

No. 653,013

W. A. ARMOUR.
SYRINGE.

Patented July 3, 1900.

(Application filed Apr. 2, 1900.)

(No Model.)

Fig. 1

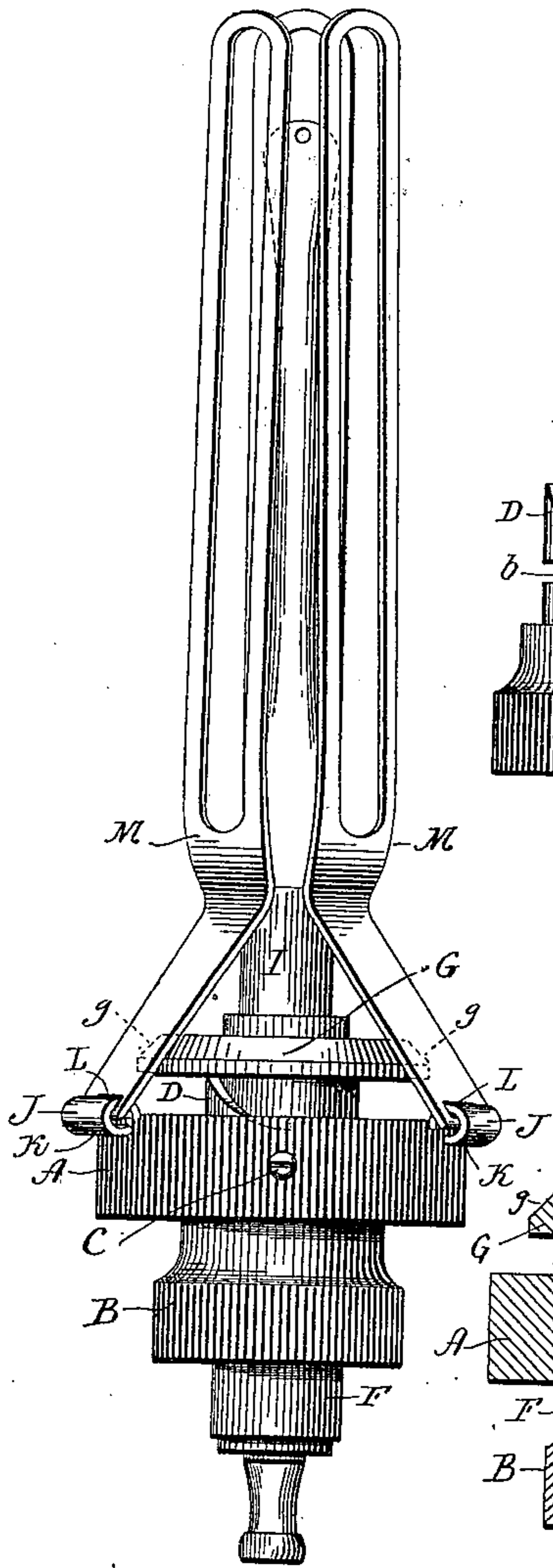


Fig. 5

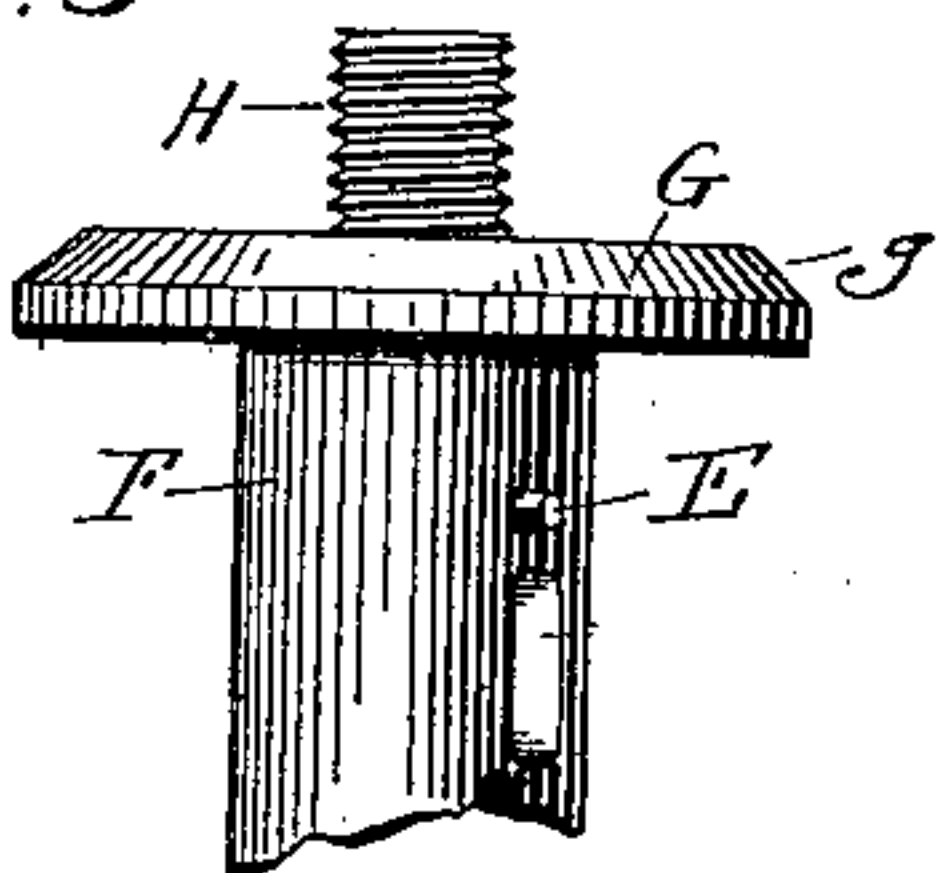


Fig. 4

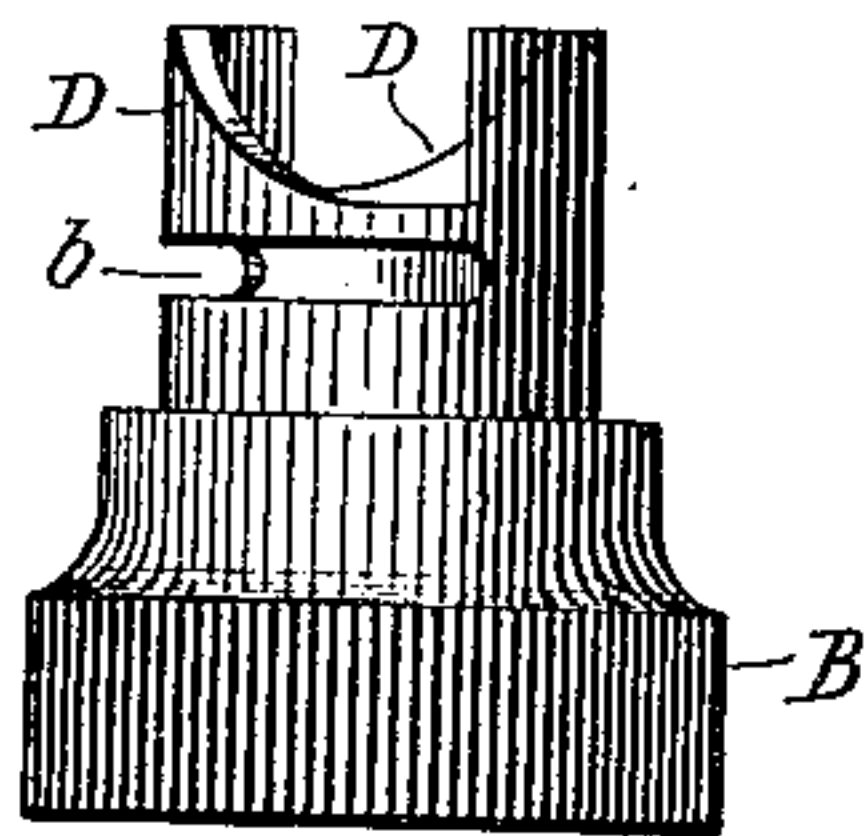


Fig. 3

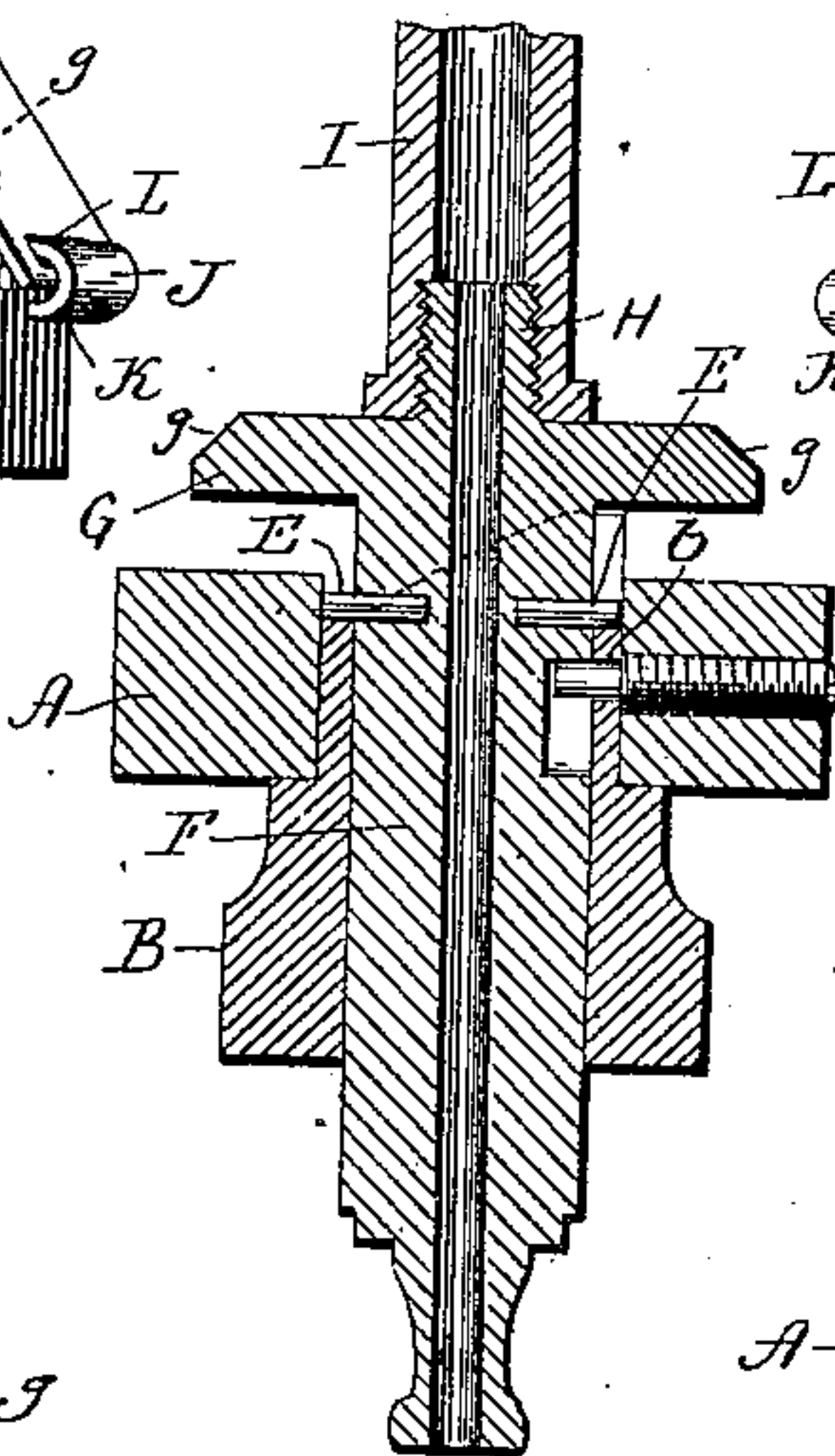


