

E. F. RICHARDSON.

Machines for Nailing Shoe-Soles.

No. 151,546.

Patented June 2, 1874.

Fig. 1.

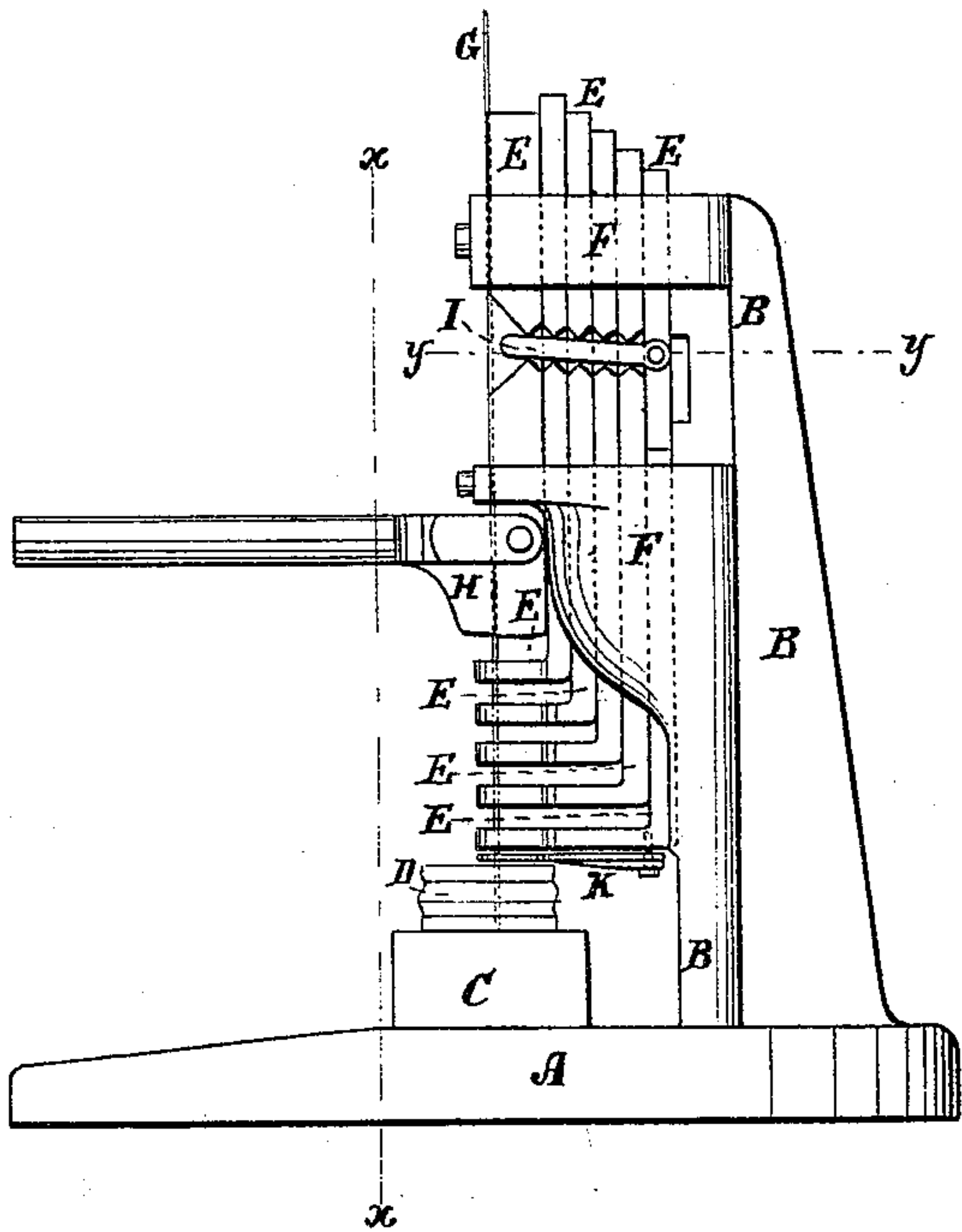


Fig. 2.

