

(No Model.)

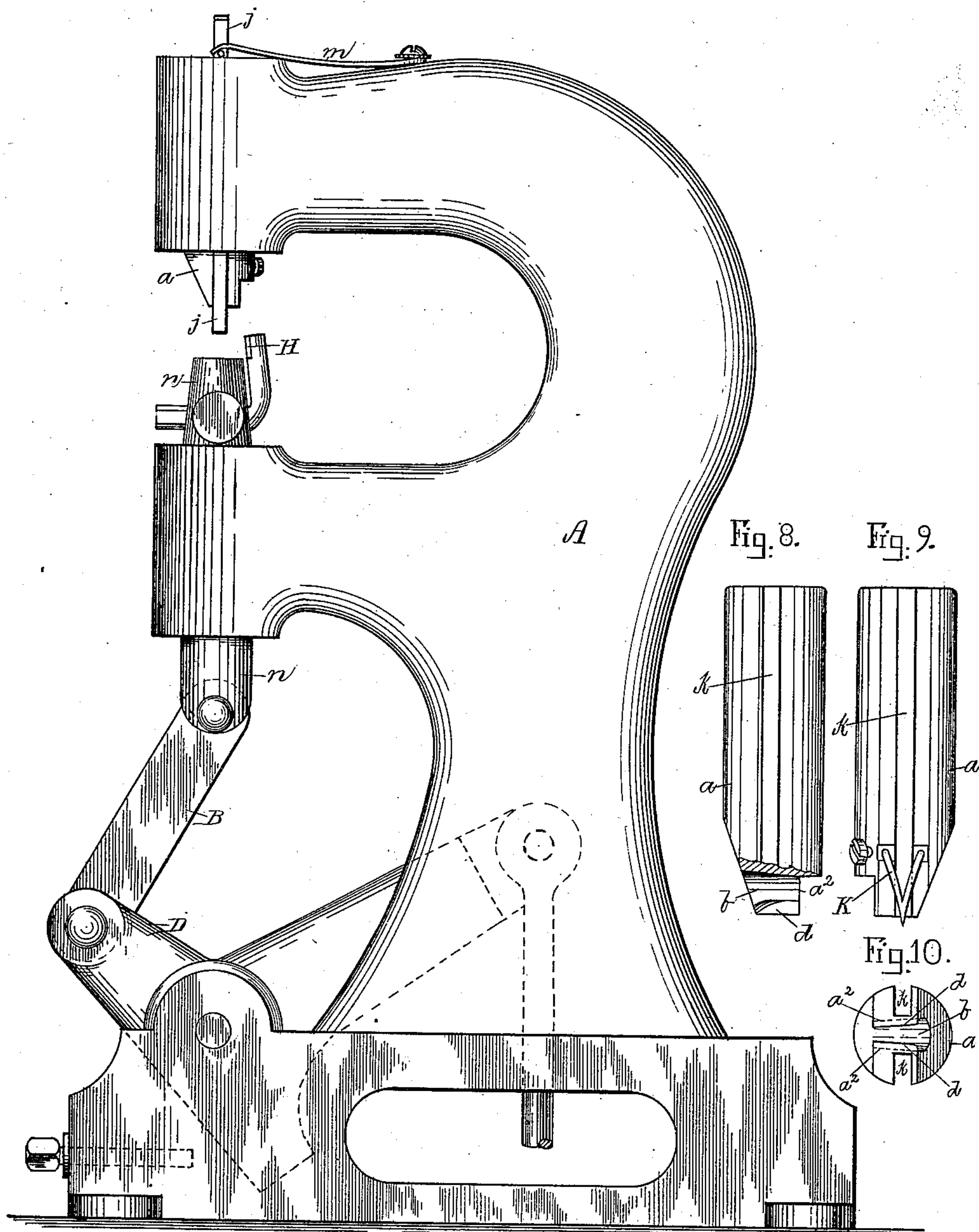
2 Sheets—Sheet 1.

J. H. REED.

MACHINE FOR SETTING LACING HOOKS.

No. 373,307.

Patented Nov. 15, 1887.



WITNESSES

FIG. 1.

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(No. Model.)

