

No. 681,935.

Patented Sept. 3, 1901.

F. A. SNELL.

FEEDING MECHANISM FOR TACK MACHINES.

(Application filed Dec. 13, 1900.)

(No Model.)

2 Sheets—Sheet 1.

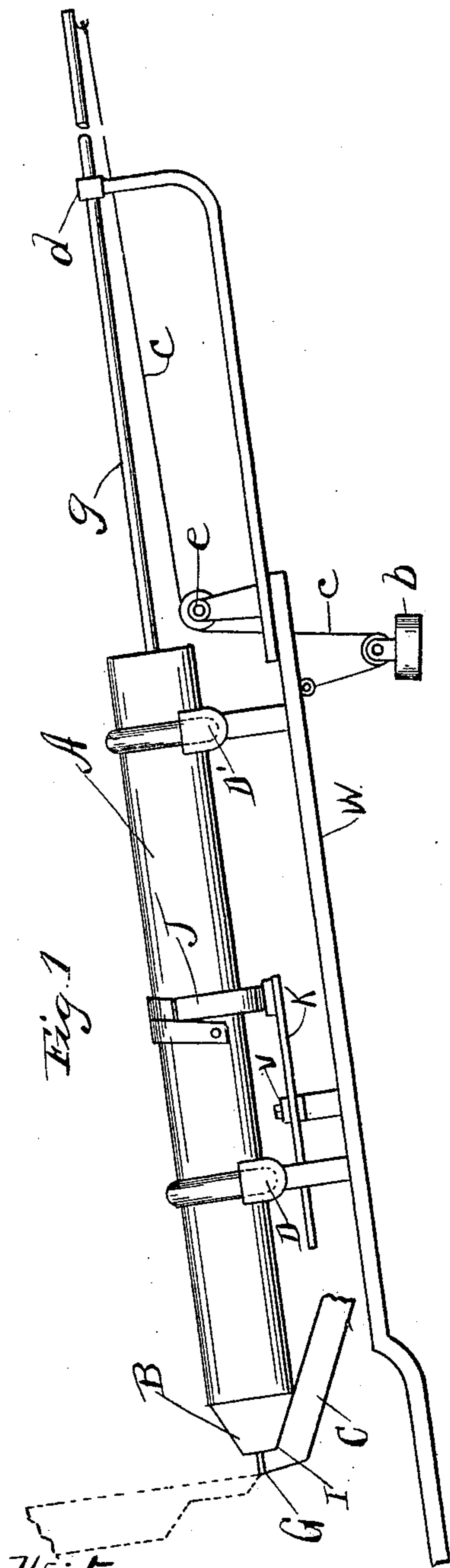


Fig. 1

