

No. 793,295.

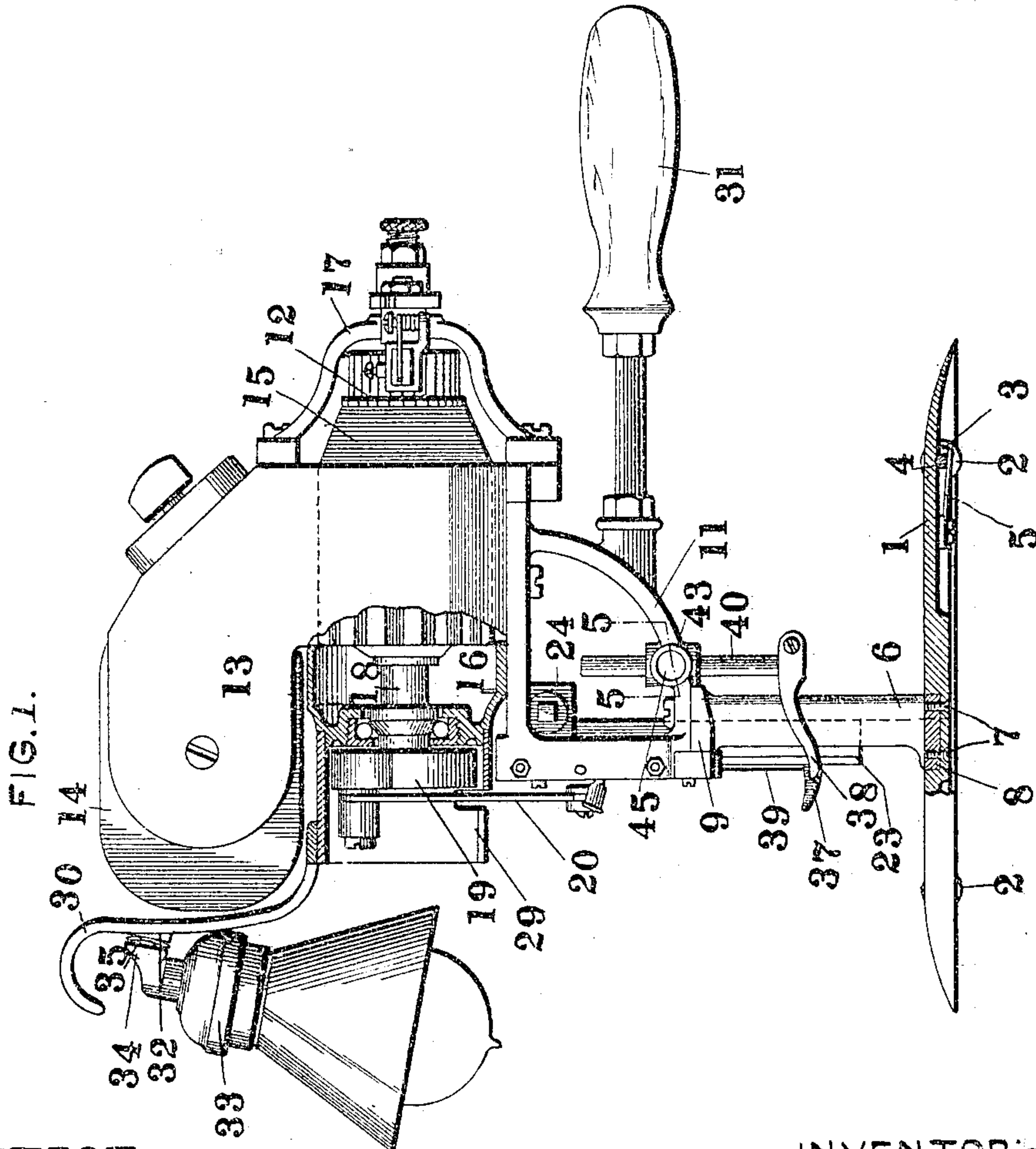
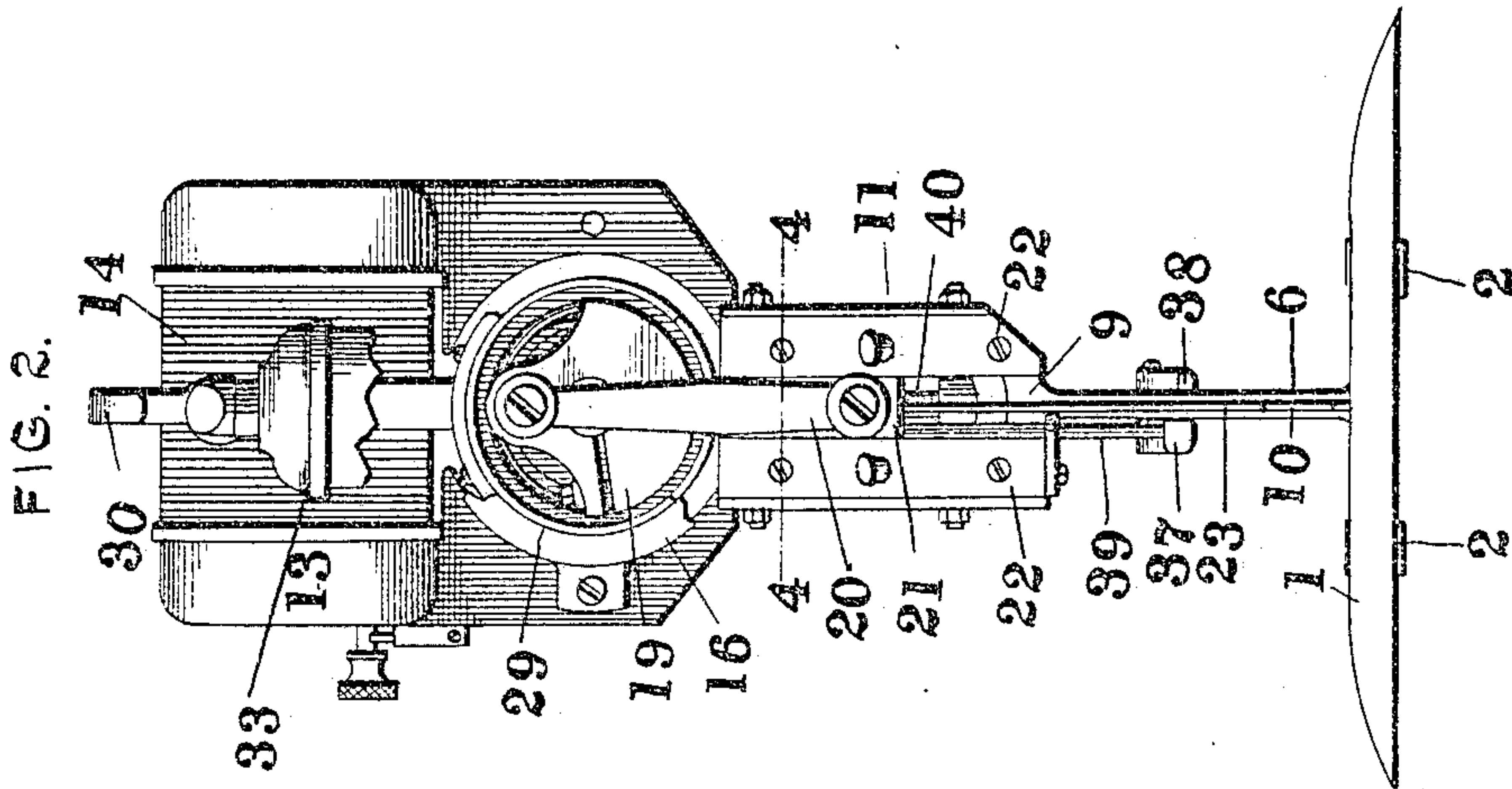
PATENTED JUNE 27, 1905.