2 Sheets—Sheet 2.

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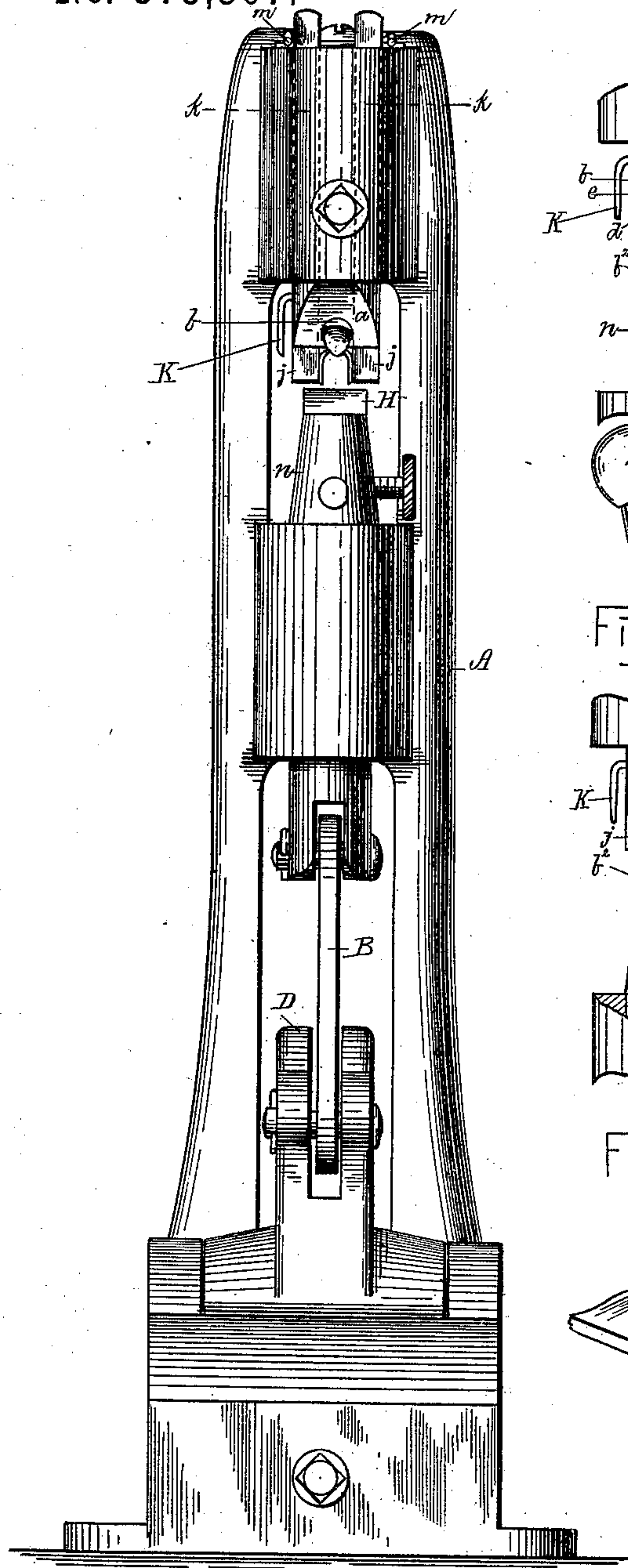


Fig. 2.