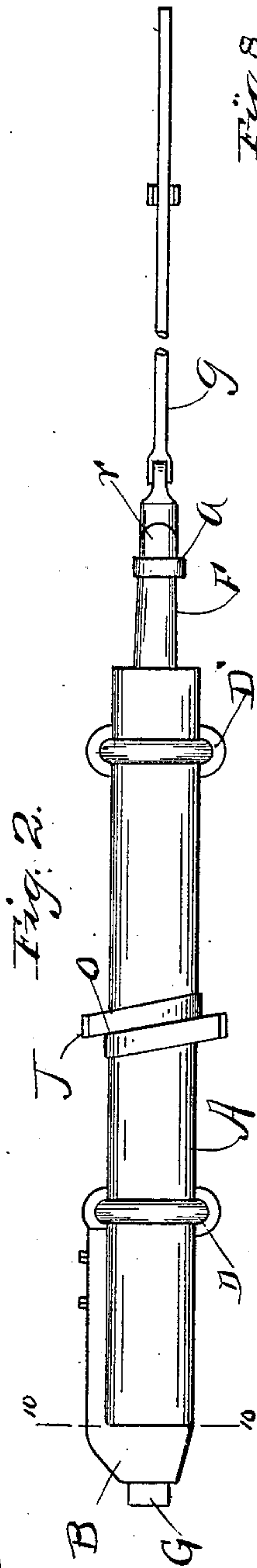


Fig. 2

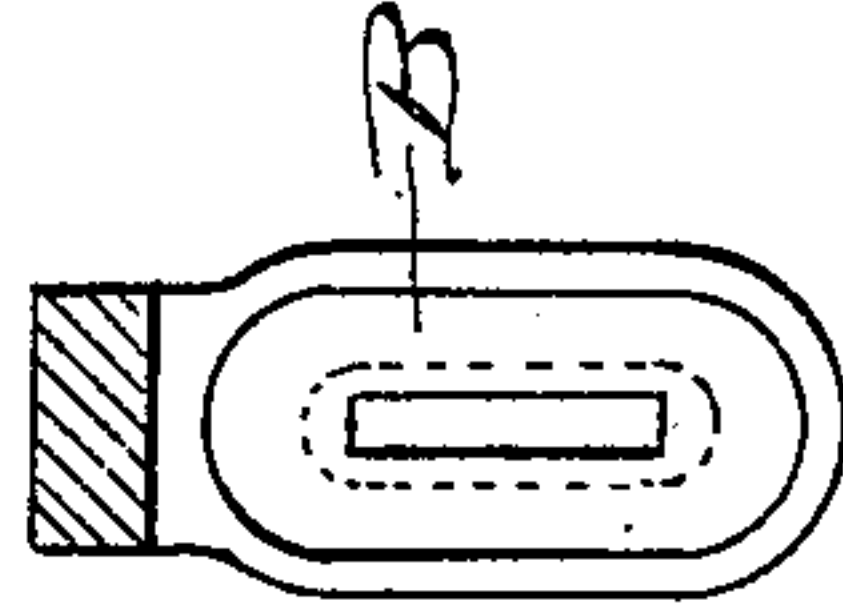


Fig. 3

Witnesses.

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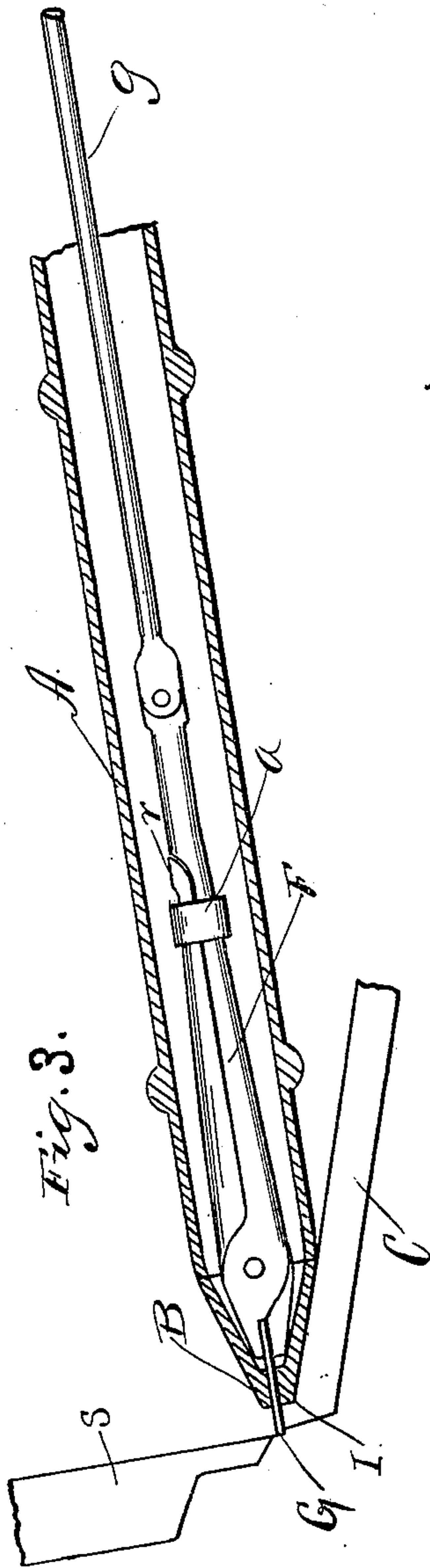


Fig. 3.

