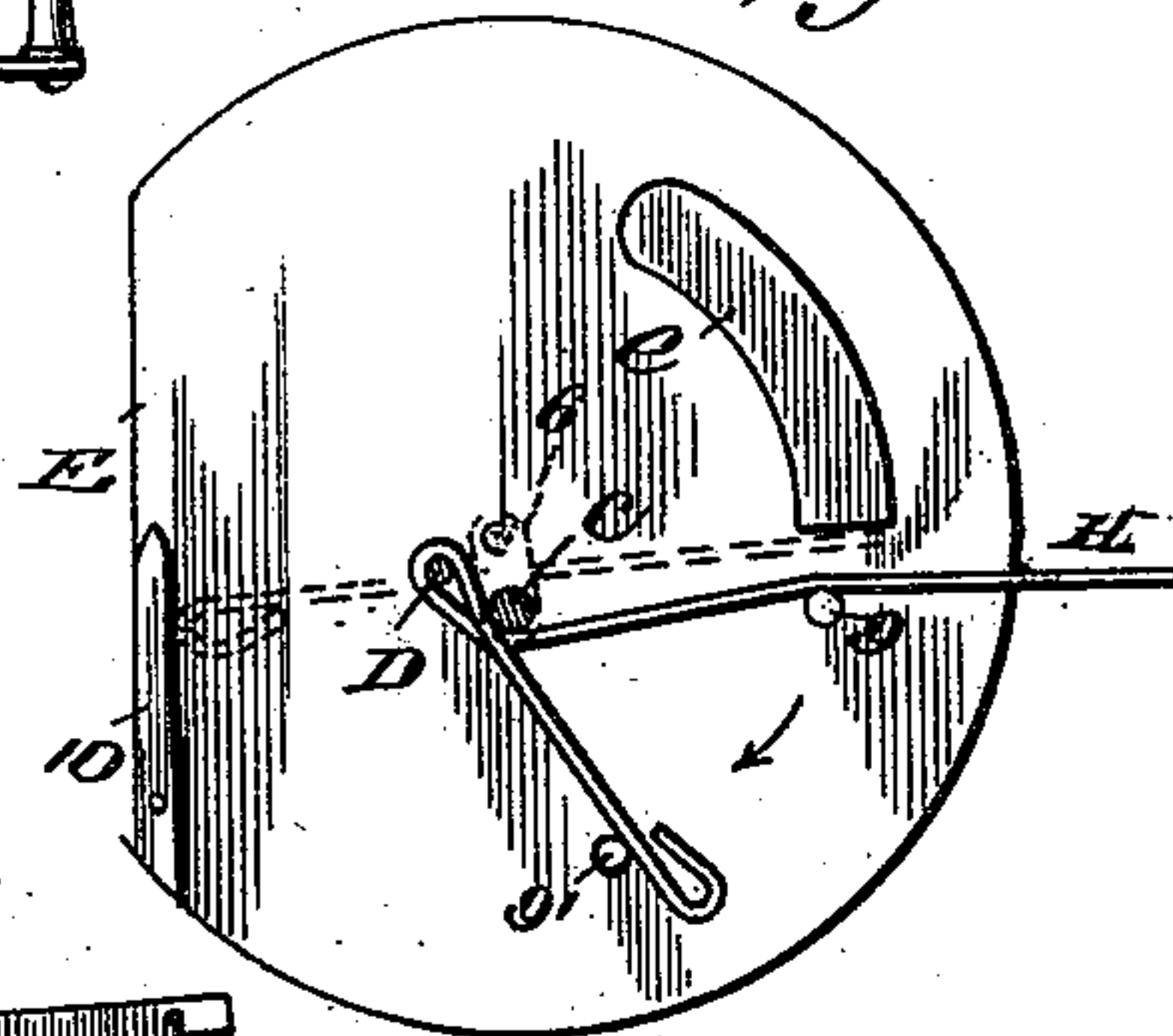
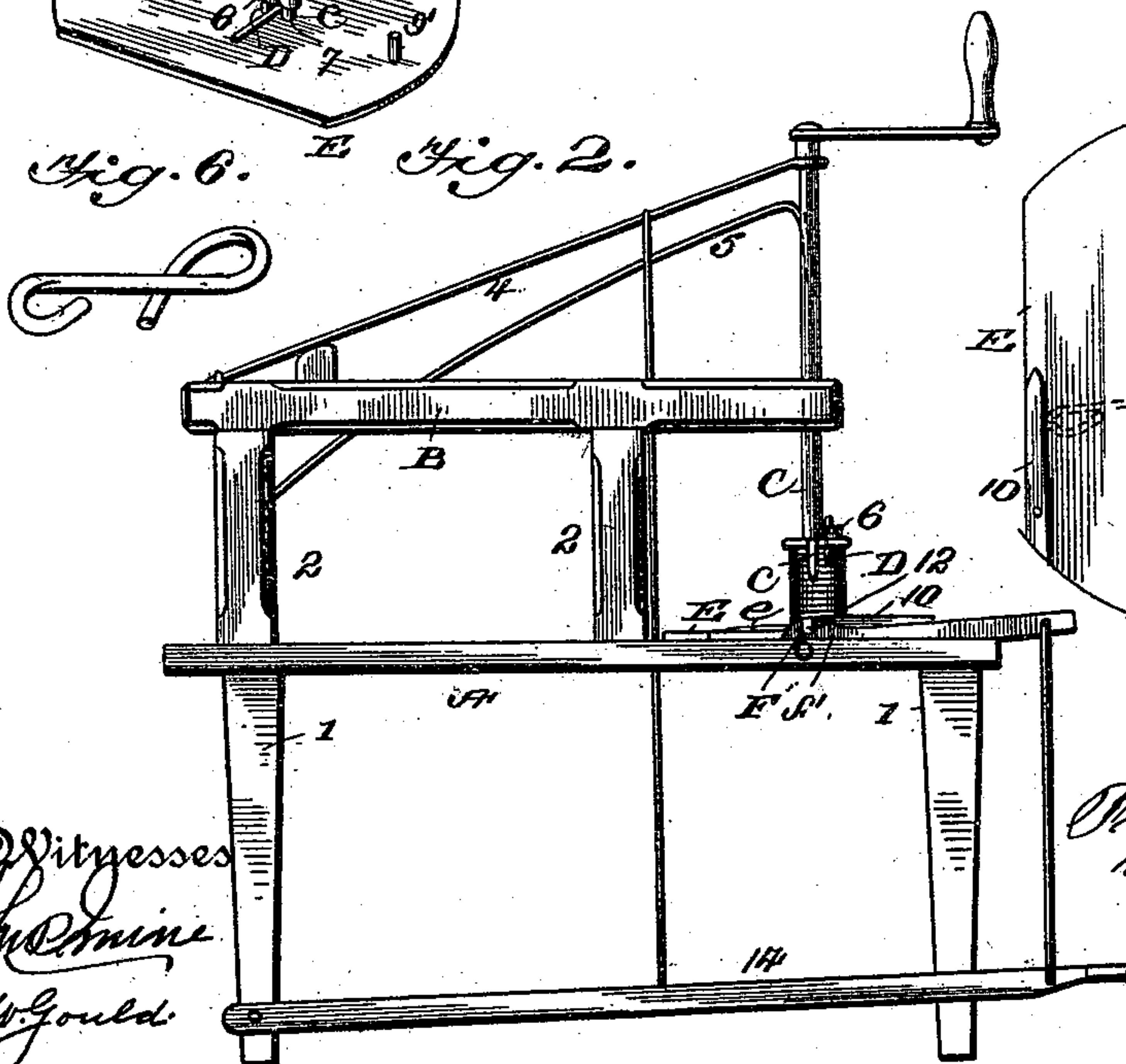
