

No. 891,308.

PATENTED JUNE 23, 1908.

E. P. WEBSTER.
WOOD TRIMMING MACHINE.

APPLICATION FILED OCT. 16, 1907.

2 SHEETS—SHEET 1.

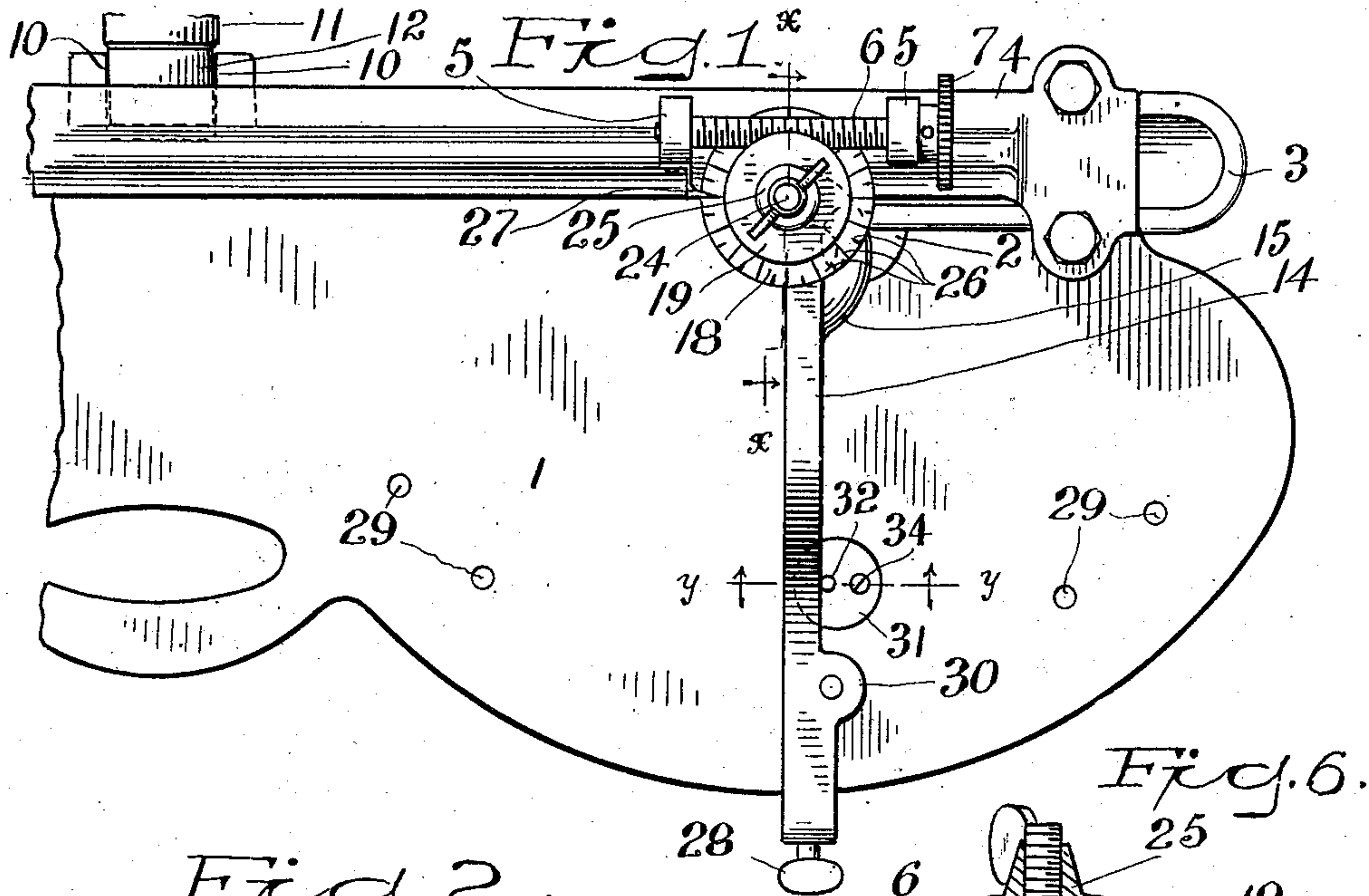


Fig. 2:

