

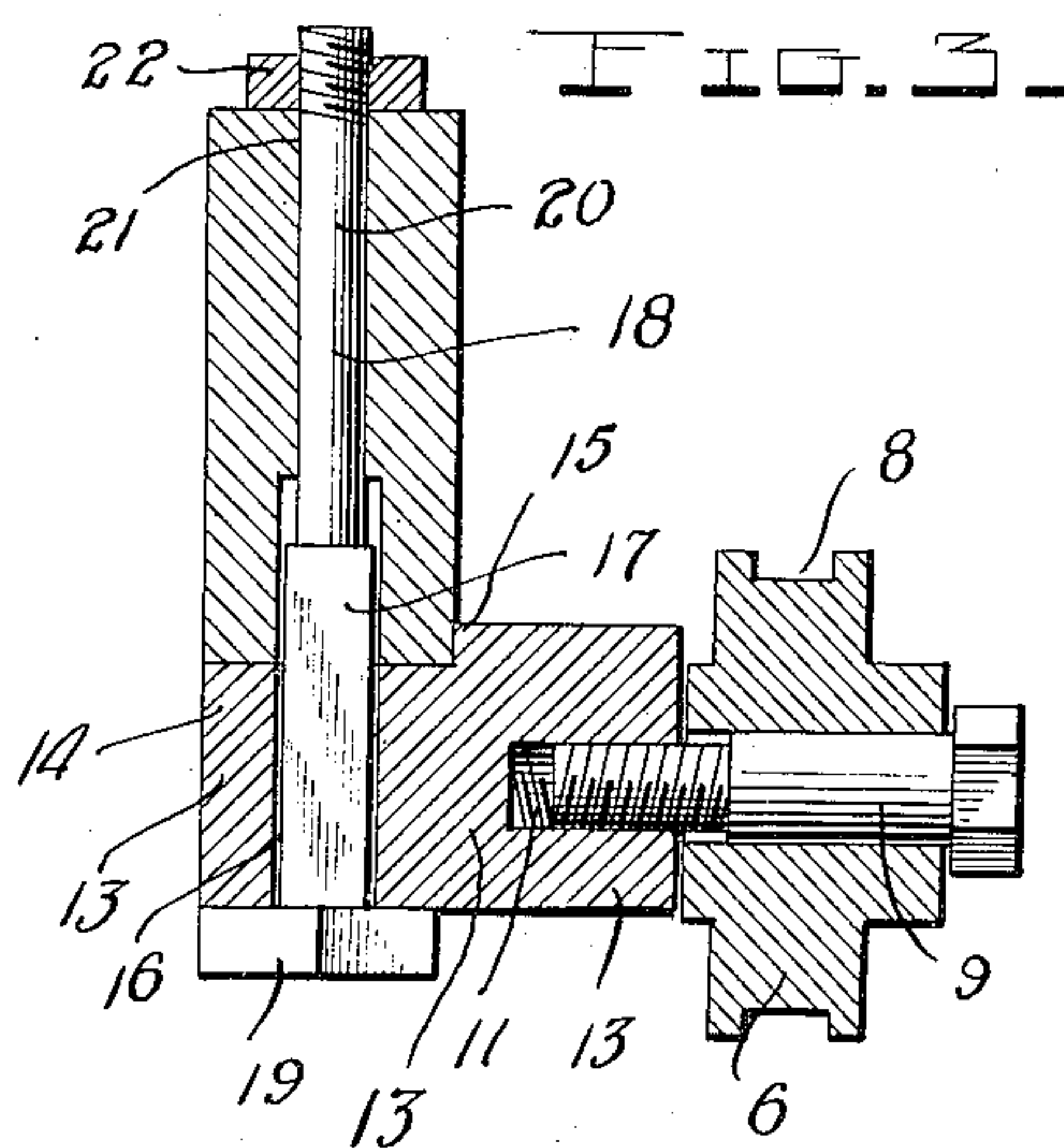