Fig. 2

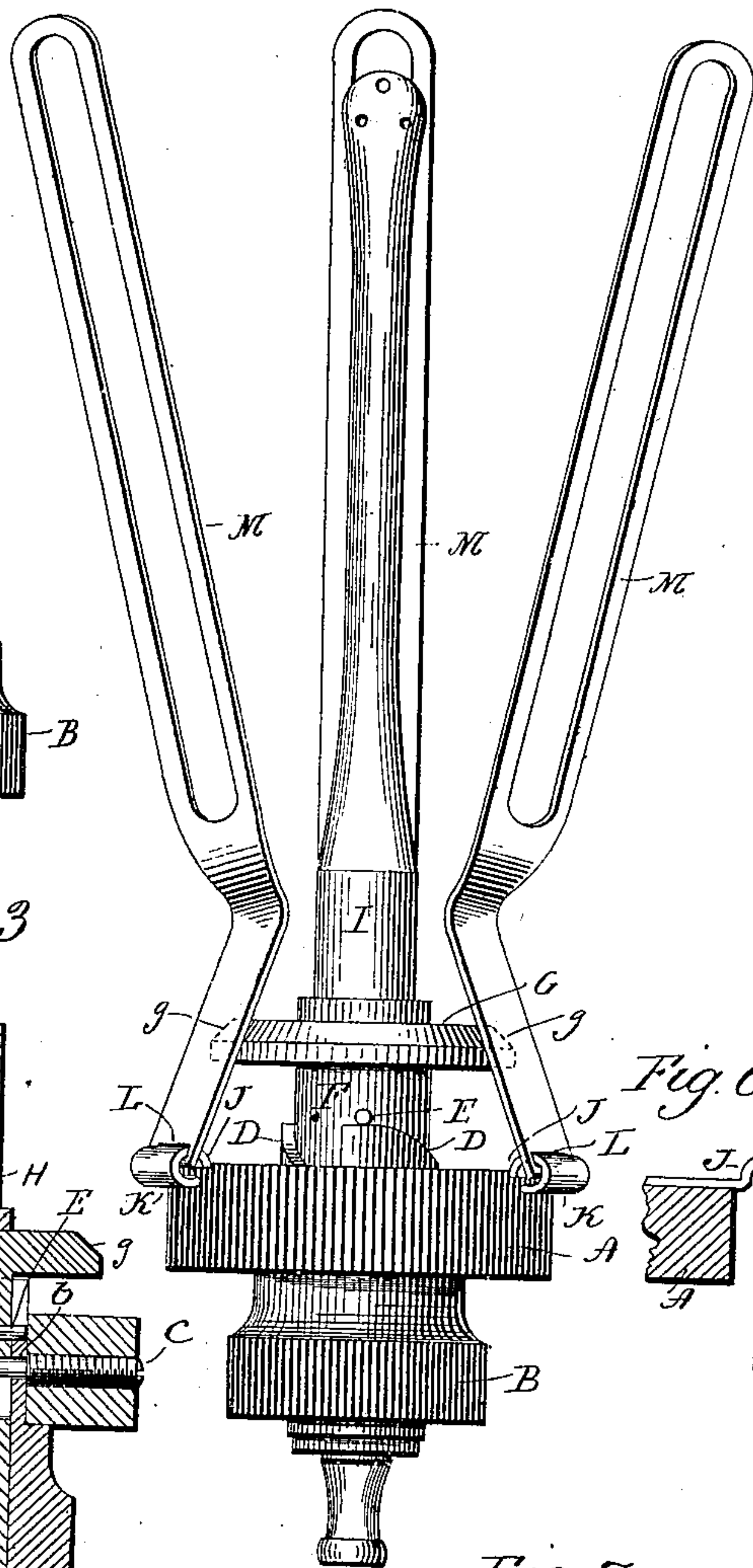


Fig. 6

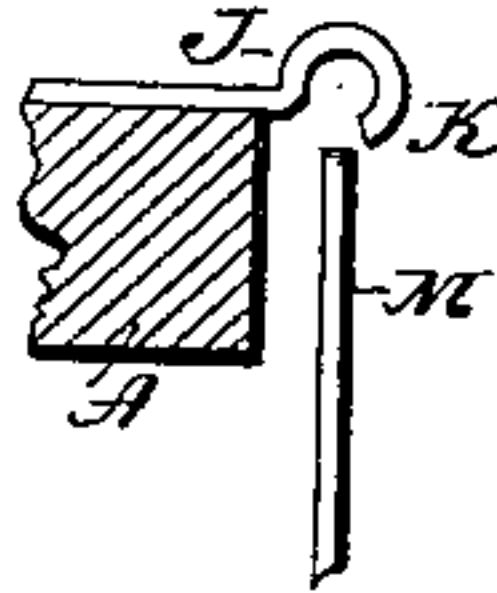
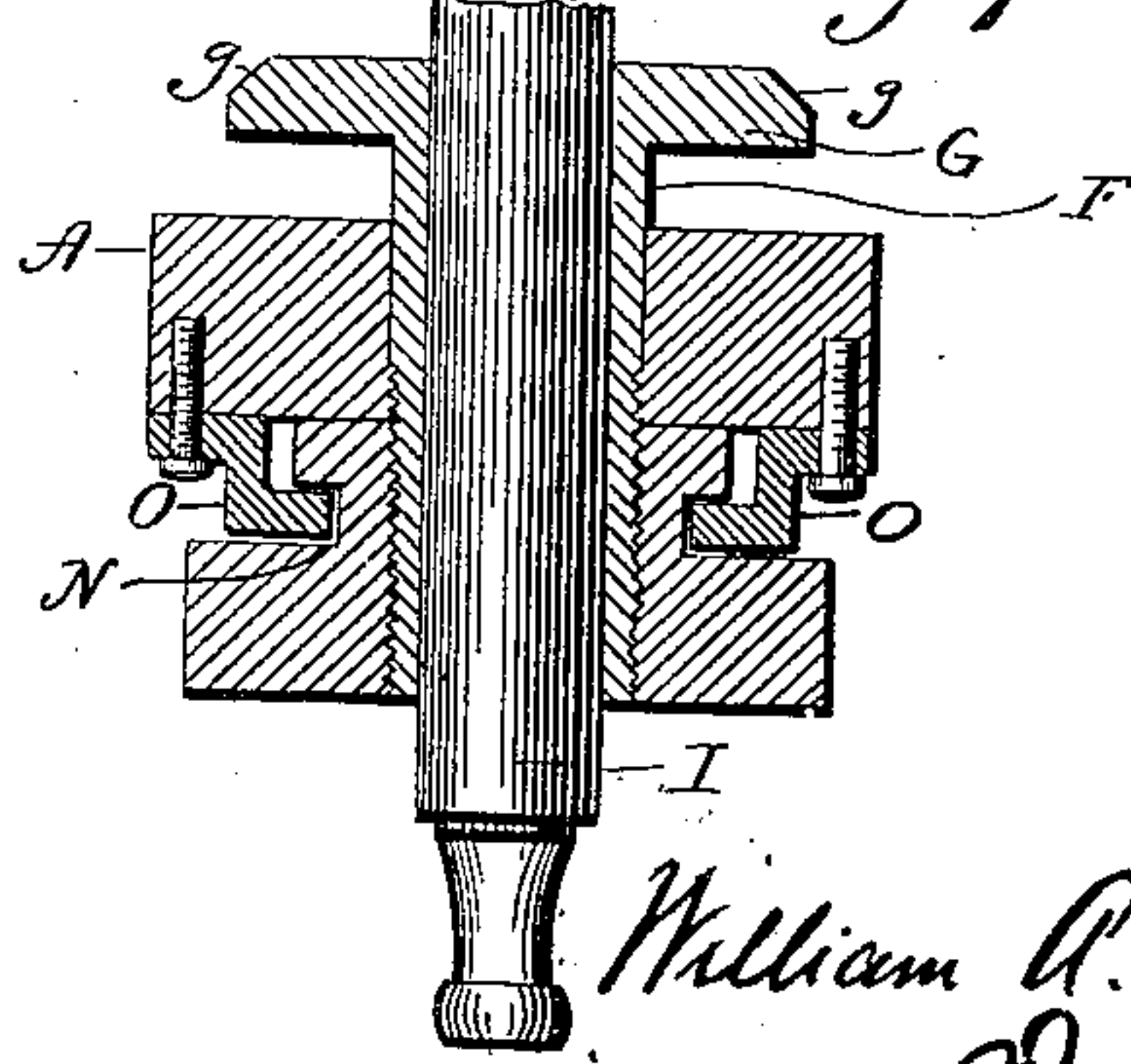


Fig. 7



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM A. ARMOUR, OF THOMASTON, CONNECTICUT.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 653,013, dated July 3, 1900.

Application filed April 2, 1900. Serial No. 11,042. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. ARMOUR, of Thomaston, in the county of Litchfield and State of Connecticut, have invented a new
5 Improvement in a Combined Speculum and Syringe; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and
10 exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of a combined speculum and syringe constructed in accordance
15 with my invention, showing the parts in their contracted position; Fig. 2, a similar view with the speculum-blades open; Fig. 3, a broken vertical sectional view; Fig. 4, a side view of the nut detached; Fig. 5, a side view
20 of the upper end of the slide; Fig. 6, a broken sectional view illustrating a modification of the manner of connecting the speculum-blades with the body; Fig. 7, a sectional view illustrating further modifications.

