

(No Model.)

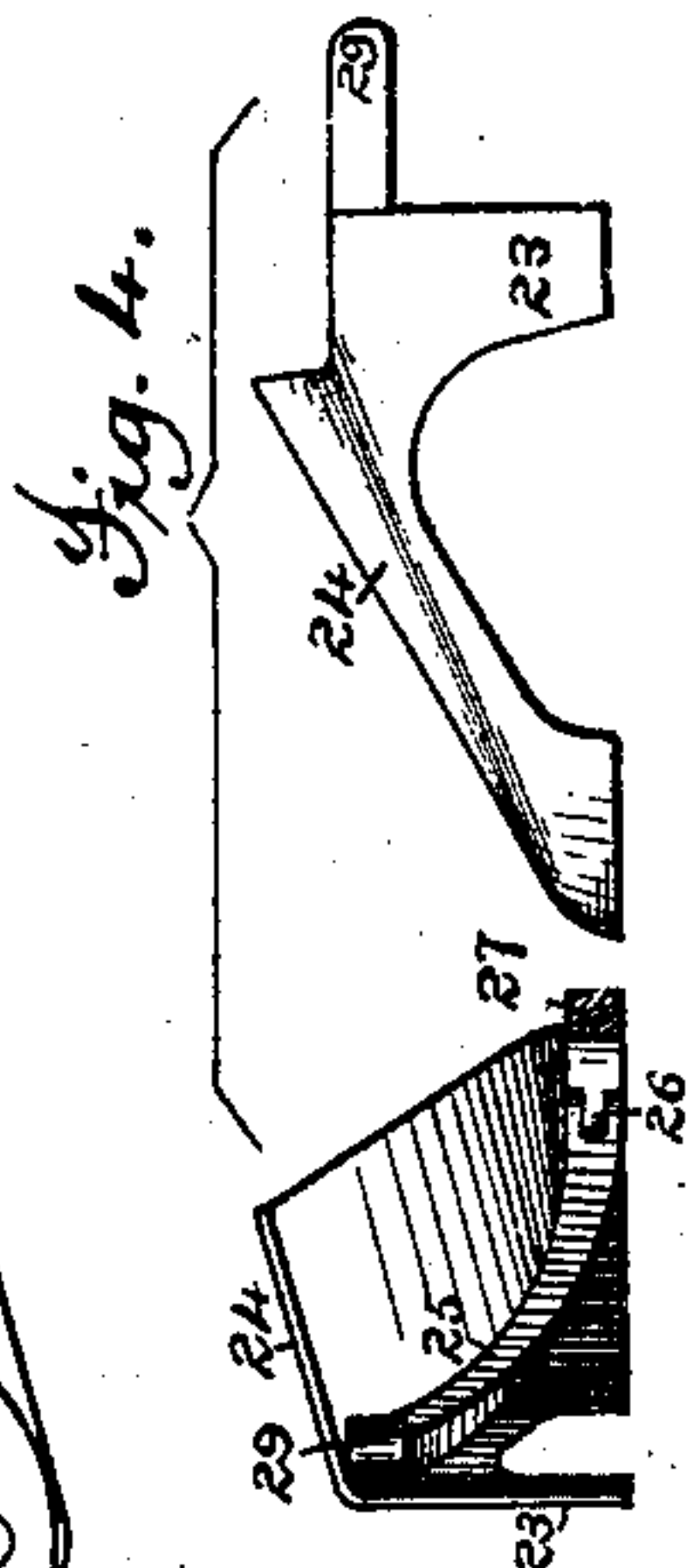