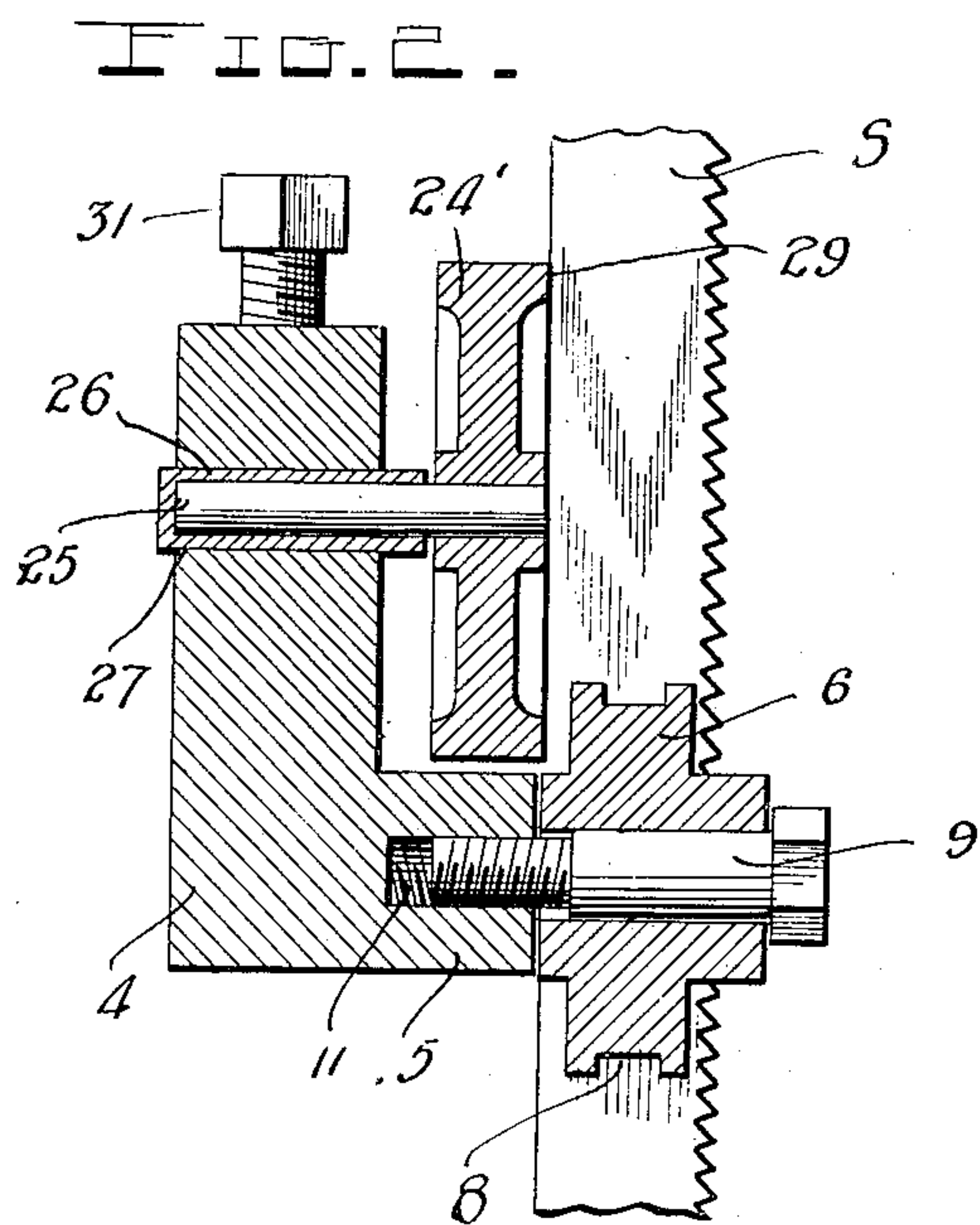