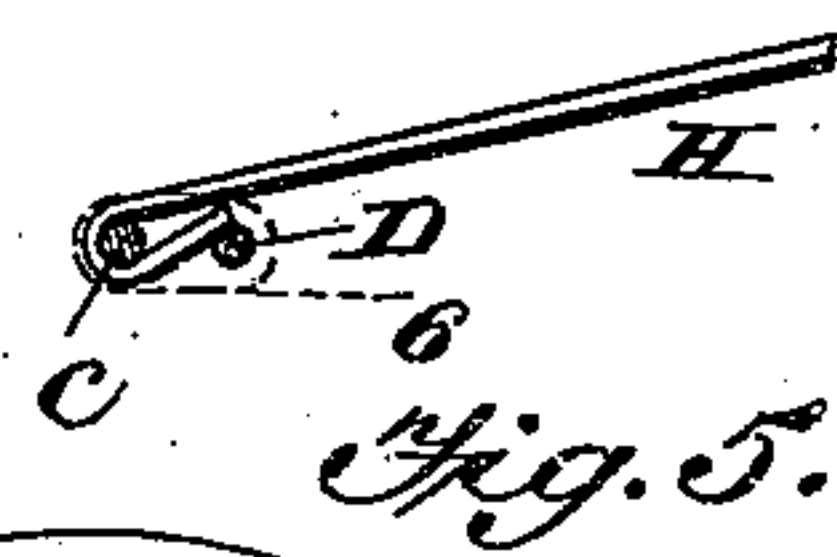