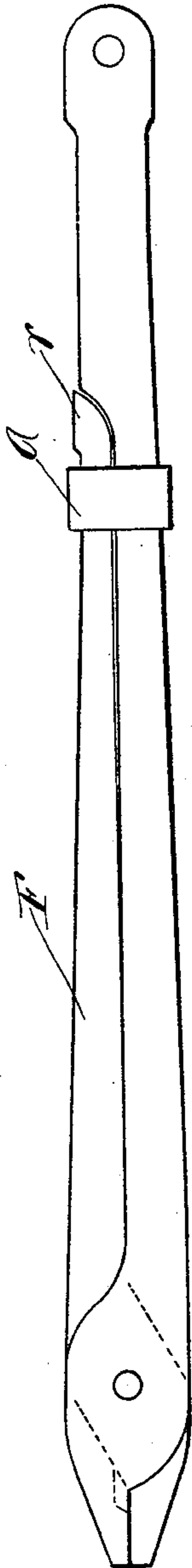


Fig. 4.

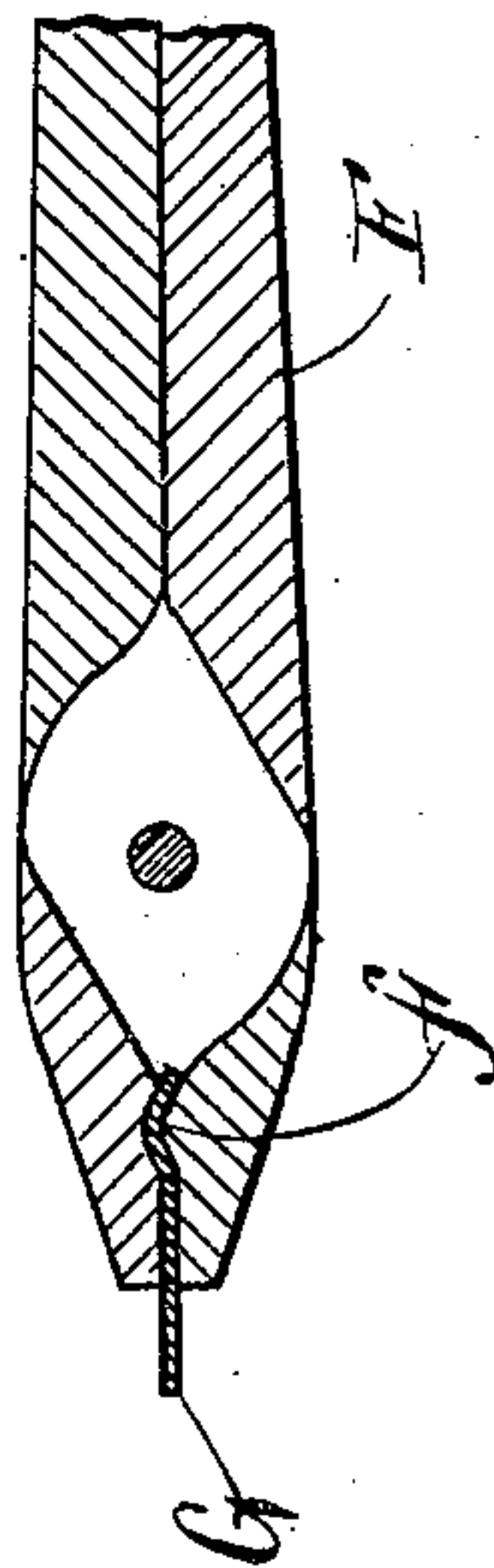


Fig. 5.

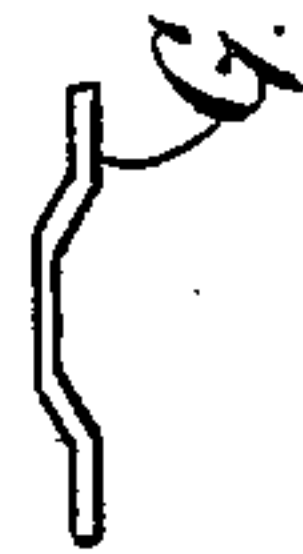


Fig. 6.