J. B. GURY.

CUTTING MACHINE.

APPLICATION FILED SEPT. 30, 1904.

3 SHEETS—SHEET 1.



ATTEST  
a. j. m. Cauley,  
Prof. P. Cauley

INVENTOR:-  
John B. Gury,  
BY *Cauley & Cauley*,  
ATTORNEYS.

No. 793,295.

PATENTED JUNE 27, 1905.

J. B. GURY.  
CUTTING MACHINE.  
APPLICATION FILED SEPT. 30, 1904.

3 SHEETS—SHEET 2.

FIG. 3.

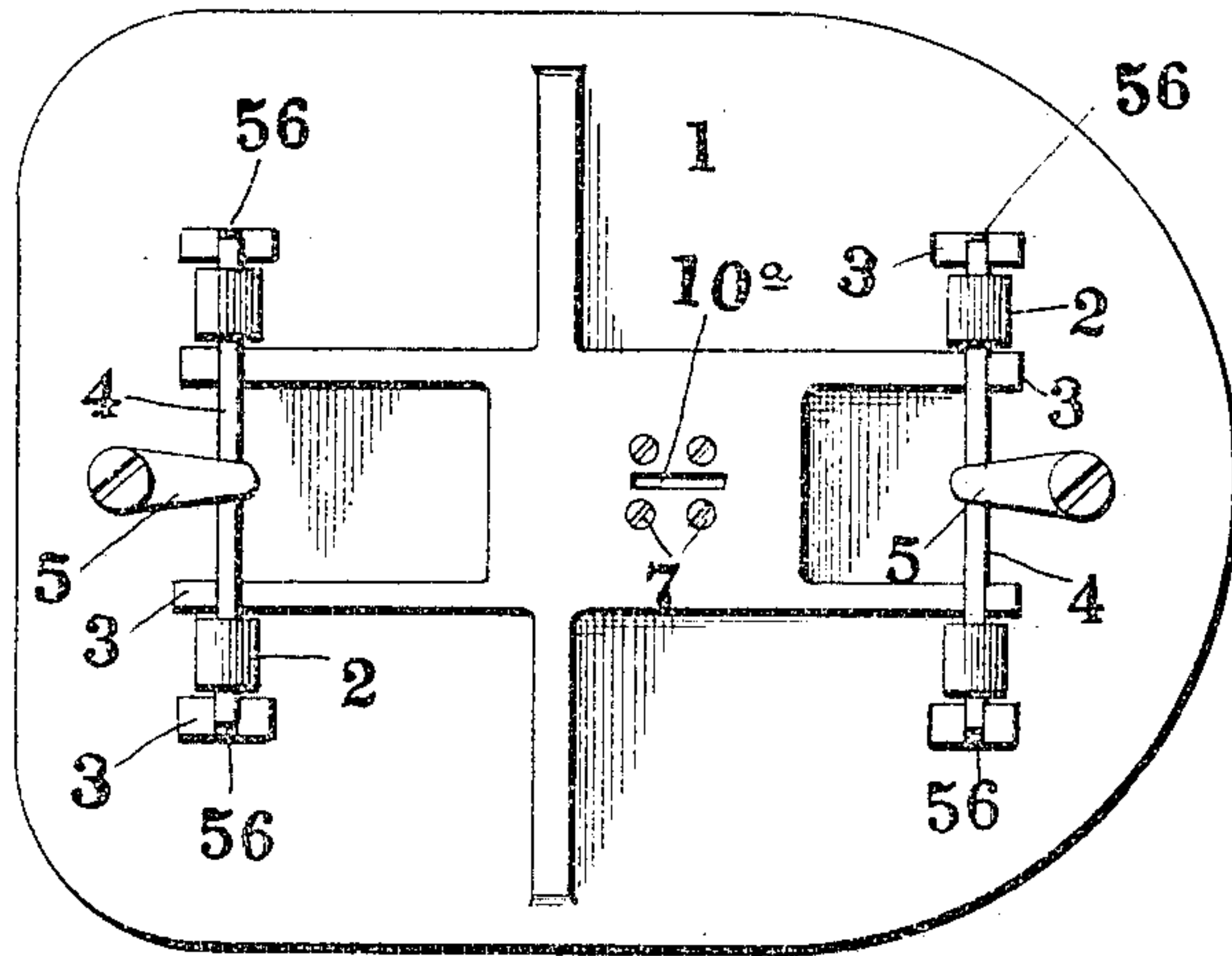


FIG. 8.

