

Townsend & Goddard,

Pegging Machine.

No. 97249.

Patented Nov. 23. 1869.

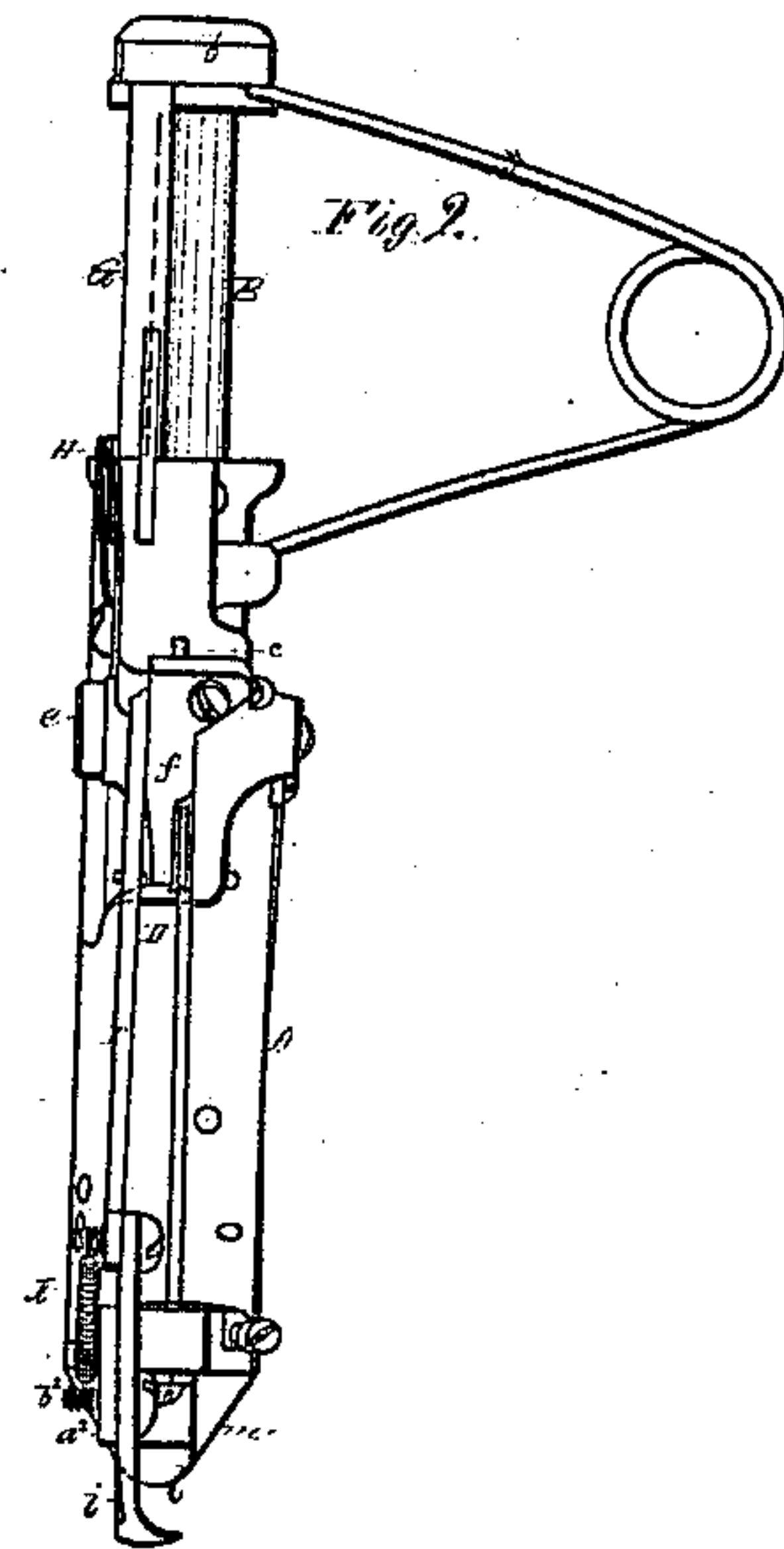
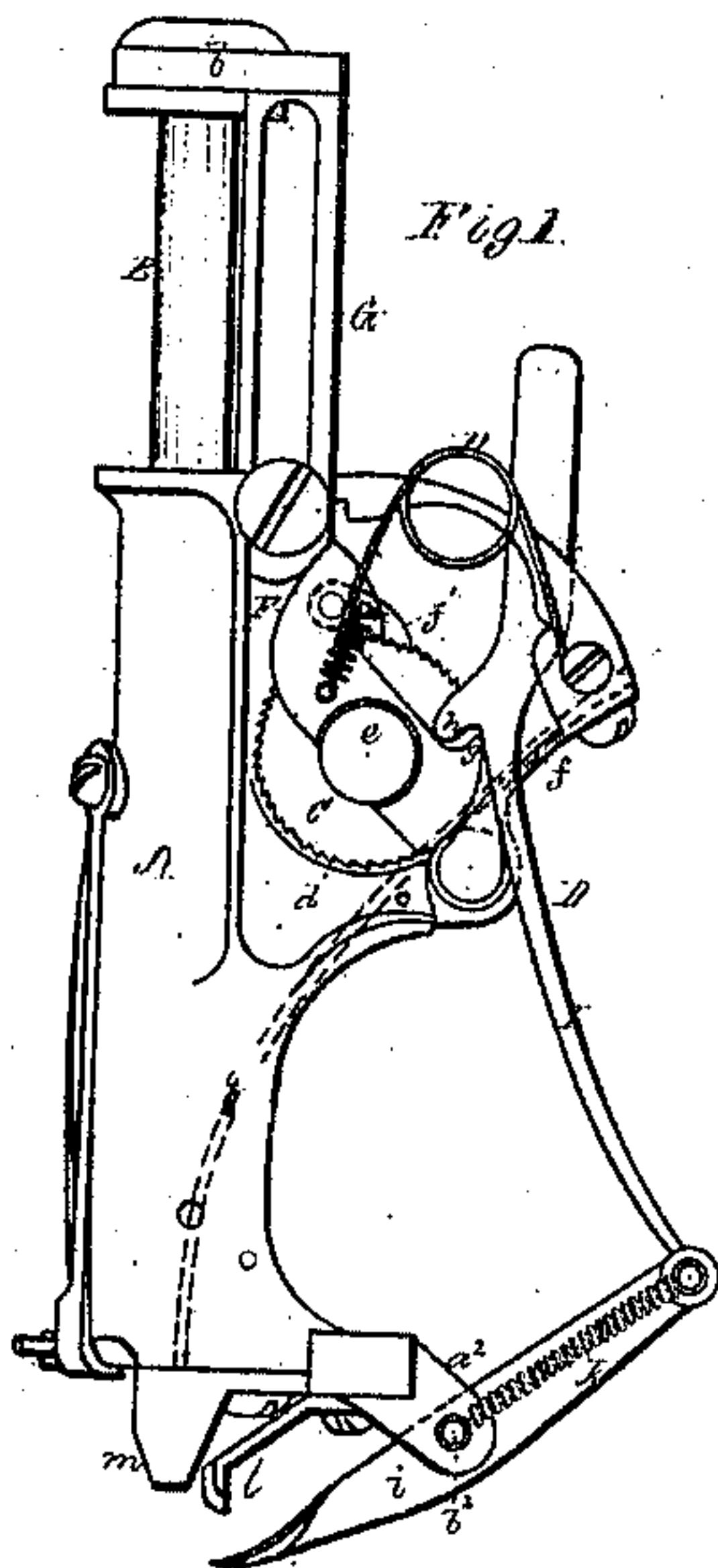