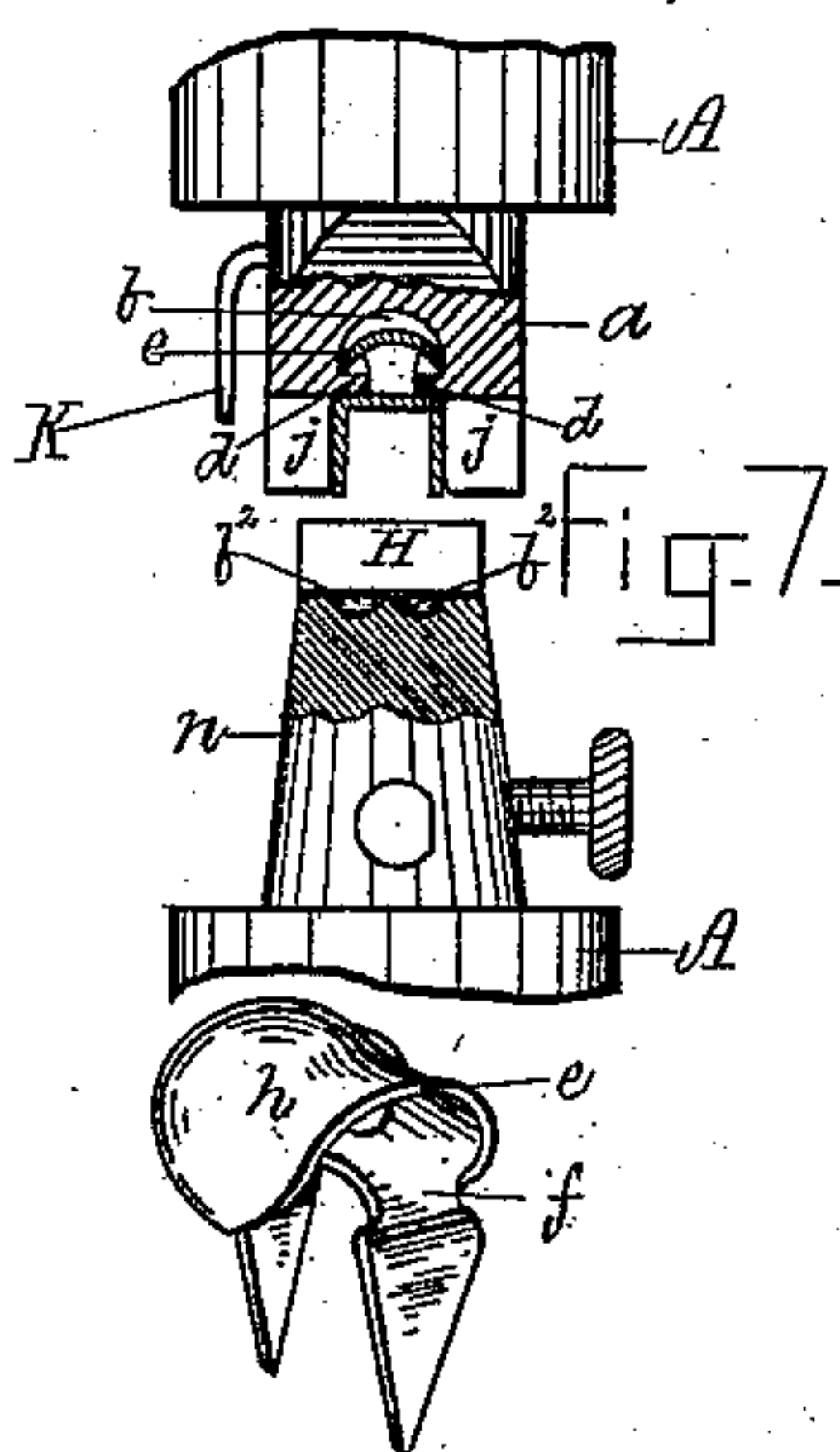


Fig. 4.

