

A. S. NICHOLS.  
MACHINE FOR APPLYING VENEERS.  
APPLICATION FILED MAY 16, 1910.

965,927.

Patented Aug. 2, 1910.

6 SHEETS—SHEET 1.

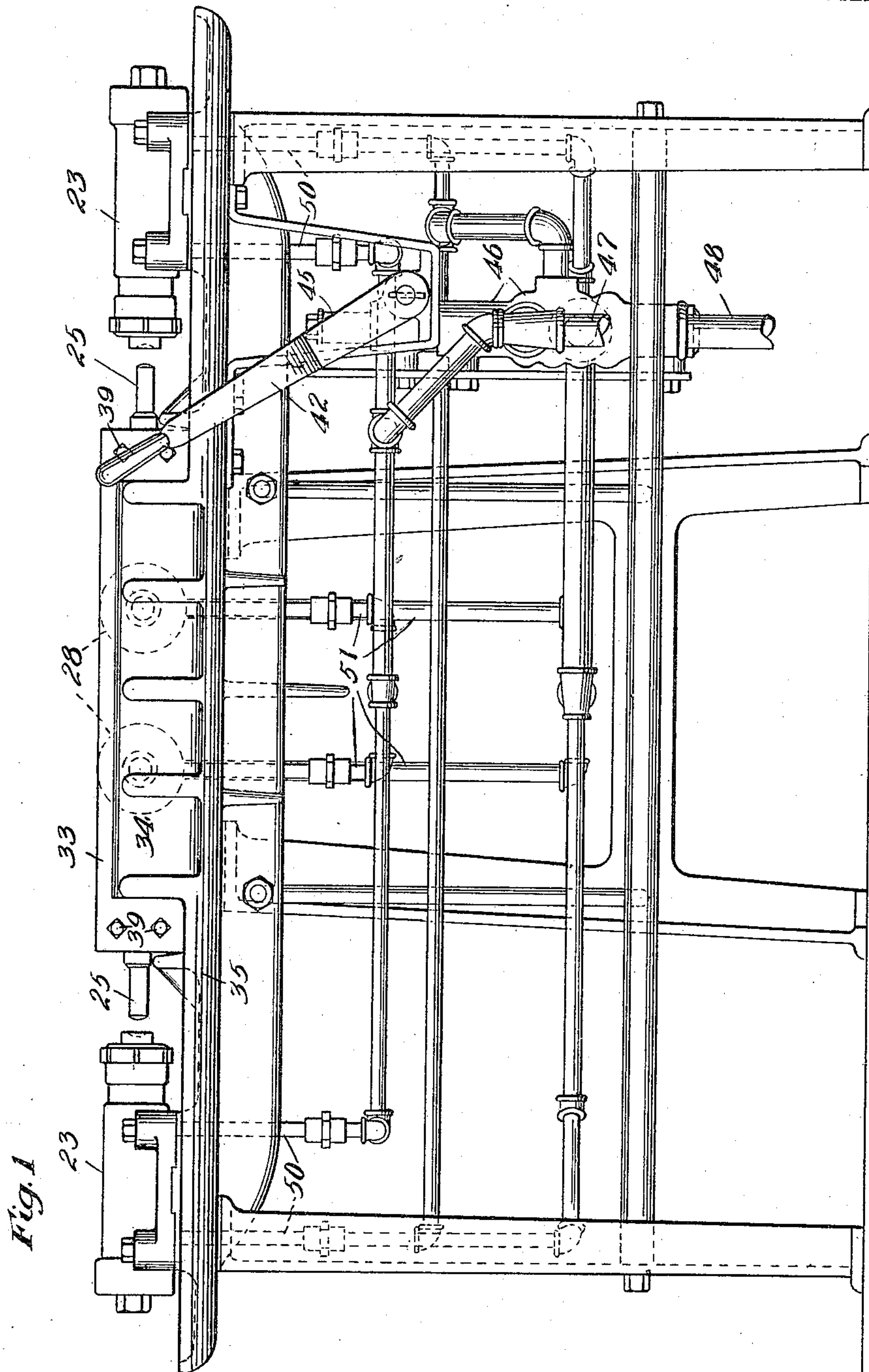


Fig. 1

Witnesses:

Wm. Geiger  
Atty. Munday

Inventor:  
Aaron S. Nichols

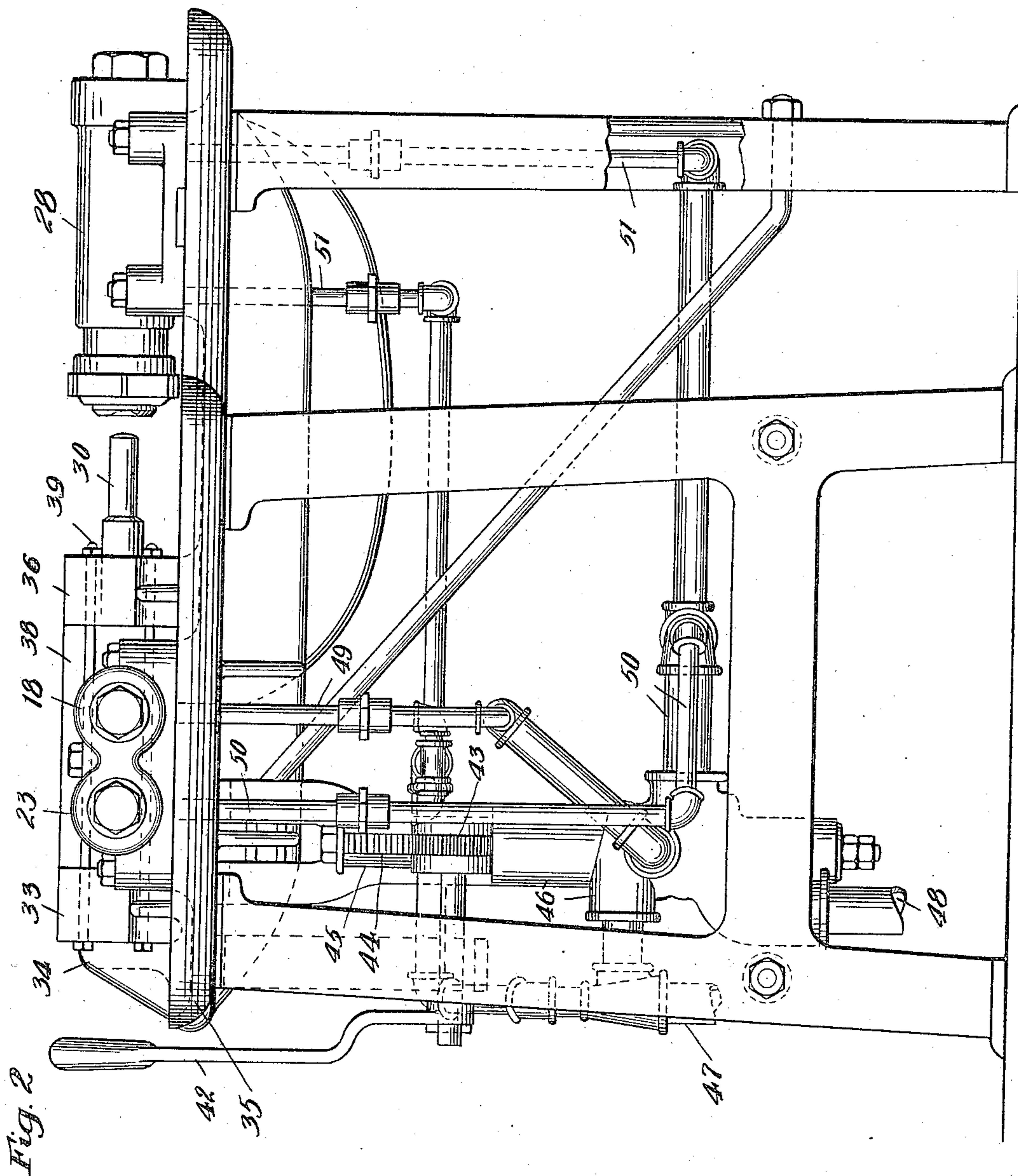
By Munday, Evans, Adcock & Clarke,

Attorneys

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6 SHEETS—SHEET 2.



Witnesses:

Wm. Geiger  
H. W. Munday

Inventor:  
Aaron S. Nichols

By Munday, Evans, Adcock & Clarke

Attorneys

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6 SHEETS—SHEET 3.

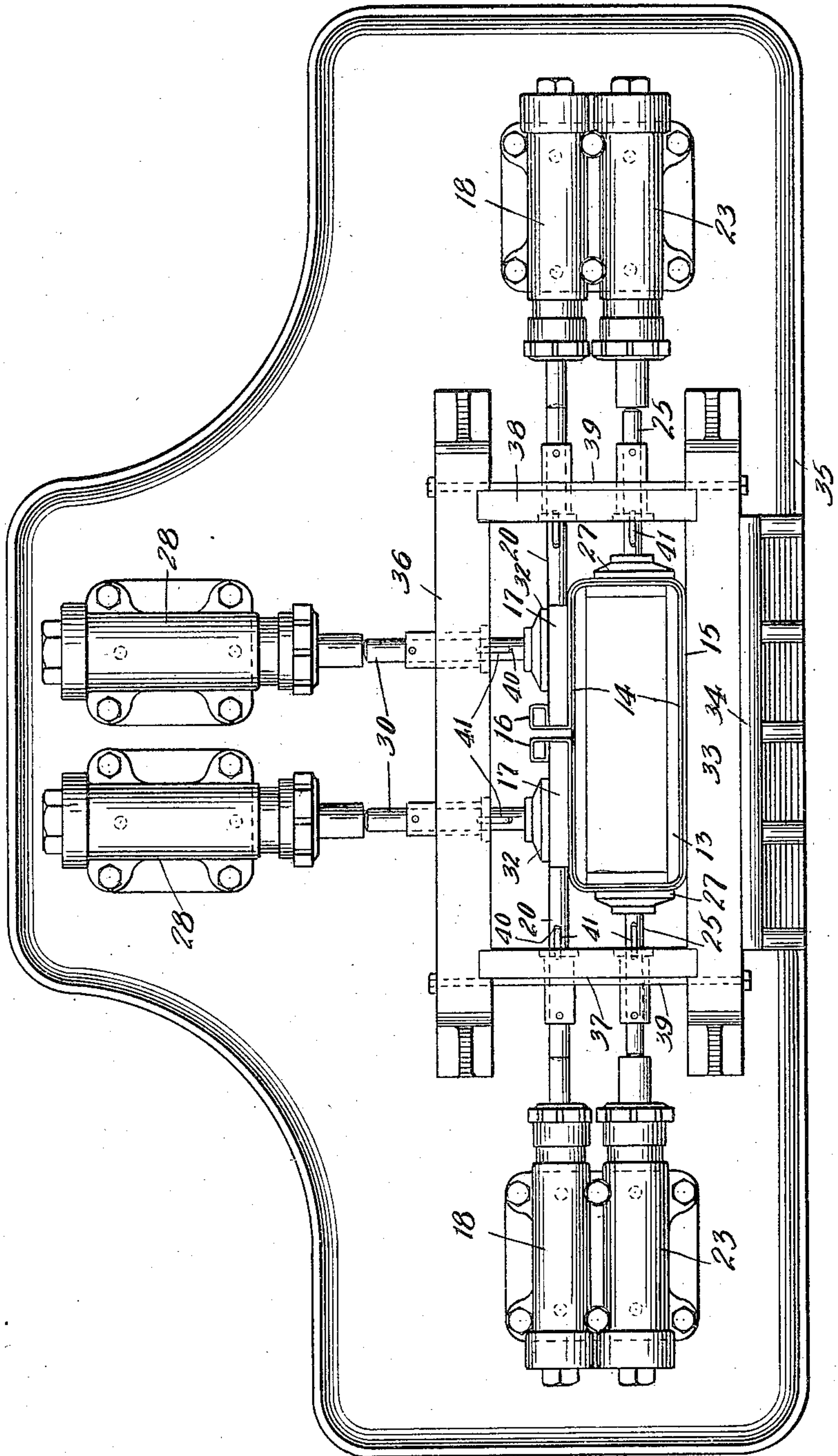


Fig. 3

Witnesses:

Wm. Geiger  
Atty. in Law

Inventor:

Aaron S. Nichols

By Munday, Evans, Adcock & Clarke,

Attorneys.