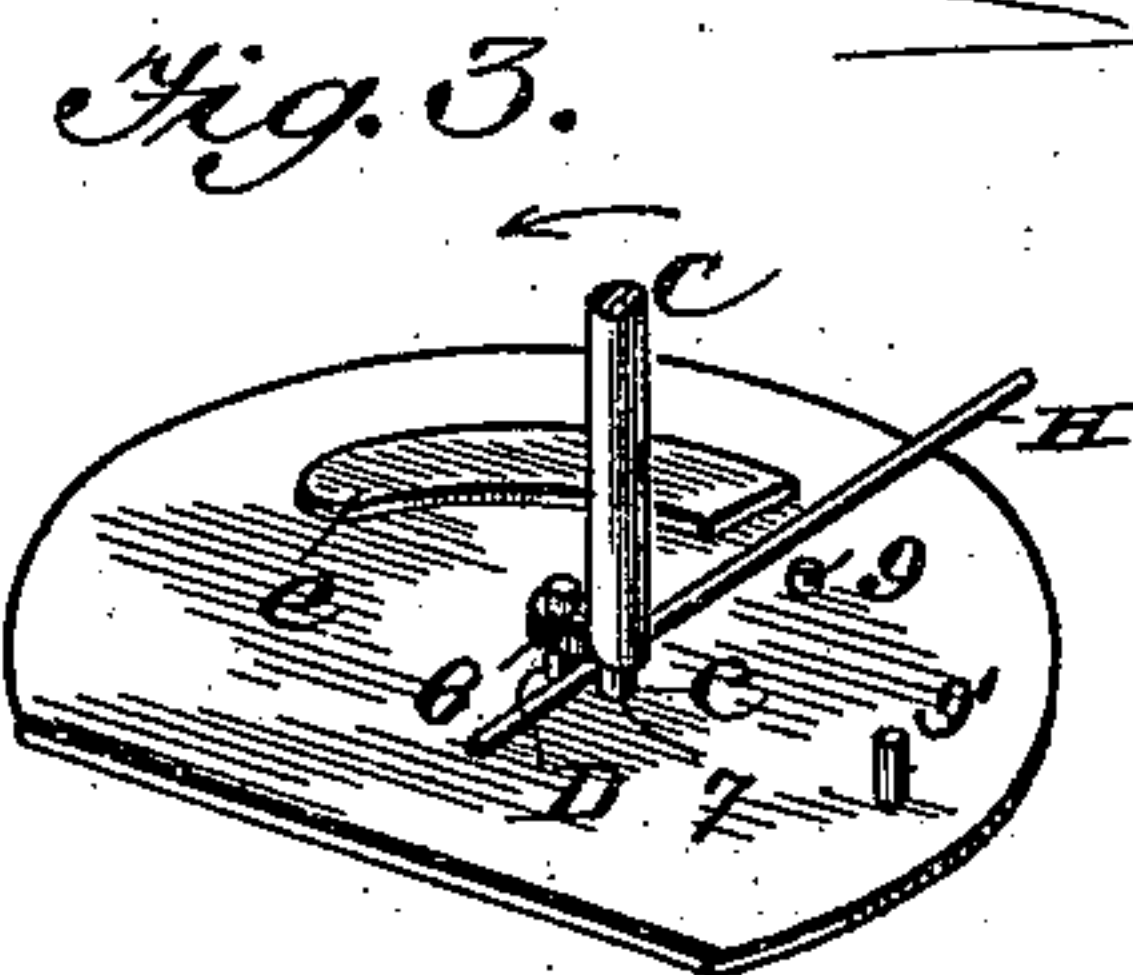
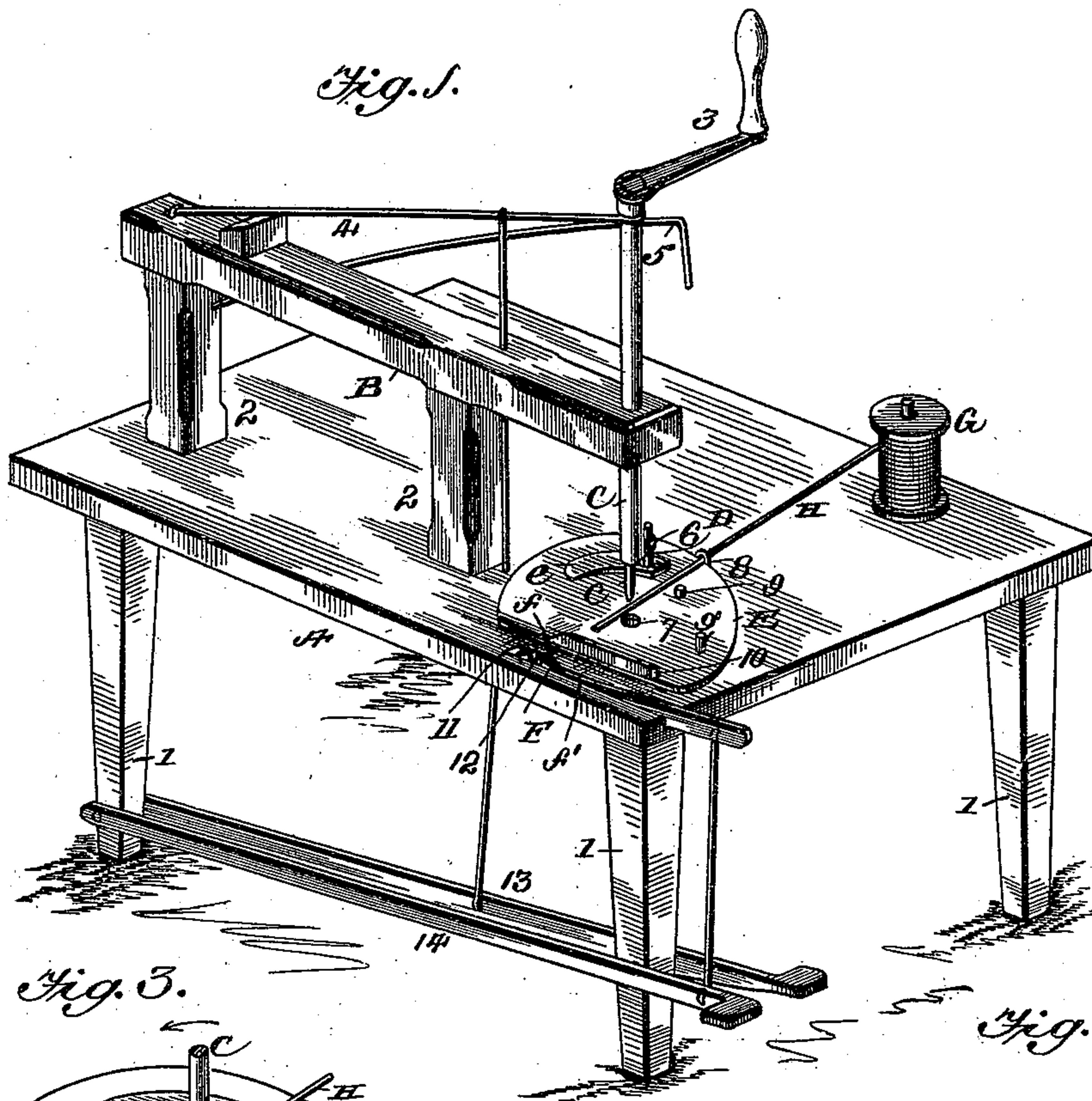


