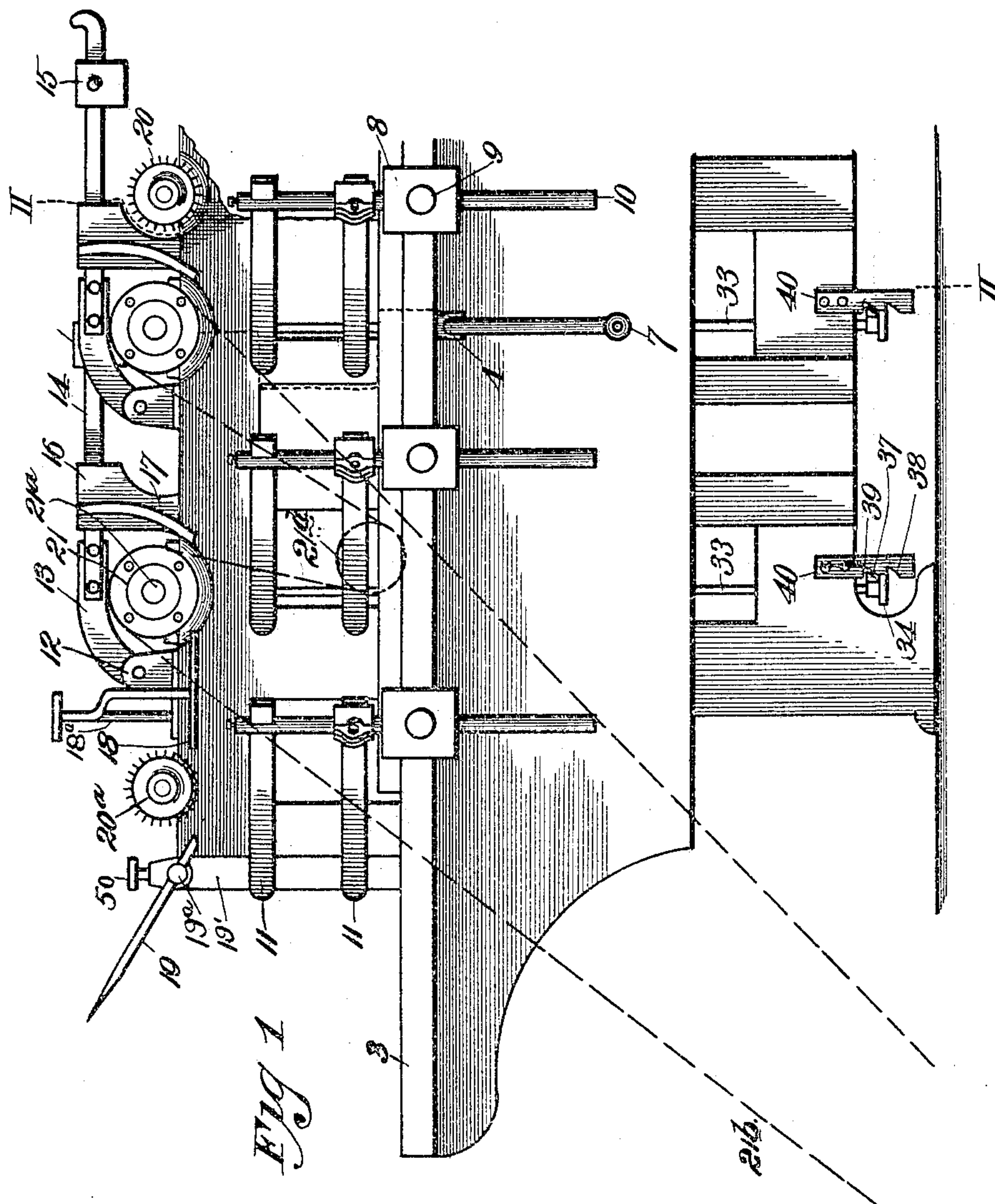


No. 793,187.

PATENTED JUNE 27, 1905.