Fig. 3.

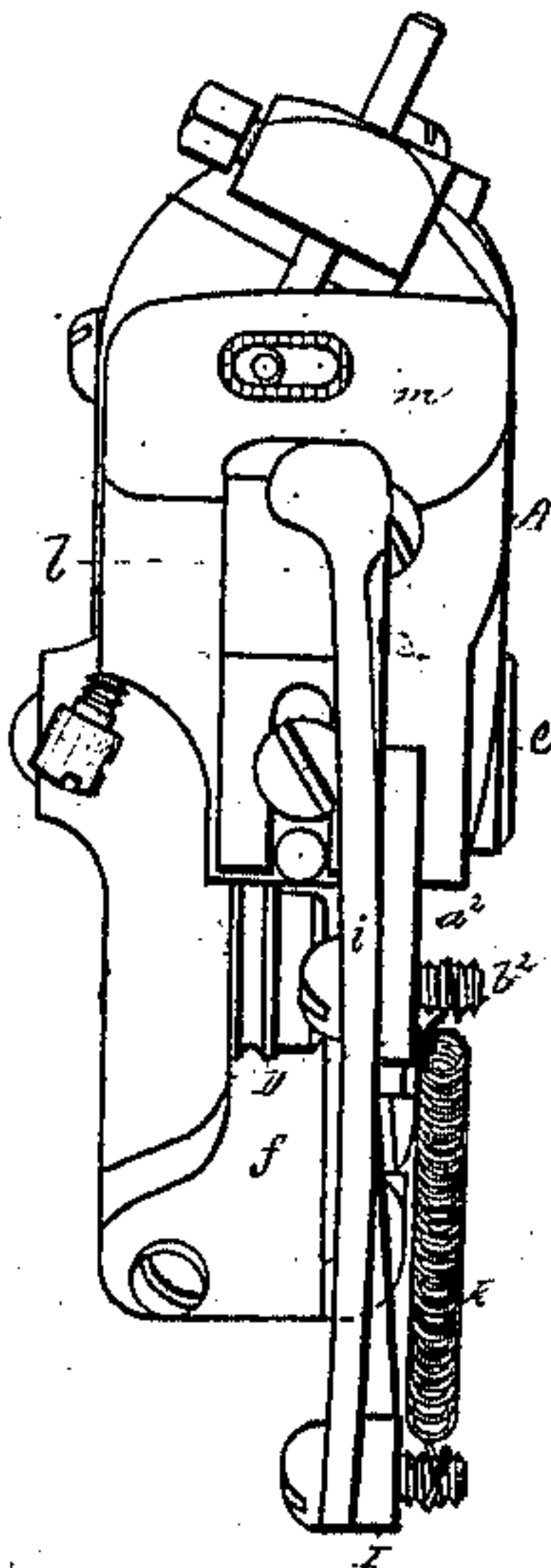


Fig. 5.