A. S. NICHOLS.  
MACHINE FOR APPLYING VENEERS.  
APPLICATION FILED MAY 18, 1910.

965,927.

Patented Aug. 2, 1910.

6 SHEETS—SHEET 4.

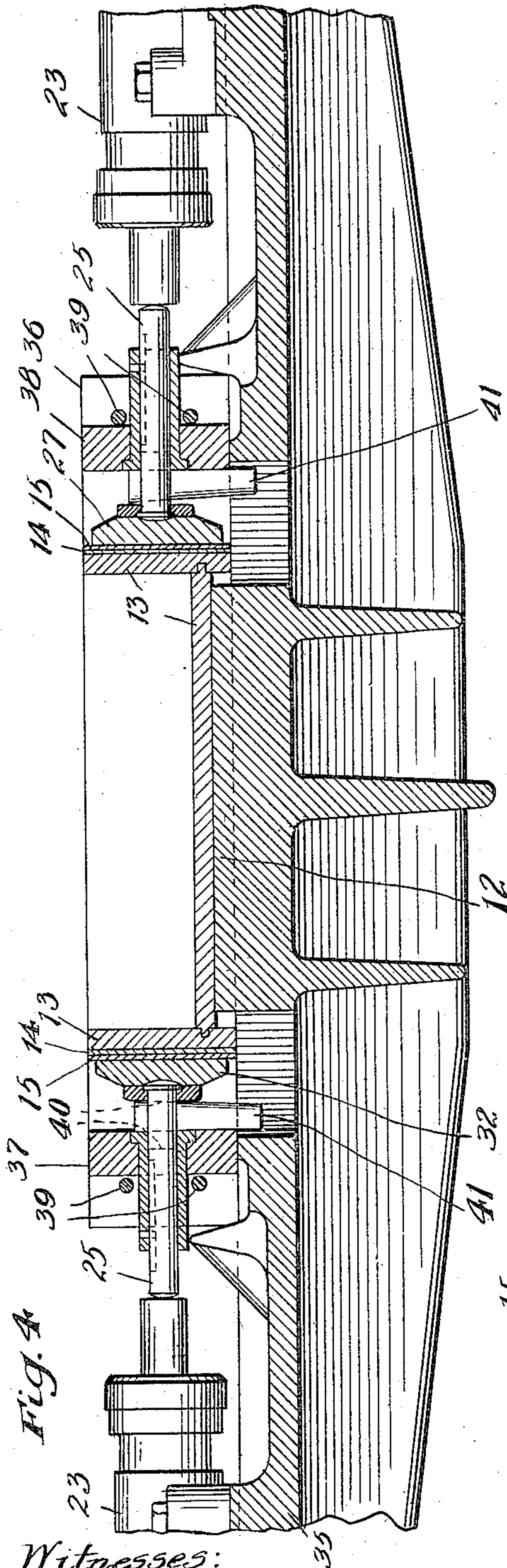


Fig. 4

Witnesses:

Wm. Geiger  
H. W. Munday

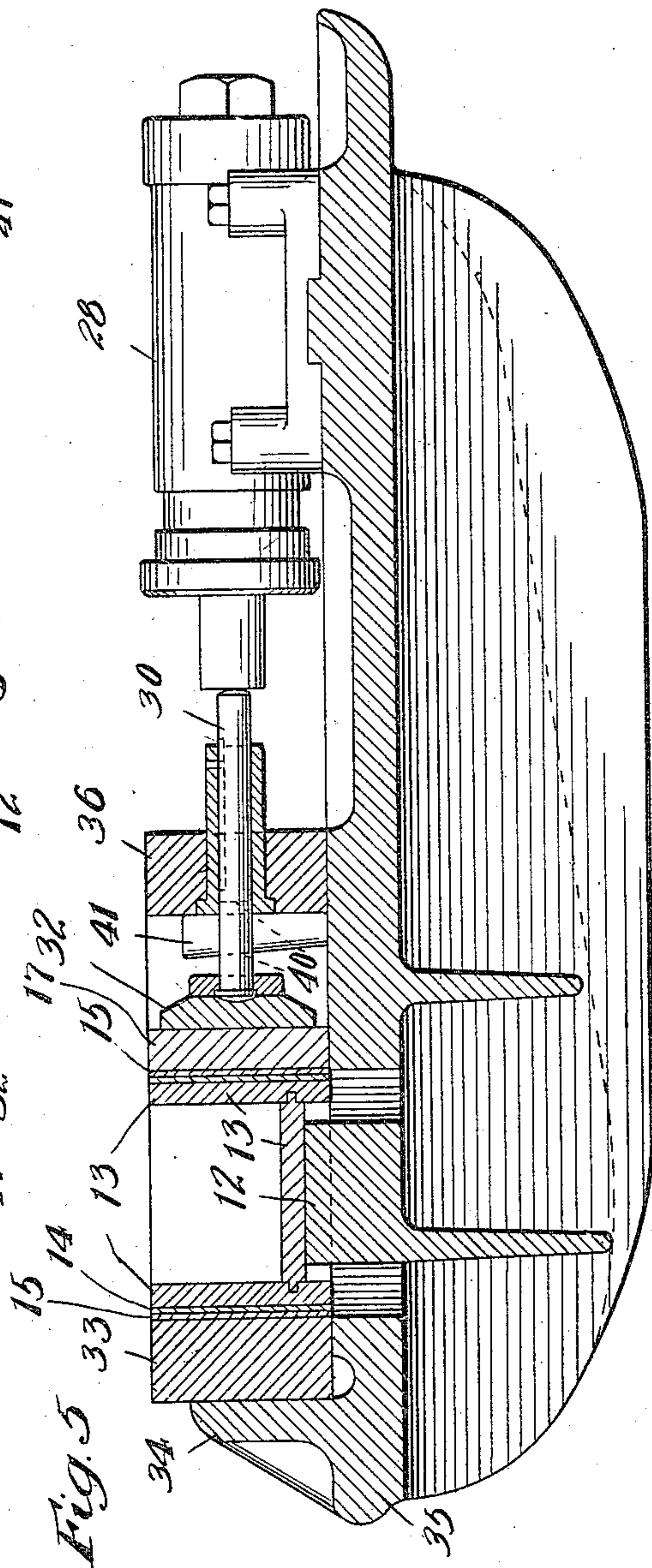


Fig. 5

Inventor:

Aaron S. Nichols

By Munday, Evans, Adcock & Blake,

Attorneys.

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6 SHEETS—SHEET 5.

Fig. 6

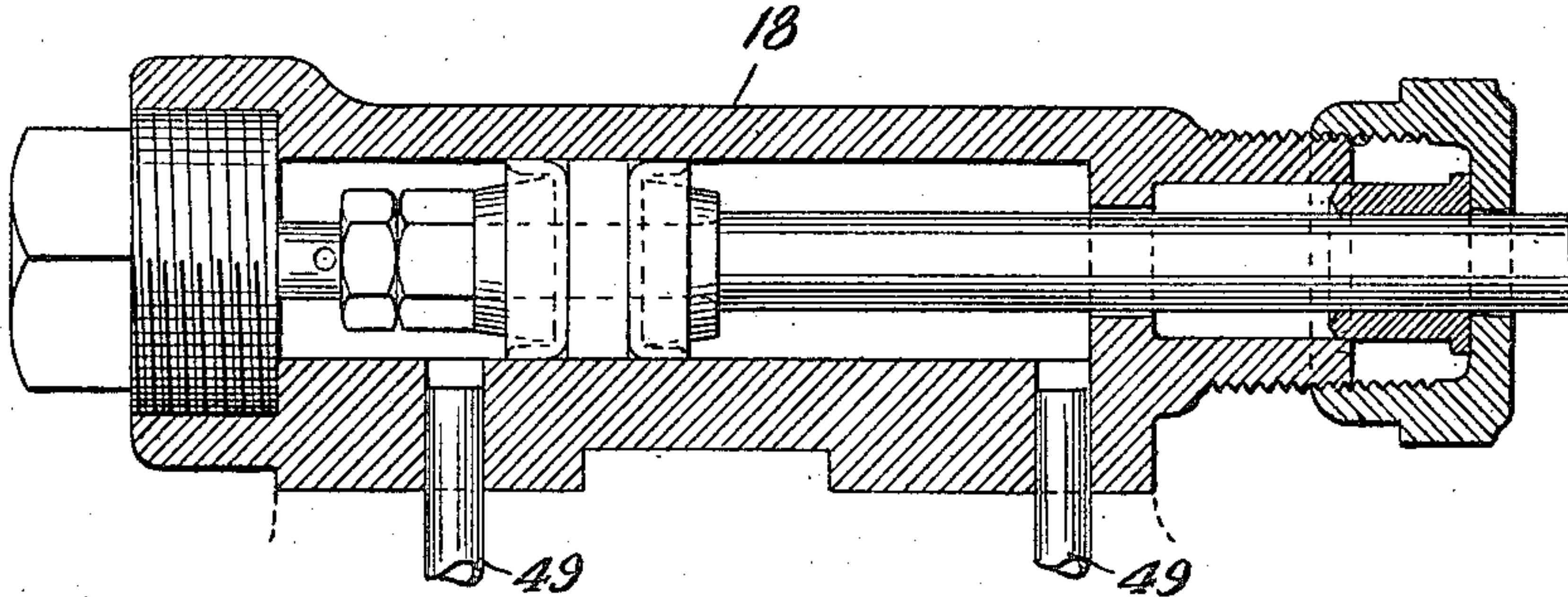


Fig. 7

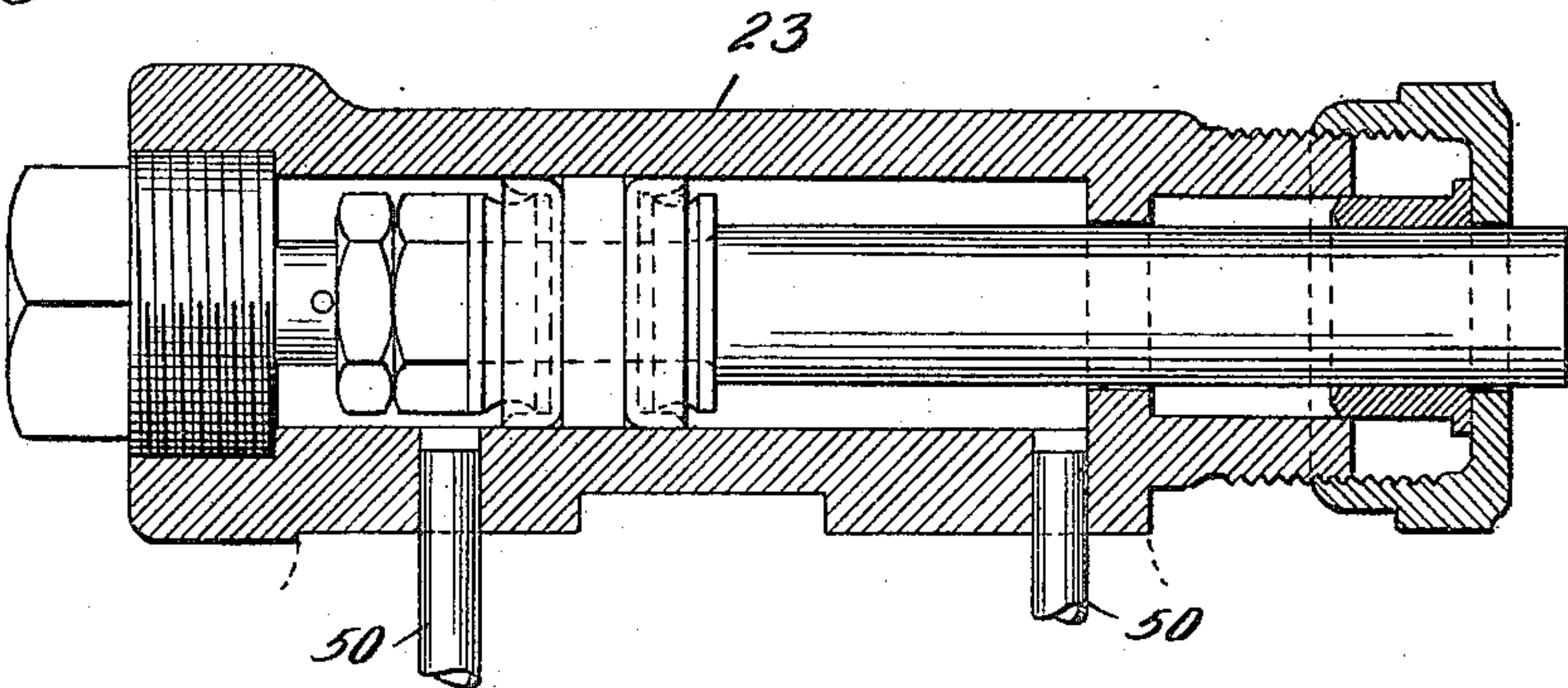
