

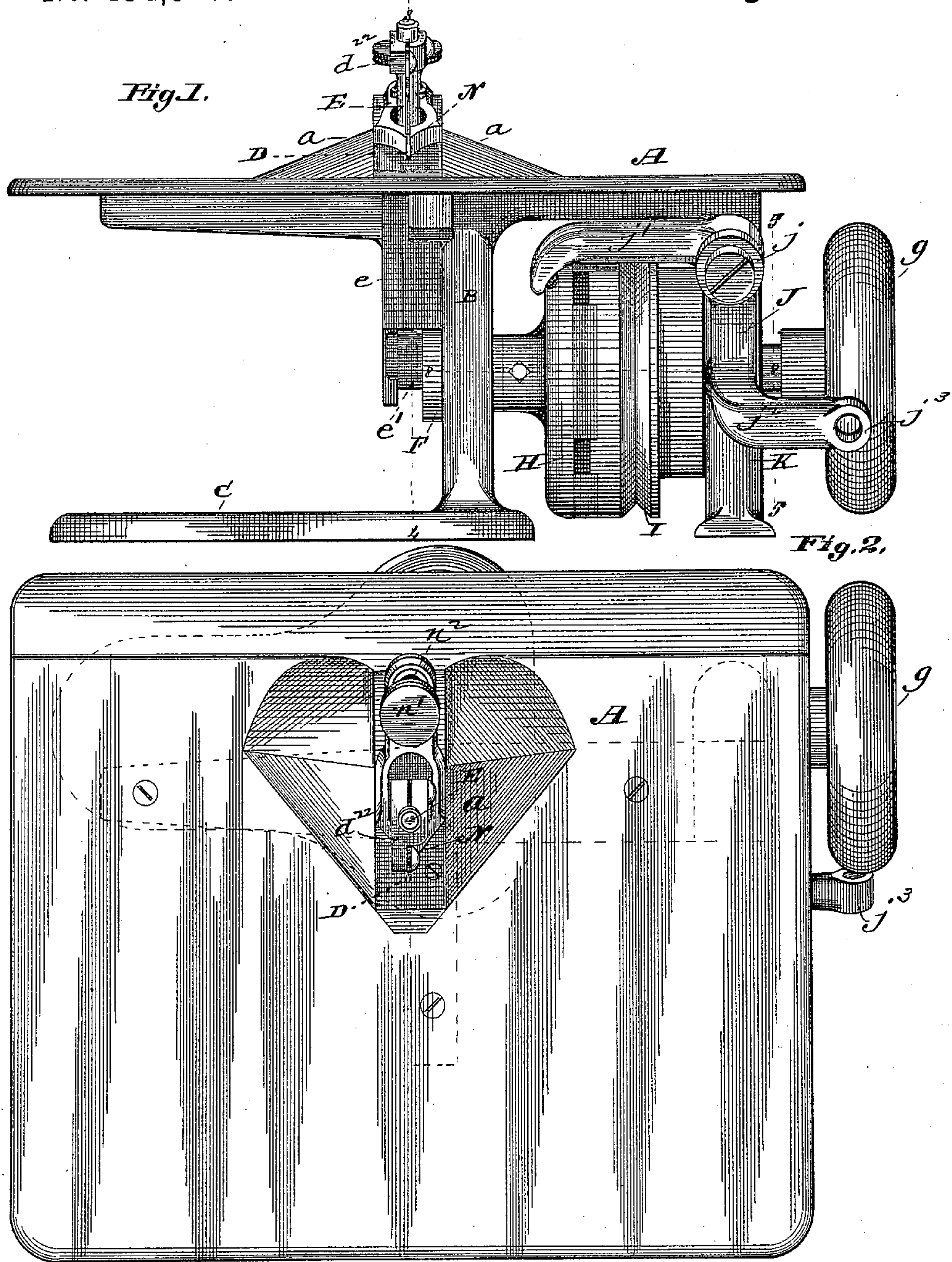
(No Model.)

2 Sheets—Sheet 1.

O. E. SEYMOUR.  
SHOE NICKING MACHINE.

No. 434,360.

Patented Aug. 12, 1890.



Attest:  
J. M. Sanford  
J. L. Day.