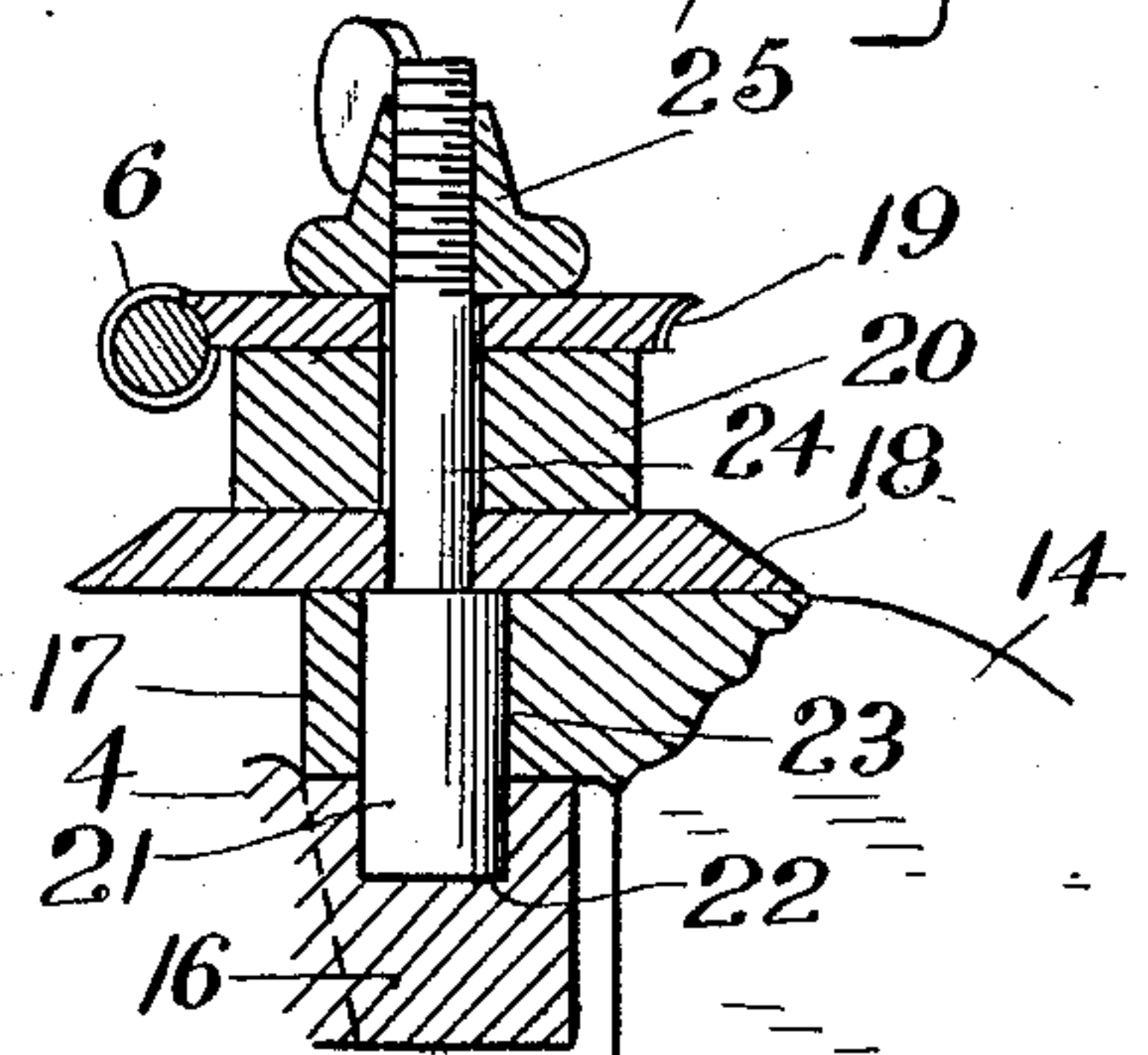
