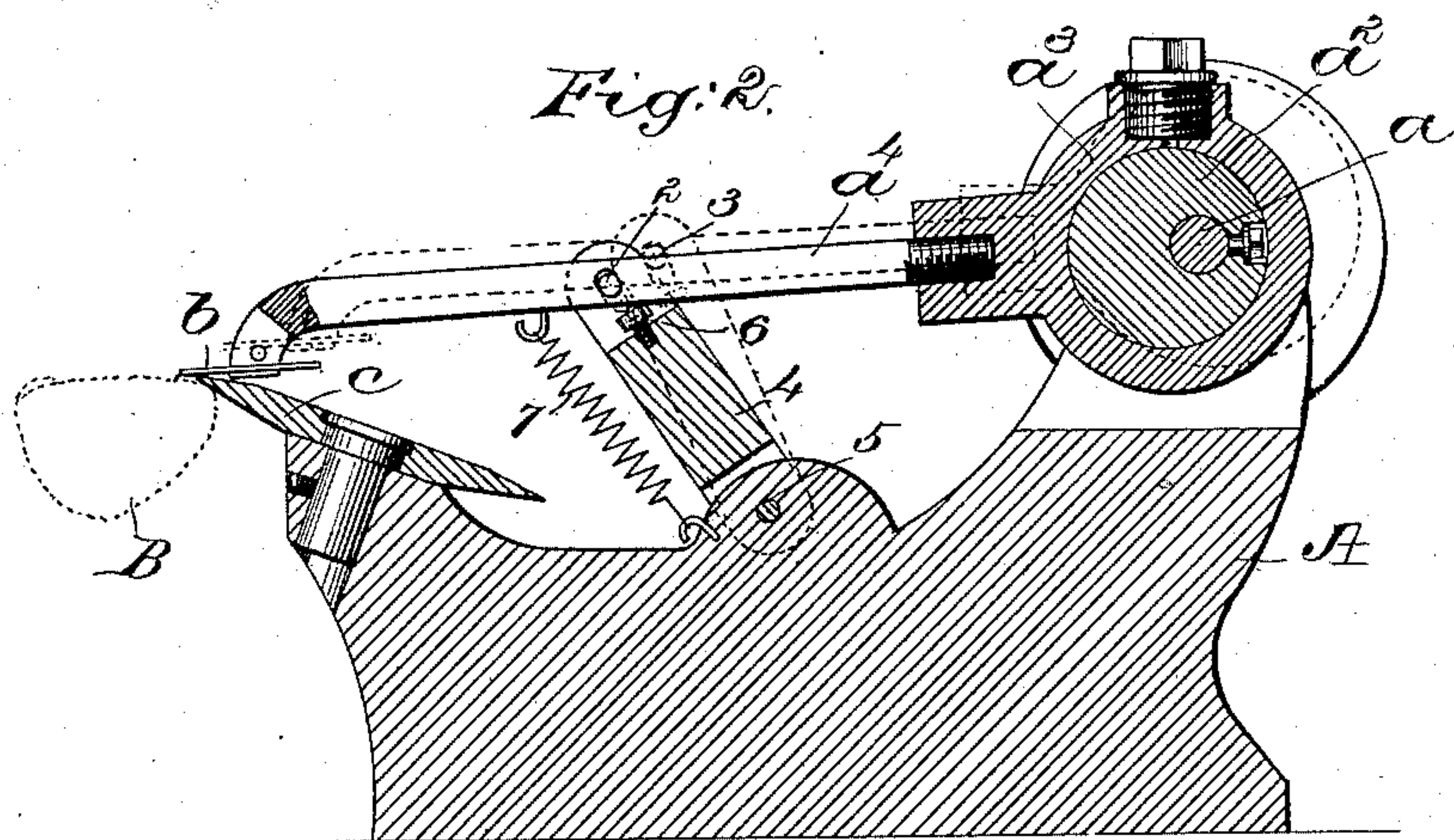
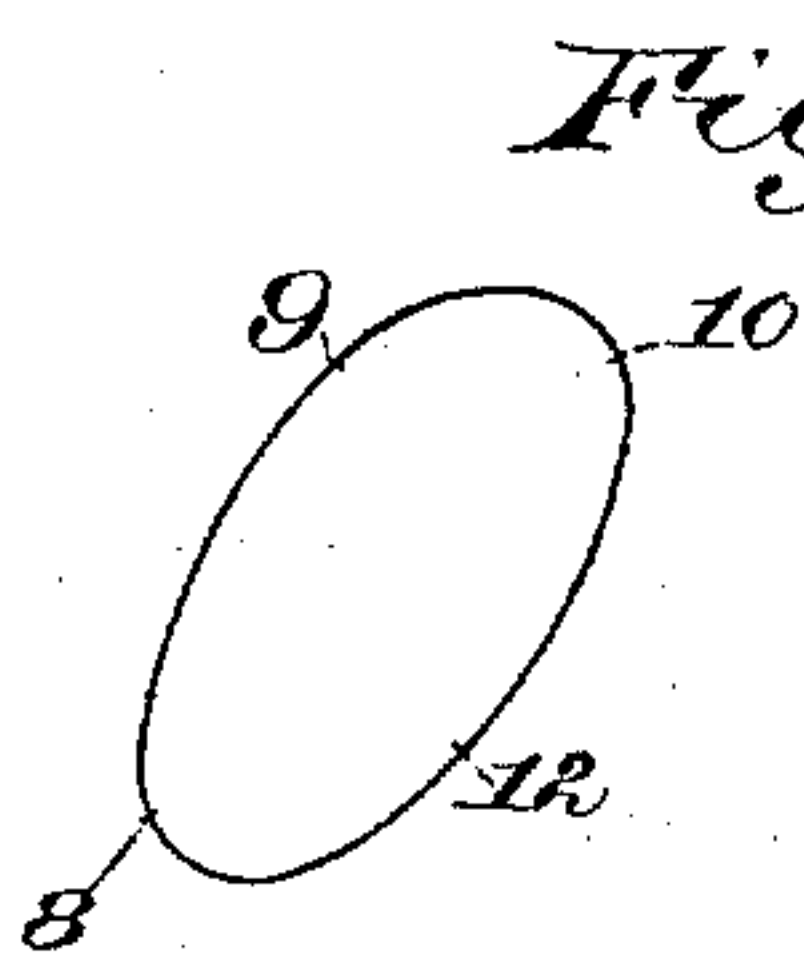