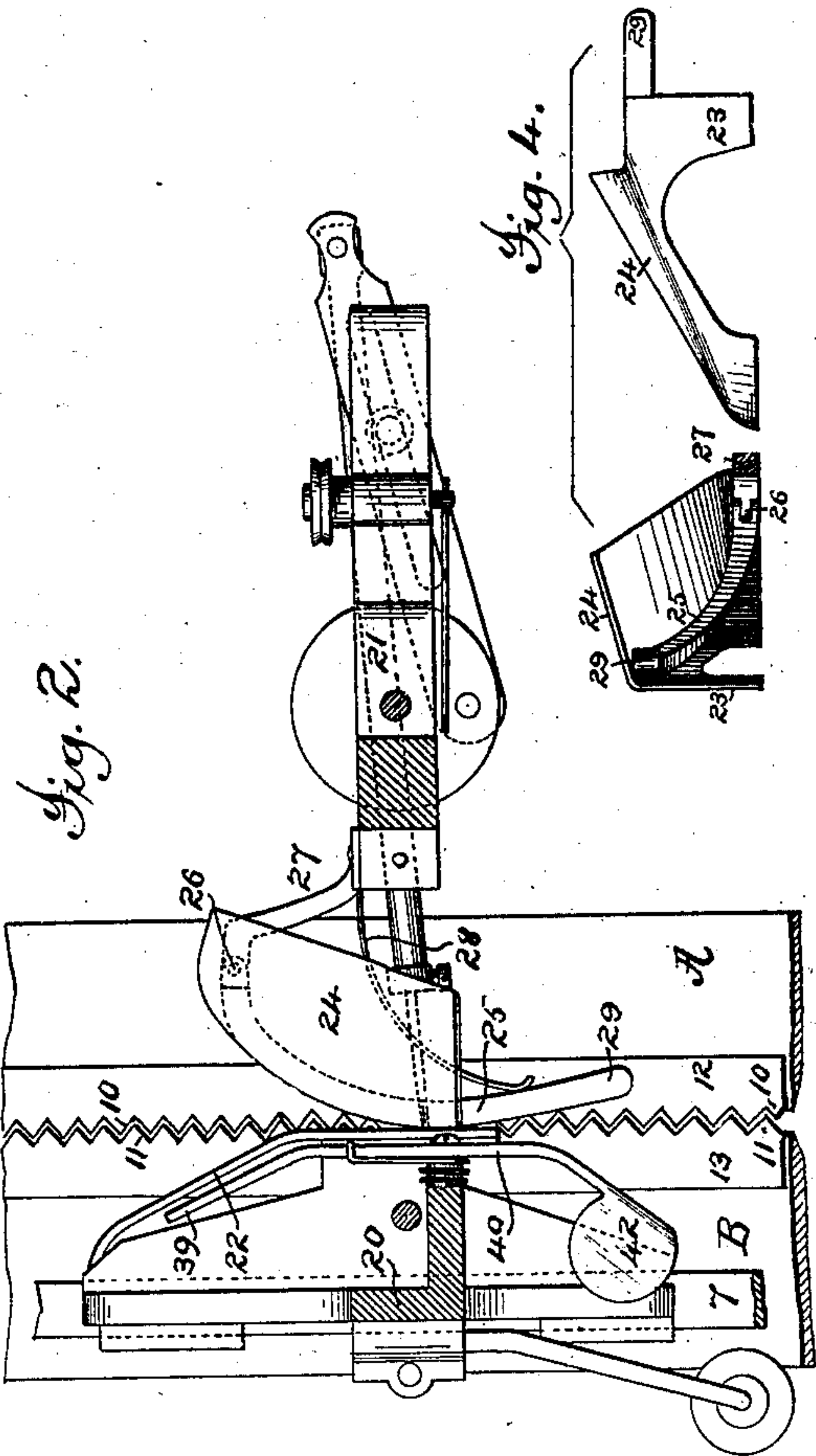
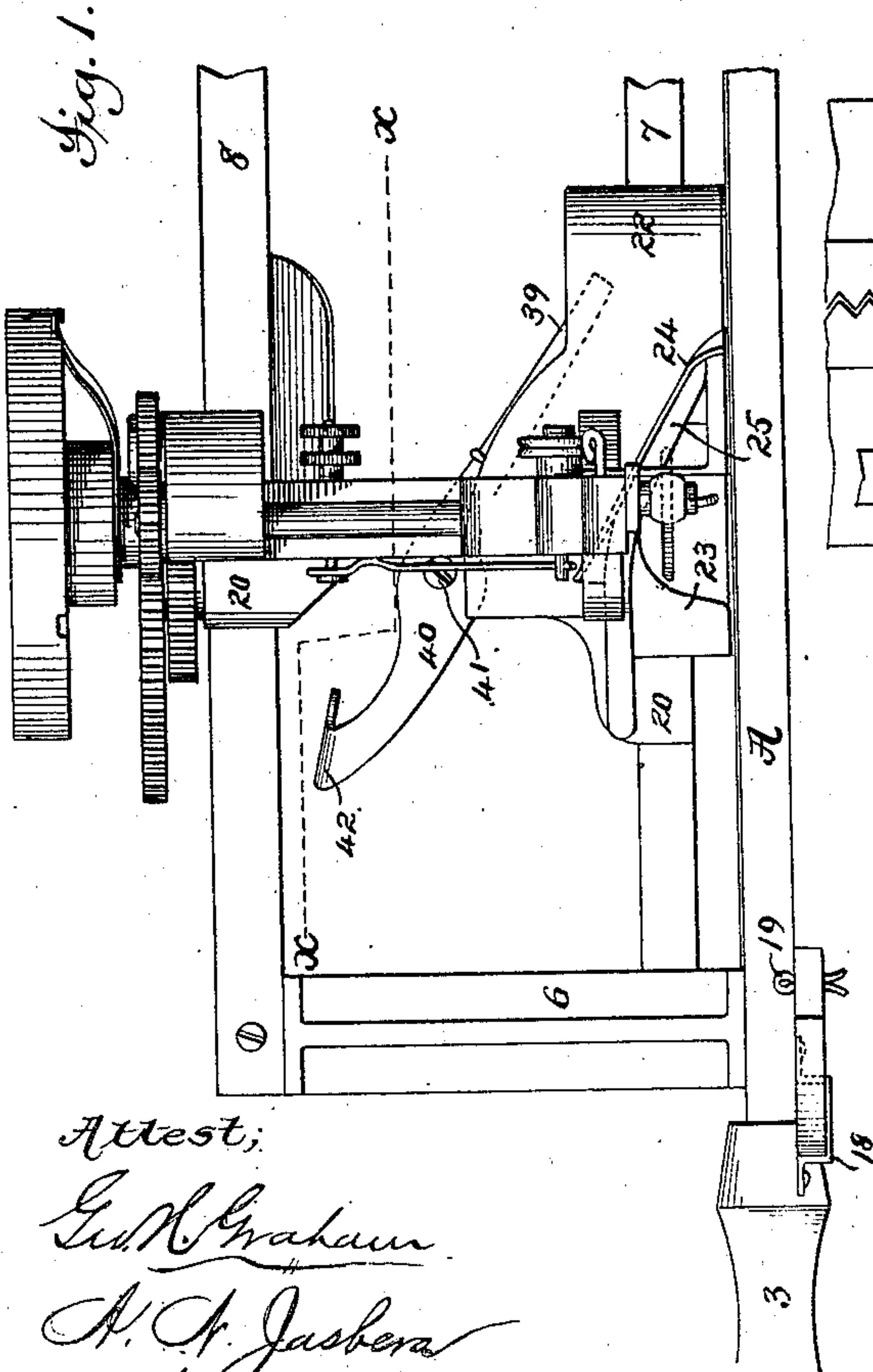