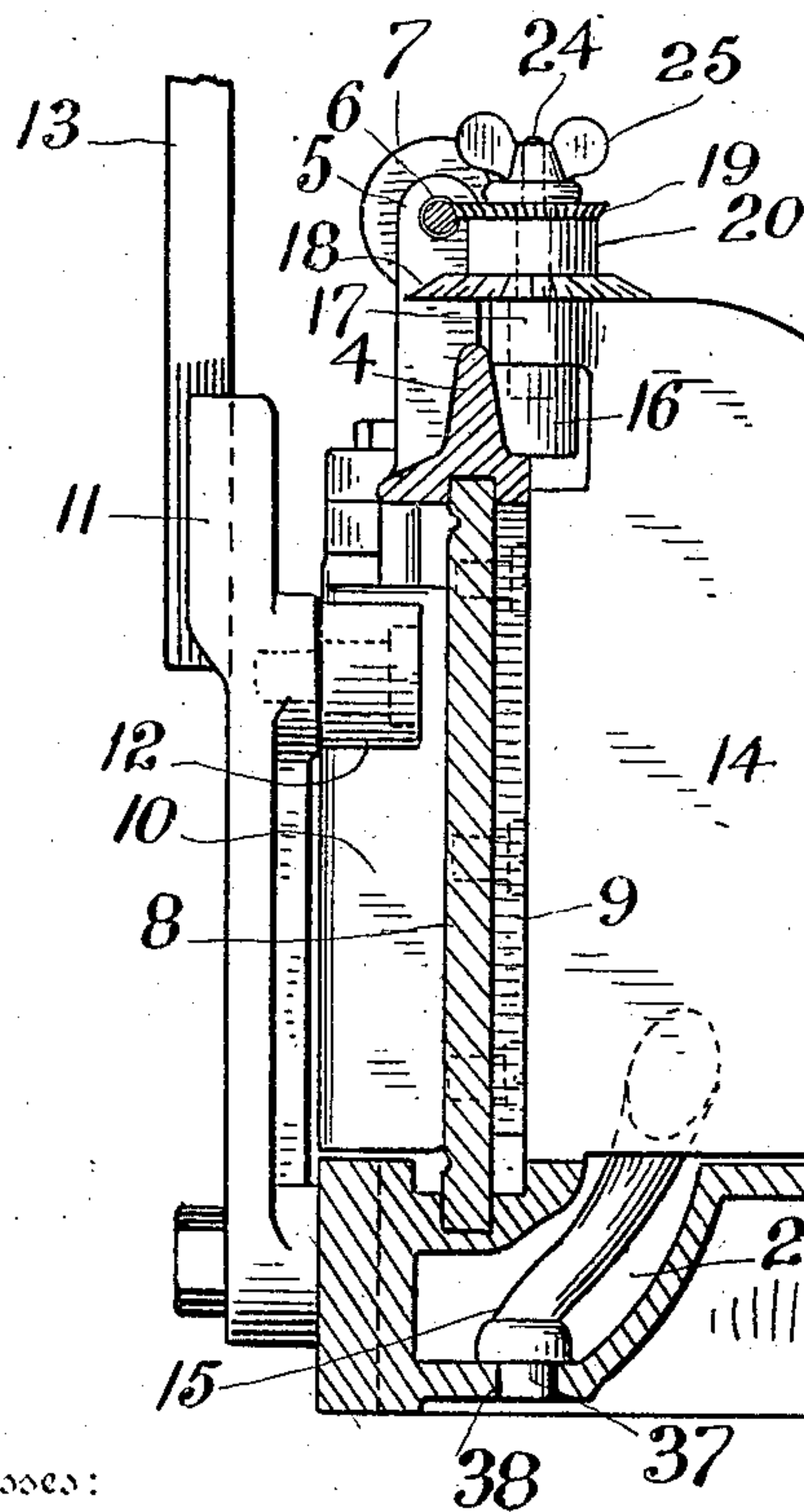