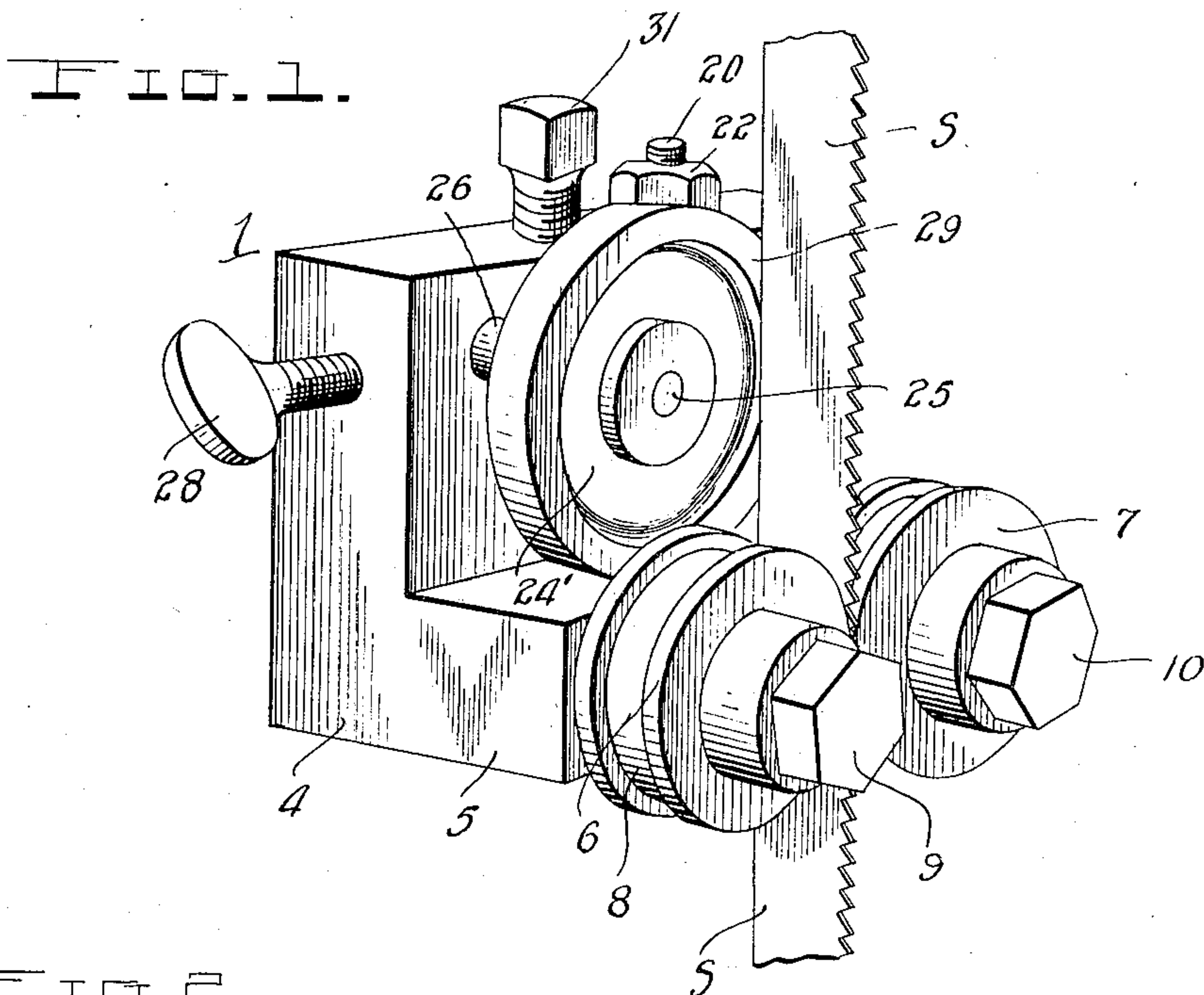
No. 876,816.