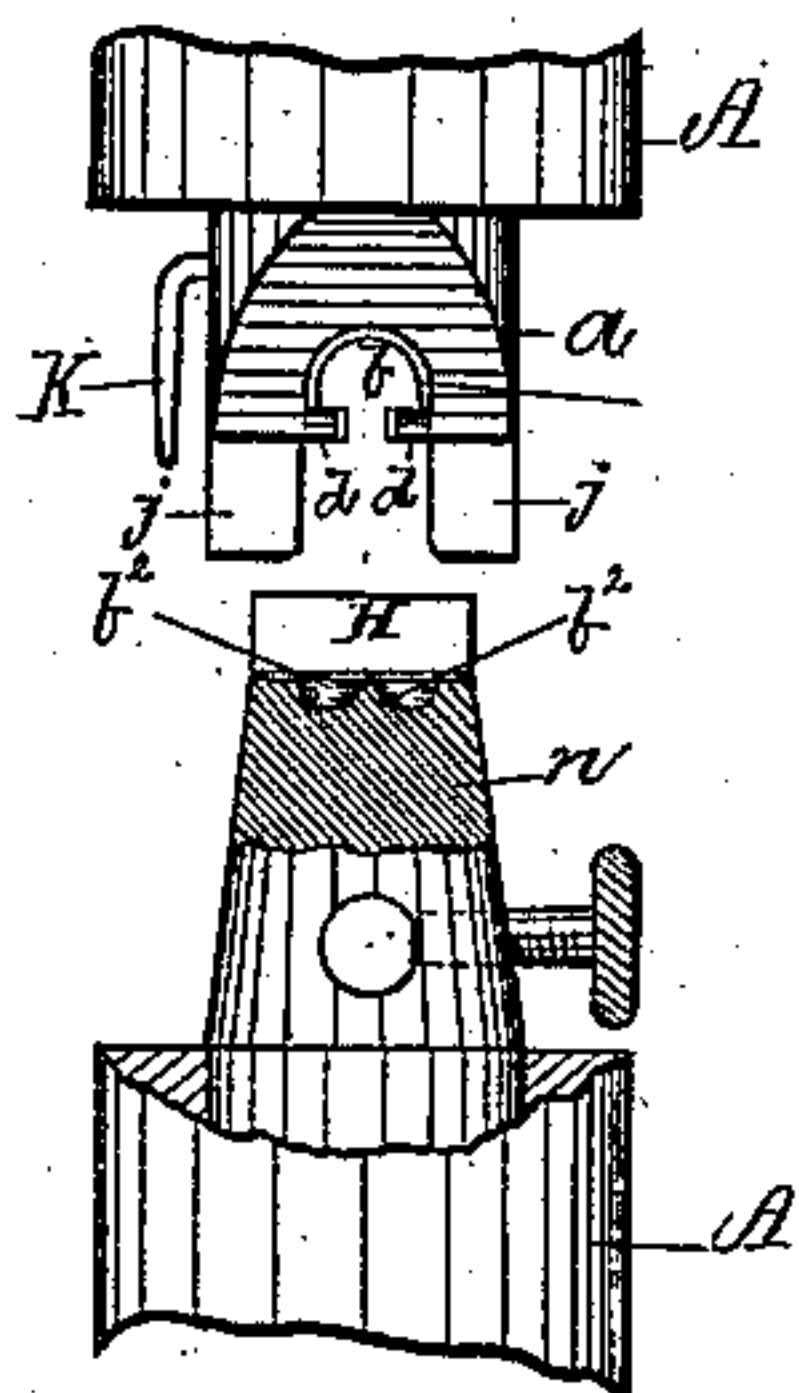


Fig. 6.

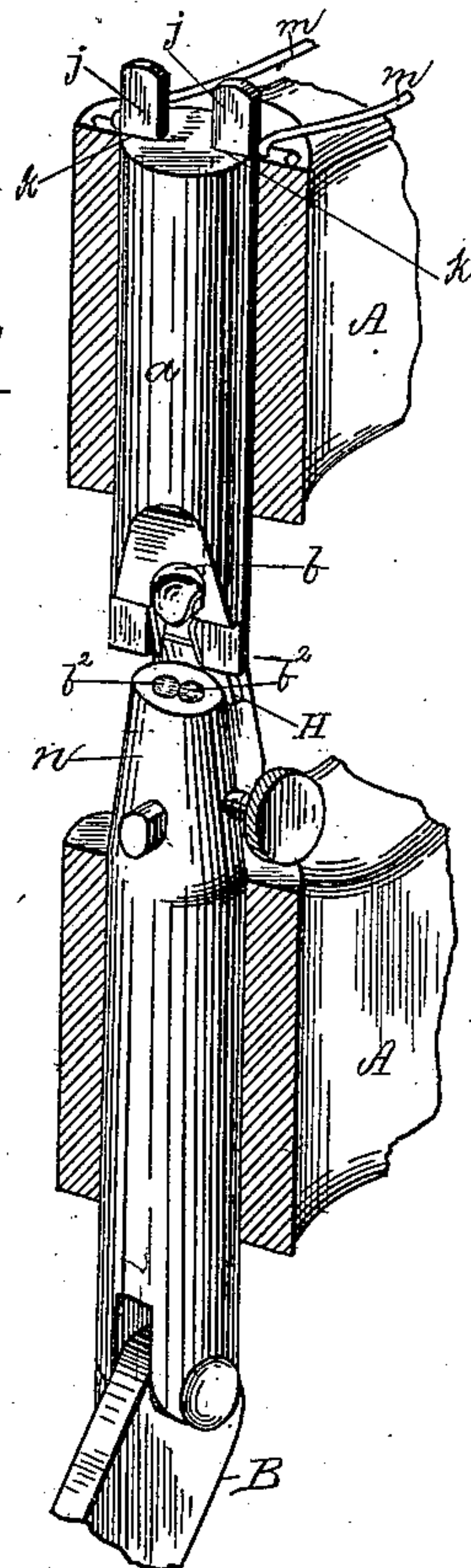


Fig. 3.