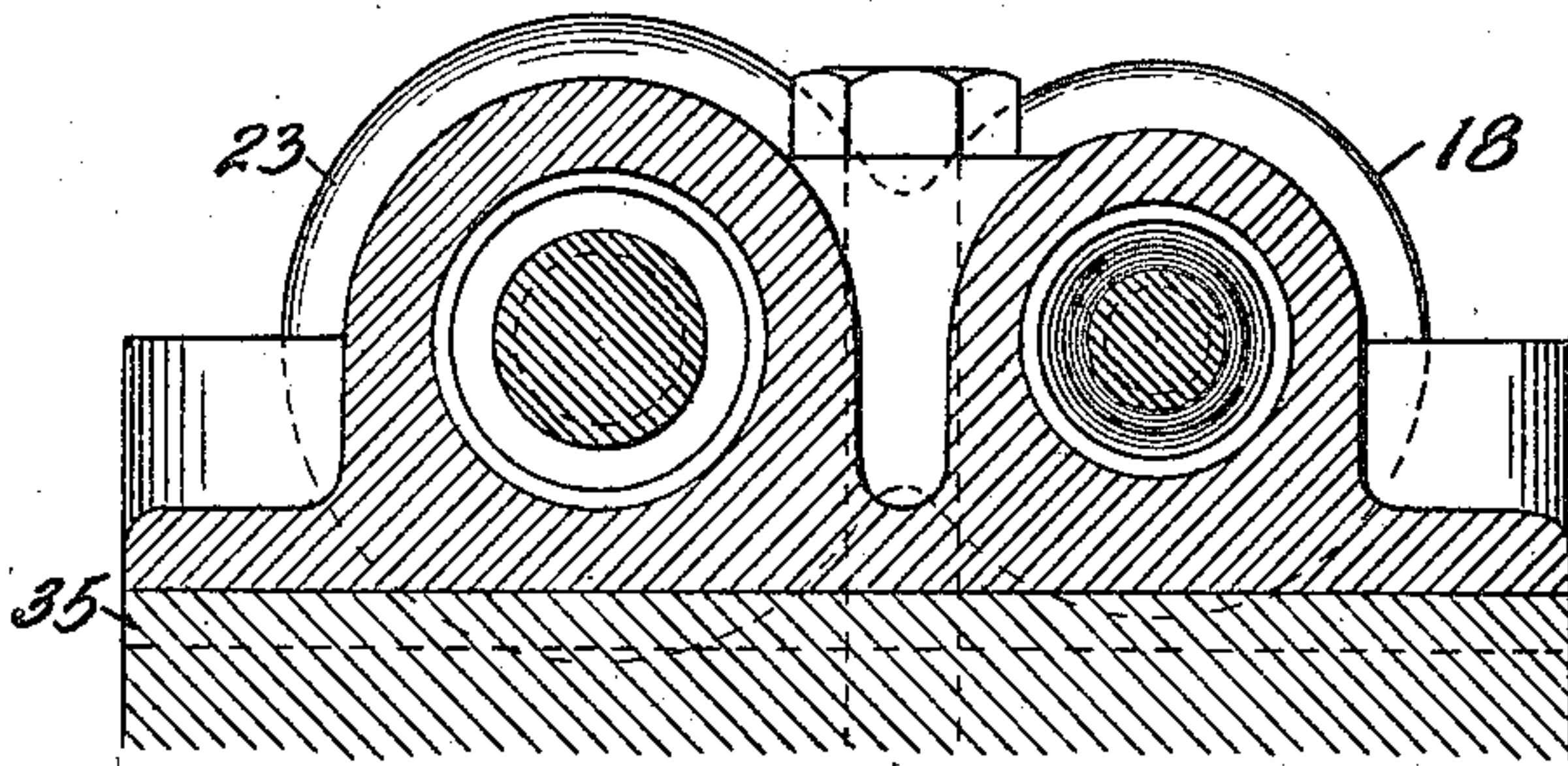


Fig. 8



Witnesses:

*Wm. Geiger*  
*A. W. Munday*

Inventor  
*Aaron S. Nichols*

*By Munday, Evans, Adcock & Clarke,*

*Attorneys*



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6 SHEETS—SHEET 6.