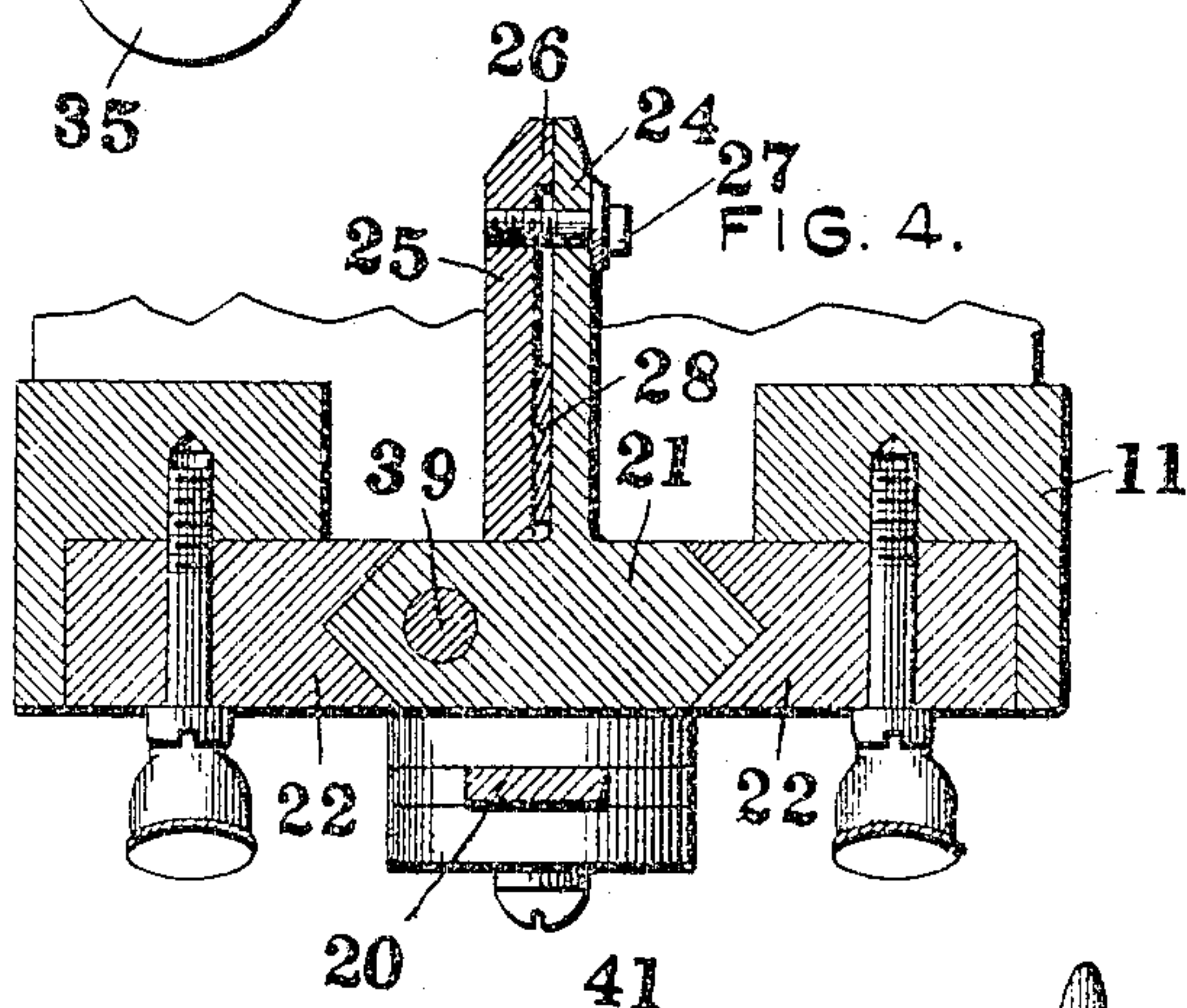
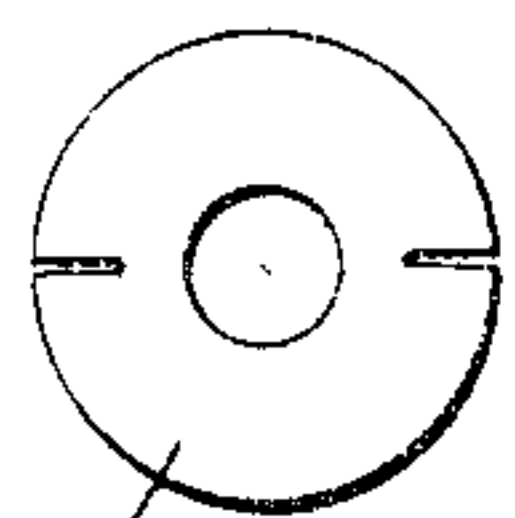


FIG. 4.

FIG. 5.