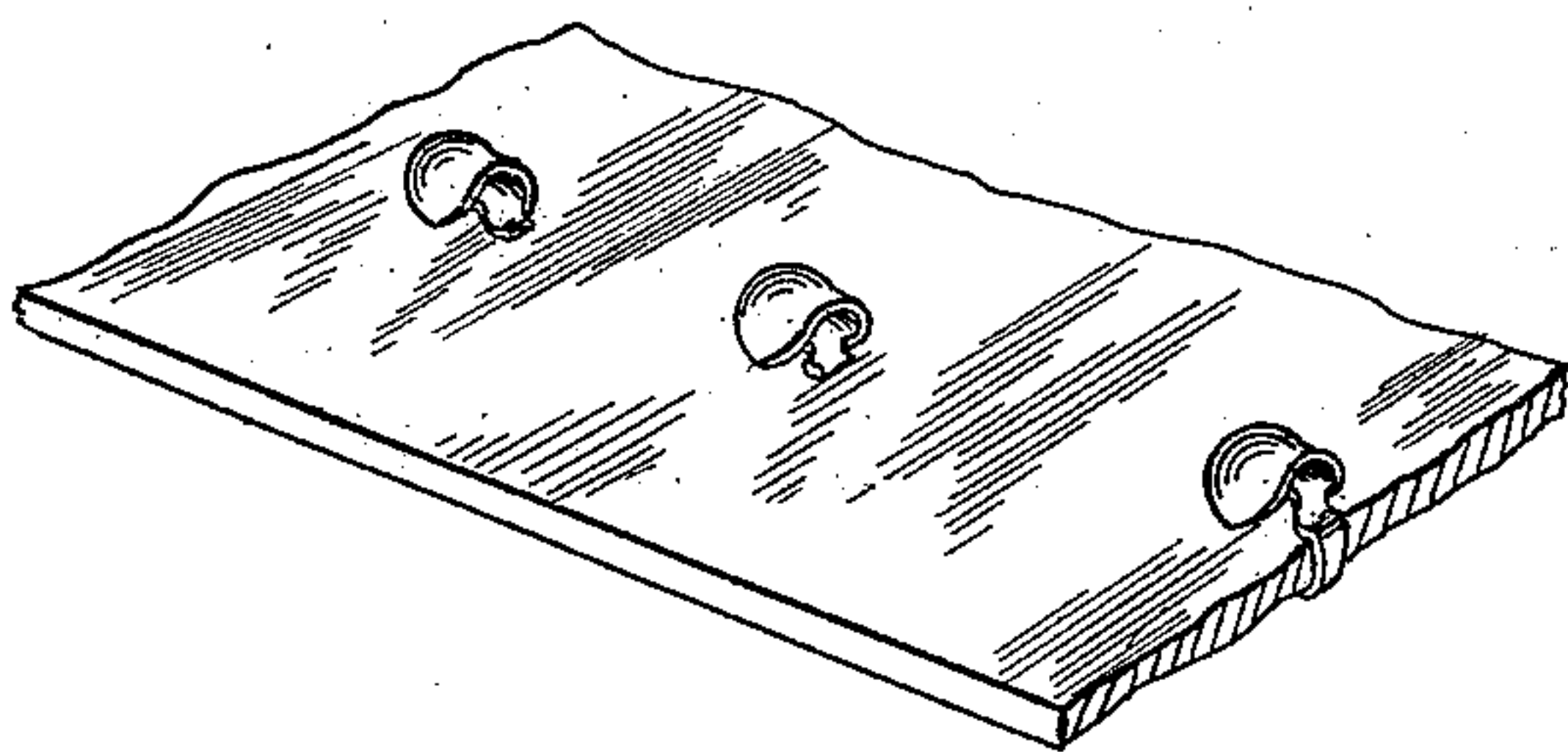


Fig. 5.

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UNITED STATES PATENT OFFICE.

JAMES H. REED, OF LYNN, MASSACHUSETTS.

MACHINE FOR SETTING LACING-HOOKS.

SPECIFICATION forming part of Letters Patent No. 373,307, dated November 15, 1887.

Application filed February 24, 1887. Serial No. 228,686. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. REED, of Lynn, Essex county, Massachusetts, have invented certain new and useful Improvements in Machines for Setting Lacing-Hooks, of which the following is a specification, taken in connection with the drawings accompanying and forming a part hereof, in which—

Figure 1 is a side elevation of my machine. Fig. 2 is a front elevation. Fig. 3 is a perspective view, partially in section, of the holder and anvil. Fig. 4 is a perspective of a lacing-hook. Fig. 5 is a view showing the hooks set in the material. Fig. 6 is a vertical section through the holder and anvil. Fig. 7 is the same with the hook in position. Fig. 8 is a side view of the holder with the lower end broken away to show the interior of the recess. Fig. 9 is a side view of the holder detached. Fig. 10 is a bottom view of the holder.