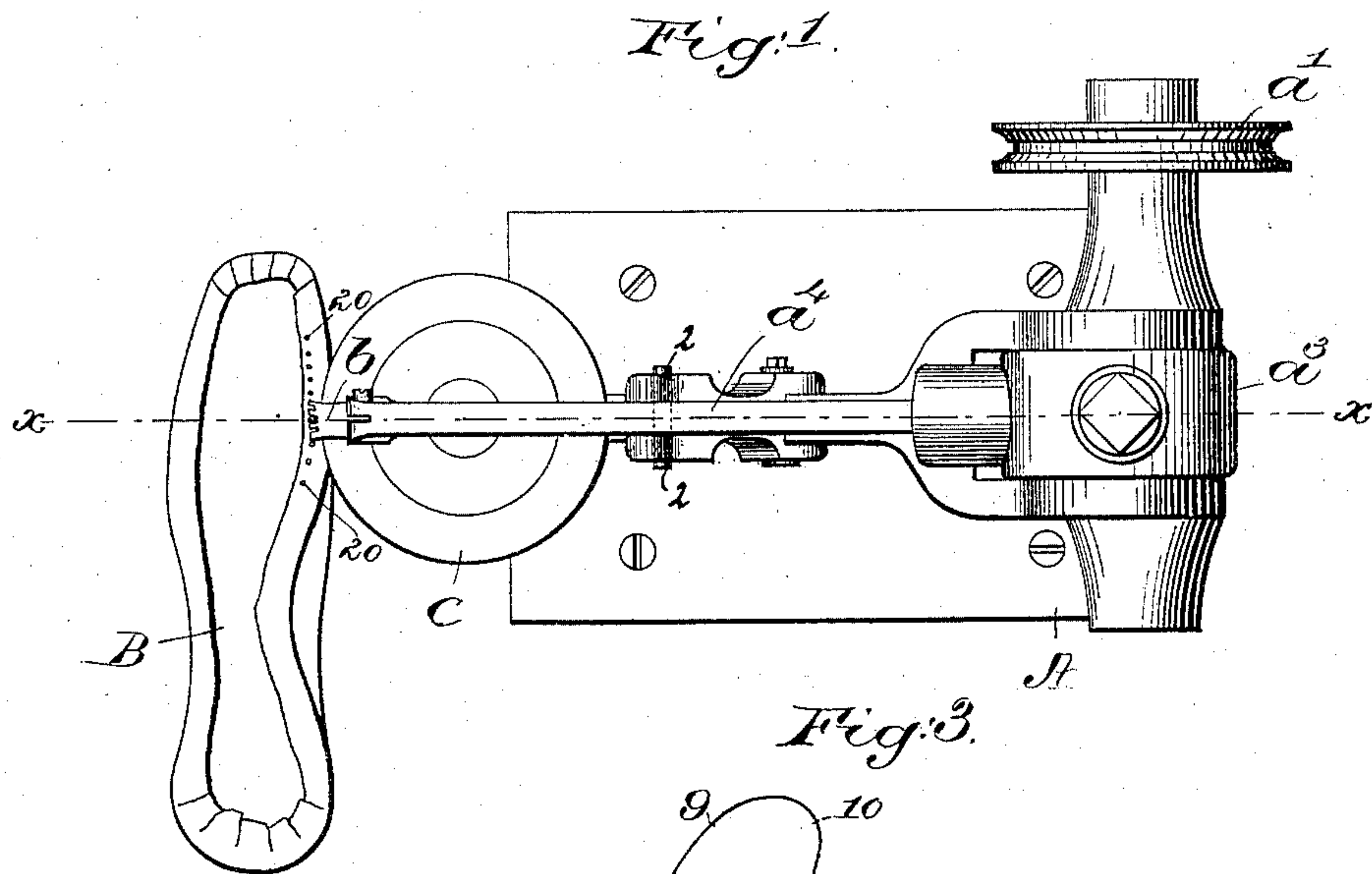