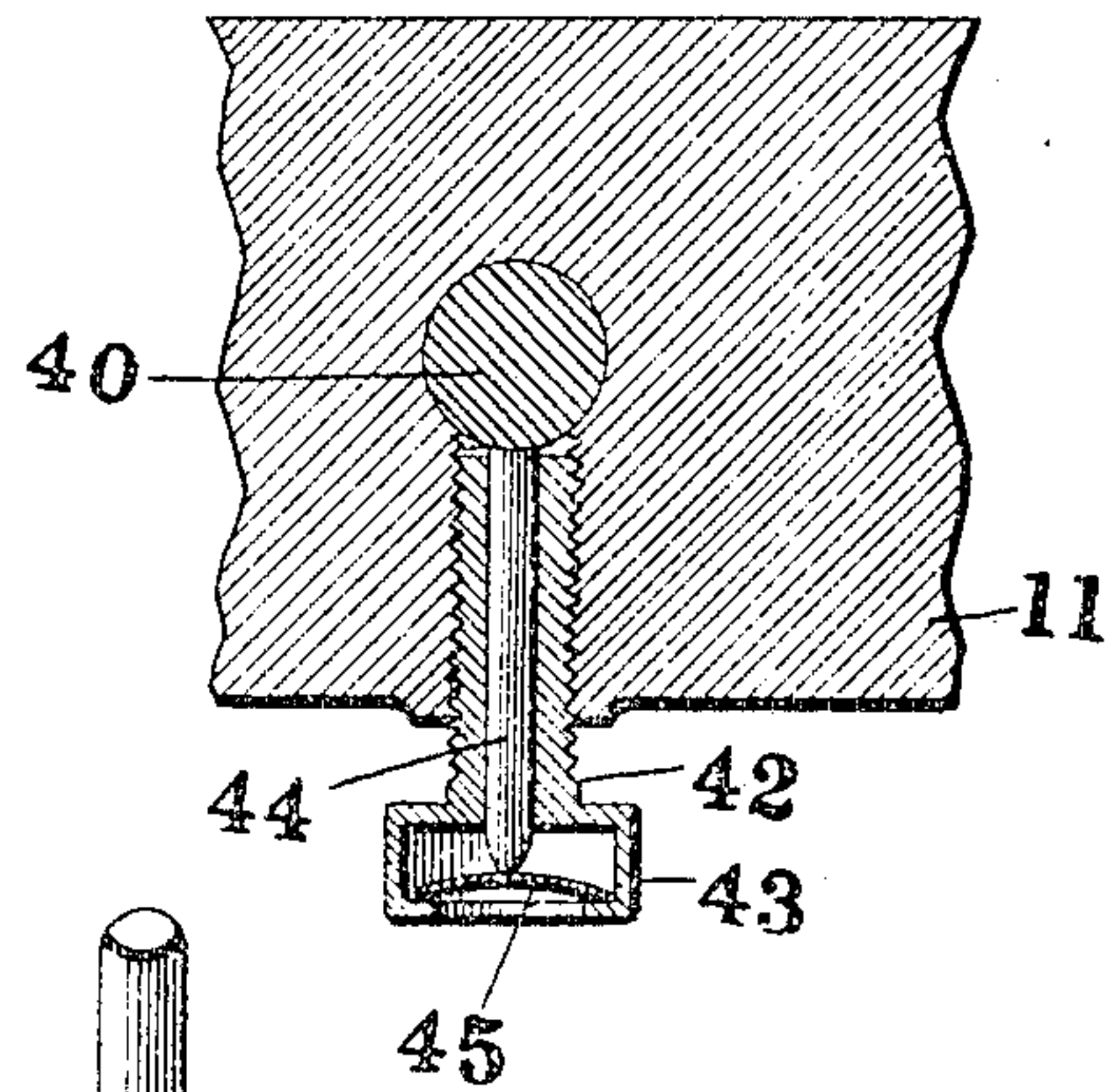


FIG. 6.