W. GOODJOHN.
WOODWORKING MACHINE.
APPLICATION FILED DEC. 23, 1903.

3 SHEETS—SHEET 1.



WITNESSES

A. Bickel.
F. P. Glue

INVENTOR

Wm. Goodjohn

By George H. Thompson
Atty.

No. 793,187.

PATENTED JUNE 27, 1905.

W. GOODJOHN.
WOODWORKING MACHINE.
APPLICATION FILED DEC. 23, 1903

3 SHEETS—SHEET 2.

Fig. 2.

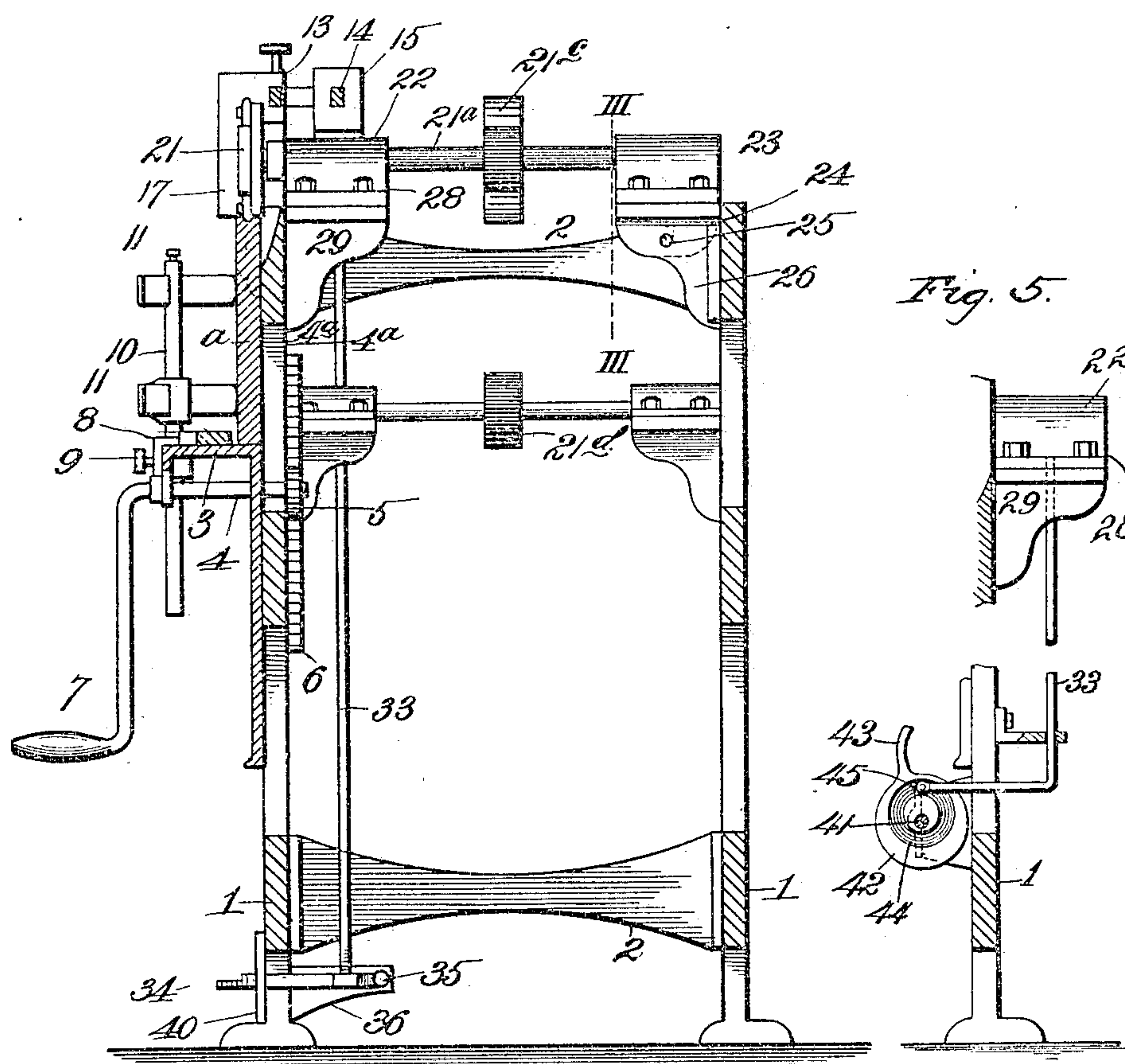
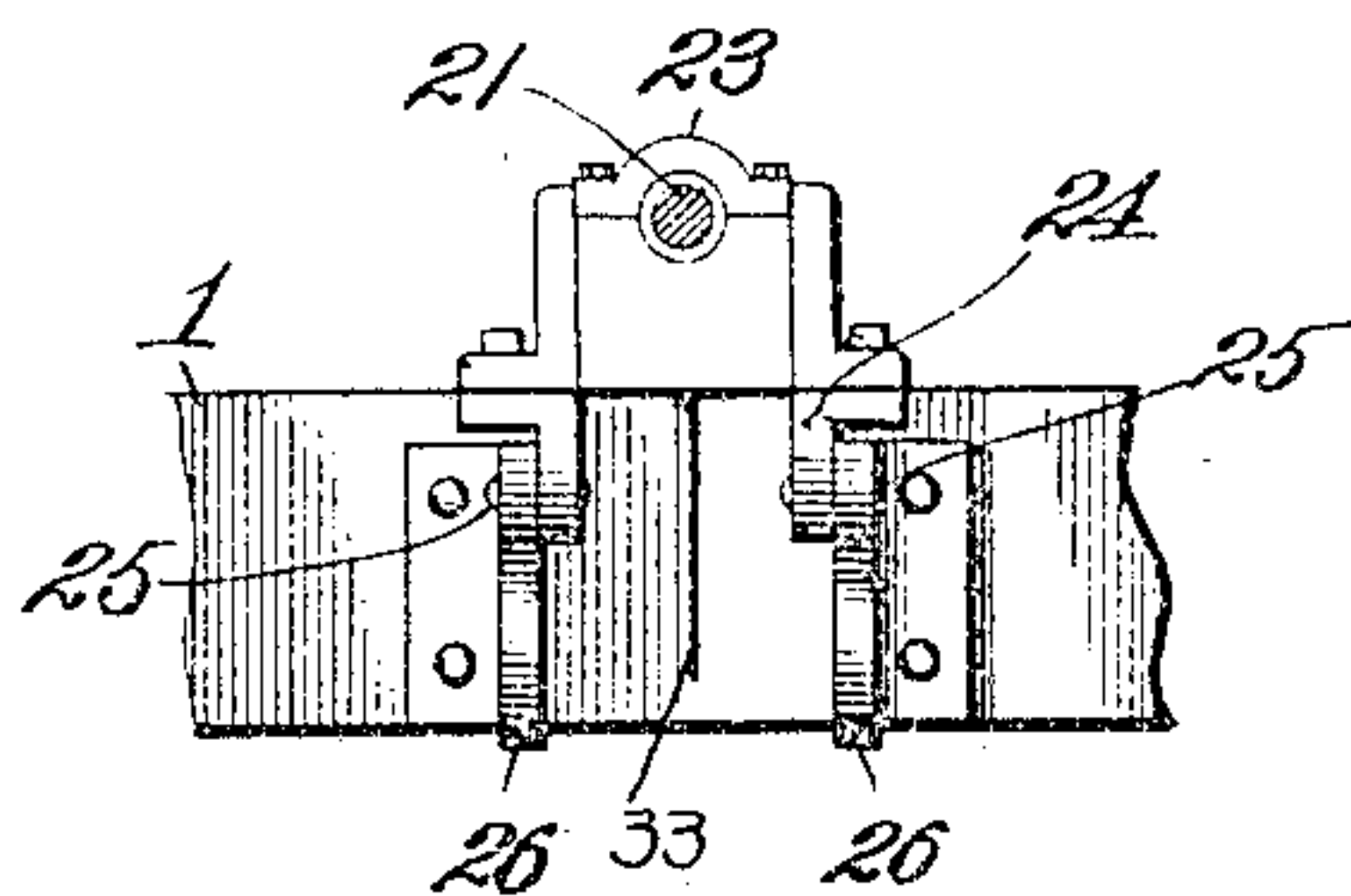


Fig. 3.