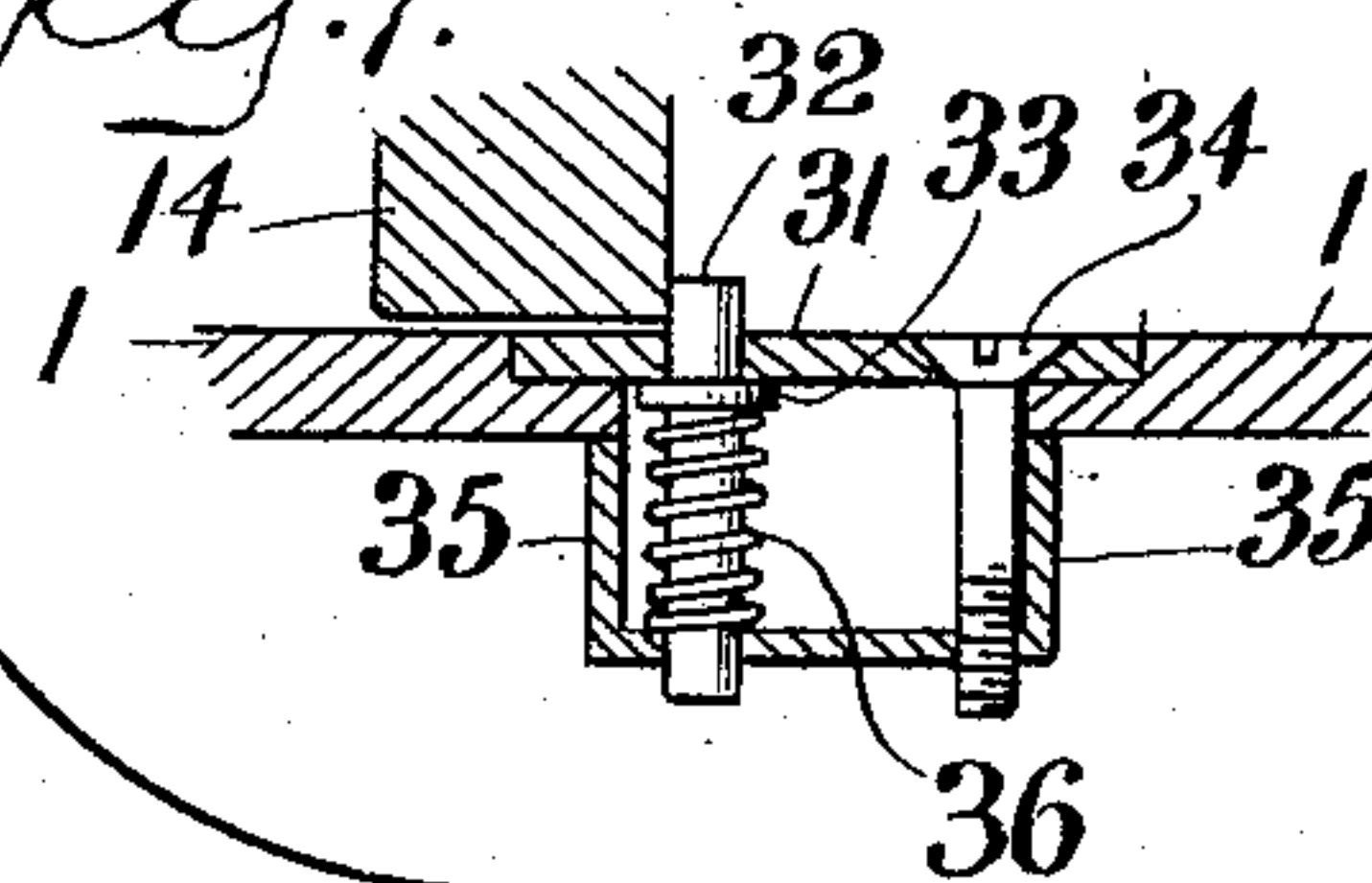