Inventor:  
Oliver E. Seymour  
by C. D. Moody  
Att'y



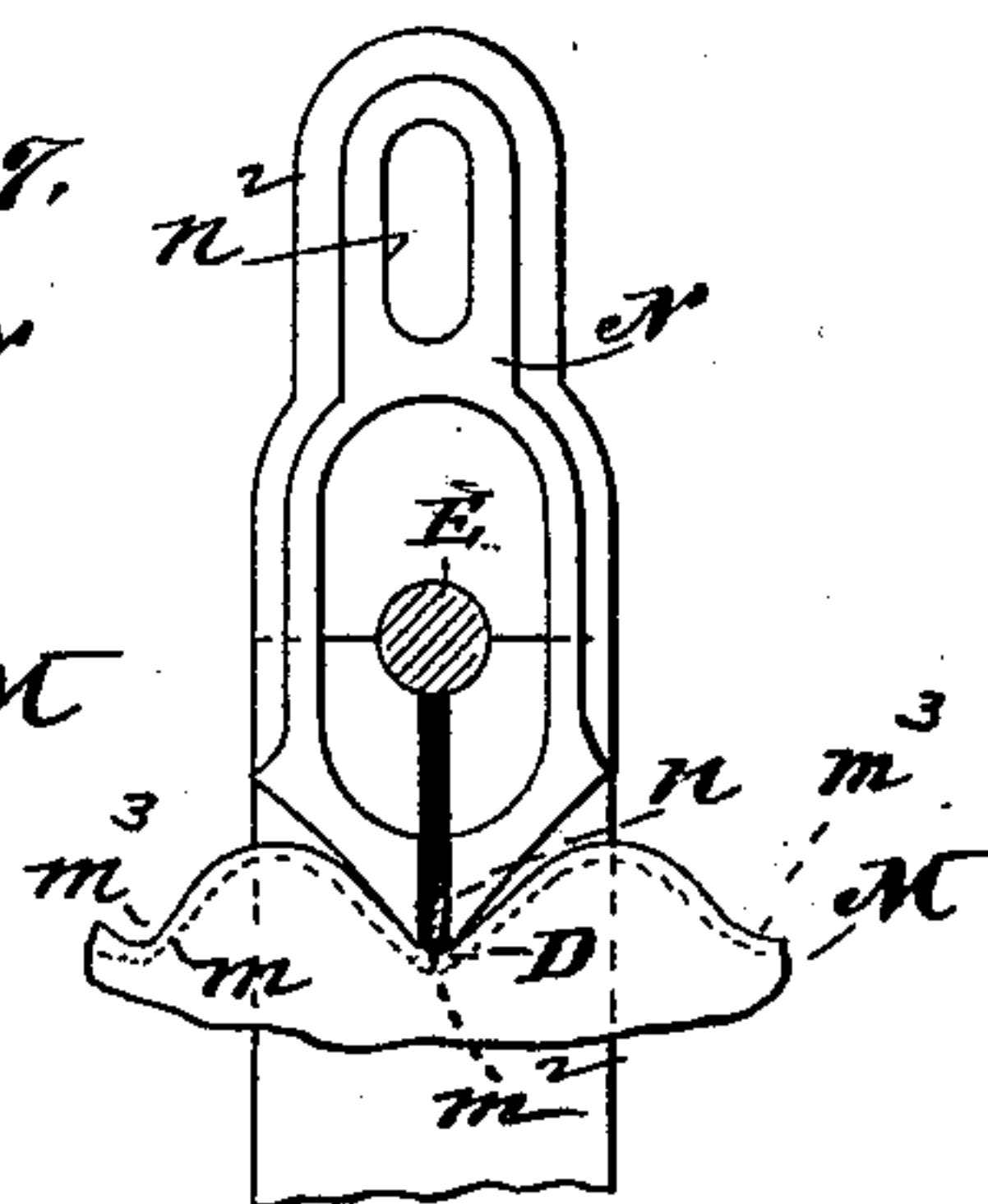
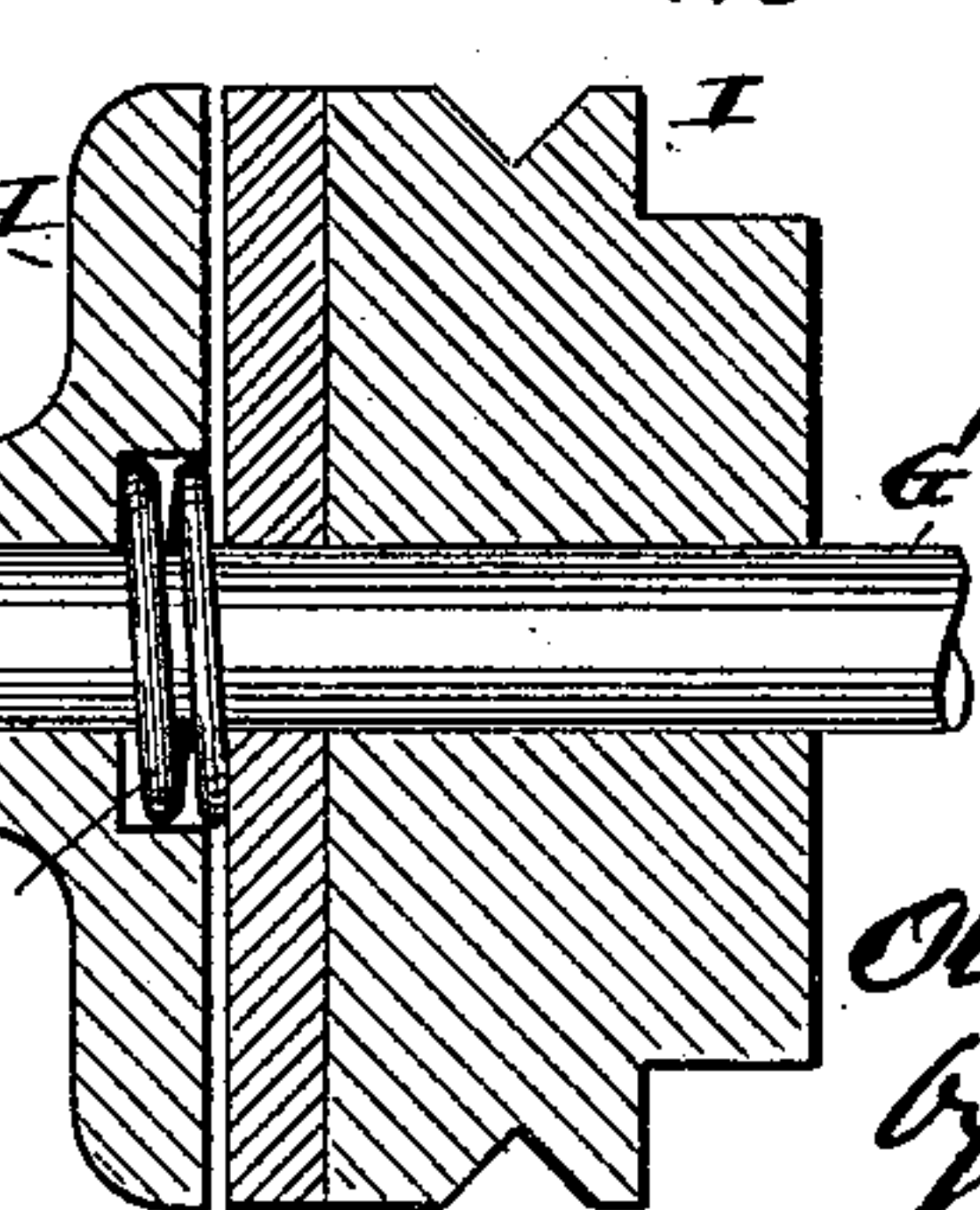