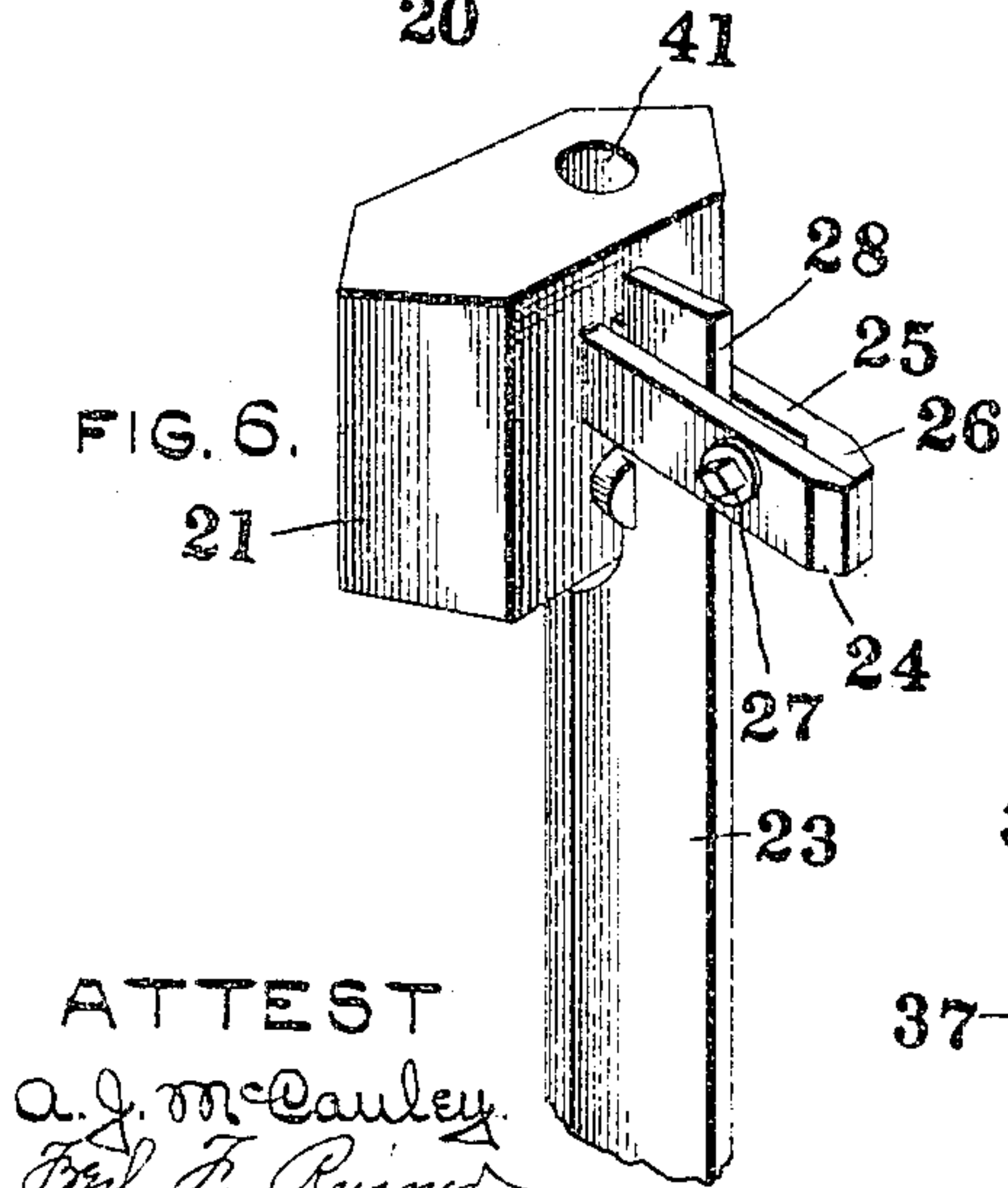
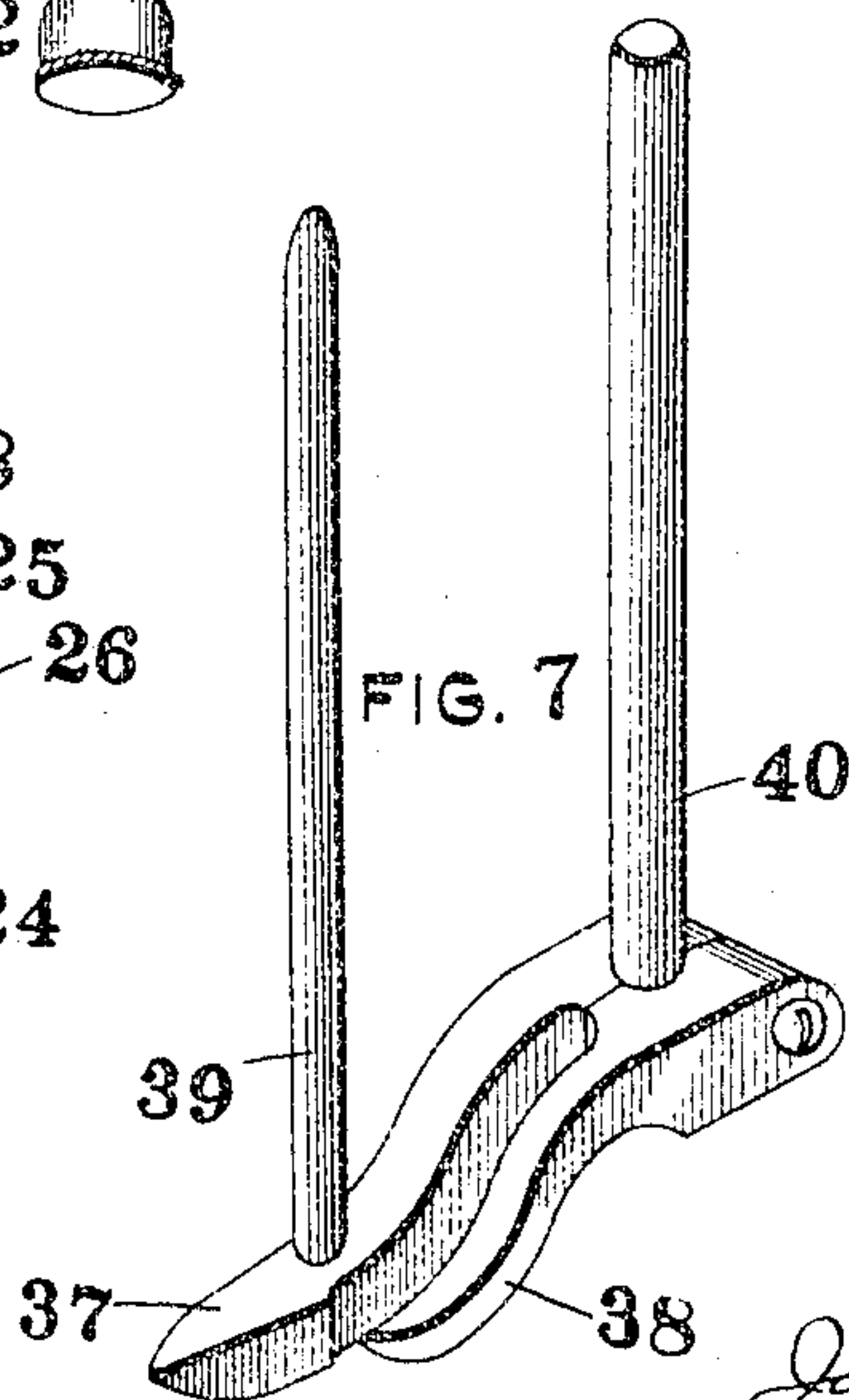


FIG. 7.



ATTEST  
A. J. McCauley.  
Prof. F. Reiner.

INVENTOR:  
John B. Gury,  
BY *Carroll Chase*  
ATTORNEY S.

No. 793,295.

PATENTED JUNE 27, 1905.

J. B. GURY.  
CUTTING MACHINE.  
APPLICATION FILED SEPT. 30, 1904.

3 SHEETS—SHEET 3.

FIG. 9.