PATENTED JAN. 14, 1908.

E. C. LIPPMANN & R. MCKINNEY.
ROLLER GUIDE FOR BAND SAWS.

APPLICATION FILED JULY 12, 1907.

2 SHEETS—SHEET 1.



Witnesses

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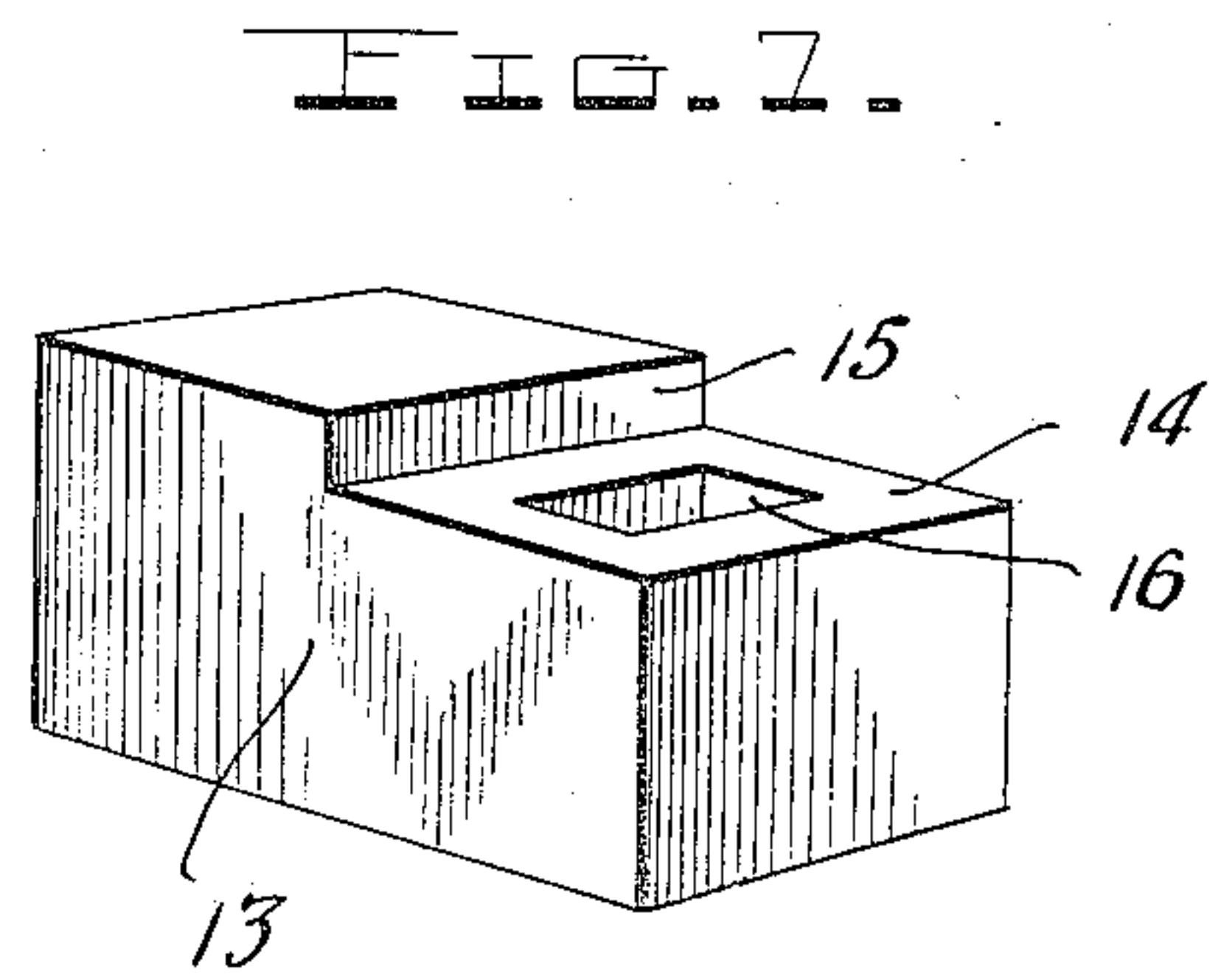
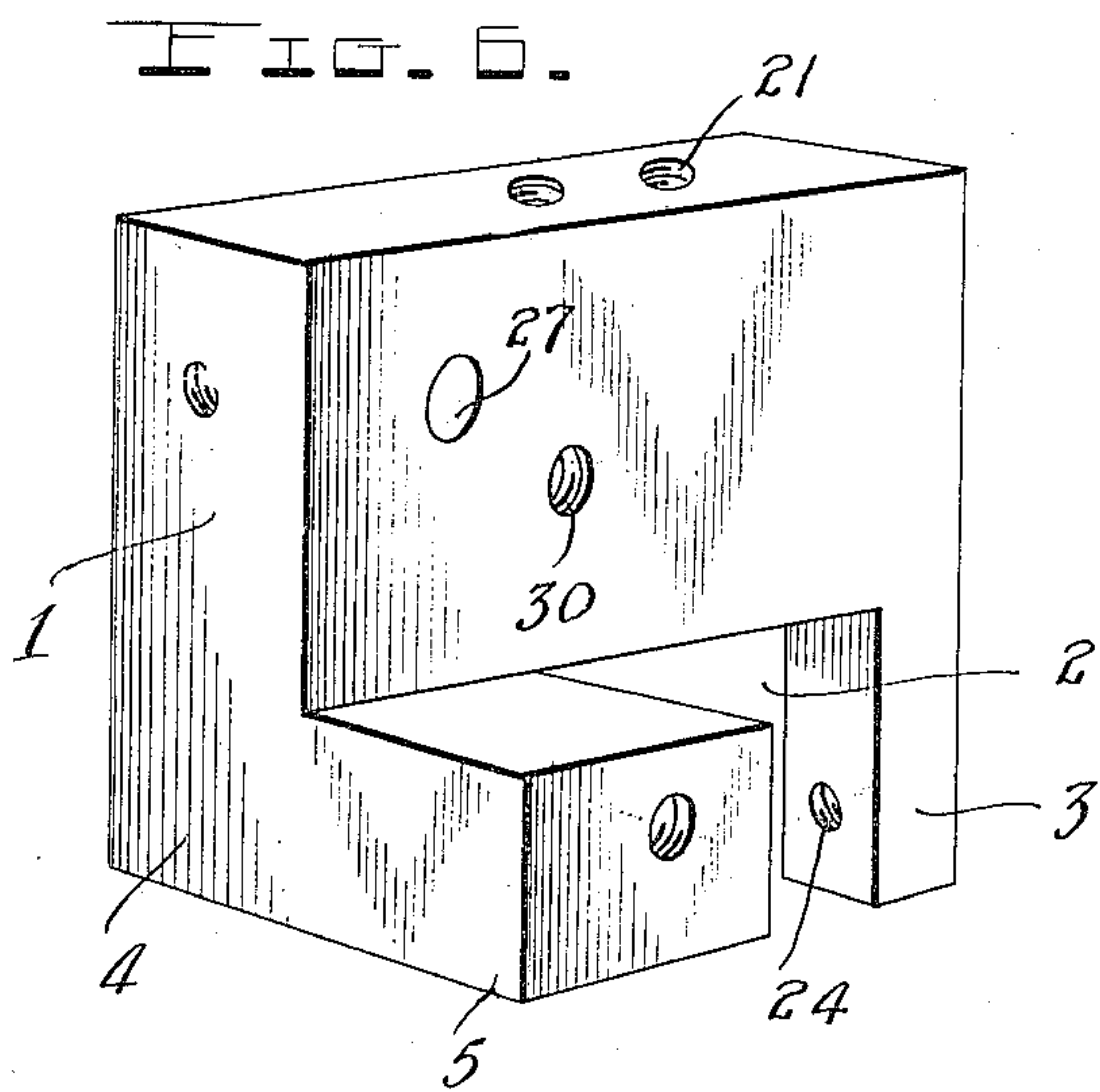