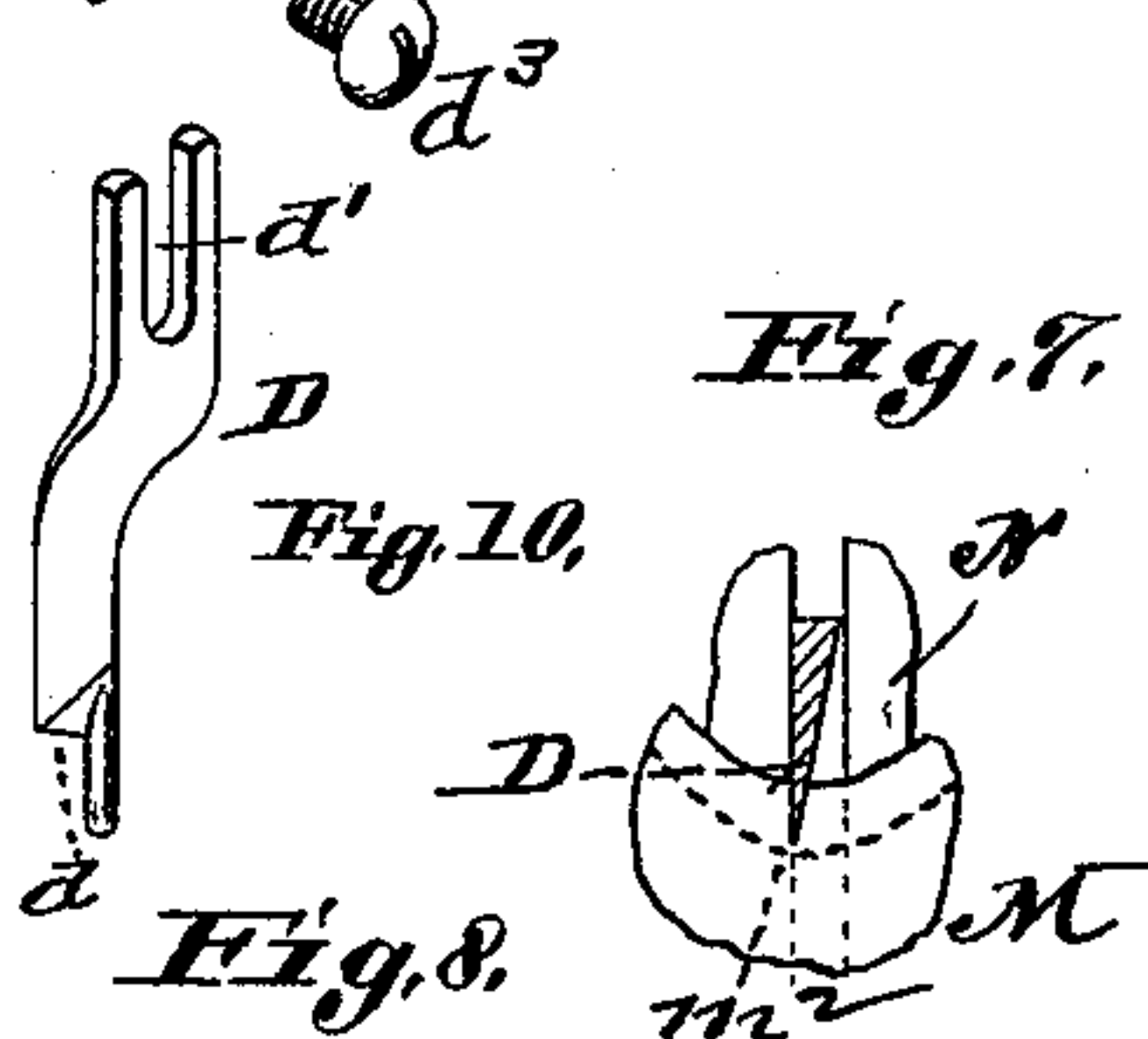
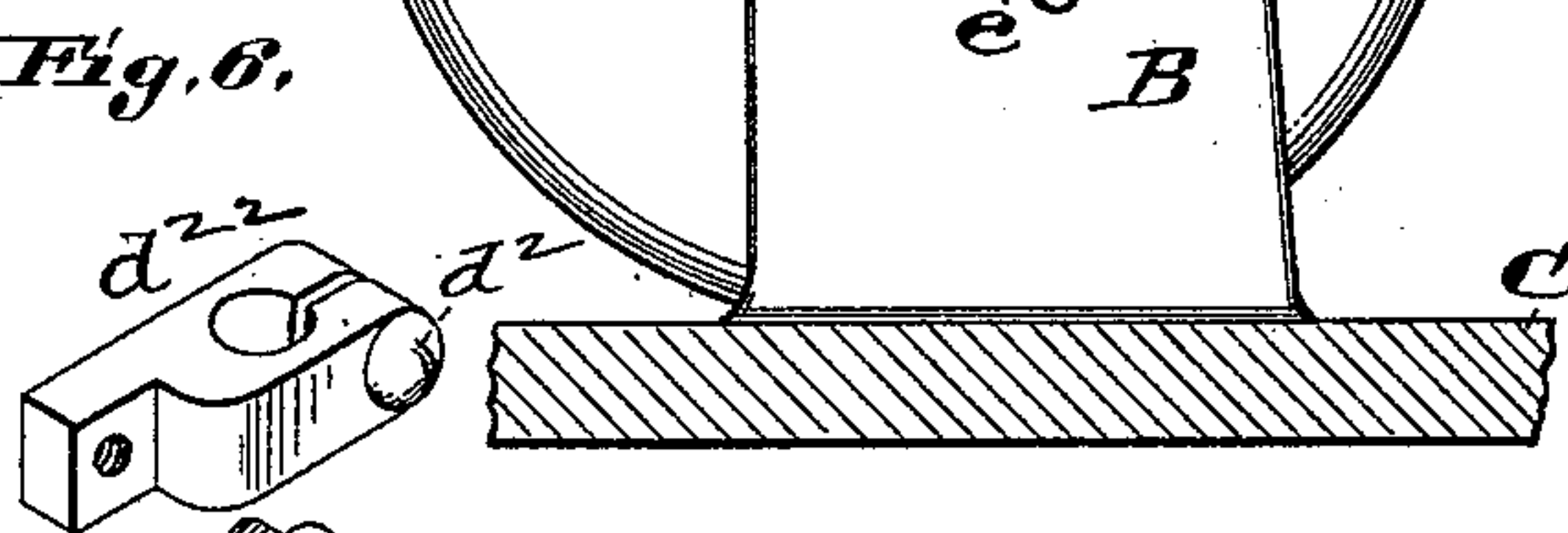
