

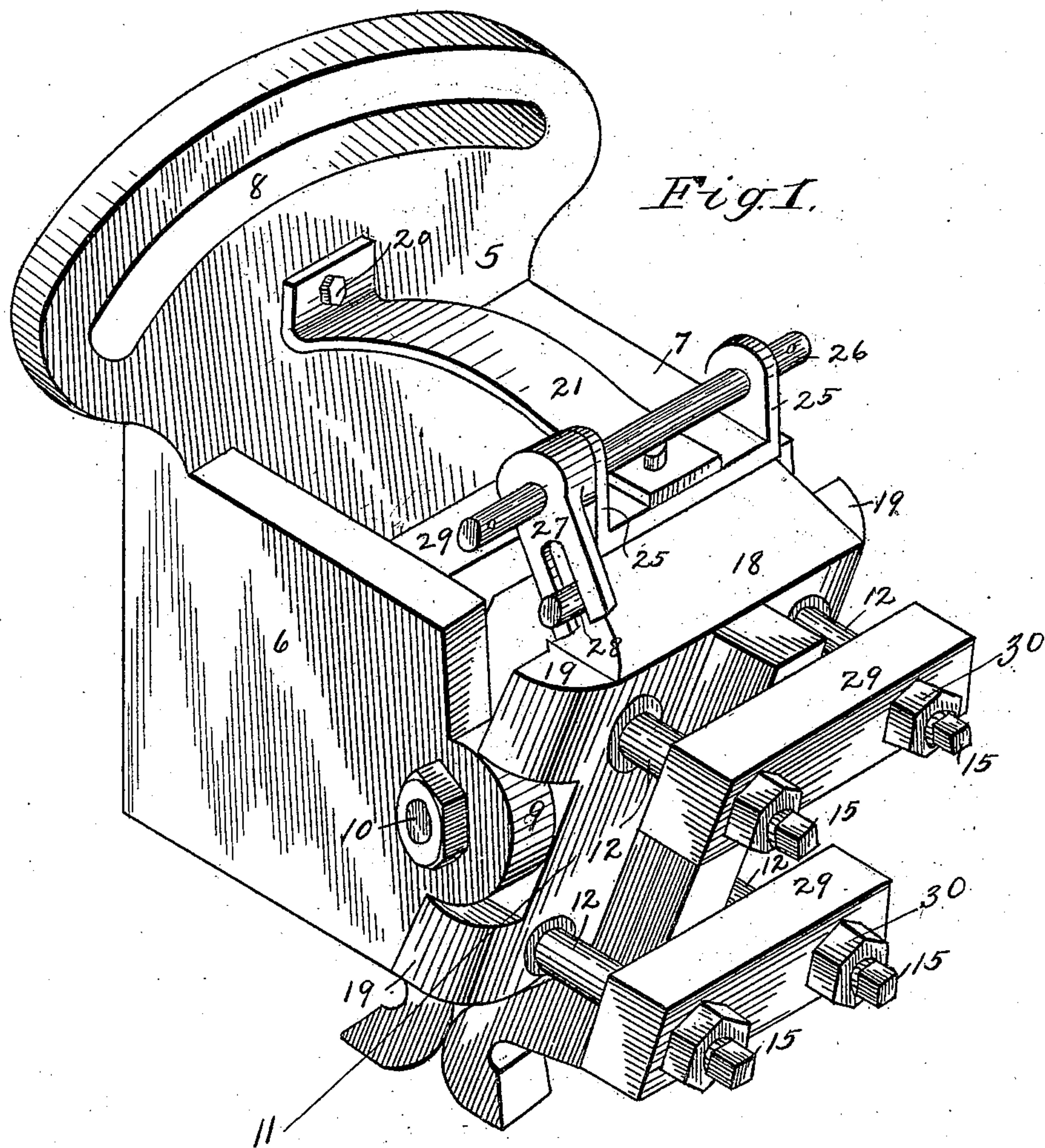
No. 848,320.

PATENTED MAR. 26, 1907.

E. PIERCE.
REVERSIBLE DUPLEX PLANER TOOL HOLDER.

APPLICATION FILED JAN. 6, 1906.