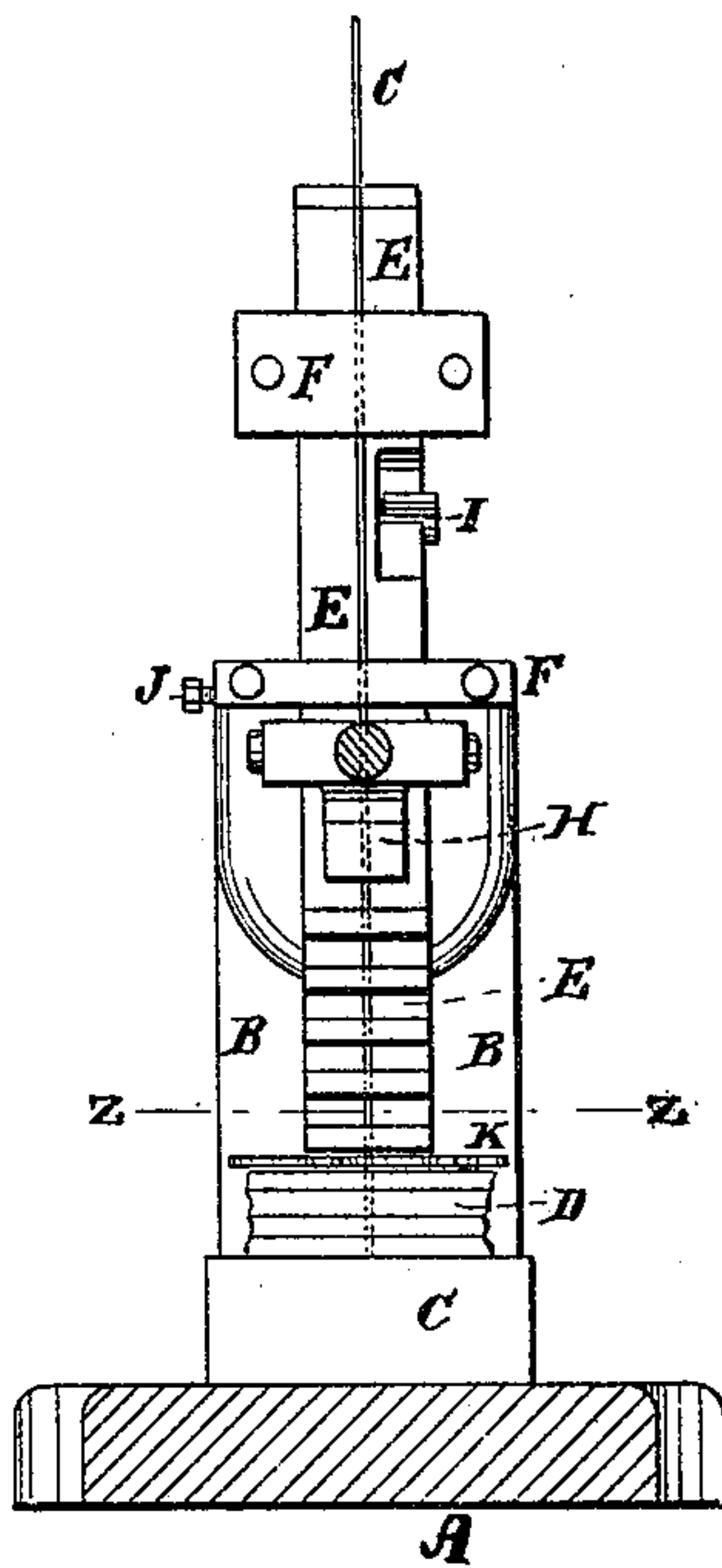


Fig. 3.