Fig. 9

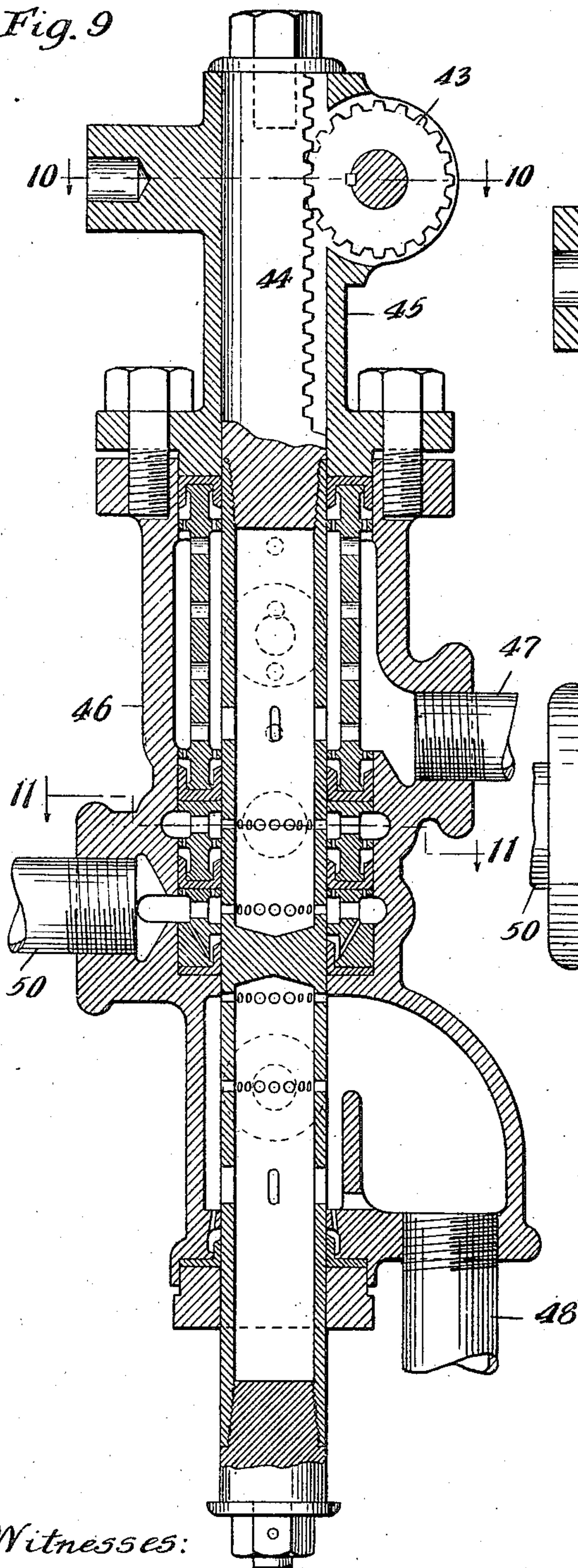


Fig. 10

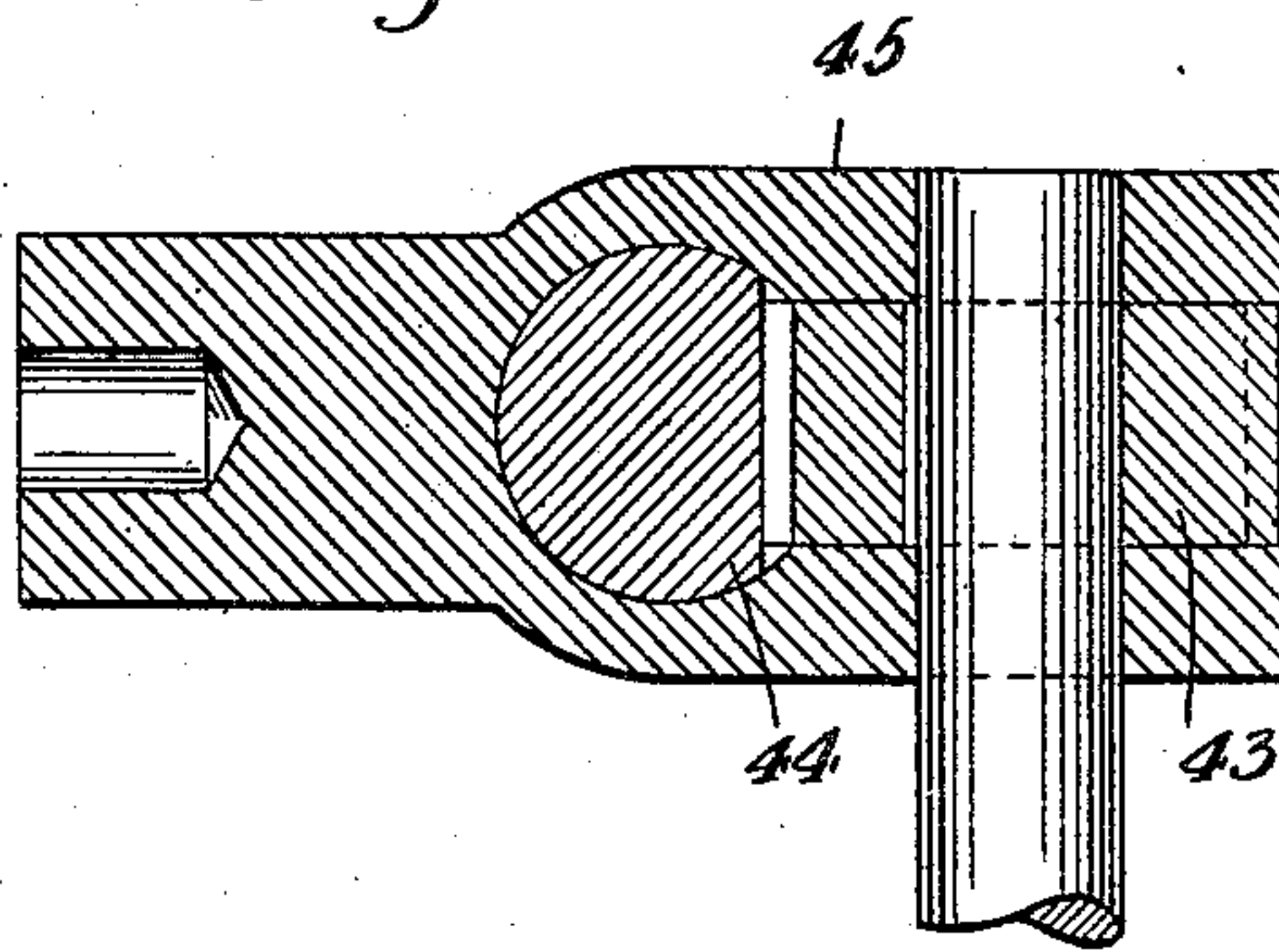
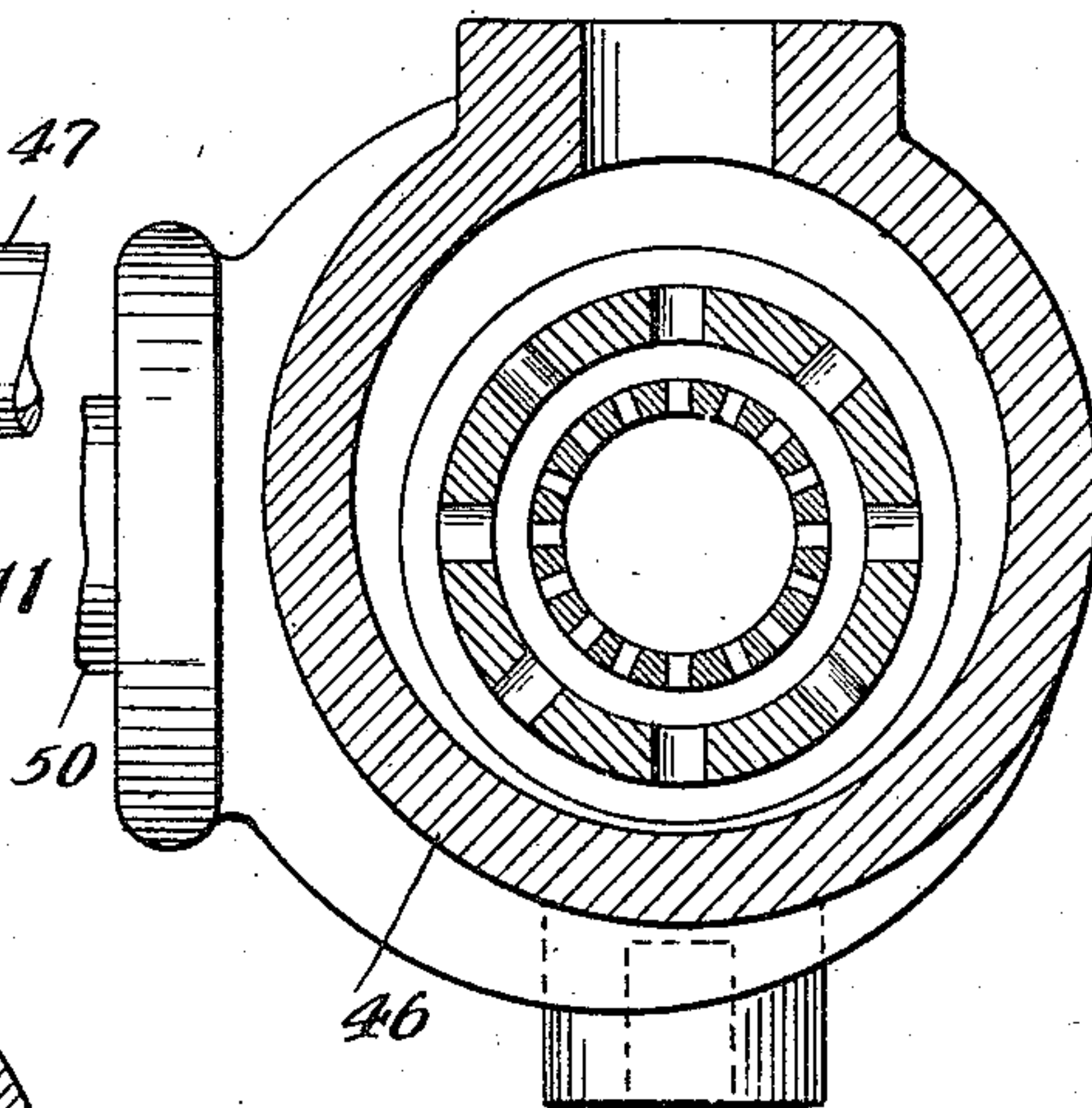


Fig. 11



Witnesses:

Wm. Geiger  
By M. H. Munday

Inventor:  
Aaron S. Nichols

By Munday, Evans, Adcock & Clarke,

Attorneys



# UNITED STATES PATENT OFFICE.

AARON S. NICHOLS, OF NEW YORK, N. Y.

MACHINE FOR APPLYING VENEERS.

965,927.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed May 16, 1910. Serial No. 561,734.

*To all whom it may concern:*

Be it known that I, AARON S. NICHOLS, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented a new and useful Improvement in Machines for Applying Veneers, of which the following is a specification.

This invention has been devised for applying veneer bands to the sides and ends of the boxes, drawers or other angular or irregular surfaces or objects.

The invention embodies a table supporting the work, a series of hydraulic rams acting in successive order and in different directions, first to draw a surrounding metal band tightly around the drawer or other object, second, to press the band and veneer against opposite faces of the object, and thirdly to press the band and veneer against other sides of the object, and a frame readily removable from the machine with the object and serving to retain the pressure upon the band and veneer after the hydraulic rams have been taken out of action. The nature of these devices is fully set forth below, and is also disclosed in the accompanying drawing, in which

Figure 1 is a front elevation of the invention, Fig. 2 is an end elevation. Fig. 3 is a plan view. Fig. 4 is a longitudinal vertical section. Fig. 5 is a transverse vertical section. Figs. 6 and 7 are detail longitudinal sections of two of the rams, and Fig. 8 is a transverse section of the same. Fig. 9 is a vertical section of the valve controlling the rams, and Figs. 10 and 11 are sections on the lines 10—10 and 11—11 respectively of Fig. 9.

