

No. 630,615.

Patented Aug. 8, 1899.

J. MARSDEN.

DEVICE FOR PERFORATING TEMPLETS

(Application filed Jan. 10, 1899.)

(No Model.)

2 Sheets—Sheet 1.

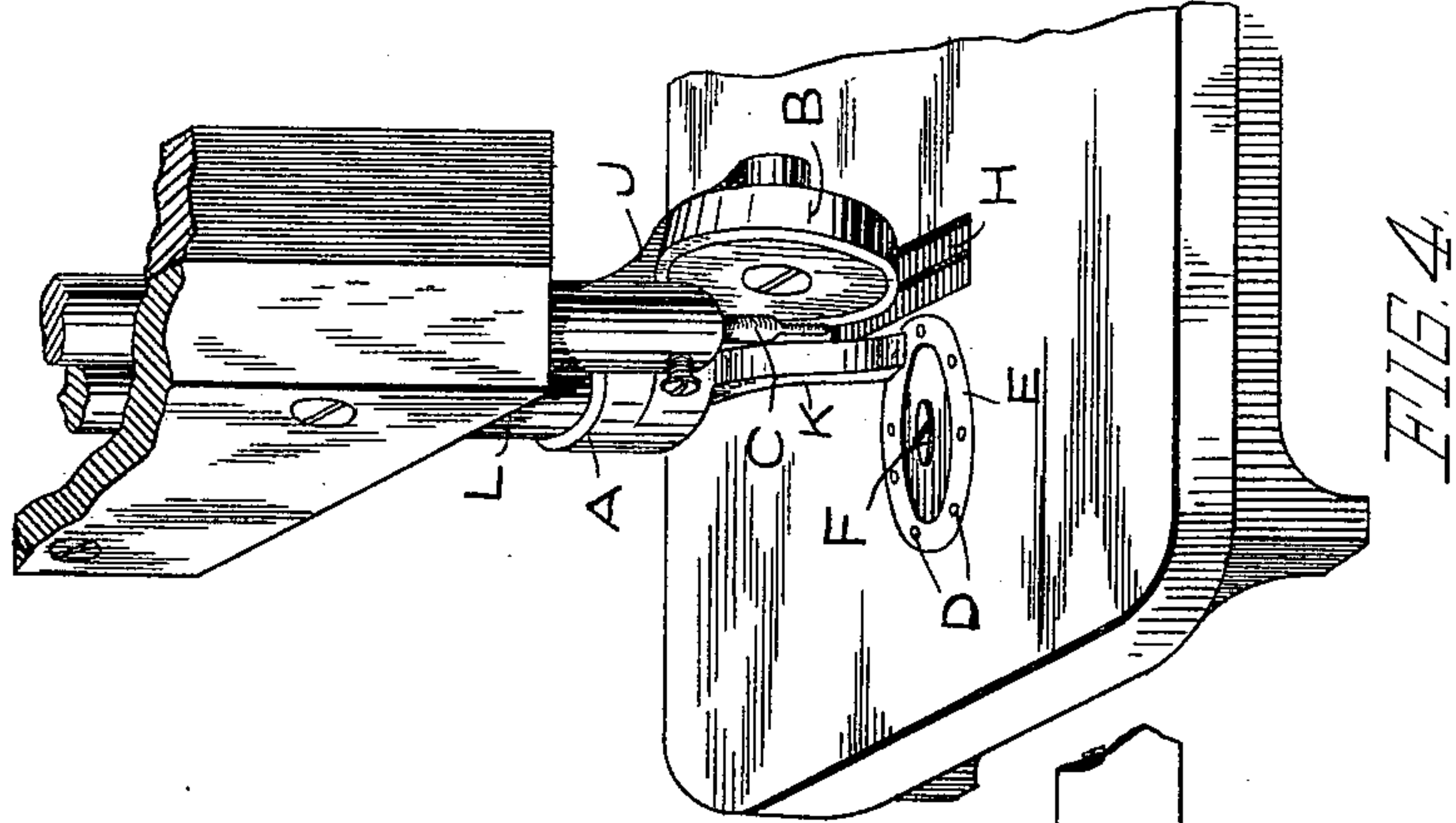


FIG. 4.