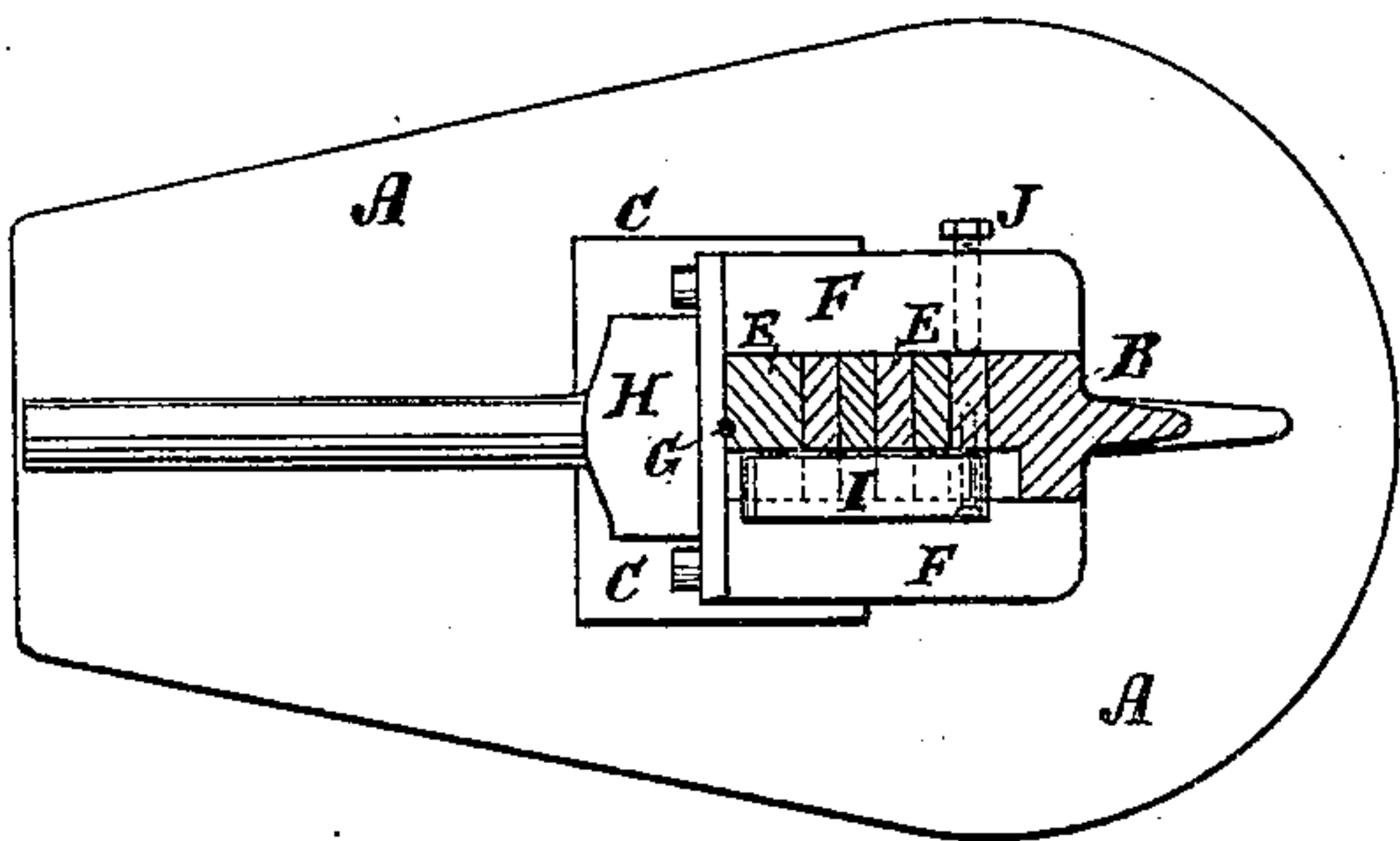