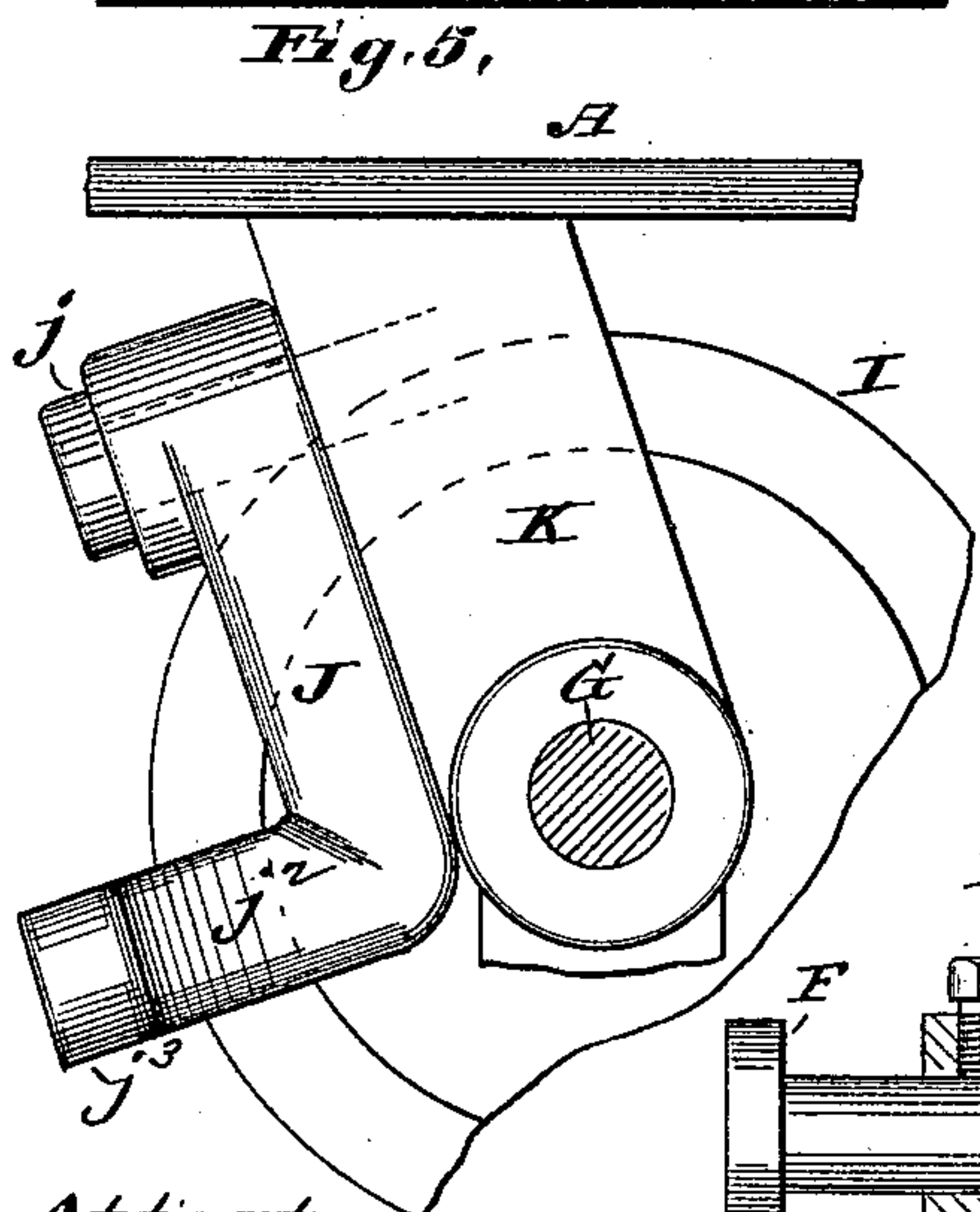
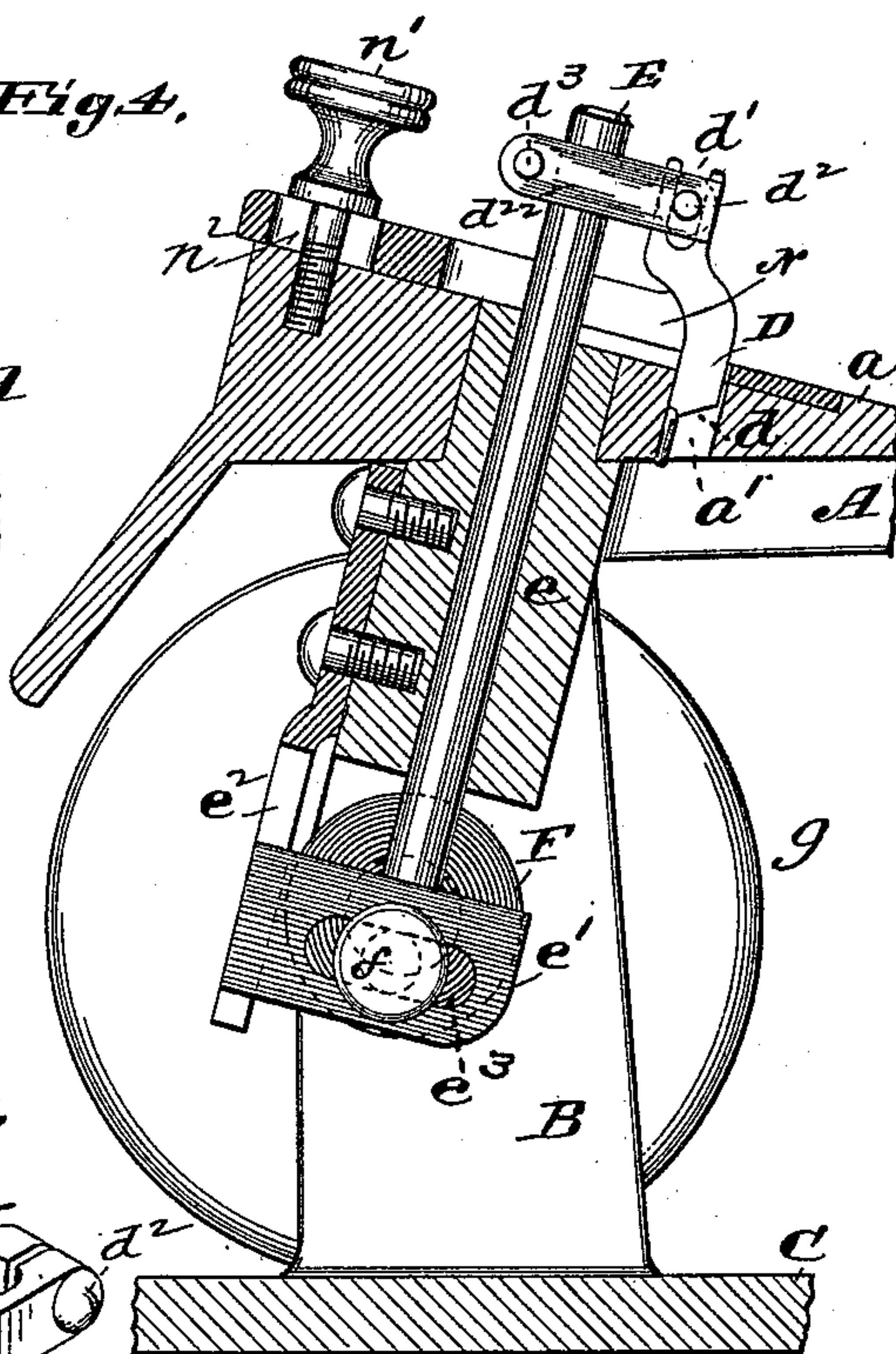