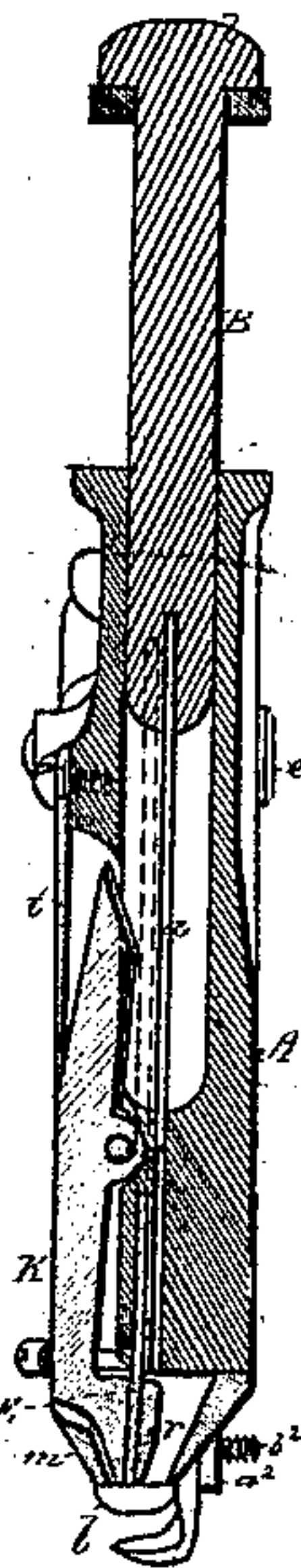
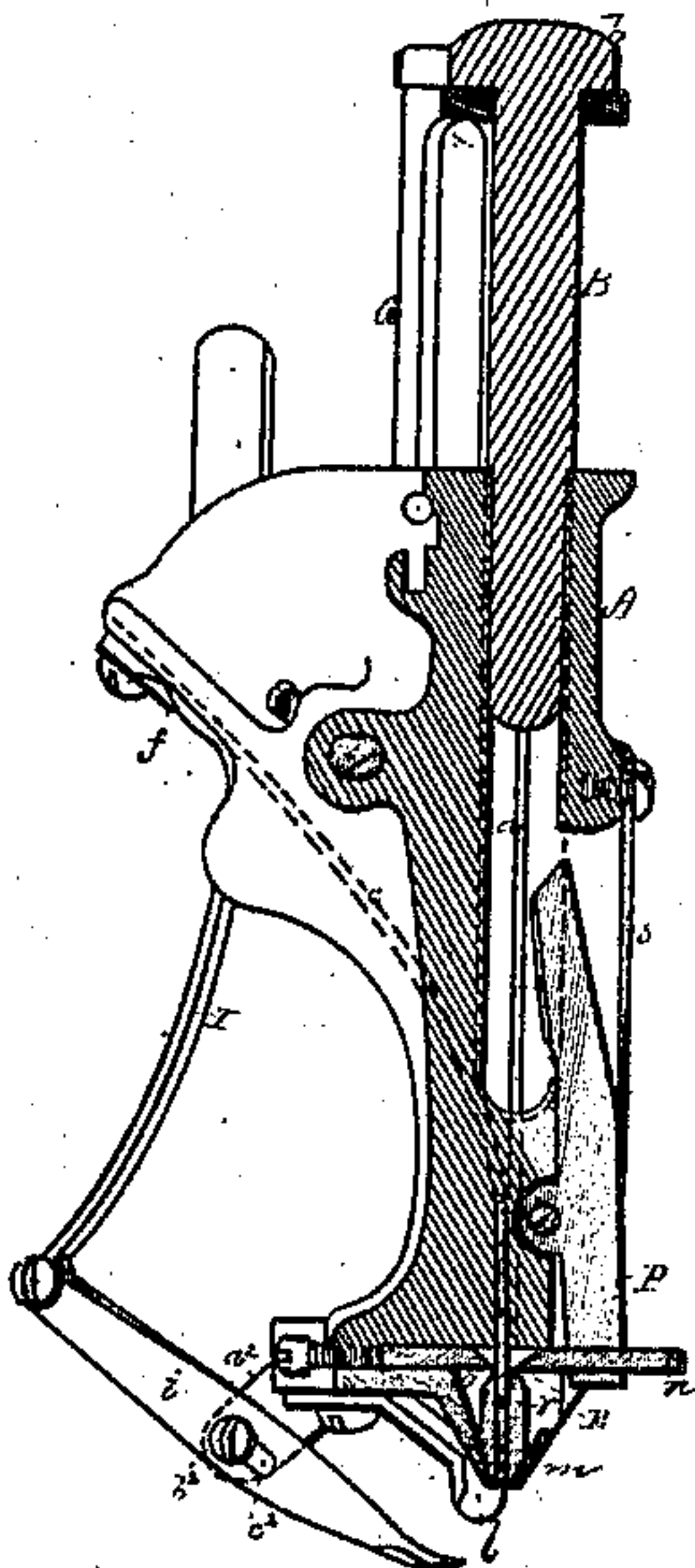