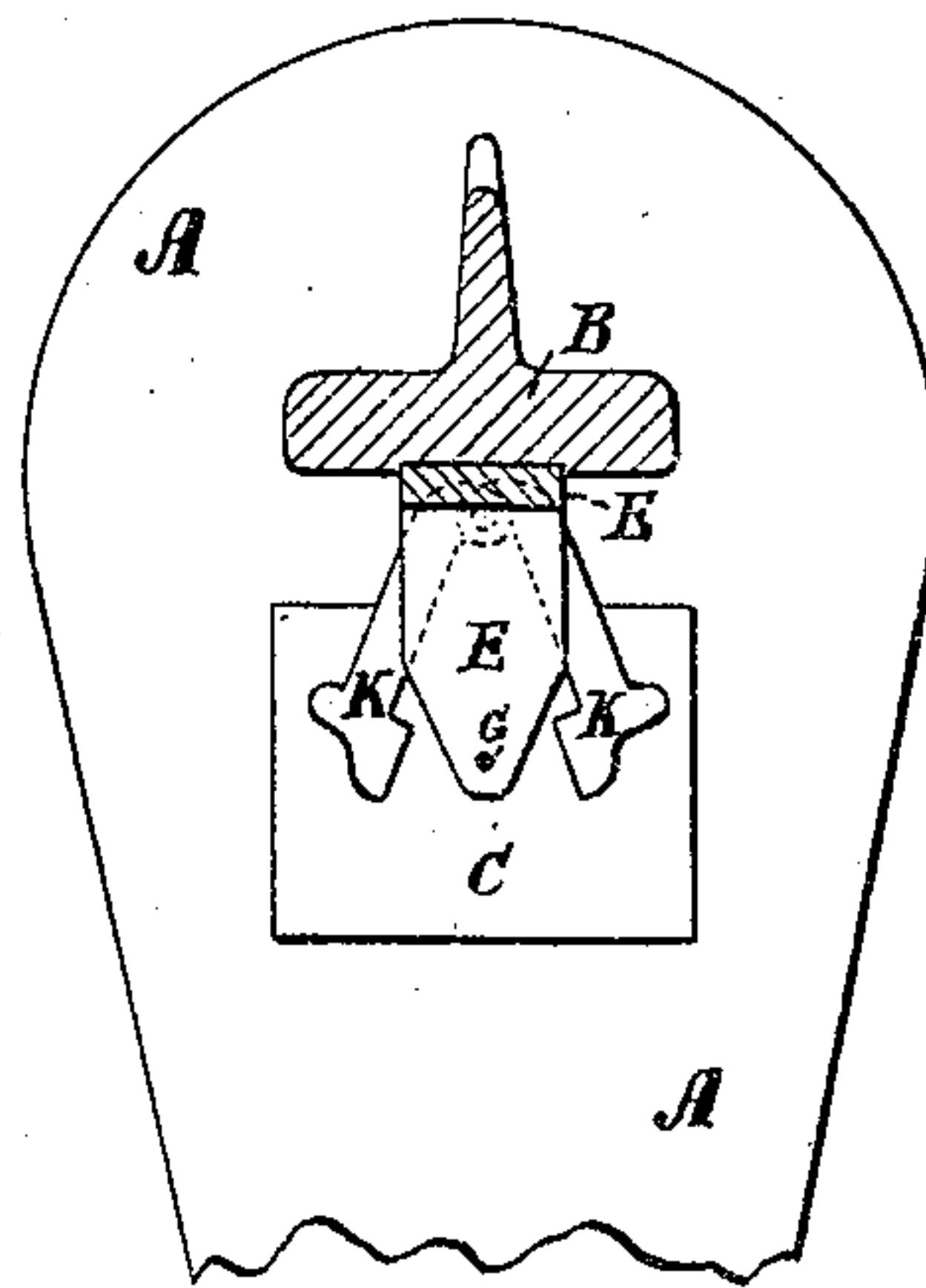