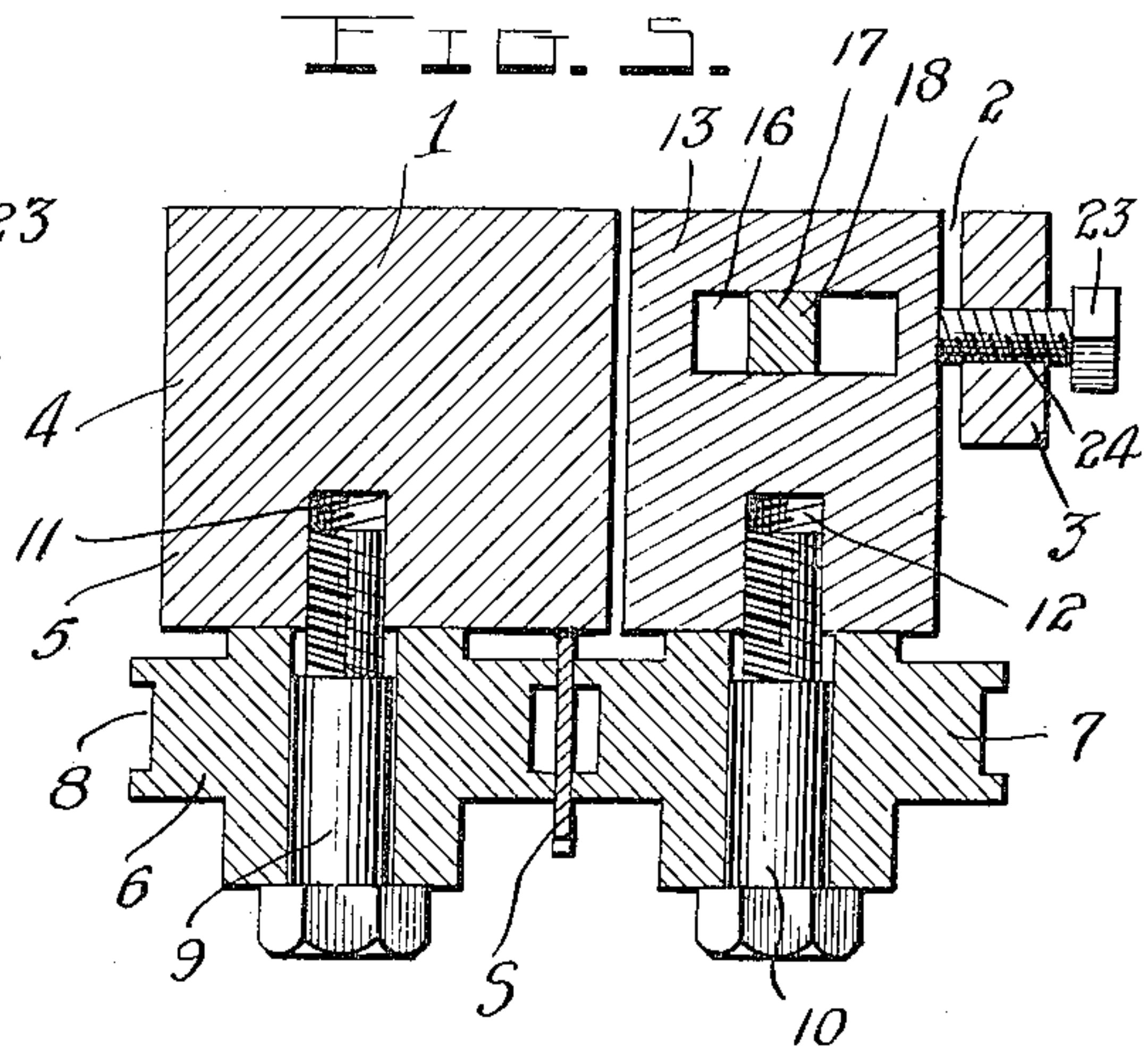
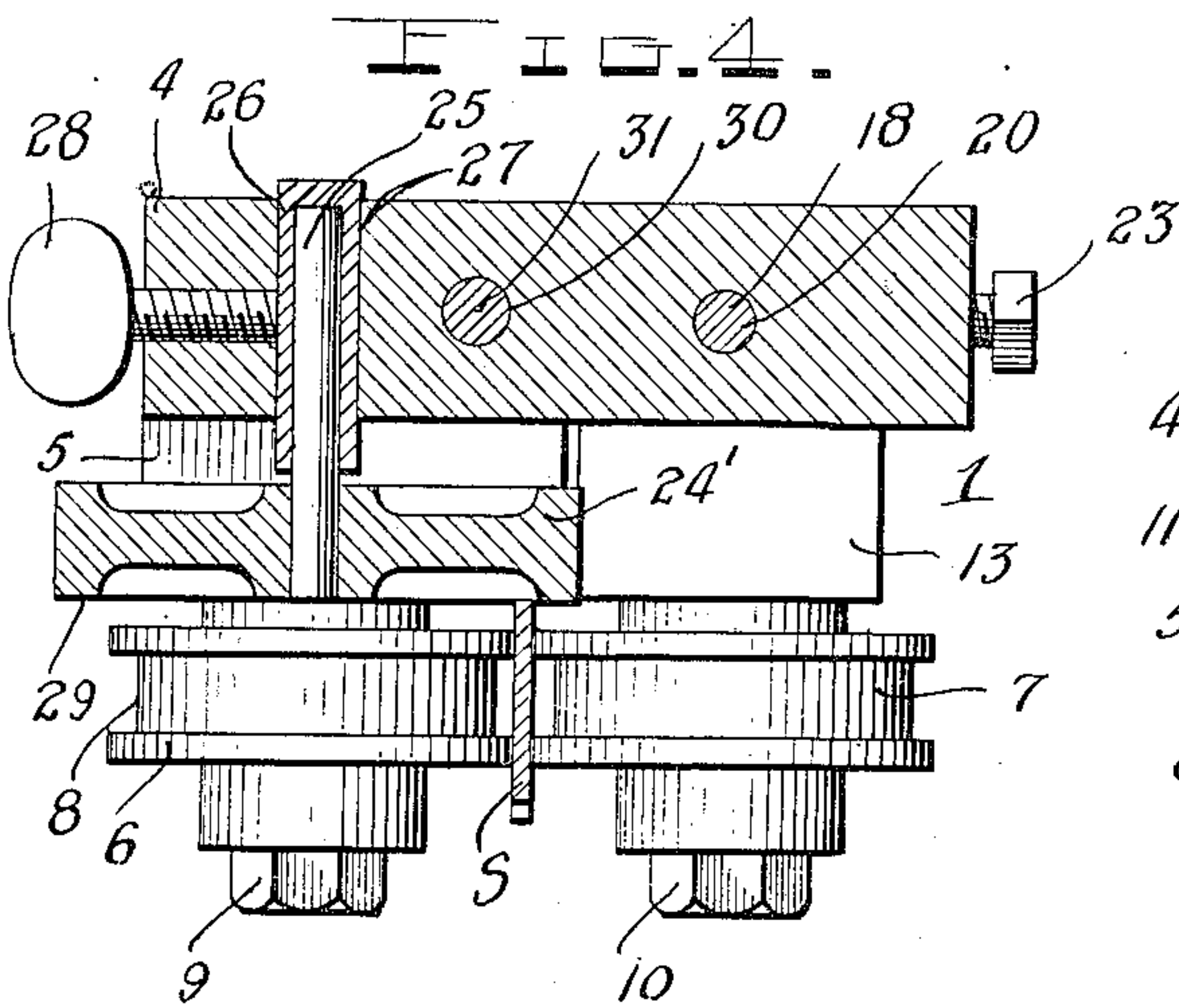
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