Fig. 4.



Witnesses

S. N. Piper

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by their attorney

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United States Patent Office.

ELMER TOWNSEND, OF BOSTON, AND LOUIS GODDU, OF LOWELL, MASSACHUSETTS.

Letters Patent No. 97,249, dated November 23, 1869.

IMPROVEMENT IN MACHINES FOR NAILING SHOE-SOLES WITH WIRE.

The Schedule referred to in these Letters Patent and making part of the same

To all persons to whom these presents may come:

Be it known that we, ELMER TOWNSEND, of Boston, of the county of Suffolk, and State of Massachusetts, and LOUIS GODDU, of Lowell, of the county of Middlesex, and State aforesaid, have made a new and useful invention, having reference to Machinery for Nailing a Shoe-Sole, or other Article, with Wire; and we do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, and

Figure 2, a side view of a machine embodying our invention.

Figure 3 is a bottom view of such machine, and

Figures 4 and 5 are transverse and vertical sections of it, the first being taken through the wire-cutters, and the second being taken through the wire-transferrers.

The purpose of our additional mechanism is to cause the nails, as they are severed from the wire, to be of proper lengths to be driven into the sole, however such sole, at its edge, may vary in thickness.

It is well known that the nails to be driven into the thinner parts of a shoe-sole ought not to be so long as those inserted, or to be inserted in the thicker portions thereof, otherwise they are liable to extend too far through the inner sole, or within the shoe.

Our nailing-machine, when at work, not only severs the nail from a continuous strip of wire, and drives each nail into the shoe, but cuts the nail to its proper length, however the sole may vary in thickness.

We have combined with the machine, or a machine for cutting nails from a strip of wire, (whether twisted or not,) a mechanism for gauging the length of each nail to be cut, in accordance with the thickness of the sole or soles, at the point or place where each nail is to be driven.

The machine represented in the drawings is what persons skilled in the art to which it appertains term "a hand nailing-machine," because, while held and moved on the shoe-sole by one hand of an operative, the machine is put in action by a mallet or hammer held in the other hand of the person, and struck upon the head of the nail-driver of the machine.