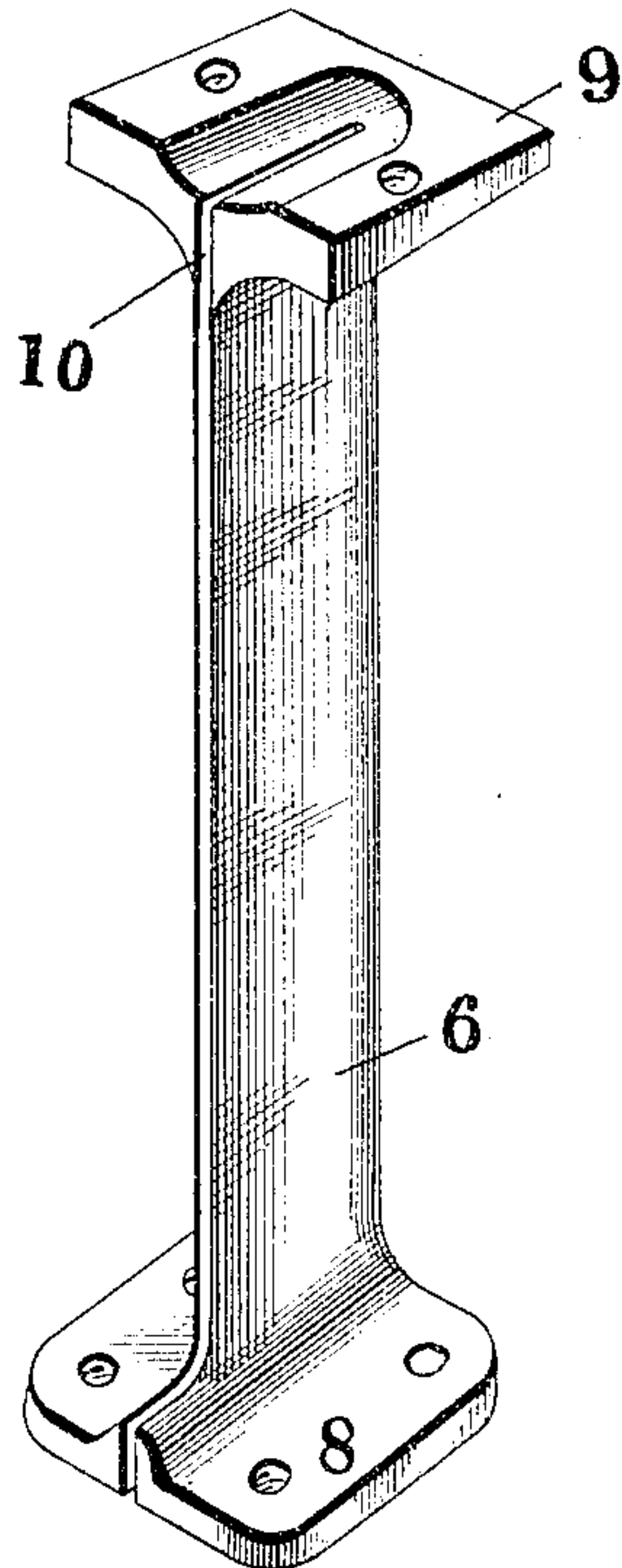
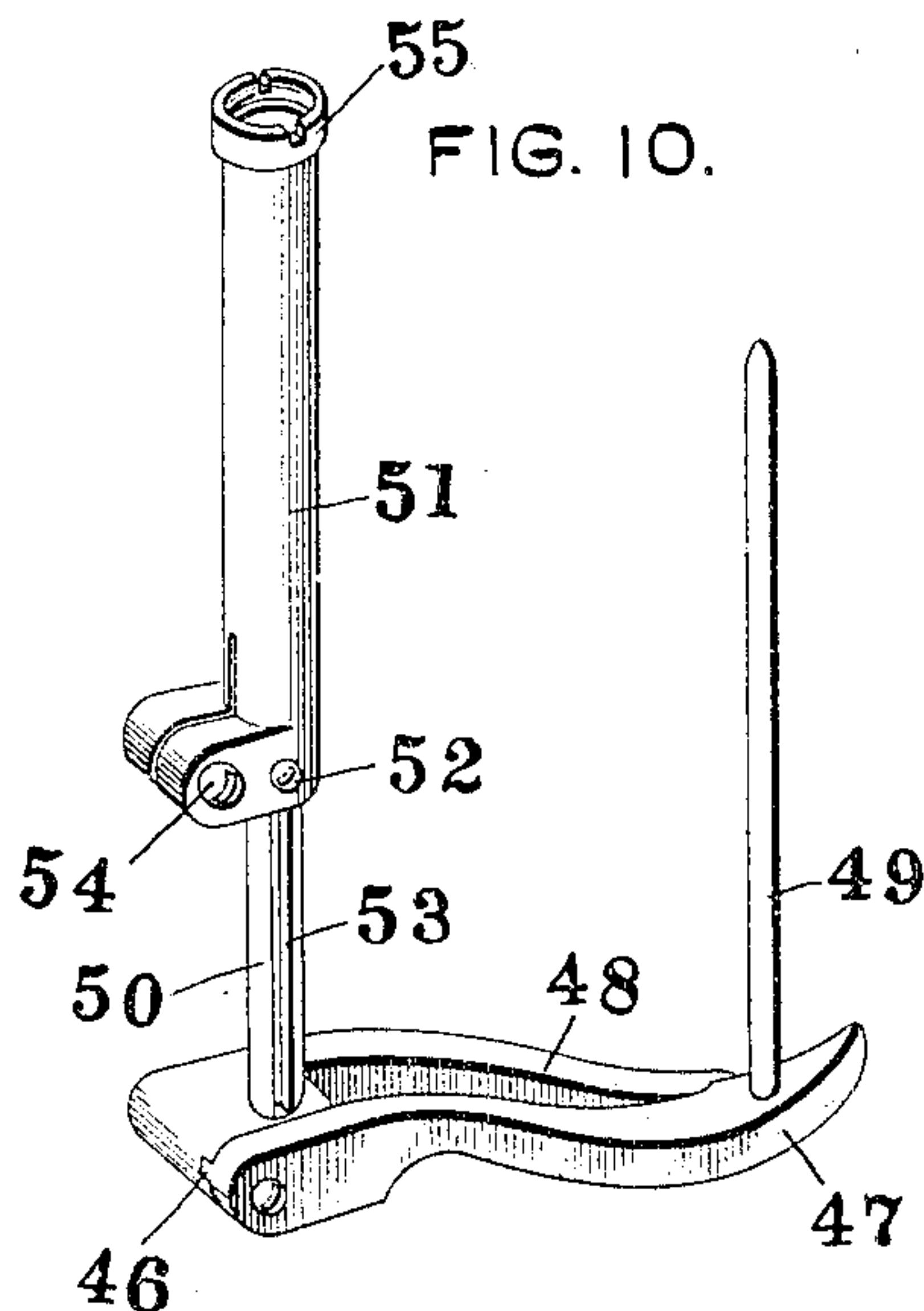