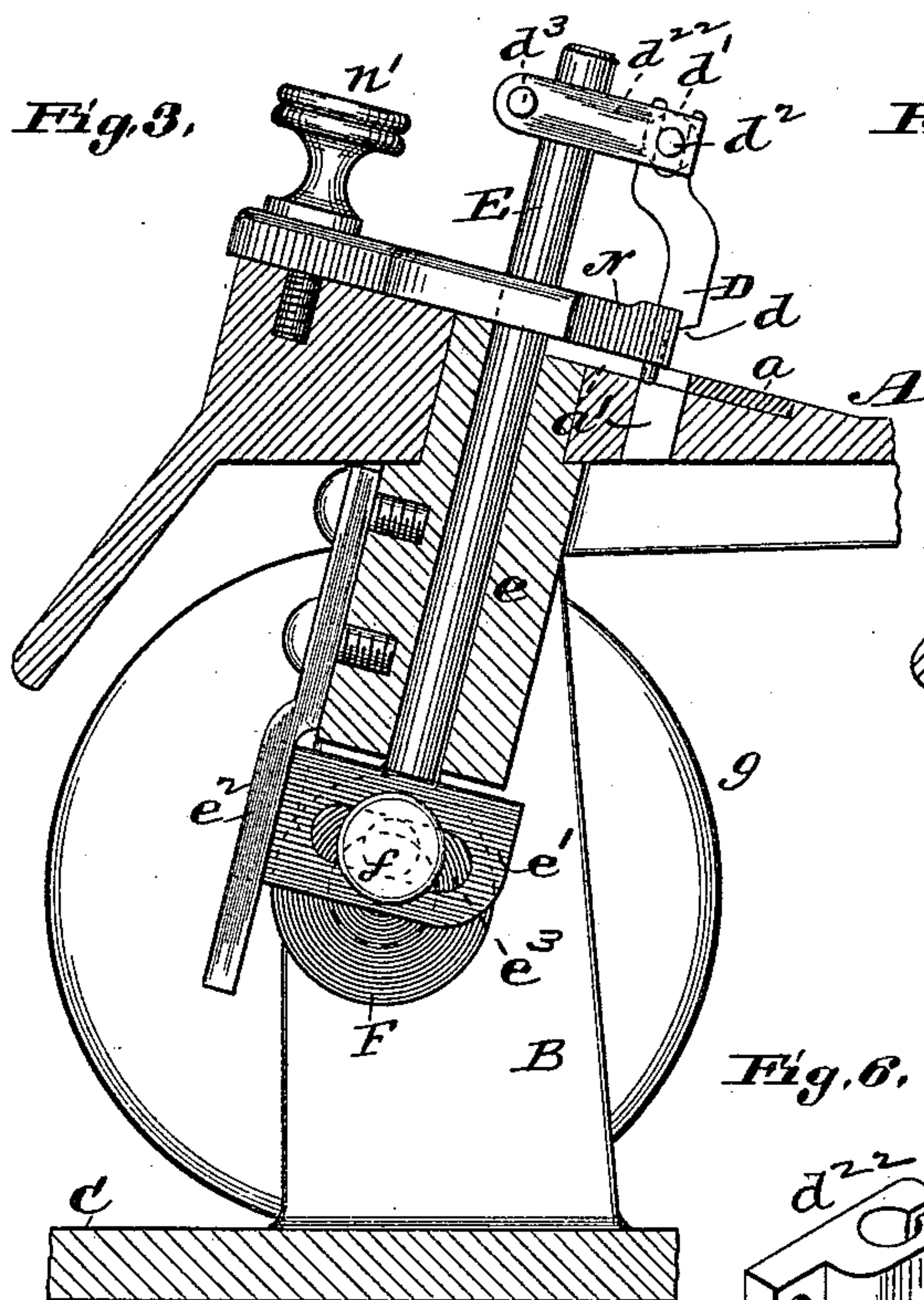
(No Model.)