The object of my invention is the construction of a simple and efficient machine for setting lacing-hooks, more particularly hooks of the kind more fully shown and described in Letters Patent granted to Francis M. Piper, No. 326,148, dated September 15, 1885; and it consists in a machine provided with a holder and anvil which are normally separate to admit of the introduction of the stock and the hook which is to be set therein, said holder and anvil being adapted to approach each other and force the prongs of the hook through the stock and clinch them, all as hereinafter described.

Like letters of reference indicate like parts throughout the drawings.

A represents the frame of the machine, which may be varied as desired, the essential features being a base or arm to support the anvil and an upper arm projecting over the anvil to support the holder. The holder *a* consists of a piece of metal set in the upper arm of the frame and provided at its lower end with a slot or recess, *b*, of a shape adapted to receive the upper part or crown of the hook. Either side of the interior of the recess *b* is provided with a flange or projection, *d*, upon which the edges of the crown *e* of the hook rest. Above these flanges *d* the interior shape of the recess *b* is not material, so long as it is sufficient in size to accommodate the crown of the hook. The

flanges slope upwardly toward the rear, as shown in Figs. 6 and 8, in order to more easily place the hook in position in the holder. The side walls of the recess *b* converge or approach each other rearwardly, as shown in Fig. 10. The space between the flanges is only sufficient in size to admit the neck *f* of the lacing-hook, but not sufficient to admit the downwardly-projecting beak *h*. By this construction the hook may be inserted in the recess *b*, and shoved backwardly into the recess until its beak *h* comes in contact with the front ends of the flanges *d*, in which position the hook is ready to be set.

On either side of the holder *a* are set guides *j*, the lower ends of which project below the holder and serve to prevent the prongs of the hook from spreading when they come into contact with the leather. As the prongs enter and pass through the leather, the guides *j* recede, being forced upward by the upward movement of the anvil. To allow the guides to recede, they are mounted in slots *k*, cut on opposite sides of the holder, and are held downward by the tension of springs *m*, secured at one end on top of the frame and at the other on the top of the guides, as shown in Figs. 1 and 3. As soon, therefore, as the anvil recedes after setting the hook, the guides *j* move downwardly, impelled by the springs *m*.

The anvil is of common construction and is mounted on the upper end of a plunger, *n*, and directly underneath the holder, and is provided with depressions *b'*, to receive and turn the ends of the prongs of the hook. The plunger *n* is arranged to slide in the frame and has pivoted to its lower end a link, *B*, the other end of which is pivoted to a bent lever, *D*, fulcrumed at the bend in the frame, and having its rear end connected with a treadle by means of a strap or rod, in the usual manner. The depression of the rear end of the bent lever forces the anvil upward to set a hook.

For the purpose of determining the distance from the edge of the stock at which the hooks are set, a guide, *H*, is provided, which consists of a rod set in a hole in the anvil and secured by means of a set-screw, the rear end of the rod being turned upwardly, so that the edge of the leather may abut against it, and thus

insure the regular alignment of the hooks. A guide or spacer, K, consisting of a pointed V-shaped pin of metal secured to the frame above and projecting downwardly, as shown in Figs. 2 and 9, beside the holder, and so as to strike the leather each time that a hook is set and make a mark thereon, is used to indicate the point at which the succeeding hook is to be set. This insures the proper and regular spacing of the hooks and may be varied whenever it is desired to vary the space between them.

My machine, as shown in the drawings, is adapted to have the hooks placed in the holder by hand; but an attachment for automatically supplying the hooks to the holder might be attached without essentially changing my present invention.

What I claim is—

In a machine for setting lacing-hooks provided with a downwardly-projecting beak, the combination, with an anvil having depressions to clinch the prongs of the hook, of a holder, as *b*, to receive the crown of the hook, provided interiorly on either side with flanges, as *d*, on which said crown rests, said flanges being arranged to receive the neck of the hook between them while the beak is stopped by contact with their front ends, whereby the hook may be accurately and speedily placed in position in the machine, substantially as shown and described.

JAMES H. REED.

Witnesses:

GEO. D. MAYO,

FRANCIS M. PIPER.