WITNESSES
A. Beckel.
F. R. Glaw.

INVENTOR.
Wm. Goodjohn

By George S. Thorpe
Atty.

No. 793,187.

PATENTED JUNE 27, 1905.

W. GOODJOHN.
WOODWORKING MACHINE.
APPLICATION FILED DEC. 23, 1903.

3 SHEETS—SHEET 3.

Fig. 4.

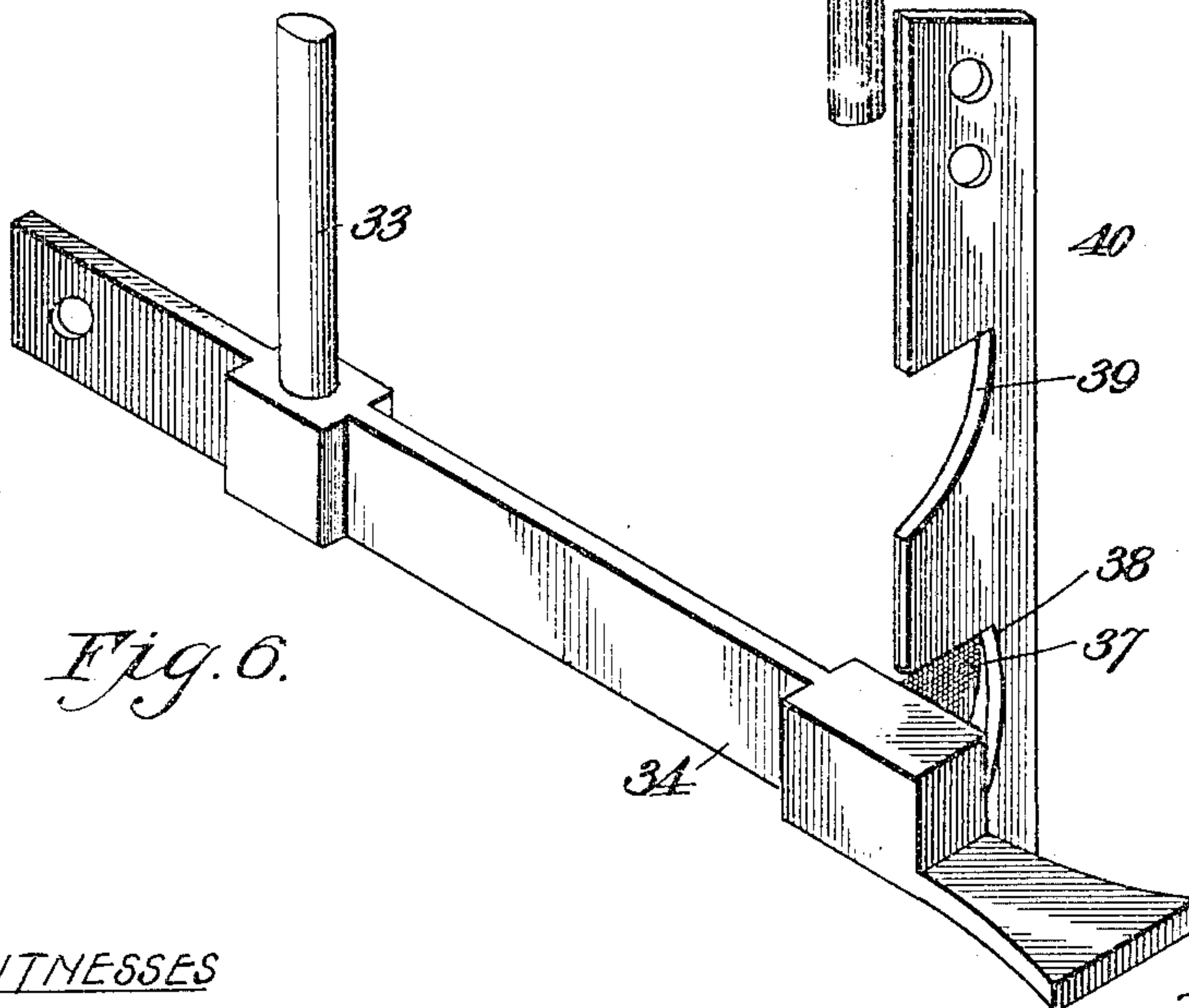
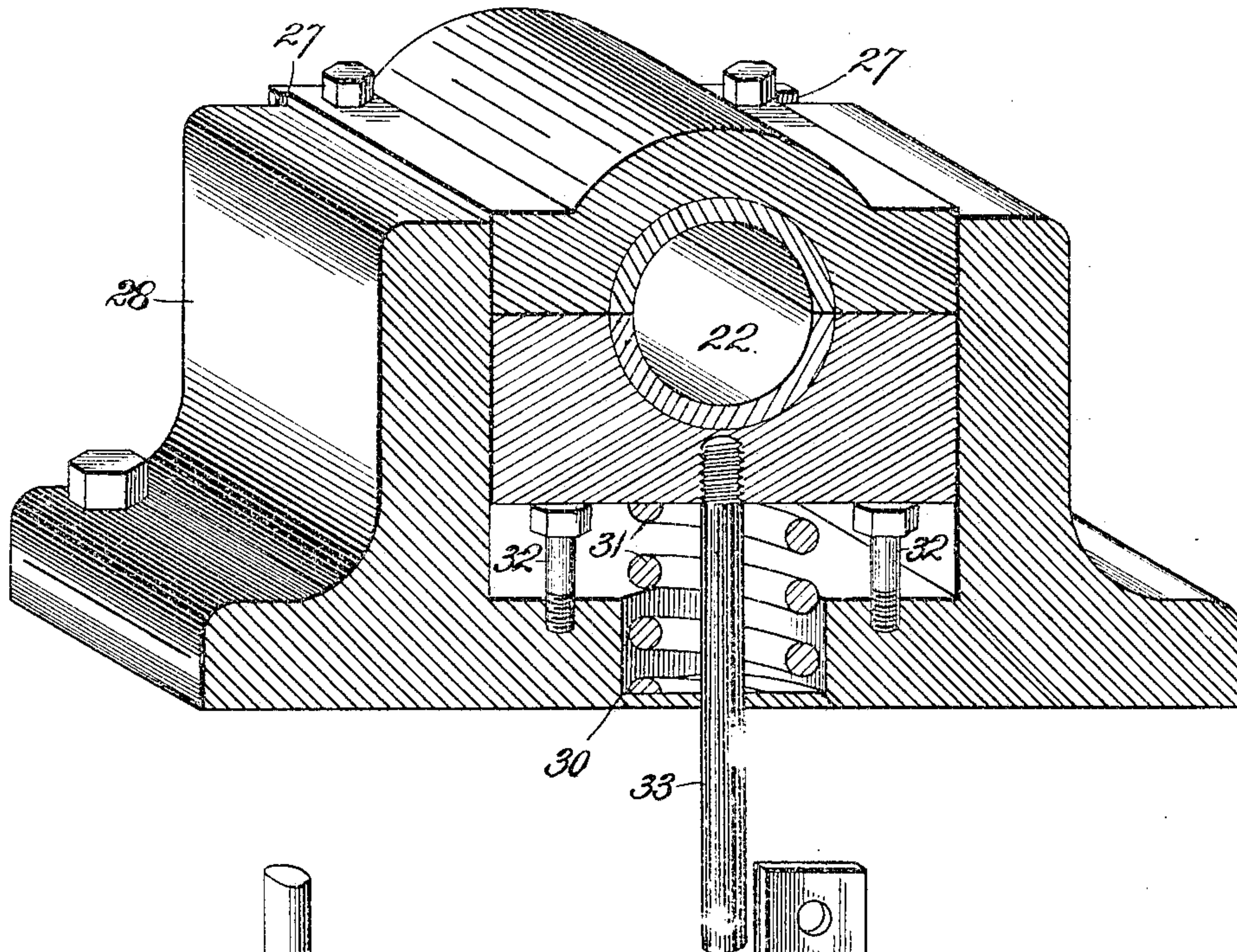


Fig. 6.