ELZA C. LIPPMANN AND ROBERT MCKINNEY, OF SIMMONS SWITCH, ARKANSAS.

ROLLER-GUIDE FOR BAND-SAWS.

No. 876,816.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed July 12, 1907. Serial No. 383,543.

To all whom it may concern:

Be it known that we, ELZA C. LIPPMANN and ROBERT MCKINNEY, citizens of the United States, residing at Simmons Switch, in the county of Woodruff and State of Arkansas, have invented certain new and useful Improvements in Roller-Guides for Band-Saws, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in roller guides for band saws and consists of the novel construction and the combination and arrangement of parts hereinafter described and claimed.

The object of the invention is to provide a guide of this character which is simple, strong and durable in construction and which may be readily adjusted for use in connection with band saws of different sizes.

The above and other objects of the invention are attained in the preferred embodiment of the invention illustrated in the accompanying drawings, in which

Figure 1 is a perspective view; Figs. 2 and 3 are vertical sections; Figs. 4 and 5 are horizontal sections; Fig. 6 is a perspective of the body, and Fig. 7 is a similar view of the adjustable bearing block.

In the drawings 1 denotes the body of my improved band saw guide, which is preferably cast in the form of a rectangular block having in its bottom edge intermediate its ends a transverse slot or opening 2 to provide two depending arms or lugs 3, 4. Projecting forwardly from the front face of the lug 4 is an enlargement or stationary bearing block 5 on which is journaled one of two guide rollers adapted to engage the opposite faces of the band saw S. These rollers are preferably formed with grooved peripheries 8 and they are mounted for rotation upon two bolts 9, 10. The bolt 9 which forms a journal for the roller 6 is screwed into a threaded opening 11 in the stationary bearing block 5, and the bolt 10 which forms a journal for the roller 7 is screwed into a threaded opening 12 formed in the front end of a rectangular bearing block 13 which is adjustably mounted in the opening or recess 2 in the body 1. This adjustable bearing block 13 has a reduced rear end 14 which projects into the opening 2 and forms a shoulder 15 adapted to engage the front face of the body as shown.

The reduced rear end 14 of the bearing block

13 is formed with a rectangular opening 16 adapted to receive the similar shaped body portion 17 of a supporting bolt 18 which retains the bearing block 13 in the body. Said bolt has a flat head 19 upon the lower end of its body for engagement with the bottom of the block 13 and from the upper end of its body 17 projects a reduced cylindrical stem or shank 20 which passes through a vertical opening 21 in the body 1 and has a threaded projecting portion to receive a clamping nut 22. The bearing block 13 is of less length than the opening 2 in the body and its vertical opening 16 is elongated, so that when the nut 22 is unscrewed to loosen the bolt or hanger 18 said bearing block may be adjusted in the opening 2 in the body so as to position its roller 7 nearer to or further from the roller 6 and thus adapt said rollers to receive a band saw of any thickness. When the nut 22 is tightened the head 19 of the bolt or hanger 18 tightly clamps the bearing block 13 in the top of the opening 2 in the body 1 and with the shoulder 15 engaging the outer face of the body so that the bearing block cannot twist or turn upon the bolt or hanger.