(No Model.)

F. ROUX.
LOOP MAKING MACHINE.

No. 556,318.

Patented Mar. 10, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK ROUX, OF STRYKER, OHIO.

LOOP-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 556,318, dated March 10, 1896.

Application filed July 20, 1895. Serial No. 556,650. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK ROUX, a citizen of the United States, residing at Stryker, in the county of Williams and State of Ohio, have invented a new and useful Loop-Making Machine, of which the following is a specification.

My invention relates to a machine for making loops or fasteners; and it has for its object the production of a machine of this class in which wire fed from a continuous coil is formed into a loop and then severed, the construction and operation of the machine being very simple and effective.

The invention will first be described in connection with the accompanying drawings, and then pointed out in the claims.

Figure 1 of the drawings is a perspective view of a machine constructed in accordance with my invention. Fig. 2 is a side view of the same. Fig. 3 is a broken perspective view showing the base-plate, a portion of the bender-shaft, and a short length of wire, the parts being illustrated in the positions they occupy when ready to make the first bend. Fig. 4 is a plan view of a short length of wire, showing the first bend formed, the bender-shaft and bender-stud being shown in section. Fig. 5 is a plan view of the base-plate with the bender-shaft in section, showing the relative positions of the parts when the loop has been formed, the positions of the parts before the final bend being shown in dotted lines. Fig. 6 is a view of the loop completely formed and severed from the continuous wire.