WITNESSES

A. Bickel
J. P. Glou.

INVENTOR
Wm. Goodjohn

By *George J. Thorpe* atty.

UNITED STATES PATENT OFFICE.

WILLIAM GOODJOHN, OF LEAVENWORTH, KANSAS.

WOODWORKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 793,187, dated June 27, 1905.

Application filed December 23, 1903. Serial No. 186,391.

To all whom it may concern:

Be it known that I, WILLIAM GOODJOHN, a citizen of the United States, residing at Leavenworth, in the county of Leavenworth and State of Kansas, have invented certain new and useful Improvements in Woodworking Machines, of which the following is a specification.

My invention relates to woodworking-machines; and my object is to produce a machine of this character by means of which two kinds or styles of work may be accomplished simultaneously or may be successively executed without changing the cutter-head knives.

My invention particularly relates to improvements in machines for carving or forming what is known to the trade as "sticking," such as bead and cove or ogee or other suitable styles determined by the forms of the cutters, which carving is on the edge of the stile of a door, for instance, and my invention is further designed to produce such carving either simultaneously and at two different points on the edge of the stile, or the cutters may operate independently of each other, one cutter performing one kind of work while the other cutter or cutters perform different styles.

With this object in view the invention consists in certain novel and peculiar features of construction and combinations of parts, as hereinafter described and claimed, and in order that the invention may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 is a side view of a portion of a machine embodying my invention. Fig. 2 is a vertical sectional view on the line II II of Fig. 1. Fig. 3 is a vertical sectional view on the dotted line III III of Fig. 2. Fig. 4 is a sectional perspective view of a spring-elevated bearing for the cutter-head shafts. Fig. 5 is a vertical sectional view of a portion of the machine-frame as equipped with a cam-lever connection for depressing and holding depressed the said bearing. Fig. 6 is a perspective view of a different type of mechanism for depressing and holding depressed said bearing, this last-named form being that shown in Figs. 1 and 2.

Before proceeding with a detailed descrip-

tion of the invention it is desirable to state that machines of the character to which this invention appertains are equipped with a single cutter-head which is rigid as regards vertical movement, and therefore depends entirely upon the vertically-adjustable table to hold the stock in position to be operated upon, and with this type of machine the use of the two cutter-heads would be superfluous, as they could accomplish only a single kind of work and could not be thrown in or out of engagement with the stock independently of each other. Where the cutter-heads are vertically and independently adjustable, one can be thrown out of or into engagement with the stock without affecting the position of the table or its relation with the stock or interrupting the operation of the other cutter-head. In my construction, furthermore, one of the cutter-heads is provided with different knives from the other, so that the work to be done determines which cutter-head shall be employed, as it is never necessary or desirable to have both cutter-heads in operation at the same time unless they are performing different styles of work.

Referring to the drawings in detail, where like reference characters designate corresponding parts in all the figures, 1 designates a pair of similar side bars or castings connected together by cross-bars 2, so as to constitute a rigid framework. A table 3, angular in cross-section, is held vertically slidable against the front side of the machine in the usual or any preferred manner (not shown) and carries a shaft 4, projecting through a vertical slot 4^a in the frame and equipped with a pinion 5, engaging a vertical rack 6, secured to the frame, the opposite end of said shaft being provided with a crank-handle 7. Devices for securing the table at the desired point of adjustment are also employed; but as such devices are in common use and form no part of this invention they are not shown or described.

The table is provided with sleeves 8, having set-screws 9, which screws impinge upon and hold at the desired point of adjustment vertical bars 10, received in the sleeves and carrying obliquely-extending springs 11, the free

ends of which springs are adapted to engage with the stock *a* and hold it reliably against the frame, as well as affording a slight frictional resistance to its longitudinal movement.