FIG. 10.



ATTEST

*A. J. McCauley*  
*Not. P. Resident*

INVENTOR:

*John B. Gury*  
BY *Carver & Carver*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JOHN B. GURY, OF ST. LOUIS, MISSOURI, ASSIGNOR TO UNIVERSAL CUTTER COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

## CUTTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 793,295, dated June 27, 1905.

Application filed September 30, 1904. Serial No. 226,624.

*To all whom it may concern:*

Be it known that I, JOHN B. GURY, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Cutting-Machines, of which the following is a specification.

My invention relates to cutting-machines, and especially to machines for cutting cloth arranged in piles of a number of thicknesses.

It has for its principal objects to reduce the necessary size of the standard in such machines, to provide easily-removable and simply-constructed rollers for the base, to provide a presser-foot which will not interfere with the operator's seeing the work, to provide means for setting a part in position which will not be loosened by vibration, to provide a combination lifting-hook and lamp-bracket, to distribute the weight of the parts so as to obviate vibrations due to the action of the reciprocating cutter, to provide simplified means for securing the cutter to the reciprocating cross-head of the machine, and other objects hereinafter more fully appearing.

My invention consists in the parts and in the arrangements and combinations of parts hereinafter described and claimed.

In the accompanying drawings, forming a part of this application, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a side view of my machine, certain parts being shown in section. Fig. 2 is a front view, a part of the casing being broken away. Fig. 3 is a bottom view of the base. Fig. 4 is a section on the line 4 4 of Fig. 2. Fig. 5 is a section on the line 5 5 of Fig. 1. Fig. 6 is a perspective view of the cross-head with cutter attached. Fig. 7 is a perspective view of the presser-foot and guides. Fig. 8 is a view of the washer for the lamp-support. Fig. 9 is a perspective view of the standard, and Fig. 10 is a perspective view of a modified presser-foot.

The cutting-machine is mounted on a base 1, having a curved front edge. The base is supported on the rollers 2, which are so lo-

cated that its lower side just clears the surface on which it stands. Grooved lugs 3 are arranged on the bottom of the base and are integral therewith. Axles 4 rest in the lugs and are held therein by springs 5, secured to the base. The rollers 2 are loosely mounted on the axles 4 and project through holes in the base. By this arrangement the rollers are easily removable.

A standard 6 is secured to the base by means of screws 7, passing through the latter into the foot of the former. This standard is made of a single piece of tool-steel and is provided with a foot 8 and a table 9. At its front edge it is provided with a knife-guiding slot or slideway 10. The base has a similar slot 10<sup>a</sup> in line with said slot 10. By providing a standard of tool-steel it is unnecessary to line the knife-slideway 10 with some kind of durable material. Consequently the standard may be made thinner than one made out of material that cannot stand the wear due to reciprocation of the knife and which must consequently have the knife-slideway lined. A frame 11, supporting the remaining parts of the machine, is mounted on the table 9 of the standard. An electric motor 12 is secured to this frame. Its substantially L-shaped pole-pieces 13 are mounted near the rear of the frame and project forwardly, carrying the center of gravity of the coil 14 a little forward of the vertical transverse center line through the standard 6. The armature 15 of the motor is journaled in bearings in a casing 16 and a bracket 17. The armature-journal 18 projects through its bearing and carries thereon a balanced crank 19. A pitman 20 connects the crank with a cross-head 21, sliding in a slideway formed between the bearing-blocks 22. A cutter or knife 23 is secured to the cross-head 21 by means hereinafter described. Thus by rotation of the motor the cutter is reciprocated. By means of the distribution of weight described vibration due to the action of the knife or cutter is lessened. The weight of the magnet-coil is vertically above the knife, and its inertia due to its considerable mass is so great that the momentary impulses due to



the reciprocation of the knife of short duration are unable to sensibly move it. By reason of the damping of the vibrations the standard is relieved of considerable strain, and its dimensions can be proportionally reduced.

The cutter or knife is secured to the cross-head 21 by the following means; an arm 24, integral with the cross-head, extends rearwardly therefrom and is provided with a bolt-receiving hole. A clamping-plate 25, having a spacing-lug 26, is secured to the arm 24 by means of a bolt 27, extending through the bolt-receiving hole in the arm 24 and into a tapped hole in the clamping-plate. Near its forward end the inner face of the clamping-plate is provided with a roughened or knurled surface. An extension 28 on the knife or cutter 23 is secured between this knurled surface of the clamping-plate and the opposite face of the arm, the parts being tightened by means of the bolt 27.