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MACHINES FOR NAILING SHOE-SOLES.

Specification forming part of Letters Patent No. **151,546**, dated June 2, 1874; application filed January 24, 1874.

To all whom it may concern:

Be it known that I, ELTON F. RICHARDSON, of Reading, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Machine for Nailing Shoe-Soles, &c., of which the following is a specification:

Figure 1 is a side view of a part of my improved machine. Fig. 2 is a front view of the same, partly in section, through the line *x x*, Fig. 1. Fig. 3 is a horizontal section of the same, taken through the line *y y*, Fig. 1. Fig. 4 is a horizontal section of the same, taken through the line *z z*, Fig. 2.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved machine for nailing shoe soles and heels, and for various other similar purposes, with a continuous wire driven into the article to be nailed before being cut off, which shall be simple in construction and effective in operation.

The invention consists of an extensible guide for the wire, which is composed of a series of bars adapted to close together, and thus support the wire in its descent into the leather, the right-angled bars arranged and operating for supporting the wire while being driven, as hereinafter fully described; in the combination of the pivoted bar or lever with the right-angled bars; in the toothed clamp, in combination with the right-angled bars and the pivoted bar or lever; and in the combination of the knives with the right-angled bars, the pivoted bar or lever, and the clamp, as hereinafter fully described.

A represents the base or bed plate of the machine, and B represents the upright part or standard. C represents a support for the work while the wire is being driven, the form of which must depend upon the kind of work to be done. D represents the work to be nailed. E are right-angled bars or plates, placed the one in front of the other, in ways or keepers F, formed upon or attached to the upright part B of the machine. The horizontal parts of the bars E are placed the one above the other, and each outer one is made so much shorter than the next inner one that the ends of all the horizontal parts may be in the same

vertical line, as shown in Fig. 1. The outer and shorter bar E is made without any horizontal part, and has a groove formed longitudinally in the middle part of its forward or outer side to receive the wire G, which is fed into it from a reel or other holder, and passes down through holes in the ends of the horizontal parts or arms of the bars E, which bars thus support the wire while being forced into the work, and prevent it from bending under the pressure applied to it. The wire G is clamped to the front bar E, by the clamp H hinged to said bar, and the face of which is corrugated or toothed to enable it to hold the wire more securely. The teeth of the clamp H also roughen the wire and cause it to keep its place in the work more securely. The clamp H is operated to clamp the wire, force it into the work, and release it by a lever, as shown in the drawings, or by a cam or other convenient means. In the side edge of the upper part of the bars E is formed a transverse notch, the shoulders of which are beveled off upon both sides, and in which is placed a bar or lever, I, the rear or inner end of which is pivoted to the rear or inner bar E. The bar or lever I forces the bars E down in such a way, when the wire is being driven into the work, that the horizontal parts or arms of the said bars E may approach the work in exactly the same proportion as their distances from it, so that they may approach each other uniformly as they descend, and all come together as the limit of their downward movement is reached. The inner or rear bar E may be adjustably secured in place at the proper distance above the work by a set-screw, J, which passes in through one of the keepers F and presses against the edge of the said bar E, as shown in Figs. 2 and 3; or it need not be secured, but may rest upon the work with a yielding pressure. To the inner end of the lower side of the horizontal part or arm of the rear or inner bar E are pivoted the knives K, which, when the wire has been forced into the work, are moved toward each other to cut off the wire between the work and the said lower bar E. The knives K may be operated by cams, or other well-known means, which are not shown in the drawings.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

1. The right-angled bars E, arranged and operating for supporting the wire while being driven, substantially as herein shown and described.

2. The combination of the pivoted bar or lever I, with the right-angled bars E, substantially as herein shown and described.

3. The toothed clamp H, in combination with the right-angled bars E and the pivoted bar or lever I, substantially as herein shown and described.

4. The combination of the knives K with

the right-angled bars E, the pivoted bar or lever I, and the clamp H, substantially as herein shown and described.

5. An extensible guide formed of a series of bars which are perforated to receive the wire, and having a vertical movement, substantially as specified, whereby they are adapted to close together and support the wire as it is forced downward.

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Witnesses:

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