Referring to the drawings, A represents a table supported by legs 1. From the table, near the rear edge and close to one side, rise two standards 2, on the upper end of which is secured a beam B, the forward end of this beam projecting a slight distance beyond the forward standard, as shown.

In the forward end of beam B is revolubly mounted a bender-shaft C, this shaft being journaled so as to be capable of vertical movement, and being also provided with a crank-handle 3. A leaf-spring 4, which is secured at one end to the rear end of beam B and at its other end to the shaft C near the upper end thereof, serves to hold said shaft normally a slight distance above the table. A spring-stop 5, secured in the beam B, projects

forward to a position near the handle 3, for a purpose hereinafter described.

A centering-pin *c*, secured in the lower end of shaft C, serves as a bearing-point for the lower end of that shaft. A laterally-projecting arm 6, provided at its outer end with a downwardly-projecting bender-stud D, is secured to the shaft C just above the pin *c*.

E represents the base-plate, which is secured to the table directly beneath the projecting end of the beam B, this plate being circular in shape with one straight edge, the latter lying parallel with the edge of the table A. A central hole 7 in this plate serves as a bearing for the pin *c* in operation. Near the rear of the plate there is secured an inclined web *e*, which slopes from the rear upward toward the front of the plate. Two guides 8 and 9 and a stop-pin 9', for a purpose hereinafter described, are also secured to this plate. Another stop, 10, is secured to plate E near the straight edge thereof, serving to limit the forward movement of the ingoing wire, as hereinafter described.

F is the cutter, which consists of two bars *f* and *f'*, the former being rigidly secured in a slot 11 cut in the table and the latter pivotally secured in the same slot. These bars are each provided with a notch 12, each of which has a cutting-edge, these notches, when the bars are in normal position, being in register with each other.

Two foot-treadles 13 and 14 are pivotally secured to one of the legs of the table and are connected, respectively, to spring 4 and cutter-bar *f'*.

An ordinary spool G is mounted on the table, from which a continuous length of wire H is fed into the machine.

The operation of my machine is as follows: Wire being fed into the machine, treadle 13 is pressed down, causing pin *c* to enter hole 7 in plate E, the wire resting between pin *c* and bender-stud D, the stud and handle 3 lying toward the rear of the machine. Then by turning the handle toward the left the stud D contacts with the wire and serves to form the first bend, as shown in Figs. 3 and 4, the movement of the handle being continued until stop 5 limits its further movement, when the first bend will have been formed. The treadle 13 then being released, spring 4 acts

to return the bender-shaft to its normal position. The wire is then moved forward until the end contacts with stop 10, when the treadle 13 is again pressed down and the handle 5 turned toward the right, causing the bender-stud to form the second and final bend, the outer end of the wire during its revolution in this bend riding up the inclined web *d* and over the wire being fed from the spool, this 10 second movement of the handle being continued until the outer end of the wire contacts with the stop 9', when the second bend will have been formed. Treadle 13 being now released, the wire is passed forward until it 15 rests in the notches 12 in the cutter-bars. Treadle 14 is now pressed down, causing cutter-bar *f'* to move, thereby forcing the cutting-edge of the notch in that bar to pass the cutting-edge of the notch in bar *f*, which cuts 20 the wire, thus completely forming and severing the loop, as shown in Fig. 6.

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

25 1. In a loop-making machine, a table, a beam secured above the table, a bender-shaft revolubly mounted in the beam, the lower end of the shaft being provided with means for forming bends in a wire fed into the ma- 30 chine, means for turning the shaft, a base-plate secured to the table below the beam, guides carried by the base-plate for limiting

the movement of the wire, and a cutter for severing the wire.

2. In a loop-making machine, a table, a 35 beam secured above the table, a vertically-reciprocating bender-shaft mounted in the beam, means for turning said shaft, a centering-pin and a bender-stud carried by the shaft for forming bends in a wire fed into the ma- 40 chine, a base-plate secured to the table below the beam, guides carried by the base-plate for limiting the movement of the wire, and a cutter for severing the wire.

3. In a loop-making machine, a table, a 45 beam secured above the table, a bender-shaft revolubly mounted in the beam, means for turning said shaft, a spring for holding the bender-shaft normally above the table, a treadle for lowering said shaft into operative 50 position, a centering-pin and a bender-stud carried by the shaft for forming bends in a wire fed into the machine, a base-plate secured to the table below the beam, guides carried by the base-plate, an inclined web secured 55 on the base-plate, and a cutter for severing the wire, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FREDERICK ROUX.

Witnesses:

W. B. KITZMILLER,
M. E. BAKER.