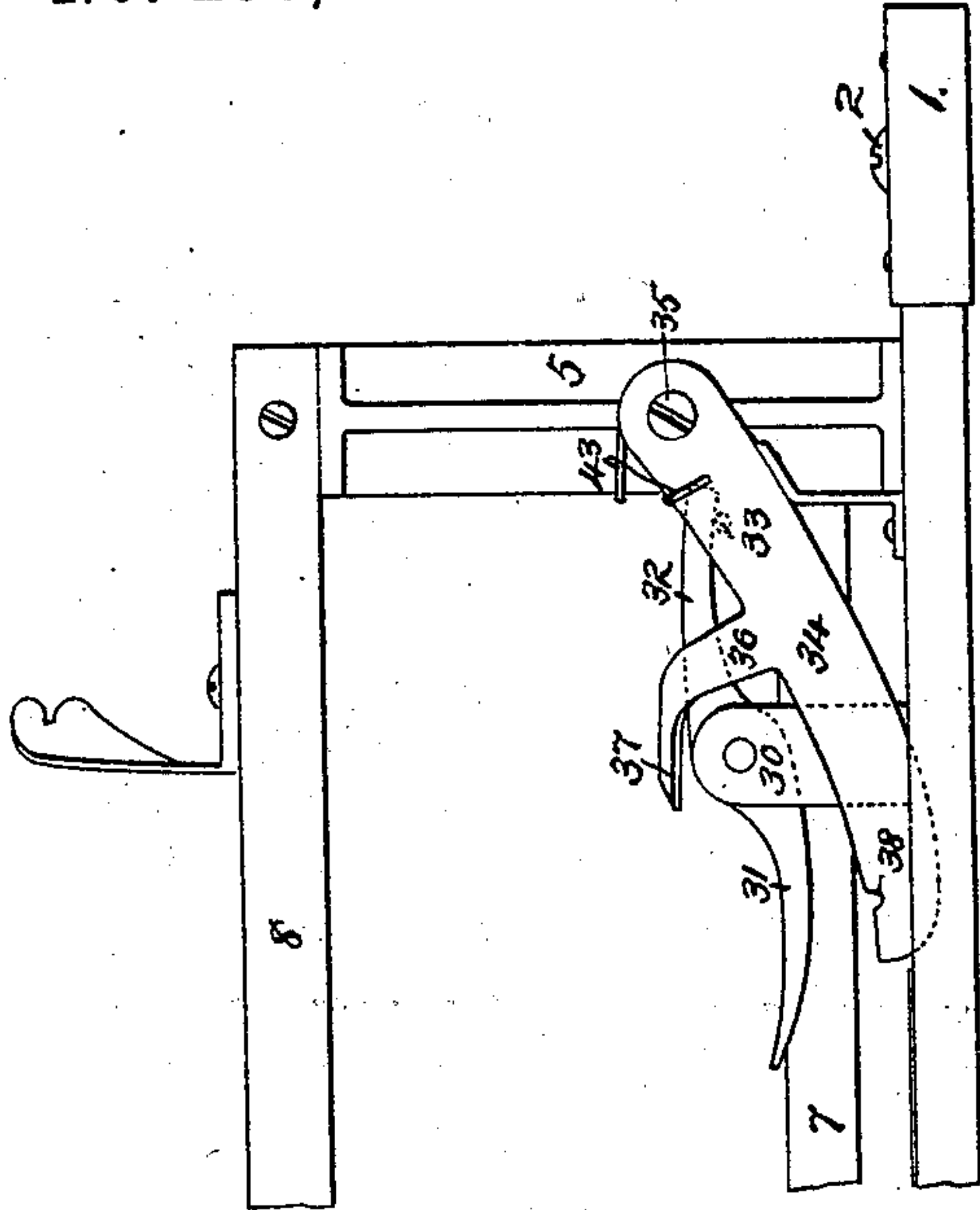
2 Sheets—Sheet 1