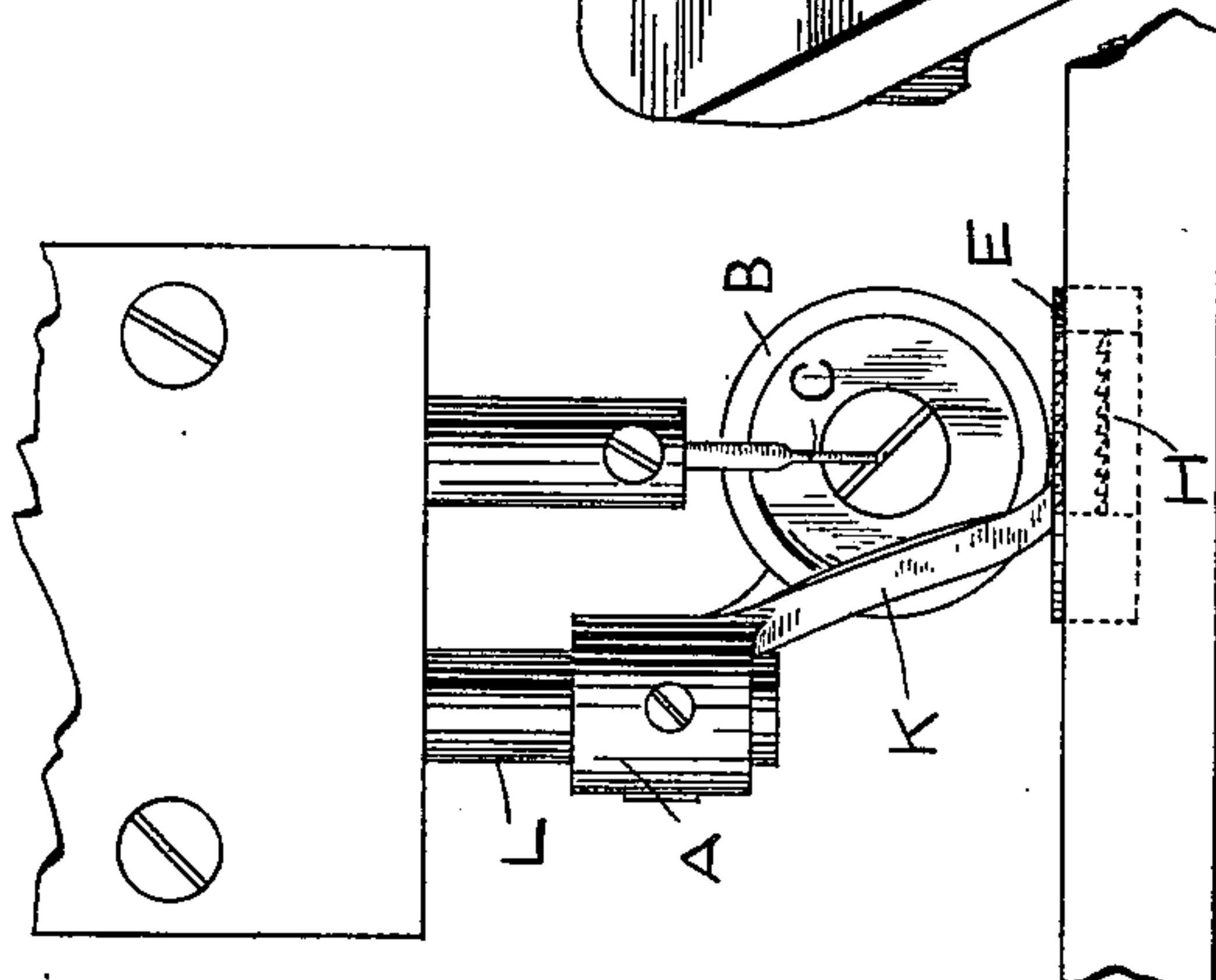


FIG. 3.