Fig. 7.



Witnesses:
H. A. Lamb.
M. J. Longden

Inventor
E. P. Webster
By Attorney
J. M. Smith

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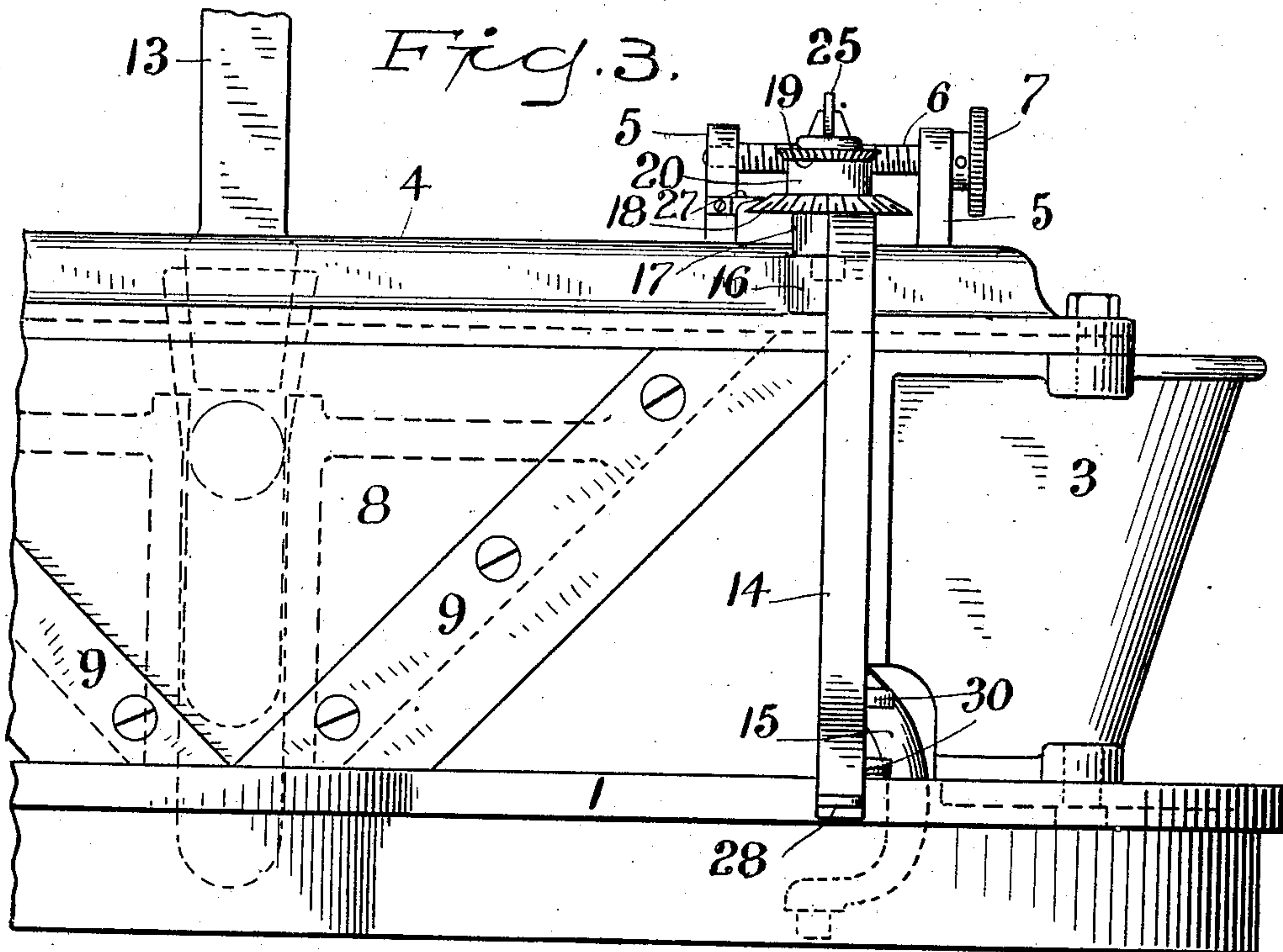


Fig. 5.