O. R. VAN VECHTEN.

MACHINE FOR SEWING UP MOUTHS OF BAGS.

No. 256,518.

Patented Apr. 18, 1882.



Attest;

Edw. M. Graham
A. H. Jasbera

Inventor,

Oroville R. Van Vechten,
by *Munson & Philipp*
Attys.

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2 Sheets—Sheet 2.

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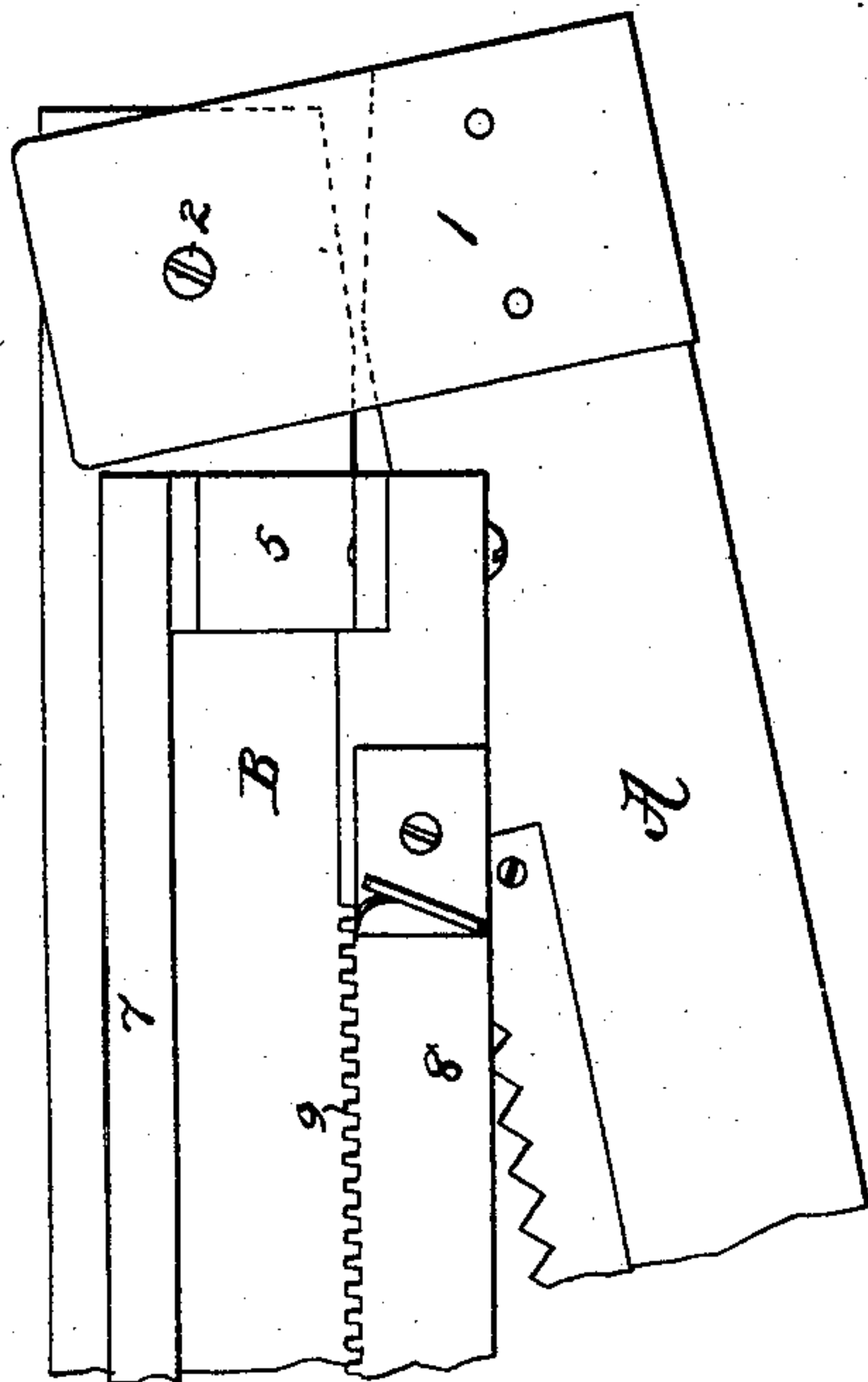
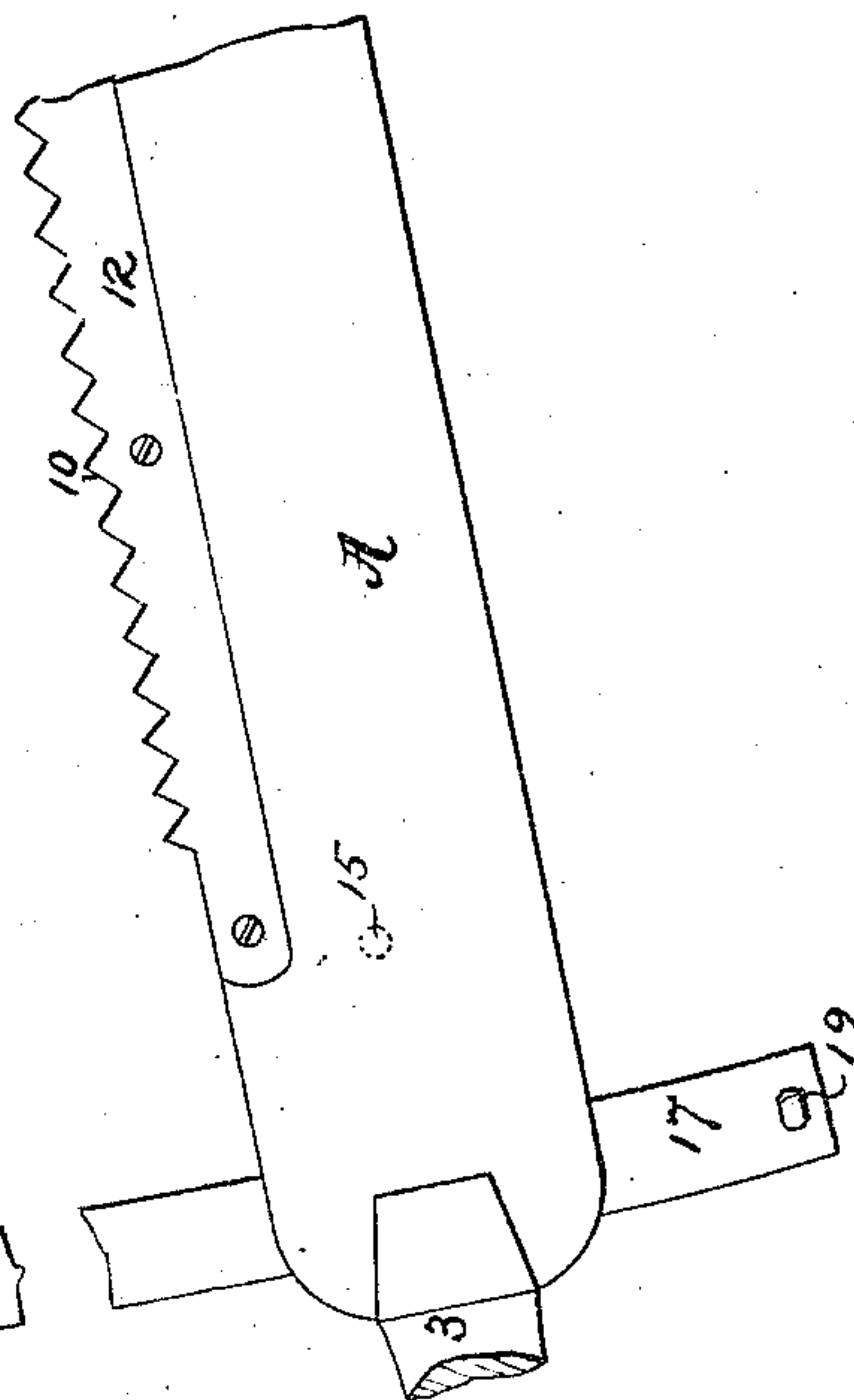
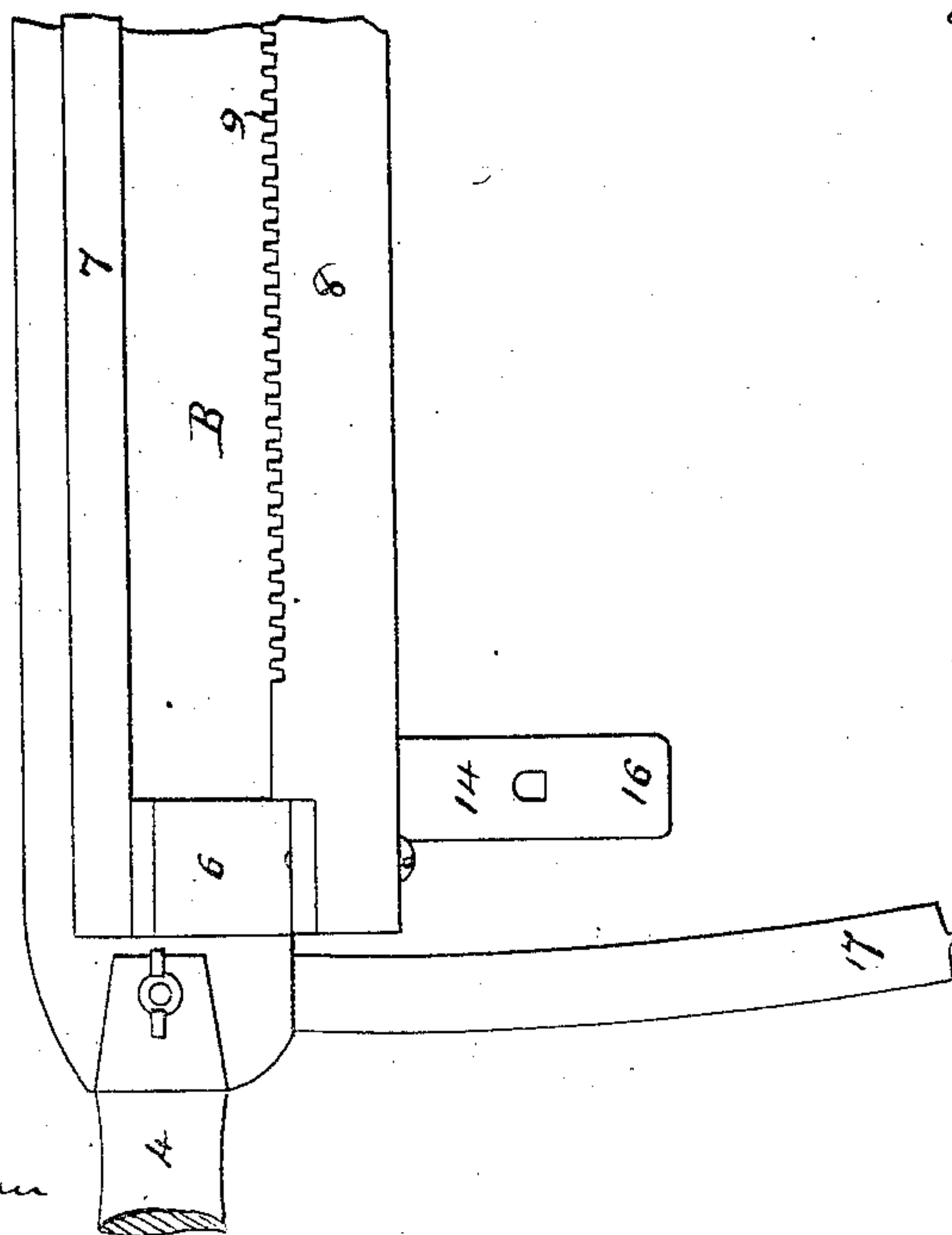