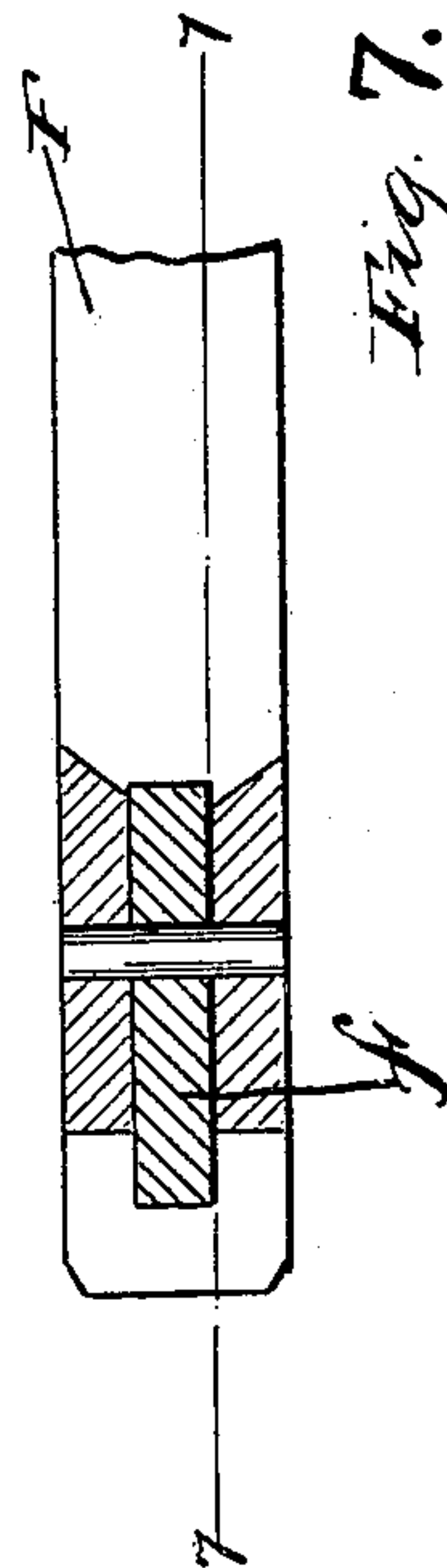


Fig. 7.

Witnesses.

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UNITED STATES PATENT OFFICE.

FREDERIC A. SNELL, OF PROVIDENCE, RHODE ISLAND.

FEEDING MECHANISM FOR TACK-MACHINES.

SPECIFICATION forming part of Letters Patent No. 681,935, dated September 3, 1901.

Application filed December 13, 1900. Serial No. 39,646. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC A. SNELL, of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Feeding Mechanism for Tack-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to the mechanism used for feeding the strips of sheet metal to machines for making tacks and the like.

It has for its object to enable a tack-machine operator to produce a greater amount of work by enabling him to tend more machines by facilitating the insertion of the strips of metal into the tube and mouth of the nosepiece that holds the metal strip while the tacks are being cut. This I accomplish by the construction and arrangement of the parts, as will be fully hereinafter described.

Figure 1 shows a side elevation of the feeding mechanism. Fig. 2 is a top view of the feeding devices. Fig. 3 shows a vertical section of the main tube or barrel with the nippers inside in elevation, also the position of the bed-knife and the cutting-off knife. Fig. 4 is a side elevation of the nippers. Fig. 5 is a vertical section of the nippers, taken lengthwise on line 7 7 in Fig. 7. Fig. 6 is an end view of the strip of metal after having been clamped in the nippers. Fig. 7 is a horizontal section of the nippers, taken lengthwise through the center of the pivot looking down. Fig. 8 is a representation of the inner side of the mouthpiece enlarged.

The construction and operation of my invention are as follows:

In the drawings only the feed mechanism is shown with a small part of the machine that is necessary to understand it.