2 SHEETS—SHEET 1.



WITNESSES
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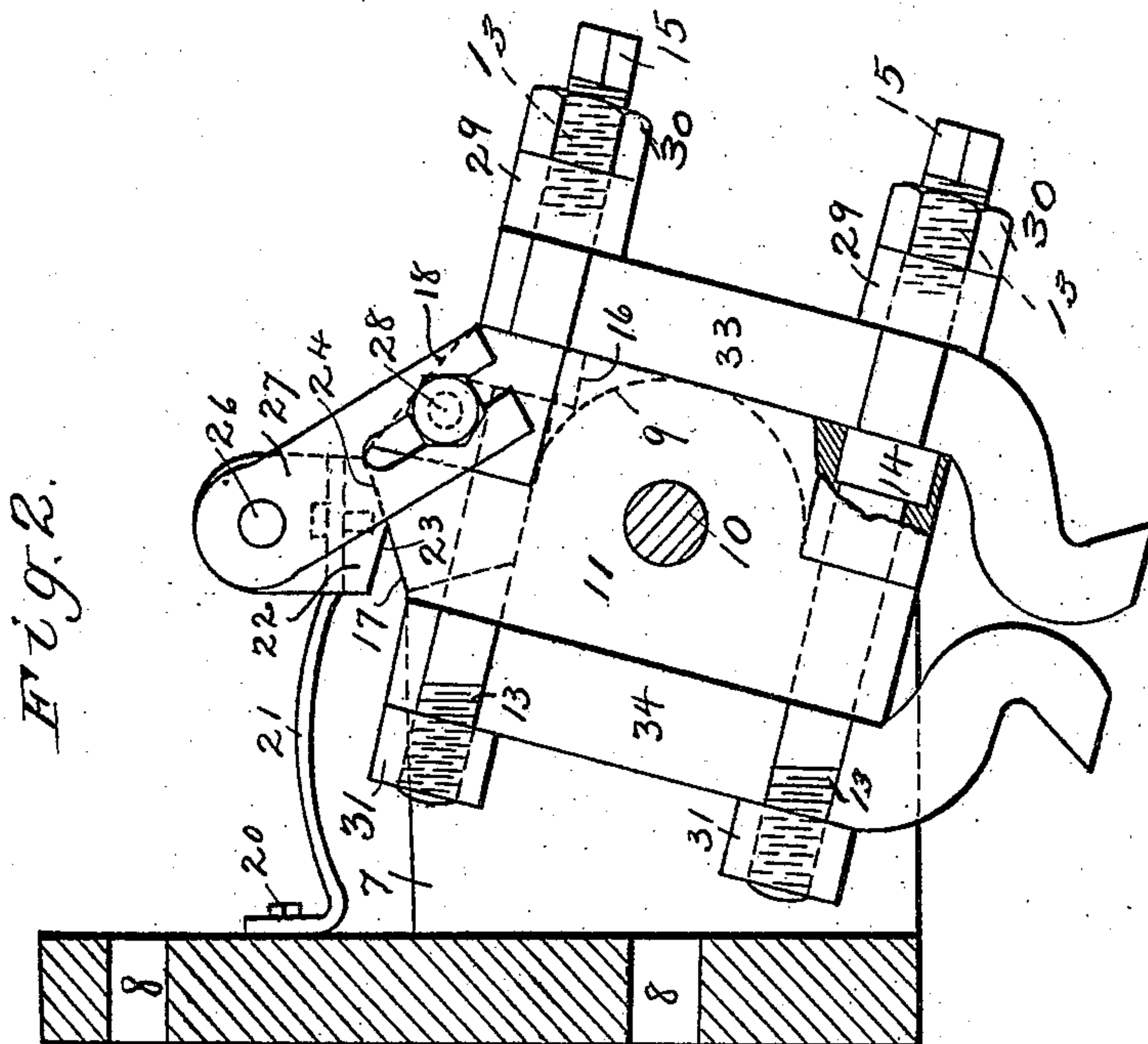
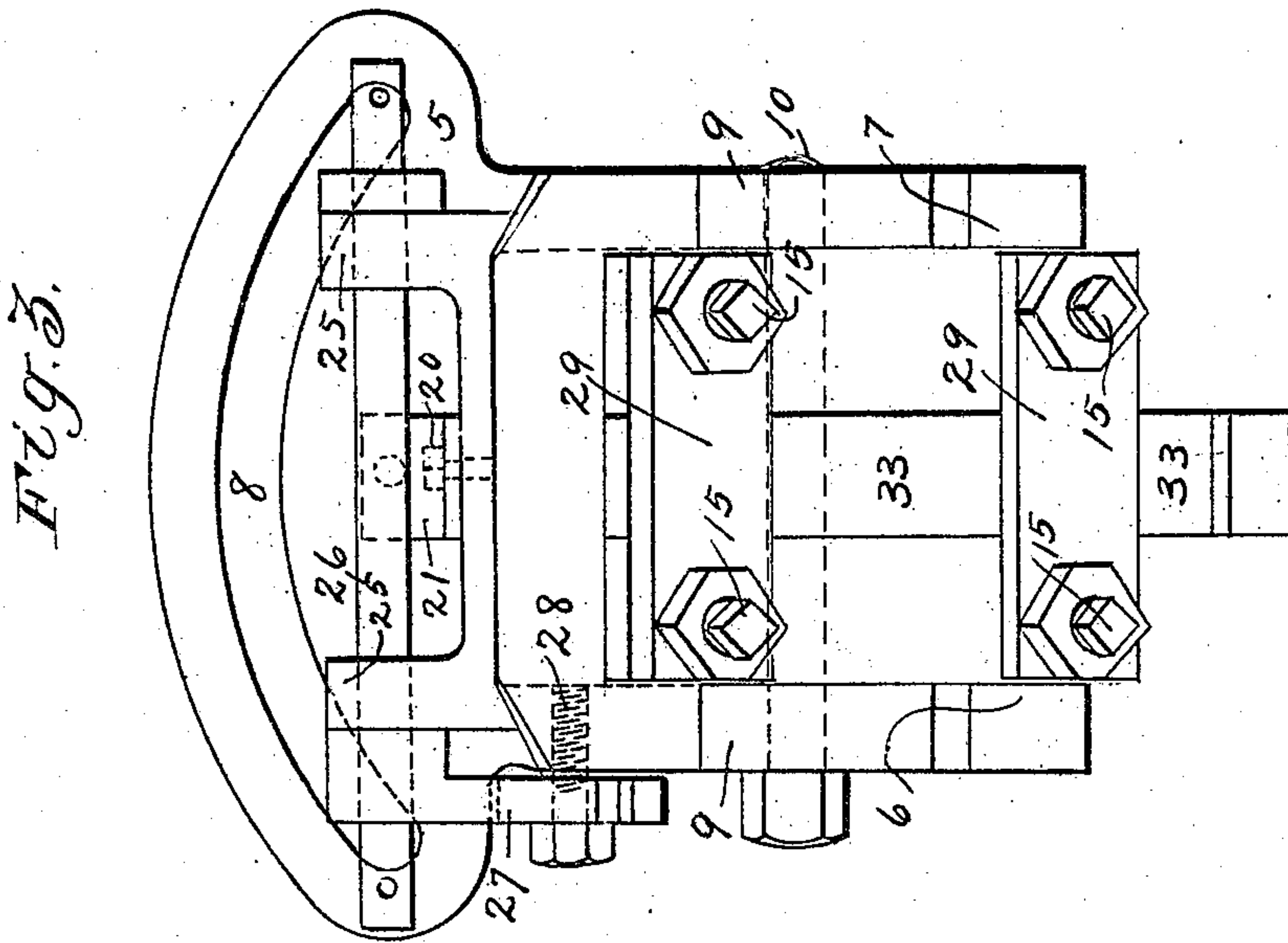
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UNITED STATES PATENT OFFICE.