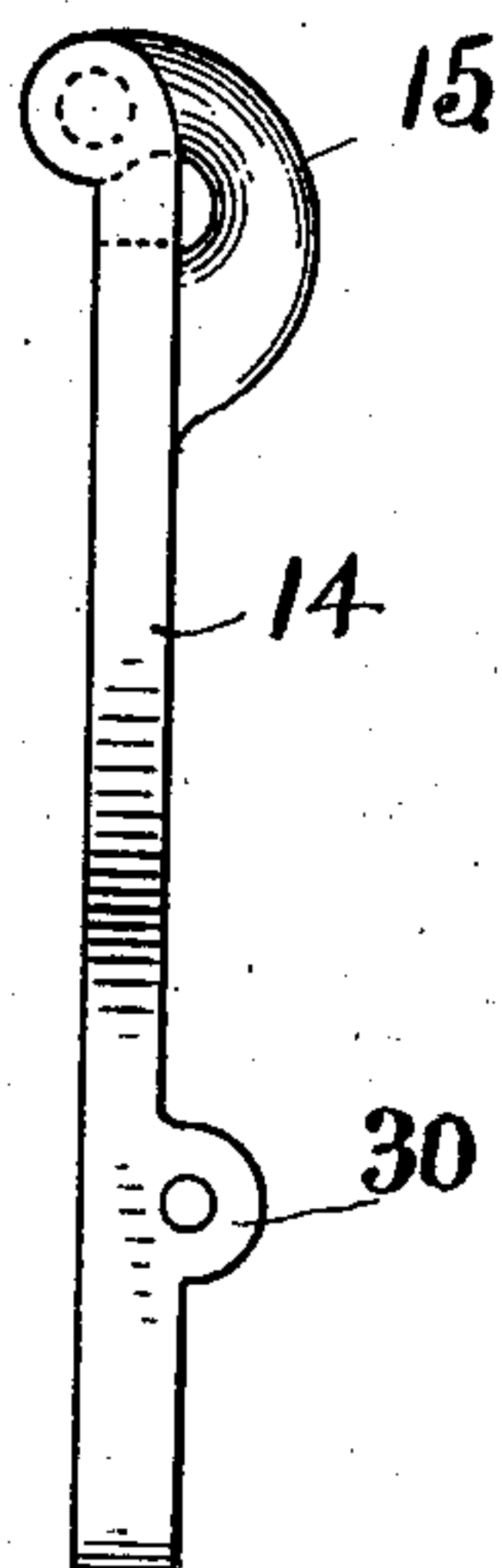
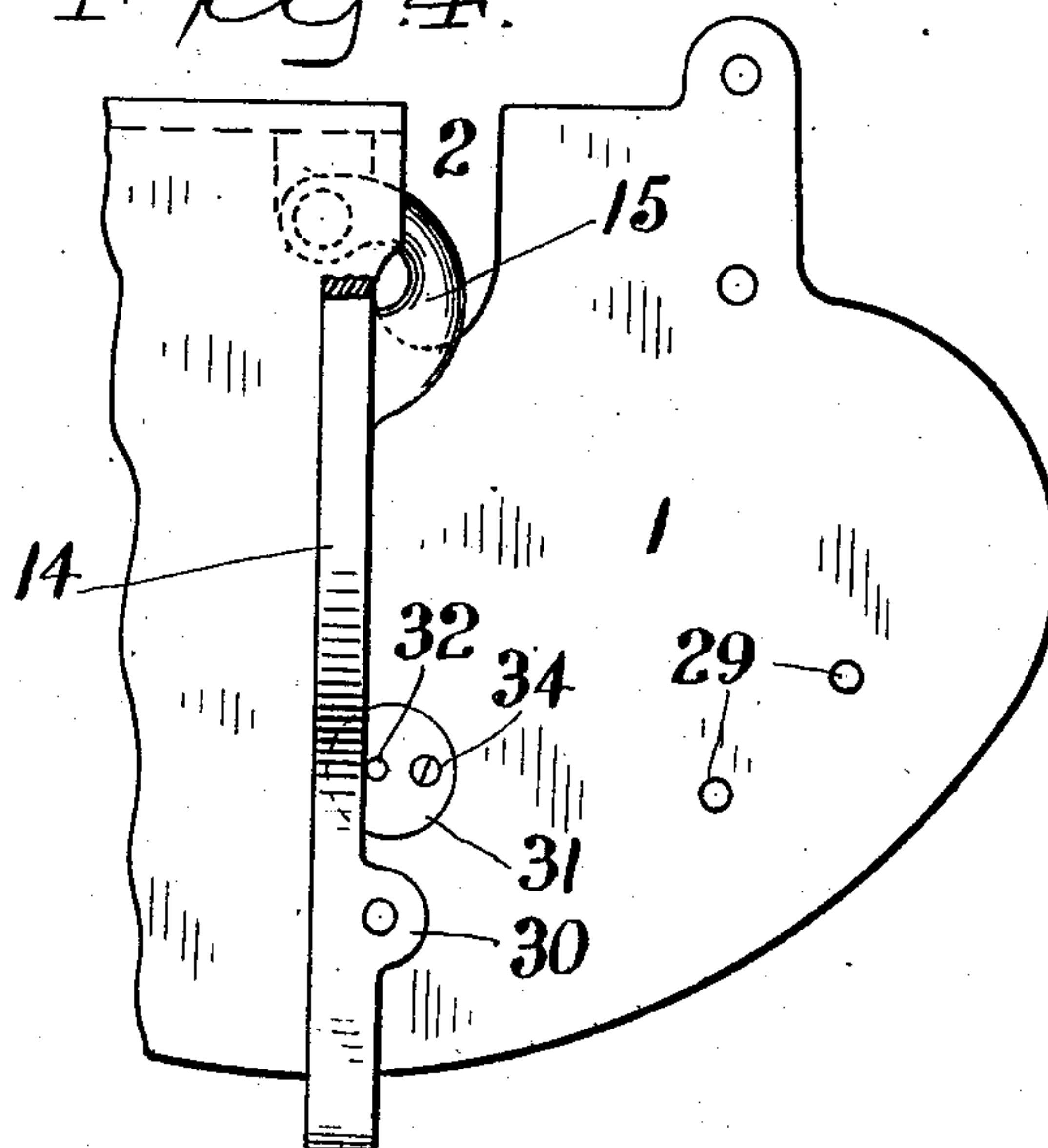


Fig. 4.



Witnesses:

H. C. F. Lamb.
M. J. Longden

Inventor

E. P. Webster

By

Attorney

J. M. Smith

UNITED STATES PATENT OFFICE.

EDGAR P. WEBSTER, OF BRIDGEPORT, CONNECTICUT.

WOOD-TRIMMING MACHINE.

No. 891,308.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed October 16, 1907. Serial No. 397,693.