In said drawing, 12 represents a table adapted to support a drawer 13 or other object to be covered with veneer 14. After the drawer has been positioned and the veneer with its glue has been drawn around the same, a steel band 15 of flat spring metal is placed outside the veneer and drawn, so that it bears upon all four sides of the drawer. To tighten the steel band its ends are bent outward so as to form abutments 16 against which the blocks 17 may act when the hydraulic rams 18 at opposite ends of the machine are caused to urge said blocks toward each other, which they do through the interposed slides 20 which connect the blocks 17 to the pistons of the rams, and transmit the

power of the rams to the blocks. It will be obvious that by the means described, the steel band can be drawn very tightly around the veneer, and that the veneer will by reason thereof be forced closely against the drawer upon all sides. After the steel band has been thus tightened, I cause the rams 23 at opposite ends of the machine to press upon the slides 25 which are interposed between the rams and ends of the drawer, and thereby force the steel band against the drawer ends. The slides 25 have flat plates or heads 27 at their inner ends adapted to cover a large surface of the steel band. After applying the power of rams 23 as stated, I next apply the power of rams 28, which are located at the rear of the machine and at right angles to the rams previously mentioned. These rams act upon slides 30, provided with plates or heads 32, and force them against the blocks 17 already mentioned and the blocks are adapted to bear against the ends of the steel band as will be understood from Fig. 3. On the side of the drawer opposite to that upon which the blocks 17 are located is a bar 33, forming one side of the retainer frame hereinafter mentioned, and the drawer fits snugly up against this bar and is supported by it against the pressure from rams 28. The bar is enabled to withstand this pressure by the abutment 34 upon the main table 35 of the machine, whereon the rams are supported.

The retaining frame by which the pressure upon the veneer is retained after the rams have been released, embodies the bar 33, a similar bar 36 on the side of the drawer opposite to the bar 33, and end members 37 and 38, let into the side members 33 and 36 as seen at Fig. 3. The side members are tied together at each end by bolts 39. The slides 20 actuated by the rams 18 pass through the end members 37 and 38, and so also do the slides 25, and the slides 30 pass through the bar 36, and all of said slides are furnished with vertical openings 40 in which are placed gravitating keys 41 adapted when the pressure of the rams reaches its limit to descend automatically into said openings and coöperate with the frame members 37, 38 and 36, in locking the slides in the positions to which they have been forced by the rams. The frame is thus adapted to retain the pressure upon the veneer as long as desired, and as it is removable, it



may then be lifted out of the machine with the drawer and stored away to allow the glue of the latter to become perfectly dry.

All the rams are controlled from a single valve, and this valve is operated by a lever 42 on the shaft of pinion 43, meshing with the rack 44 formed on the extension of the valve which is shown at 45. The valve casing is shown at 46, and is provided with a feed port 47, and a discharge outlet 48, and with other ports shown in Fig. 9 and pipes 49 connect it to the rams 18, pipes 50 connect it to the rams 23, and pipes 51 connect it to the rams 28. This valve is adapted to admit the water first to rams 18, then to rams 23 and finally to rams 28, and its operation in other respects will be understood from the drawing without further description.

The rams 18 are of larger capacity than rams 23 as may be inferred from Figs. 6, 7 and 8, Fig. 6 being a section of the latter and Fig. 7 a section of the former.

The operation of the machine has been fully detailed in the foregoing description and needs no recapitulation. It will be obvious that the machine can be used without employing the flexible metal band.

I claim:—

1. The machine for applying veneers embodying a flexible metal band surrounding the object to which the veneer is being applied, and a series of power presses acting successively first to tighten said band and then to compress it from several different directions upon the object.

2. The machine for applying veneers embodying a flexible metal band surrounding the object to which the veneer is being applied, and a series of power presses some of which tighten the band and the rest press it from several different directions against the object.

3. The machine for applying veneers embodying a flexible metal band surrounding the object to which the veneer is being applied, and a series of power presses some of which tighten the band and the others of which after the tightening presses have acted, act to press the band and the veneer from several directions against the object.

4. The machine for applying veneers embodying a series of power presses adapted to press the veneers in several directions against the object to be veneered, slides actuated by said presses and having heads bearing upon the veneers, a rigid frame sur-

rounding the object, and means for locking said slides in said frame in the position to which they are forced by the presses, thereby holding the pressure created by the presses.

5. The machine for applying veneers embodying a series of power presses adapted to press the veneers against the object to be veneered, slides actuated by said presses and having heads bearing upon the veneers, and a rigid frame surrounding the object, and means for locking said slides in said frame in the position to which they are forced by the presses, said frame being removable with the locked slides.

6. The machine for applying veneers embodying a series of power presses having pistons moving from different directions toward the object to be veneered, a series of slides actuated by the presses and having heads adapted to bear against the veneers, a rigid frame surrounding the object and supporting said slides, and means for locking said slides in said frame in the positions to which they are forced by the presses so as to retain the pressure created by the presses.

7. The machine for applying veneers, embodying a series of power presses having pistons movable toward the object to be veneered, a flexible metal band adapted to be bent around the object, a rigid frame surrounding the object, a series of slides supported in said frame and adapted to be actuated by the presses, and means for locking the slides in the frame in the position to which they are forced by the presses, some of said presses acting to tighten said band and the others pressing the veneer against the object.

8. The machine for applying veneers, embodying a series of power presses having pistons movable toward the object to be veneered, a flexible metal band adapted to be bent around the object, a rigid frame surrounding the object, a series of slides supported in said frame and adapted to be actuated by the presses, and means for locking the slides in the frame in the position to which they are forced by the presses, some of said presses acting to tighten said band and the others pressing the veneer against the object, said frame being removable with the locked slides and the flexible band.

AARON S. NICHOLS.

Witnesses:

A. R. PERRY,  
ELEANORE PFAFF.