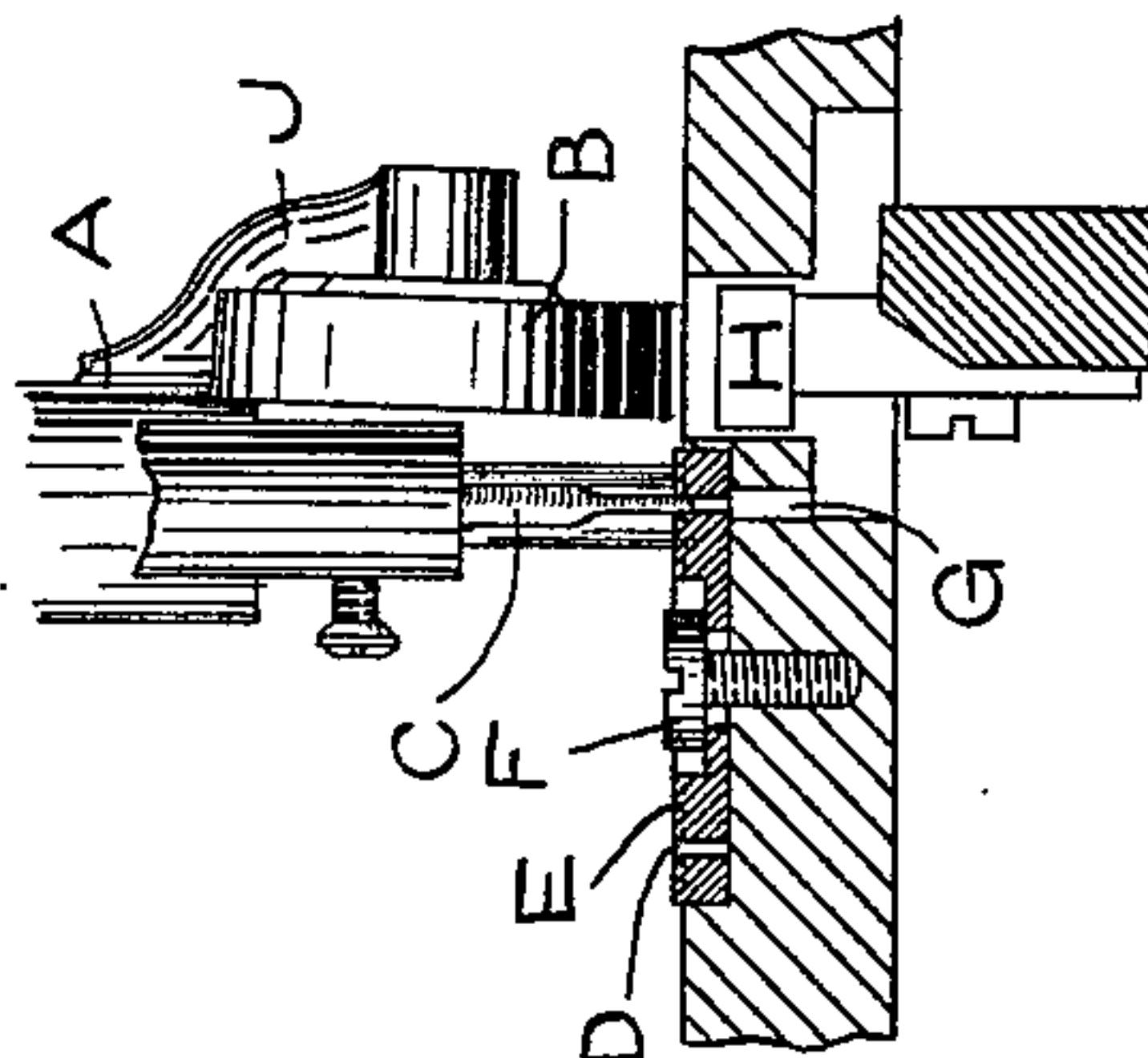


FIG. 2.