To all whom it may concern:

Be it known that I, EDGAR P. WEBSTER, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Wood-Trimming Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain improvements in wood trimming machines, and consists of certain arrangements and combinations of parts such as will be hereinafter fully explained and then particularly pointed out in the claims which conclude this application. Machines of this description are made so that the knives will cut in opposite directions, and the combination and arrangement of the parts on one side of the machine are the duplicate of the combination and arrangement of parts on the other side of the machine, and therefore in the drawing I will show only one side of the machine as constructed in accordance with my improvement.

In the accompanying drawing Figure 1 is a plan view of a wood trimming machine constructed in accordance with my improvement—Fig. 2 a cross sectional elevation of the same—Fig. 3 a front elevation—Fig. 4 a detail broken plan of the bed of the machine and the gage bar showing particularly the way in which said bed is cut away to accommodate the peculiar journaling at the bottom of said bar—Fig. 5 a detail top view of the gage-bar—Fig. 6 a detail section, partly broken, at the line *x, x*, of Fig. 1, and Fig. 7 a detail broken sectional elevation at the line *y, y*, of Fig. 1.

Similar numbers of reference denote like parts in the several figures of the drawing.

1 is the bed plate which has an opening 2 cut in its rear edge for the purpose presently to be explained, and 3 is a vertically disposed guard which is bolted to the bed plate at the rear thereof, one of these guards being of course at each end of said bed plate. 4 is a back-rail which bridges the space between said guards and is bolted at each end directly to the same, and 5 are uprights rising from said rail within which uprights is journaled a screw 6 to one end of which latter is secured a knurled thumb disk 7, for the purpose presently to be explained.

8 is the knife carriage which is adapted at its upper and lower edges to slide in suitable ways provided in the top rail and bed plate, and 9 are the knives secured to said carriage, and in the rear central portion of the knife carriage a vertically disposed way 10 is provided.

11 is the operating lever which is pivoted at its lower end to the rear edge of the bed plate, which lever carries a friction roller 12 that normally extends within said way 10. Within the upper end of this lever a suitable handle 13 is affixed so that it will be readily understood that when said handle is grasped and the lever swung on its pivotal point the knife carriage and knives will be operated.

14 is the gage-bar of any suitable shape, the rear lower edge of this bar being provided with a curved downwardly extending leg which passes through the opening 2, the bottom extremity of said leg having a reduced circular stud 37 which seats within a circular recess 38 in the bed plate and affords the lower journal for the gage bar.

16 is a boss extending from the back rail 4, and 17 is likewise a boss integral with the rear top portion of the gage bar. 18 is a beveled disk which is rigidly secured to the top of the gage bar immediately above the boss 17, and 19 is a worm wheel in mesh with the screw 6 and provided with a hub 20 which seats upon the upper face of said disk.

21 is a round stud seated within a recess 22 in the boss 16 and extending loosely up through a perforation 23 in the boss 17, thereby affording the upper journal of the gage bar. From this stud a reduced concentric pin 24 extends upwardly through corresponding perforations in the disk 18, hub 20 and worm wheel 19, and a thumb nut 25 is driven on the threaded end of this pin whereby said worm wheel, hub, disk and boss 17 may be bound together so as to revolve in harmony for the purpose presently to be explained.

26 is a scale laid out on the beveled face of the disk 18, and 27 is an indicating pointer secured to any stationary part, as for instance, one of the uprights 5, with which pointer said scale registers. This scale is marked off in any suitable and approved manner indicative of the degrees at which the trimming operations may be performed.

28 is a set screw driven through the front edge of the gage bar against the front edge of the bed plate, whereby said bar may be se-

curely held in any position to which it has been adjusted. By providing perforations 29 at predetermined locations in the bed plate and also providing perforated lugs 30 which extend laterally from the gage bar, the latter may be swung until the perforations in the lugs register with one of the perforations in the bed plate, and any suitable pin inserted through these coinciding perforations so as to hold the gage bar firmly in position, which construction and arrangement is not new in machines of this description and merely provides for certain angular adjustments of the gage bar that are most commonly used.