Fig. 3.



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UNITED STATES PATENT OFFICE.

ORVILLE R. VAN VECHTEN, OF BROOKLYN, NEW YORK.

MACHINE FOR SEWING UP MOUTHS OF BAGS.

SPECIFICATION forming part of Letters Patent No. 256,518, dated April 18, 1882.

Application filed December 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, ORVILLE R. VAN VECHTEN, a citizen of the United States, residing in the city of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Machines for Sewing Up Mouths of Bags, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

In packing for shipment grain and other substances of like character which are required to be contained in bags it has long been the practice to close the mouths of filled bags by hand tying or sewing. In United States Patent No. 246,644, dated September 6, 1881, there is, however, described a mechanism adapted to perform this function, and the present invention relates to a machine of the character therein described.

It is the object of the present invention to so improve the structure and operation of the said machine as to render it capable of performing better work and in a more satisfactory manner.

The improvements effected consist in certain details of construction, which will now be fully explained, and then specifically pointed out in the claims.

In said drawings, Figure 1 is a side elevation of portions of the machine shown in said patent, modified, however, so as to embody the present invention. Fig. 2 is a horizontal section taken on the line *x x* of Fig. 1. Fig. 3 is a plan view of parts of the bag-clamping frame and its auxiliaries. Fig. 4 is a detail showing the construction of the presser-foot.

The bag-clamping frame in this case, the same as in the patent referred to, consists of two members, A B, hinged together at one end by a strap or straps, 1, and a pivot, 2, and having at the other end handles 3 4. The member B of this clamping-frame supports, by means of brackets 5 6, bolted to it, guide-bars 7 8, the latter of which carries the actuating-rack 9. This clamping-frame is made of a length to suit the size of bags or a range of sizes of bags, the mouth end of the bag being introduced between and clamped by its members A B. In the patent referred to the mem-

ber A of the clamping-frame is provided with two or three pins, which, when the members are closed upon a bag, are designed to impale the plies of the mouth end and hold the material evenly and in proper position. It is found, however, in practice that these pins are inadequate for the purpose. The members of the clamping-frame cannot be arranged so as to grasp material of varying thickness with sufficient firmness to prevent its "crawling" between the bars as the needle advances. In consequence of this crawling or slipping of the cloth the stitches made are of unequal length and the material is gathered in places, so that the thread is liable to break when the seam is subjected so strain. To obviate this difficulty and to hold the mouth end of the bag firmly and evenly along its whole width, the members A B are provided along their clamping-edges with serrations 10 11, which match or fit into each other, as shown in Fig. 2. These serrations may be formed upon the edges of the members A B, or upon plates 12 13, secured thereto, as shown in the drawings. As will readily be seen, the plies of material when clamped between these serrated edges will be held at every point and absolutely prevented from moving so long as the frame is closed upon them.

In order to hold the two members of the clamping-frame in their closed position when they have been brought together, the member B is provided with the spring-catch 14, which springs over the lug 15, carried by the member A, thus locking the two members firmly together.

In the machine shown in the patent referred to the clamping members were held together during the sewing by the hand of the operator, which was laborious and inconvenient. The use of this locking device relieves the operator of much labor and leaves both of his hands free for other purposes. When the members of the clamp are to be separated the catch 14 is sprung off from the lug 15 by pressing upon its end 16. To guide and steady the members A B when they are separated, to insure that they shall come together evenly and in proper co-relation, and to prevent wrenching of the joint 1 2, the member B is provided with the

segment-bar 17, which is attached to the under side of its free end at its junction with the handle 4.

The member A has secured to its under side, at a corresponding point, the loop 18, through which the bar 17 passes, thus forming a guide and support for the member A as it is swung back and forth. The loop 18 is prevented from being drawn off from the bar by the pin 19, which forms a stop at the end of the bar. In the present machine, as in the patent referred to, the guide-bars 7 and 8 form ways upon which the sewing-machine is arranged to travel from one end of the clamping-frame to the other, the frame 20 of the sewing-machine being recessed to form sockets that embrace or partially embrace said bars 7 and 8, also substantially the same as in said patent.