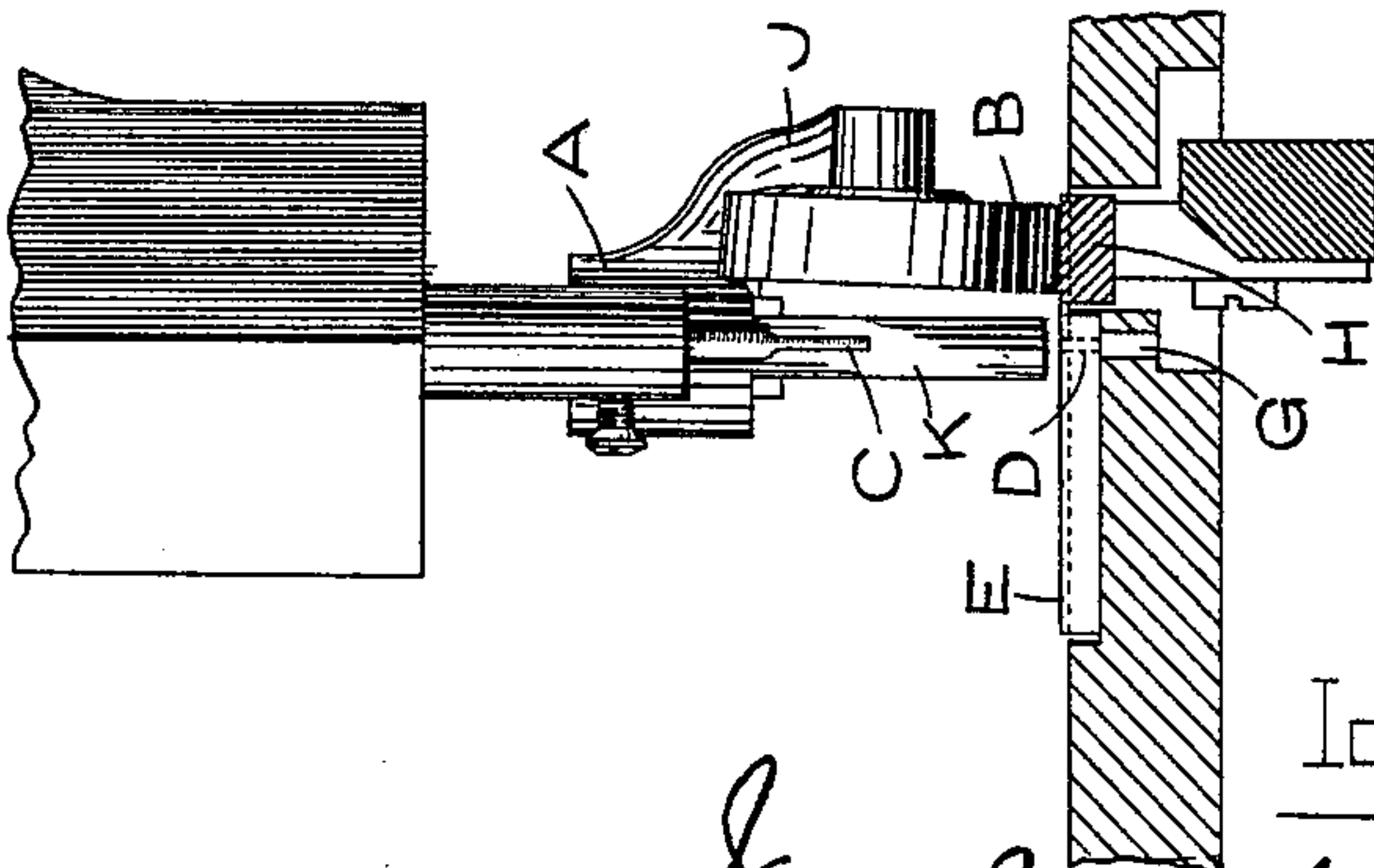


FIG. 1.