2 Sheets—Sheet 2.

O. E. SEYMOUR.  
SHOE NICKING MACHINE.

No. 434,360.

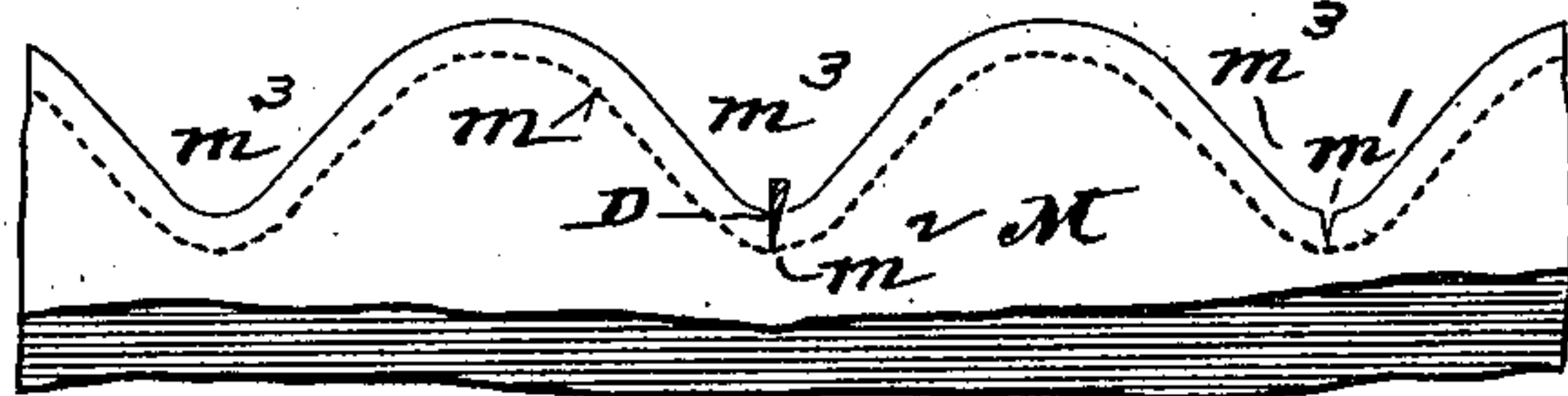
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*Fig. 9.*

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# UNITED STATES PATENT OFFICE.

OLIVER E. SEYMOUR, OF ST. LOUIS, MISSOURI.

## SHOE-NICKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 434,360, dated August 12, 1890.

Application filed September 13, 1889. Serial No. 323,827. (No model.)

*To all whom it may concern:*

Be it known that I, OLIVER E. SEYMOUR, of St. Louis, Missouri, have made a new and useful Improvement in Shoe-Nicking Machines, of which the following is a full, clear, and exact description.

A certain branch of shoe-making is termed "nicking." The scalloped edge of the fly of the shoe upper, before the work can be properly turned, has to be nicked at the inner end of each scallop. The nick should be, and in practice is, extended inward just to the line of the stitching, and, on the other hand, care must be exercised that the nick shall not extend so far inward as to cut the stitching. The work in question has hitherto been done by hand, and it is necessarily slow and expensive and not always perfect. By means of the present improvement shoe-nicking can be well and rapidly performed by machinery, substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which the most desirable form of the improved machine is exhibited.