To permit the bearing block to be readily adjusted when the nut 22 is loosened I preferably employ a set screw 23 arranged in a threaded opening 24 in the lug 3 so that its inner end will impinge against the bearing block as clearly shown in the drawing. The back edge of the saw is guided and supported by its engagement with a disk roller 24' arranged in a plane parallel to that of the rollers 6, 7 and secured upon a spindle 25 which rotates in a cylindrical bearing or sleeve 26 in turn arranged in a transverse opening 27 in the upper portion of the body 1 adjacent to one side of the same. The spindle 25 is retained in the bearing 26 by the saw engaging the disk 24', and said bearing is adapted to slide forwardly and rearwardly in the opening 27 and is held stationary in an adjusted position by means of a set screw 28 arranged in the threaded opening in one side of the body and adapted to impinge against said bearing. This adjustment of the bearing permits the disk 24' to be adjusted forwardly and rearwardly according to the width of the saw and so that the back edge of the latter will bear against the front or outer face of the disk adjacent to its edge as clearly shown in the drawings. Said face of the disk is preferably concave or recessed so as to form

a flat surface 29 against which the back edge of the saw bears. While the body of the device may be supported upon the machine in any suitable manner I preferably provide
 5 an opening 30 in the body 1 to receive a suitable support and a set screw 31 which retains the body upon said support.

From the foregoing it will be seen that my improved guide will effectively steady and
 10 guide the saw with little or no friction and without danger of breaking the same. The three rollers are the only parts of the device that contact the saw and they turn in the direction the saw moves so that there is little
 15 or no friction. The side rollers 6, 7 effectively prevent the saw from shifting or springing laterally and the disk roller 22 rigidly supports the back edge of the same so that it cannot yield or give in a backward direction.
 20 By means of the various adjustments the three rollers may be so positioned with respect to each other that they will effectively guide and brace band saws of different sizes.

Among other advantages of my invention
 25 may be mentioned the ease with which the parts may be adjusted to take up wear and to accommodate saws of different widths and thickness; the effective manner in which the tension of the saw is preserved so that there
 30 will be less liability of molecular crystallization, and hence a greater life for the saw; the ease with which the parts may be oiled; the steady and effective manner in which the saw will be held so that perfect work may be
 35 done, and the comparatively small amount of friction and hence little or no danger of the parts heating. If desired oil cups may be provided to supply the lubricant to the bearings and ball bearings may also be provided
 40 to reduce friction. The opposing guide wheels preferably are turned smaller at the back than at the front edge to cause them to more effectively guide the saw but if desired said wheels may be made of rubber or fitted
 45 with rubber rims when it becomes necessary to do various fancy or particular work.

Having thus described my invention what I claim is:

The herein described band saw guide com-

prising a body formed in its upper portion 50 with vertical and horizontal openings arranged adjacent to its opposite sides and also formed in its bottom beneath the vertical opening with a recess or open portion which provides two depending arms, one of which 55 latter has a transverse threaded aperture and the other a forwardly projecting enlargement forming a stationary bearing block, a transversely slidable block arranged in the recess or open portion of the body between 60 said arms and formed with a reduced rear portion to provide the shoulder 15 to engage the front face of the body, said reduced rear portion of the slidable bearing block being formed with a vertical slot to register with 65 the vertical opening in the body, the front portion of said slidable bearing block being formed with a threaded socket, a suspending and clamping bolt passed vertically through the slot in the slidable bearing block and 70 through the vertical opening in the upper portion of the body, the head of said bolt being engaged with the bottom of the slidable bearing block, a clamping nut upon the upper threaded end of the bolt engaged with the 75 top of the body for securing said slidable bearing block in an adjusted position, a set screw arranged in the threaded opening in one of said arms for sliding the slidable bearing block upon said bolt toward the stationary 80 bearing block when the bolt is loosened, headed screws engaged with the threaded sockets in the two bearing blocks, opposing guide rollers journaled upon said screws and adapted to engage the opposite sides of the 85 saw, a sleeve slidable in the horizontal opening in the upper portion of the body, a set screw for securing said sleeve in an adjusted position and a guide disk journaled in said sleeve and adapted to engage the back edge 90 of the saw, substantially as set forth.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

ELZA C. LIPPMANN.
 ROBERT McKINNEY.

Witnesses:

W. A. MORGAN,
 W. L. WOODS.