25 This invention relates to an improvement in a combined speculum and syringe, and particularly to that class in which the arms or blades of the speculum are adapted to be expanded by a moving part of the device, the
30 object of the invention being a simple construction which readily permits the arms or blades to be positively moved and held in the desired position; and it consists in the construction as hereinafter described, and particularly recited in the claims.

Preferably the device will consist of a body A and, for the purpose as will hereinafter appear, what I will term a "nut" B, the said nut extending upward through the body A
40 and formed with a slot *b*, adapted to receive the end of a screw C, which extends through one side of the body into said slot, whereby the body and nut are swiveled together. The upper end of the nut is formed with cam-surfaces D, adapted to engage with pins E on a
45 tubular slide F, the said slide being formed with a disk G, having beveled edges *g* and a threaded nipple H at its upper end, while its lower end, which extends through the nut, is
50 adapted to be connected with a supply-pipe. (Not shown.) To the nipple H the discharge-tube I, which may be of any approved con-

struction, is attached. To the upper face of the body A three or more plates J are secured, the ends of the fingers K of which project through slots L, formed in the lower ends of the speculum-blades M. These fingers K are preferably turned into substantially-circular shape, so as to permanently secure the blades to the body; but it is evident that they
55 may be left partially open, as shown in Fig. 6, and so that the blades may be readily removed. The lower ends of these blades are inclined inward, so as to bear against the inclined surfaces *g* of the disk G, and whereby
60 the vertical movement of the disk will expand the outer ends of the blades.

Instead of forming the nut with the cam-surfaces D and having the nut extend through the plate the nut may be swiveled to the plate,
70 as shown in Fig. 7, in which the nut is formed with an angular groove N, into which two or more arms O extend, the arms being secured to the under face of the body. With this construction the nut will be internally threaded and the tubular slide F externally threaded for engagement therewith and so that by
75 turning the nut the tubular slide will be moved inward or outward.

Instead of attaching the discharge-nozzle
80 to the slide, as above described, it may be made of proper size to extend through a central opening formed in the slide, as also shown in Fig. 7, thus permitting the tube to be projected to a greater or less extent above the
85 disk.

In the construction first described the rotation of the nut B causes the cam-surfaces D to ride under the pins E, and thus force the slide upward, and this upward movement
90 of the slide carries the disk against the lower ends of the blades L and forces their upper ends outward, as shown in Fig. 2, whereas the reverse movement of the nut permits the disk to be forced downward and the blades
95 contracted. If the threaded nut is employed, the turning of the nut operates in the same way to raise or lower the disk, and if the discharge-nozzle extends through the slide it may be adjusted as desired, it being understood that it will so closely fit within the slide
100 as to be frictionally held in any desired position.

I am aware that syringes have been com-

bined with speculums, and whereby a movement of one part will expand or contract the blades of the speculum, and therefore do not wish to be understood as claiming, broadly, 5 such as my invention; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described combined specu- 10 lum and syringe, consisting of a body, a nut swivelly connected therewith, a slide extending through said nut and adapted to be longitudinally moved by the rotation of the nut, said slide formed at its upper end with a disk, 15 speculum-arms secured to said body, and having inclined ends adapted to bear against said disk, and a discharge-nozzle carried by said slide, substantially as described.

2. The herein-described combined specu- 20 lum and syringe, consisting of a body, a nut extending through said body and swivelly connected therewith and formed at its upper end with cam-surfaces, a slide extending through said nut, and having studs for en-

gagement with the said cam-surfaces, where- 25 by the movement of the nut will force the slide upward, a disk carried by said slide, speculum-arms secured to said body, and adapted at their lower ends to bear upon the edges of said disk, and a discharge-nozzle car- 30 ried by said slide, substantially as described.

3. The herein-described combined specu- lum and syringe, consisting of a body, a nut swivelly connected therewith, a slide extend- 35 ing through said body, and adapted to be longitudinally moved by the rotation of said nut, a disk at the upper end of said slide, a discharge-nozzle extending through said slide, and speculum-arms pivotally connected with 40 said body and adapted to bear upon the edge of the said disk, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM A. ARMOUR.

Witnesses:

ALBERT P. BRADSTREET,
GEO. D. FERGUSON.