Witnesses

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Inventor

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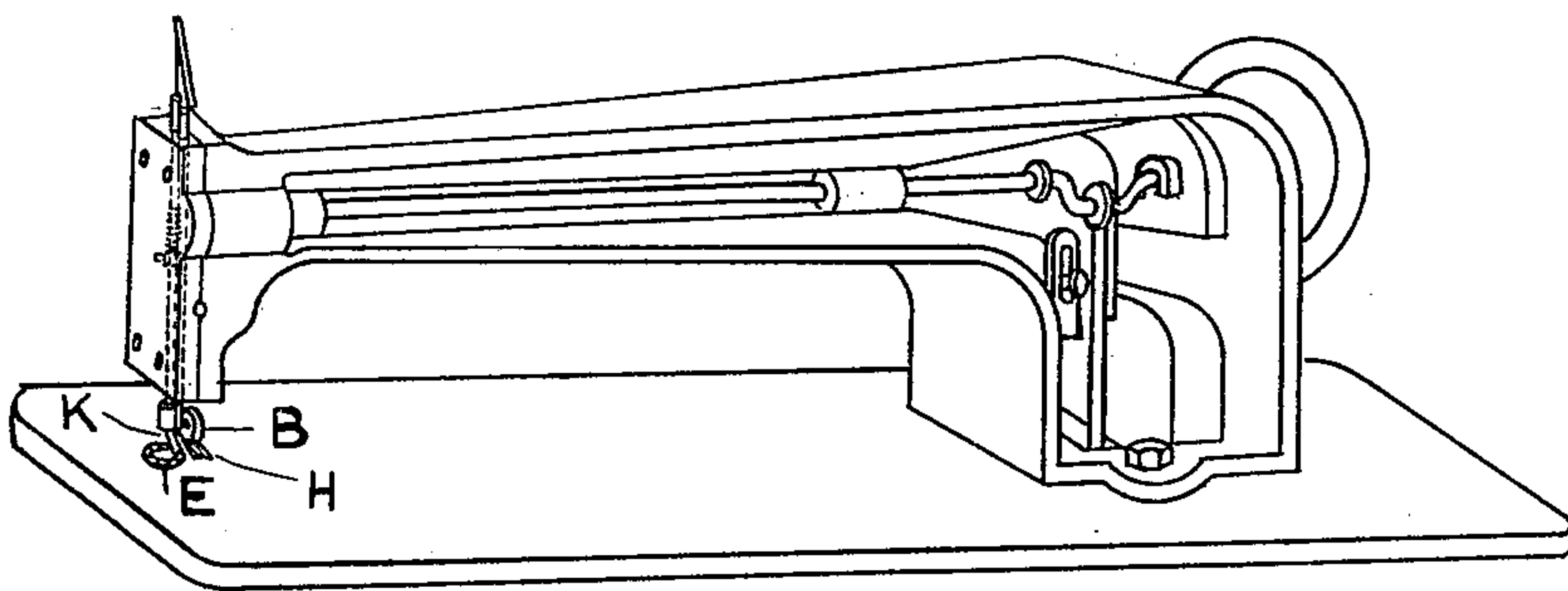


FIG. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

JAMES MARSDEN, OF WIGAN, ENGLAND.

DEVICE FOR PERFORATING TEMPLETS.

SPECIFICATION forming part of Letters Patent No. 630,615, dated August 8, 1899.

Application filed January 10, 1899. Serial No. 701,717. (No model.)

To all whom it may concern:

Be it known that I, JAMES MARSDEN, manufacturing clothier, a subject of the Queen of Great Britain, residing at Wigan, in the

5 county of Lancaster, England, have invented certain new and useful Improvements in Apparatus for Perforating Lays or Templets for Marking Out Cloth and the Like with Powder, of which the following is a specification.

10 In the production of perforated lays or templets for marking out cloth and the like with powder it has been found absolutely necessary to have perforations roundly and smoothly cut out and not mere punctures.

15 When any ordinary perforating-machine is used, perforations are produced with jagged edges, which when the templet is in use catch the powder, and the perforations soon get stopped up.