Figure 1 thereof is a front elevation of the machine, and Fig. 2 a plan; Figs. 3 and 4, both sections on the line 3 4 of Fig. 1, and respectively showing the two positions of the knife; Fig. 5, a vertical section on the line 5 5 of Fig. 1; Fig. 6, a view showing in perspective the knife and its holder detached from each other; Fig. 7, a horizontal section taken through the knife above the level at which the work is applied to the knife. The view includes the adjacent parts. Fig. 8 is a horizontal section on the line 8 8 of Fig. 1; and Fig. 9, a view introduced to illustrate the operation of the knife, which is shown in horizontal section and the scalloped edge to be nicked being shown in plan; and Fig. 10, a detail upon an enlarged scale.

The same letters of reference denote the same parts.

The leading feature of the machine is a combination of a movable knife, a gage, and a support, upon which the work being nicked is stretched.

A represents the support. It is substantially a table-top upheld by a post B and base C and extended horizontally sufficiently to

hold the work in position, and that portion *a* of the support which is immediately alongside the knife D and upon which the scallops as they are nicked immediately rest is preferably crowned or shaped into a protuberance more or less convex, substantially as shown, and over which the work can be advantageously stretched as it is moved into the field of the knife.

The knife D is preferably in the form of a reciprocating part and adapted to be moved upward and downward past the bearing *a* and through the slot *a'* therein, substantially as is indicated by the two positions of the knife. (Shown, respectively, in Figs. 3 and 4.) The cutting-edge is at *d*, and the upper end of the knife is slotted at *d'* to admit the screw *d<sup>2</sup>*, which is used to secure the knife to the holder or arm *d<sup>22</sup>*, which in turn and by means of the screw *d<sup>3</sup>* can be and is clamped to a rod E. This last-named part works longitudinally in a bearing *e*, and its lower end is attached to a cross-head *e'*, which works in a guide *e<sup>2</sup>*, and is slotted at *e<sup>3</sup>* to receive and engage with the wrist-pin *f* of a crank F, that is fastened to the shaft G. This shaft is journaled in the post B and is provided with the clutch part H. A clutch-pulley I is journaled on the shaft G, and by means of the bell-crank lever J, pivoted at *j* and having its arm *j'* curved to fit around the clutch part and its arm *j<sup>2</sup>* adapted at *j<sup>3</sup>* to be connected with some part—say a treadle, (not shown)—and the lever thereby turned on its pivot, the clutch-pulley can be slipped on the shaft G to bear against the clutch part H, and thereby cause the clutch part and shaft to rotate. The motion of the shaft is communicated through the crank F to the rod E, and the knife thereby rapidly moved upward and downward in the slot in the table-top. The shaft G extends through another bearing K, and is provided with a fly-wheel *g*. A spring L serves to separate the clutch-pulley from the clutch part when the bell-crank lever is released by the operator. The clutch-pulley can be driven by any suitable power. (Not shown.) Any other suitable means may be employed to operate the knife.

M, Figs. 7 and 9, represents the scalloped edge to be nicked. The line of stitching



therein is indicated by the dotted line  $m$ . A nick is shown made at  $m'$ , and the knife is shown as making a nick at  $m^2$ .

N represents the gage. It is slotted or divided at  $n$  to enable the knife to extend the proper distance in front of it, and it is pointed, substantially as shown, to enable it to enter the scallops  $m^3$  of the edge M. The function of the gage is to determine the exact depth of the nick to be cut by the knife. To this end the gage by some suitable means—such as the binding-screw  $n'$ , working through the slot  $n^2$  in the gage and into the table-top, as shown—can be set outward or inward, so that the knife shall project just the proper distance in front of the nose of the gage and substantially as shown. The operator is thus enabled to push the edge M rapidly and safely against the knife, knowing that the gage prevents the edge from moving too far beneath the knife.

As shown more distinctly in Fig. 10, the gage at one side of its front divided end serves as a guide to steady the knife in its movement, and the shape of the knife in cross-section is also more clearly exhibited; but I desire not to be restricted to this knife.

I claim—

1. In a shoe-nicking machine, the combination of the support A, the knife D, connected to and movable by means of the rod E and shaft G, and the gage N, slotted at  $n$  and suitably secured to the top of the table or support A, all in the manner and for the purpose set forth.

2. The combination of the support A, the rod E, carrying the knife D, the shaft G, operating said rod, and the clutch part H, and the clutch-pulley I, journaled on the shaft G, and clutch-lever J, all substantially in the manner and for the purpose set forth.

3. The combination of the pointed and divided gage N, adapted to be set outward or inward by means of the set-screw  $n'$ , working in the slot  $n^2$  and taking into the table-top, and the knife D, connected with, adjustable on, and movable by the rod E, and the table-top or support A, all as and for the purposes set forth.

Witness my hand this 11th day of September, 1889.

OLIVER E. SEYMOUR.

Witnesses:

C. D. MOODY,

D. W. C. SANFORD.