(No Model.)

O. PAQUETTE & I. LA CHAPELLE.
MACHINE FOR PULLING TACKS.

No. 473,708.

Patented Apr. 26, 1892.



witnesses.
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UNITED STATES PATENT OFFICE.

OCTAVE PAQUETTE AND ISRAEL LA CHAPELLE, OF HAVERHILL,
MASSACHUSETTS.

MACHINE FOR PULLING TACKS.

SPECIFICATION forming part of Letters Patent No. 473,708, dated April 26, 1892.

Application filed October 19, 1891. Serial No. 409,094. (No model.)

To all whom it may concern:

Be it known that we, OCTAVE PAQUETTE and ISRAEL LA CHAPELLE, both of Haverhill, county of Essex, State of Massachusetts, have
5 invented an Improvement in Machines for Pulling Tacks, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like
10 parts.

In lasting boots or shoes the upper when drawn taut over the last is tacked down with numerous small lasting-tacks, and after the upper has "set" for a sufficient length of
15 time most of the tacks are removed preparatory to applying a welt or outer sole. The act of removing the tacks has heretofore, so far as we are aware, been accomplished by hand.

This invention has for its object to construct a power-operated machine for removing the lasting-tacks; and it consists in a tack engaging or pulling device and means for moving it in an elliptical path, or nearly
20 so, to engage the tacks beneath their heads, remove them, and then come again into operative position.

The means herein shown for imparting elliptical motion to the tack-pulling device consists of a bar connected to an eccentric-
30 strap on an eccentric, which is secured to a rotatable shaft, and a movable fulcrum or support for said bar midway its length, said fulcrum or support being adapted to rise or fall at certain times, in order that the bar may
35 be raised and lowered without its being rocked or tilted, while at other times said fulcrum remains substantially stationary and the bar is rocked or tilted.

The invention also consists in a tack engaging or pulling device and means for moving it, combined with a bed-plate, against the under side of which the boot or shoe is held,
40 guided, or brought to bear while the pulling device operates, said plate serving to hold the leather in place as the tacks are withdrawn.

Figure 1 shows in plan view a tack-pulling machine embodying this invention; Fig. 2, a vertical section of the machine shown in Fig. 1, taken on the dotted line *xx*; and Fig. 3 a
50 diagram showing the path of movement of the tack-pulling device.