20 Now my invention is designed to enable the lays or templets, which preferably consist of cloth treated in the manner described in my application Serial No. 664,724, to be accurately and expeditiously perforated along the

25 lines previously planned thereon. My invention consists, essentially, in making a machine resembling a strong sewing-machine in every respect, except that I make the arm slightly longer, stiffer, and stronger

30 than that of the average sewing-machine, so as to allow a greater width of cloth without folding to be passed through it and the machine to work with absolute accuracy. In place of the ordinary needle and needle-plate

35 I employ a fine punch and a matrix or block with a hole right through it, into which the punch accurately fits, and thus cuts the material evenly and smoothly all around the edges of the perforation on both sides. I

40 have also found that the working of the material necessitates the use of a roller-foot to take the place of the ordinary flat foot of the sewing-machine, with the addition of a smaller foot to act when the roller is out of

45 action—that is, when the feed-dog drops—and so hold the cloth in position until the return of the feed and prevent the templet from slipping and causing false perforations. In order that my invention may be better

50 understood, I annex drawings of the novel parts of the actual machine used by me, in which—

Figure 1 is a sectional elevation; Fig. 2, a similar view with the feed-dog down; Fig. 3, an end view, and Fig. 4 a perspective view 55 showing the die-plate. Fig. 5 is a perspective of a perforating-machine embodying my invention.

C is the fine punch, and E the matrix, which is preferably formed as a die-plate having a 60 series of matrix-holes D and which is screwed tight against the bed-plate by means of a screw F. It will be seen that the plate E may be adjusted to bring any one matrix-hole D under the punch in case the hole in 65 use gets worn at the edge and fits the punch too loosely.

G is a hole into which the punched matter from the punch falls and passes out below 70 the bed-plate.

H is the ordinary feed-dog of a sewing-machine.

A is the bracket, comprising the roller-foot J and the straight foot K, preferably formed 75 in one casting and rigidly attached to the presser-bar L, and B is the roller or wheel of the roller-foot, revolvably mounted on a stud screwed to the roller-foot J. The straight foot K rests on the die-plate E and the roller B 80 rests on the feed-dog H when the latter is at its highest point. When the feed-dog H rises, the roller B is in action. (See Fig. 1.) When the feed-dog drops, the straight foot K is alone in action and holds the cloth in position until the return of the feed-dog. (See Fig. 2.) 85

The remainder of the machine is as in an ordinary sewing-machine, and it is needless to describe it further.

The roll of material to form the templet, and which has the forms which are to be per- 90 forated planned out and delineated in fine lines, is placed with one end under the punch, and the operator proceeds to work exactly as an embroiderer, guiding the material so that the punch shall follow and perforate all the 95 lines of the designer, thus producing a set of clean perforated holes. A single lay or templet thus produced is placed upon the material to be marked and coloring matter or powder then rubbed over the same, so as to fall onto 100 the cloth through the perforations.

I declare that what I claim is—

1. In a machine for perforating templets for marking cloth and the like, the combina-

- tion with a vertically-reciprocating punch and a matrix-die accurately fitting said punch, of a feed-dog to feed the material, a presser-bar, and two presser-feet rigidly mounted upon the presser-bar and arranged over the die and feed-dog respectively to alternately hold or press the material as the feed-dog is moved out of or into operation, substantially as hereinbefore described.
- 10 2. In a machine of the kind described for perforating templets for marking cloth and the like, a presser-foot for holding or pressing the material consisting of a bracket rigidly fixed on the presser-bar and having a straight foot bearing on the material to one side of the feed-dog, and a second foot carrying revolubly mounted thereon a roller or wheel bearing on the material over the feed-dog when the latter is in its highest position, substantially as hereinbefore described.
- 20 3. In a machine for perforating templets for marking cloth and the like, the combina-

tion with a vertically-reciprocating punch and a matrix-die accurately fitting said punch and the feed-dog and presser-roller device of sewing-machines of a vertically-sliding spring-propelled bracket carrying the presser-roller and a second presser-foot immediately above the die and carried rigidly by the bracket and of such length that when the feed-dog is depressed the second presser-foot bears on the material but when the feed-dog rises and raises the feed-roller the second presser-foot rises with it clear of the material, whereby there is always one presser-foot holding the material.

In witness whereof I have hereunto signed my name, this 29th day of December, 1898, in the presence of two subscribing witnesses.

JAMES MARSDEN.

Witnesses:

W. P. THOMPSON,
W. H. BEESTON.