The machine, irrespective of the additions we have made to it, and the combination of it with such, we make no claim to as our invention.

In the drawings—

A denotes the stock or frame of the machine.

B, the shank of the nail-driver a , such shank being provided with a head, b .

C and D are the feed-wheels or wheels for feeding the strip E of wire along through the strip-passage O, as fast as it may be necessary, there being, to the

larger of these feed-wheels, a ratchet, d , which, fixed to the said feed-wheel, is supported on a stationary pivot or journal, e .

The lesser feed-wheel is simply a presser-wheel, its journal being supported by a spring, f , which forces the wheel closely against the strip of wire, so as to crowd the latter up to the milled periphery of the larger feed-wheel.

A rocker-lever, F, formed in manner as represented in the drawings, and arranged alongside of the said ratchet, and having the journal or pin e as a fulcrum, carries, at its upper part, a pawl, f' , to operate with the dentated periphery of the ratchet.

During each descent of the shank of the nail-driver, a cammed and slotted projection or arm, G, extended from such shank, and formed in manner as exhibited, will be driven against the lever F, and will turn it on its fulcrum in a manner to force the pawl against the ratchet, and cause it to be revolved, more or less, so as to feed the wire forward.

A spring, H, suitably affixed to the stock and the lever, serves to effect the retreat or return movement of the lever, and to move such lever until a projection, g , of it is brought up against a stop, h , extended from the nail-gauge bar I.

This gauge-bar I, formed in manner as represented, is pivoted, at its lower end, to a lever, i , arranged to extend from an arm, a^2 , of the shank, in manner as shown in the drawings.

The gauge-bar I, at its upper part, is disposed in the stock A, so as to be capable of sliding lengthwise therein. It is pressed in a direction toward the stock by means of a spring, k , extended from the fulcrum-pin b^2 , which goes through the arm a^2 .

The lever i has a slot, c^2 , in it, where the fulcrum-pin goes through it, such slot being arranged so as to allow the lever to play more or less endwise.

The front end of the lever i extends underneath the sole-edge gauge l , which is arranged close to the nose-piece m of the stock.

The stationary and the movable knives, by which nails or portions of the strip of wire are cut, from time to time, from such strip, are shown at n and o , the movable knife n being projected from a lever, p .

The transferrer, shown at K, is a lever, provided with a tubular foot, r , which receives the nail, and, after the separation of it from the rest of the wire, moves it to and underneath the nail-driver a , which, while descending, forces the nail into the shoe.

The transferrer and the movable cutter-lever are both operated by the nail-driver shank, and by springs s t applied to them, in a manner well known.

The toe of the foot of the nail-gauge lever i is to enter the channel between the outer sole and upper

leather of a shoe to be pegged, the nose-piece at the same time resting on the flat surface of the sole, and leaving the edge-gauge resting against the edge of the sole.

Under this state of things, it will be seen that the sole, close to its edges, will be spanned by the nose-piece, and the foot or lever *l* of the nail-gauge mechanism.

Now, while the nose-piece rests on the sole, and the foot-lever of the nail-gauge remains in such channel, and the nailing-machine is in movement along the sole, the nail-gauge slide *I* will be pressed up or down, more or less, as the thickness of the sole may vary along the edge of such sole.

Consequently, the stop *k*, as the sole may increase in thickness, will be raised, and it will be depressed as the sole may diminish in thickness, and, therefore, it will thereby govern the extent of rearward movement of the pawl of the ratchet.

The more the pawl may fall back during the return movement of its lever, the greater will be the length of wire fed forward during the next advance movement of the pawl.

By means of the slot in the lever *i*, and the spring *k*, such lever will be enabled to accommodate itself to the varying depth of the channel of the shoe while at work in such channel.

We claim—

The combination of the mechanism for regulating the length of the nail (to be cut) to the thickness of a sole at the place where such nail is to be driven, such mechanism being the stop-slide *I* and the lever *i*, with the mechanism for feeding the nail-strip along, the mechanism for severing each nail from the strip, and the mechanism for driving such nail, so cut off, into a sole, the whole being substantially as hereinbefore specified.

Also, the arrangement and combination of the slot *c* and the spring *k* with the stop-slide *I* and the lever *i*, combined with a nailing-machine or mechanism, substantially as explained.

ELMER TOWNSEND.
LOUIS GODDU.

Witnesses:

R. H. EDDY,
S. N. PIPER.