A represents the tube or barrel through which the strip of metal G, of which the tacks are made, is fed to be cut up between the bed-knife C and the cutting-off knife S, (see Fig. 3,) in which the pincers F are represented as pushing the strip of metal G out through the mouthpiece B to the knives.

By reference to Fig. 1 it will be seen that

the tube A is held in bearings D D', secured to a bar W, by which the feed mechanism is made fast to the main machine. The flat front end or nosepiece of the tube A rests on the bed-knife C, and the bearing D next to it is used only to hold the tube A from lateral motion and has a spring over it to keep the tube down, only allowing it to rise a little as it turns over on its flat nosepiece. The tube A is reversed in position, so as to present the strip G first one side and then the other side to the cutting-off knife S by means of the usual device called a "fiddle-bow" O, which is held on the end of the lever K, that swings horizontally on a pivot V, fast in the bar W. The other end of the lever K is connected with the running part of the machine. (Not shown.) This bow O, by means of a strap J, which passes around the tube and has its ends made fast to the ends of the bow, gives a half-turn in alternating directions to the tube A when the lever K is moved and causes the tacks to be cut with their points first to one side and then to the other from the strip. A mouthpiece B is attached to the end of tube A, of an oval shape, with an opening in it large enough to allow the strip of metal G to pass through freely, and the inner side of the opening is made flaring to allow the strip of metal to enter readily from the tube A when first inserted. The flaring form of the inside of the mouthpiece B allows the nose of the nipper F, which is made with a corresponding taper, to enter well in (see Fig. 3) and cut the strip up close, so as not to waste any stock. Usually the mouthpiece has been ground down very thin around the slit to allow the edge of the bed-knife C to lie close to it to leave as little room between the edge of the knife and the mouthpiece as possible; but the thin edge of the mouthpiece is very liable to break away. To accomplish this object without thinning and weakening the mouth edge, I make an offset I in the top of the knife C, (see Fig. 1,) which leaves the end of the mouth thicker and brings the cutting edge of the knife upon a level with the opening in the mouthpiece. The nippers F are made in the usual form of pliers excepting that the shanks are carried straight back and are made round when closed to pass easily

in the tube A, and one of the shanks is made shorter than the other and turned out at the end *r* to prevent the clamp-ring *a* from working off and releasing the strip of metal. Much trouble is caused by the strip of metal working off to one side out of line with the center of the tube and causing the knife to cut faulty blanks from the strip. To obviate this, I make the inner face of one of the nipper-jaws with one or more ridges or projections on it and the face of the other jaw with corresponding depressions, so that when the nippers are closed on the end of the strip it will be crimped between the jaws and held, so that when the nippers are clamped by sliding the ring *a* over the end *r* the strip cannot be swung to one side of the straight line. A stick *g* is attached to the back end of the nippers *F* and a bearing *d* is provided for it to hold it straight. A cord *c* is attached to the back end of the stick and extends in over the pulley *e* and is made fast to plate *W*. A weight is hung on the cord between the pulley and the fastening which draws the nipper and strip of metal into the tube and the knives.

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

1. In a strip-feeding mechanism, the com-

bination with a nosepiece having its front slotted end transverse to its axis, and the exterior portion made tapering from the transverse part rearward; of a cutting member having a cutting portion and a shank projecting therefrom at an angle corresponding to the angle of said tapering portion with the end of the nosepiece, the cutting member having the said parts arranged to engage the end and the tapering portions of the nosepiece respectively when the strip is supported upon the cutting portion.

2. In a strip-feeding mechanism, the combination of a nosepiece of substantially oblong cross-section with curved corners, said nosepiece having a slot at its front end for engaging a strip and having its bore tapering from said slot rearward, and a pair of nippers adapted to support the strip to be fed, the nippers being made tapering and arranged to engage the walls of the said nosepiece when supporting the strip in said slot.

In testimony whereof I have hereunto set my hand this 10th day of December, A. D. 1900.

FREDERIC A. SNELL.

In presence of—

BENJ. ARNOLD,
E. S. MARSH.