It is very necessary that there should be an accurate rectangular adjustment of the gage bar on which adjustment all other adjustments must depend, but frequently inaccuracies in the castings militate against such adjustment and make it extremely difficult to arrive at the latter. I have provided means for overcoming this difficulty, and although I base no claim for any novelty of the same since it has been in public use for several years, I will, nevertheless, describe it briefly, calling particular attention to Fig. 7. The bed plate is bored and counterbored so as to provide a counterbored opening through said plate, and within the counterbored portion is seated a disk 31 which is flush with the surface of the bed plate. 32 is a pin extending loosely through the disk 31 and having a shoulder 33 immediately beneath said plate. 34 is a screw which passes through the disk at a point substantially diametrically opposite the pin 32. 35 is a cup whose edge abuts against the bottom of the bed plate, and through the bottom of this cup the pin 32 extends loosely, while the lower end of the screw 34 engages through a threaded perforation in the bottom of the cup. 36 is a coil spring around the pin 32 and confined between the shoulder 33 and the bottom of the cup, the pin 32 being normally projected above the surface of the bed plate by the action of said spring. This pin serves as a stop against which the gage bar abuts when in accurate rectangular adjustment, and the screw binds the disk to the bed plate in order to keep the pin in proper position. In order to obtain the rectangular adjustment of the gage bar the screw 34 is loosened thereby permitting the disk to be turned until, by experiment in connection with the gage-bar, the correct position of the pin 32 has been ascertained, and then the screw is tightened to make the adjustment permanent. Frequently it becomes necessary to swing the gage bar beyond the pin 32, and the latter is then merely depressed and the bar swung to the desired adjustment while the spring 36 will return the pin to normal position.

In performing work which necessitates the frequent adjustment of the gage bar, the thumb nut 25 is loosened so that said bar

may quickly be swung to any desired position and held therein by means of the set screw 28, and this manipulation of the gage bar particularly obtains in the instance of trimming operations that do not require nicety; but for work in which great accuracy in the adjustment of the gage bar is necessary, the thumb nut is tightened against the wheel 19 thereby binding the latter and its hub 20 firmly to the disk 18, and the disk 7 is then operated to cause the gage bar to gradually swing to the particular angular adjustment desired, this result being accurately determined by the registration of the scale on the wheel 19 with the pointer 27, so that it will be clear that, in addition to the ordinary adjustments, I have provided a micrometer adjustment which greatly enhances the value of my improvement.

The journaling of the gage bar constitutes a feature of my invention in that the bar is positively pivoted and is swung independent of the front edge of the bed plate and without the aid of guide slots or springs. Also, I desire to call attention to the fact that, by extending the curved leg from the lower rear edge of the gage bar through the bed plate and seating said leg within a recess in said plate, I have provided a lower journal to said bar which does not in the least interfere with the knife carriage or knives. Moreover, the gage bar can readily be removed by merely lifting it so as to raise the studs 21, 37, so that they will clear the respective recesses 22, 38.

The guards at the ends of the machine provide housings into which the knives pass after the trimming operations, thereby greatly diminishing the danger of injury to the operator by careless handling of the machine.

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

1. The combination of the bed plate having an opening extending into its rear edge, the back rail supported in position above said plate, the gage bar pivotally supported at its upper rear edge by said rail and having a curved leg extending downwardly from the lower rear edge through said opening and pivotally supported within said bed plate, the knife carriage slidably arranged between said rail and plate, the knives secured to said carriage, and the lever pivoted to said plate and operatively connected with said carriage.

2. The combination of the bed plate, the vertically disposed curved guards secured to the opposite rear ends of said plate, the back-rail bridging the space between said guards and fastened upon the latter, the carriage slidably arranged between said rail and plate, the knives secured to said carriage, and means for operating the latter.

3. The combination of the bed plate, the back-rail supported in position above the rear of said plate, the carriage adapted to

slide in ways in said rail and plate and having in its rear face a vertically disposed way, the knives secured to said carriage, and the lever pivoted at its lower end to the rear of the bed plate and carrying a friction roller which extends within said way in the rear face of the carriage.

4. The combination of the bed plate, the back-rail supported in position above the rear of said plate, the gage-bar journaled upon said plate and rail so as to be capable of independent swinging movements, the graduated disk rigid with said bar and concentric with the upper journal thereof, the worm wheel journaled concentric with said disk and resting by gravity thereon, the screw supported in suitable bearings and meshing with said worm wheel, the thumb disk rigid on one end of said screw, and the thumb nut above said worm wheel and driven on the threaded end of the journal that is common

to said gage-bar and worm wheel, whereby said bar and wheel may be bound together and operated in harmony by the manipulation of said thumb disk.

5. The combination of the bed plate having an opening extending into its rear edge, the back-rail supported in position above the rear edge of said plate, and the gage bar having upper and lower journal bearings at its rear edge and respectively within said rail and through said opening within said plate, whereby said gage bar is capable of swinging movements across the face of said plate and may be lifted clear of its bearings and re- moved.

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

EDGAR P. WEBSTER.

Witnesses:

F. W. SMITH, Jr.,
M. T. LONGDEN.