The sewing mechanism, which is in many respects of common construction, is also in its general features the same as that shown and described in said patent, and therefore needs no detailed description here. It differs, however, from the mechanism referred to in one particular. The patented machine is not provided with a presser-foot—that is to say, a guide or surface resting against the cloth upon the side from which the needle enters, and holding it firmly against the bed of the machine. This omission caused trouble in the practical operation of the machine. There being nothing to strip the cloth from the needle and press it against the bed-plate of the machine, it would sometimes follow the needle back, so that the latter would not be drawn entirely clear of the cloth, and consequently was not left free to advance with the machine. This difficulty has been obviated by the present invention, in which the needle-bar-carrying frame 21 is provided with a clamp or presser-foot, which strips the cloth from the needle and keeps it pressed snugly against the bed 22 of the machine.

The presser-foot consists of the curved plates 23 24, angularly disposed to each other, as shown, and secured to the bar 25, which is hinged at 26 to the arm 27, projecting forward from the needle-bar support. The spring 28 is arranged, as shown, behind the bar 25, so as to hold it with a yielding pressure against the bed-plate 22. An extension, 29, of the bar 25 affords a convenient handle by which the presser-foot can be swung away from the plate 22 for the purpose of inserting or removing the work. The curvature of the plates 22, 23, and 24 is such that a wide throat is formed upon the side from which the material enters, so that seams, wrinkles, or other inequalities in the thickness of the material will offer no hindrance to the movement of the machine. The needle in this machine has what is termed a "walking" movement, to permit which the bed-plate 22 is provided with an elongated slot for the needle to pass through, all of which is fully set forth in the patent referred to. This movement of the needle makes it also necessary that

the plate 23 of the presser-foot should be provided with a corresponding slot.

In the present machine the devices for severing the sewing-thread from the work at the end of the run of the machine are of a construction somewhat different from that shown in the patented machine, as will now be explained.

Upon the member B of the clamping-frame, a short distance in the rear of the bracket 5, is fixed the post 30, to the upper end of which is pivoted the shear-blade 31. This blade has a forward extension, 32, which rests upon the stud 33, projecting from the thread-carrier 34, which is pivoted at 35 to the bracket 5. The thread-carrier is provided near the middle of its length with the upward projection 36, the upper end of which is bent to one side, forming the laterally-projecting arm 37.

The forward end of the thread-carrier is provided with a notch, 38, so located that when the parts just described are in their normal positions and the sewing-machine has come to the end of its run it will be directly beneath the needle when it enters the cloth for the last stitch, and consequently directly beneath the thread when the needle is withdrawn. When the sewing-machine is in this position the end 39 of lever 40, which is pivoted at 41 to the frame of the machine, will be under the arm 37 of the thread-carrier 34, and, as will readily be seen, by pressing down upon the handle 42 the thread-carrier will be raised, and catching the thread in notch 38 will carry it upward. At the same time, however, by the action of stud 33 the shear-blade 31 will be lowered, and as it passes by the advancing edge of the thread-carrier will by its shearing action sever the thread.

It is to be remarked that the raising of the thread-carrier will draw the thread out sufficiently to leave a fastening end of suitable length. When the sewing-machine is withdrawn the thread-carrier and shear-blade will be returned to their normal positions by the action of a spring, 43.

The means by which the needle is arrested and held in its outward position at the time when the sewing-machine stops at the end of its run are substantially the same as in my patent referred to, and consequently need no detailed description here.

What I claim is—

1. The clamping-frame composed of the two members, as A B, hinged together, and provided with intermeshing serrated edges, in combination with a traveling sewing-machine, substantially as described.

2. The combination of the clamping-frame composed of the two members, as A B, hinged together, the segment-bar, as 17, fast to one of the members and extending through a bearing in the other, and a traveling sewing-machine, substantially as described.

3. The clamping-frame composed of the two

members, as A B, having intermeshing serrated edges, and provided with the segment-bar 17, and the spring-catch and lug 15, in combination with the traveling sewing-machine, all substantially as described.

4. The combination of the clamping-frame, the traveling sewing-machine carrying the actuating-lever, as 40, the thread-carrier, as 34, arranged to be actuated by said lever, and the pivoted shear-blade arranged to be operated by the thread-carrier, substantially as described.

5. The combination, with a work-holding device acting to sustain the work stationary, of a sewing-machine constructed to travel bodily with respect to the work-holding device, and having the bed-plate, as 22, and the hinged

spring-seated presser-foot, between which the seam-line of the material to be sewed passes, all substantially as described.

6. In a sewing-machine constructed to travel bodily with respect to the material being operated upon, the combination of the bed-plate 22 and the presser-foot, composed of the curved plates 23 24, the hinged bar 25, and the spring 28, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ORVILLE R. VAN VECHTEN.

Witnesses:

GEO. H. GRAHAM,
T. H. PALMER.