The main frame-work A is of suitable construction to support the operating parts. The shaft *a*, having its bearings in the main frame-work, has fixed to it a belt-pulley *a'* and also
55 an eccentric *a*². The eccentric-strap *a*³ incloses the eccentric *a*² and has secured to it a bar *a*⁴, the outer or free end of which is turned downwardly, as best shown in Fig. 2, and has adjustably connected with it a notched
60 blade or plate *b*. A bed-plate *c* is located just beneath the blade or plate *b*, against the under side of which the boot or shoe B may be held, the edge thereof outside of the tacks
20 bearing against said plate, and, as herein
65 represented, this bed-plate is made as a rotatable disk with a thin edge. The bar *a*⁴ has at one or both sides of it at a point midway between its ends, pins 2, which work in slots 3
70 in the upper end of the fulcrum-post 4, pivoted at 5 to the main frame-work. An adjusting-screw 6 is screwed into the fulcrum-post 4 beneath the bar *a*⁴, upon which the said bar is pressed by means of a spring 7, which is
75 connected at one end to the under side of the bar *a*⁴ and at the other end to the main frame-work. When the eccentric is in the full-line position shown in Fig. 2, the notched plate is in the position to engage the tacks just below
80 their heads. As the shaft *a* is revolved the notched plate follows the line shown in Fig. 3, moving from the point 8 to the point 9 during the first quarter of a revolution of the eccentric, thereby removing the tacks, and
85 moving from the point 9 to the point 10 during the second quarter of a revolution of the eccentric, and from the point 10 to the point 12 during the third quarter of a revolution, and from the point 12 to the point 8 during
90 the fourth and last quarter of a revolution. By moving the notched plate *b* in the path shown it will be seen that the plate will be moved in nearly a right line into position to engage the tacks and then will be moved up-
95 wardly to remove the tacks. This particular movement is accomplished by means of the movable fulcrum-post 4, it permitting the bar *a*⁴ to rise and fall at times without causing
100 said bar to be rocked or tilted on the pivots 2, while at other times the said bar is rocked or tilted, the fulcrum-post remaining stationary.

The plate *b* is represented as having several

notches, so that it may engage and remove several tacks at one revolution. The boot or shoe is held up against the under side of the plate *c*, as shown, the edge of said plate bearing against the edge of the boot or shoe outside of the tacks, and said plate acts to hold down the leather while the tacks are being withdrawn.

We do not desire to limit our invention to the particular path of movement of the notched plate nor to the particular mechanism herein shown for moving said plate.

We claim—

1. In a machine for pulling tacks, a tack-pulling device and an arm carrying it, combined with an eccentric for moving said arm longitudinally and a movable fulcrum-post connected to said arm intermediate its ends to move it transversely, substantially as described.

2. In a machine for pulling tacks, a tack-pulling device, its supporting or carrying arm, means, substantially as described, for reciprocating said arm longitudinally, and an independent rocking support to raise and lower the arm, the outer or free end of said arm being moved in an elliptical path by the combined movements of the arm and rocking support, or nearly so, substantially as described.

3. In a machine for pulling tacks, a tack-pulling device, a bar, as *a*⁴, intermediate and connecting said tack-pulling device and eccentric-strap, and the eccentric-strap and eccentric, combined with a movable fulcrum-post for said bar and having an adjusting-screw 6, and a spring 7, connected to and to retain the bar in contact with said fulcrum-post, substantially as described.

4. In a machine for pulling tacks, a tack-pulling device, arm *a*⁴, connecting said tack-pulling device and eccentric, and an eccentric,

combined with a movable fulcrum-post 4, slotted, as at 3, to receive pins 2 on the arm and to which it is pivoted thereby intermediate its ends, substantially as described.

5. In a machine for pulling tacks, a bed-plate, against the under side of which the boot or shoe is borne, combined with a tack-pulling device, and means to reciprocate it over said plate to engage and withdraw a tack, and a rocking fulcrum-post for said device to lift it from the bed-plate, substantially as described.

6. In a machine for pulling tacks, a rotatable bed-plate, against which the boot or shoe may be placed, combined with a tack-pulling device including a supporting-arm therefor, an eccentric to move said arm longitudinally, and a movable rocking fulcrum-post to which said arm is connected intermediate its ends, substantially as described.

7. In a machine for pulling tacks, a bed-plate having a tapering or thin edge, against the under side of which plate the boot or shoe is borne, with the tacks adjacent to the edge of the plate, and a tack-pulling device acting over and being supported in its forward movement by the opposite upper side of said bed-plate to engage the tacks beyond its edge, means, substantially as described, for reciprocating said device longitudinally, and a fulcrum-post connected to said device for lifting it above the bed-plate, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

OCTAVE PAQUETTE.
ISRAEL LA CHAPELLE.

Witnesses:

LIZZIE B. CHADWICK,
NATHL. C. BARTLETT.