A protecting-case 29 surrounds the crank 19 and is secured to the casing 16. To the top of case 29 an upwardly and forwardly extending hook 30 is secured. This hook, in addition to the handle 31, secured at the rear end of the frame 11 of the machine, serves as a means for handling the machine. Near the upper part of its vertical portion the hook is provided with a lug 32, having an inclined front face. A lamp-socket 33 is provided with a laterally-extending lug 34, having a similarly-inclined face. Between the lugs 32 and 34 a warped spring-washer 35, which is provided with radial slits 36, is interposed. When the lamp-socket is drawn down by the screw connecting the socket and the hook, the pressure tends to flatten the washer. Thus a yielding friction-grip is secured which will permit the socket to be forcibly turned while holding it in any position to which it is set. The socket is so set that it will just strike the hook below the lug 32. To swing the socket into the vertical position shown in Fig. 2, it is necessary to force the socket slightly forwardly. This can be done, as the spring-washer yields enough to permit it. Thus the lamp snaps into and out of its vertical position and is firmly held there.

To prevent the cloth being raised, a presser-foot is provided. It consists of two gently-curving sections 37 38, which are secured together at their rear ends by a screw. When fastened together, a slot open at the front end of the foot is formed between the sections. The left section 38 is short, extending but little past the edge of the cutter. This section is also thinner than the opposite section. This construction permits a right-handed operator to always see the line he is cutting to practically clear up to the edge of the cutter. The presser-foot must be adjusted to different heights, according to the

thickness of the layers of cloth being cut. For this purpose a guide-rod 39 is secured to the front end of the right section 37 and a second guide-rod 40 is clamped at the rear of the presser-foot, between the sections thereof. The latter guide-rod extends through the frame and is secured therein by a set-screw hereinafter described. The guide-rod 39 extends into the slideway for the cross-head 21. A bore 41 extends through the cross-head to receive the guide-rod. By this construction the inconvenience of parts projecting from the frame of the machine is avoided, the presser-foot is easily and readily removable, and accurate work is possible because the line of cut is plainly visible.

The presser-foot is held in any position of adjustment by a resilient set-screw, which will not be loosened by vibration. It consists of a hollow screw 42, having a hollow open-topped head 43. A bearing-pin 44 extends through the screw and is somewhat longer. A thin steel disk 45 is secured in the head of the screw by turning over the rim of the latter. By means of the disk the bearing-pin is held so as to project beyond the end of the screw, and thus it comes in contact with the rod to be secured in position. On the other hand, the screw is in engagement with the frame. Thus vibration tending to loosen the parts will be taken up by the disk and the adjustment of the screw will not be affected.

A modification of one of the guides for the presser-foot is shown in Fig. 10. The sections 47 48 of the presser-foot are connected by means of a screw, as before, but to one side of the medial vertical plane. A dovetail 46 is provided to prevent turning of the sections with respect to each other. The guide-rod 49 is similar to the guide-rod 39. The rear guide-rod is made in relatively movable sections. A rod 50 is rigidly secured to one of the sections of the presser-foot. A sleeve 51 surrounds the rod 50. A guide-screw 52, working in a groove 53 in the rod 50, prevents rotation of the sleeve 51 with respect to the rod 50. The lower end of the sleeve is slitted and provided with a clamping-screw 54, by means of which the sleeve may be clamped on the rod. The sleeve 51 extends through the frame of the machine in the same manner as the guide-rod 40 and is secured by the same set-screw. A short nut 55 is in screw-threaded engagement with the upper end of the sleeve 51. It is removed when putting the sleeve in place in the frame and put on after the sleeve is in place to keep it from accidentally falling out. This construction is advantageous in a machine in which the standard is long compared with the free space above the bar of the frame through which the guide-rod extends. The range of adjustment of the presser-foot is limited to the height of this free space when an intergal guide-rod is used,



while with a telescoping guide-rod a much greater range of adjustment is possible.

Obviously my device is capable of modification within the scope of my invention, and therefore I do not wish to be limited to the specific construction shown and described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a cutting-machine a base comprising grooved lugs, an axle seated in said lugs, means at the ends of said axle to prevent longitudinal movement of said axle, rollers loosely mounted on said axle, means to limit movement of said rollers longitudinally of said axle when seated in said lugs, and a resilient arm pivotally mounted in position to extend over said axle and hold it in said lugs.

2. A cutting-machine comprising a base, a standard thereon, a frame mounted on said standard and provided with a slideway, a cross-head in said slideway, a cutter connected to said cross-head, means on said frame to actuate said cutter, and a presser-foot extending in front of and behind said standard and provided with guide-rods one of which extends through a portion of said frame and the other of which extends into said slideway.

3. A cloth-cutting machine comprising a base, a standard on said base, a cutter, a frame mounted on said standard, actuating means for said cutter mounted on said frame, a presser-foot adjustably mounted on said frame, and a set-screw for said presser-foot comprising a hollow screw provided with a

hollow head and adjustably mounted in said frame, a resilient disk secured in said head at its periphery, and a pin in said screw bearing at one end on said disk and projecting at its opposite end beyond the end of said screw and into engagement with said presser-foot.

4. A cutting-machine comprising a movable frame, a hook-handle mounted at the front upper part of said frame, a lamp-socket pivotally mounted on said handle, and a spring-washer yieldingly engaging said socket, said socket being arranged to engage the handle below the point of its pivotal connection thereto when turned into a substantially vertical plane, whereby said socket may be firmly held in said plane.

5. A cloth-cutting machine comprising a frame, a slideway in said frame, a cross-head arranged to reciprocate in said slideway, a motor mounted in said frame and operatively connected to said cross-head, an arm integral with said cross-head, a clamping-plate provided with a spacing-lug, a screw connecting said plate to said arm and a cutter clamped between said arm and said plate.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 27th day of September, 1904, at St. Louis, Missouri.

JOHN B. GURY.

Witnesses:

T. PERCY CARR,  
J. B. MEGOWN.