5 Brackets 12 are secured upon the front side of the frame, the brackets having curved arms 13 pivoted at one end thereto, the outer ends of the arms carrying the offset bars 14, on which are mounted the adjustable weights 15. 10 Intermediate the arms 13 and the weights 15 the bars are connected with blocks 16, equipped with pressure-bars 17, which engage the upper edge of the stock, the weights retaining the blocks in depressed position to prevent 15 the cutter-heads, hereinafter described, from splitting or tearing the wood and to retain the stock firmly in position.

Contiguous to the left-hand bracket 12 is a retaining-bar 18 to fit on the finished edge of 20 the stock to assist in holding the latter down in position, said bar being vertically adjustable by means of the screw 18^a, to which the rod is attached, and to the left of said bar 18 the machine is equipped with a spring-bar 19 25 for the purpose of holding the rear end of the stock down as it emerges from the machine in a finished state, the spring-bar 19 being retained in adjusted position by means of the set-screw 50, which engages the pin 19^a, the 30 latter journaled in a standard 19' and carrying the spring-bar.

A suitable distance forward of the right-hand bracket 12 is a driven feed-roller 20 for engagement with the upper edge of the stock 35 to force it through the machine, and just to the right of spring 19 is a similar wheel 20^a to continue to move the stock through the machine at the same speed after it has passed from engagement with wheel 20, wheel 20^a, of 40 course, running in a groove of the stock, so as not to mar the finish thereof.

Between each bracket 12 and its contiguous pressure-bar 17 is a cutter-head 21, said cutter-heads being of precisely the same construction, if desired, as others now in common use. 45 It is to be understood, however, that the cutter-heads will be equipped with different knives—that is to say, one may be equipped with, for instance, knives for ogee-carving and 50 the other with knives for sash-carving—which knives, of course, are of the customary type now in use. Each of these cutter-heads is secured rigidly on a shaft 21^a, extending transversely of the machine and journaled in a bearing-box 22 at one end and at its opposite end 55 in a bearing-box 23, the last-named bearing-box being provided with depending flanges 24, pivoted, as at 25, to brackets 26, secured to the machine-frame, the arrangement being 60 such that the shaft may swing in a vertical plane from the pivotal point 25, said pivotal point being at the opposite end of the shaft from the cutter-head, which latter occupies a position for engagement with the upper edge 65 of the stock *a*, as shown clearly in Fig. 2.

The bearing 22 of the type shown in Fig. 4 or of any other suitable type is provided with shoulders 27 at its ends, which loosely embrace the vertical arms of the guide-bracket 28, bolted to bracket 29 of the machine-frame, 70 the bearing 22 having the grooves or recesses formed between the shoulders 27 wider than the arms of said bracket 28 in order to accommodate the very slight angle at which the shaft extends when the cutter-head occupies its ele- 75 vated or inoperative position.

30 is a recess in the base of bracket 28, in which recess is seated an expansive spring 31, the ends of which bear against the bottom of the recess and the bearing, respectively, for 80 the purpose of holding the bearing at its highest point of adjustment, the downward movement of the bearing being limited by adjustable stop pins or bolts 32, mounted in the base of said bracket. Extending centrally through 85 bracket 28 and said spring and screwed, as shown, or otherwise secured to bearing 22 is an upright spring-rod 33, the lower end of said rod in the construction shown in Figs. 1, 2, and 6 being secured to a foot-lever 34, 90 pivoted, as at 35, to a bracket 36 on the machine-frame, said lever also being provided with a laterally-projecting lug 37 for engagement with a notch 38 or notch 39 of a bar 40, secured also to the machine-frame, this lug 95 and bar constituting a locking mechanism to lock the bearing in its depressed position or in its elevated position, accordingly as the lug 37 engages notch 38 or 39.

Another means of lowering the bearing and 100 securing it in such position is constructed as follows: 41 is a shaft journaled in the machine-frame in any suitable manner and provided with a collar 42, having a handle 43 to be operated by hand or foot. Said collar is 105 provided with a cam-groove 44, engaged by a roller 45, secured to the lower end of rod 33, the arrangement being such that one-half of a revolution of the collar will lower the bearing, and consequently the cutter-head, the 110 required distance. With this construction the rod is automatically locked from upward movement after each depression by the engagement of the roller 45 with the cam-groove vertically below the axis of the collar, as will 115 be readily understood.

The operation of the machine in general is precisely the same as in all machines of this class—that is to say, an operator at the front 120 of the machine places the stock to be operated upon on the table and against the face of the frame and pushes the stock forward until it is engaged by the automatic feed-wheel 20, driven in any suitable manner, the crank-arm 7 being first turned, of course, to vertically 125 adjust the table to accommodate the width of such stock. If only ogee-carving is to be produced, the cutter-head, provided with the proper knives, is lowered and locked in such position, the other cutter-head occupying its 130

elevated or inoperative position and locked in such position, if desired, though the spring will ordinarily be all that is necessary to hold it elevated. The shafts 21^a are driven through the medium of a belt 21^b engaging their pulleys 21^c, a suitably-supported idler 21^d being employed to deflect the belt, so as to give a longer bearing on said pulleys. Should it be necessary for the operator to produce sash-carving instead of the ogee, he throws the formerly-operative cutter-head to inoperative position and the other cutter-head to operative position, it being assumed, of course, that the last-named cutter-head is equipped with the proper knives for the work in hand. Should the operator desire to produce the two different styles of carving at the same time, but at different points along the length of the stock, it can be accomplished by throwing the cutter-heads into and out of operative position at the proper time, the person in control of course determining this question.

From the above description it will be apparent that I have produced a machine of the character described which possesses the features of advantage enumerated as desirable, and it is obvious that it is susceptible of variation in its form, proportion, detail construction, and organization without departing from its spirit and scope or sacrificing any of its advantages.

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

1. In a woodworking-machine, the combination with a cutter-shaft pivotally secured at one end, of a journal-bearing located near the opposite end of the shaft and in which the shaft is received, stationary guides in which the journal-bearing is located, means tending to retain the journal-bearing away from the work, adjustable means for limiting the movement of the journal-bearings in one direction, a rod connected directly with the journal-box and a manually-operated cam-grooved wheel actuated by the operator and with which the rod engages to move the journal-bearing against the tendency of the first-named means and toward the work.

2. The combination with a cutter-shaft pivotally journaled at one end, of a cutter carried by the outer end of the shaft, a guide-bracket having a pair of vertical arms and a

base connecting the arms, and provided with a recess in its upper face, a spiral spring seated at its lower end in the recess in the base, a journal-box for the shaft received and guided within the bracket and bearing against the upper end of the spring, and means for moving the journal-box to move the cutter to the stock and compress the spring.

3. The combination with a cutter-shaft pivotally journaled at one end, of a cutter carried at the other end of the shaft, a guide-bracket having a pair of upstanding arms and a base provided with a recess, the base connecting the arms, a spiral spring seated in the recess in the base, a journal-box guided between the arms of the bracket and bearing against the spring, means for moving the journal-box to move the cutter to the stock and compress the spring, and adjustable stops secured to the base between the arms.

4. The combination with a cutter-shaft pivotally journaled at one end, of a cutter carried at the other end of the shaft, a guide-bracket having a pair of arms and a base, provided with a recess, connecting the ends of the arms, a spring seated in the recess in the base, a journal-box received between and guided by the arms of the bracket and bearing against the spring, an upright rod extending through the bracket and spring, and connected to the journal-box, and means for reciprocating the rod to move the cutter toward the work and compress the spring.

5. The combination with a cutter-shaft pivotally journaled at one end, of a cutter carried by the shaft, a guide-bracket consisting of a pair of arms and a base, provided with a recess, connecting the ends of the arms, a spring seated in the recess in the base, a journal-box received between and guided by the arms of the bracket, the box bearing against the spring, an upright rod extending through the bracket and spring, and connected to the journal-box, and a collar provided with a cam-groove and a handle, the collar being rotatably supported to bring the cutter to the work and compress the spring.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM GOODJOHN.

Witnesses:

AMOS GOODJOHN,
G. Y. THORPE.