EUGENE PIERCE, OF ILION, NEW YORK.

REVERSIBLE DUPLEX PLANER-TOOL HOLDER.

No. 843,320.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed January 6, 1906. Serial No. 294,868.

To all whom it may concern:

Be it known that I, EUGENE PIERCE, a citizen of the United States, residing at Ilion, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Reversible Duplex Planer-Tool Holders, of which the following is a specification.

This invention relates to tool-holding devices for planing-machines, and more particularly to that type of tool-holder in which a rocking tool-carrier is provided, whereby a cut may be made in the material in the movement of the bed or platen of the planing-machine in each direction.

The primary object of the present invention is the provision of novel means for rocking the tool-carrier to present the tool at a reverse angle to the material at the termination of the movement of the bed or platen in either direction.

The invention aims as a further object to provide novel means for maintaining said carrier in the particular position to which it may be moved by the mechanism on the bed or platen.

The detailed construction will appear in the course of the following description, in which reference is had to the accompanying drawings, forming a part of this specification, like numerals designating like parts throughout the several views, wherein—

Figure 1 is a perspective view of a tool-holder constructed in accordance with the invention. Fig. 2 is a side elevation of an oscillatory tool-block, showing the supporting-frame in which it is mounted in section; and Fig. 3 is a front elevation of the device.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

In the drawings the numeral 5 designates the rear wall, and the numerals 6 and 7 the side walls of the frame in which the oscillatory tool-block is mounted. Rear wall 5 has curved slots 8 formed therein to permit of the device being adjusted bodily to varying angles in the usual and well-known manner. Formed upon the front edges of the side walls 6 and 7 are semicircular bosses 9, and passing through said side walls adjacent said bosses is a central supporting pin or shaft 10, upon which is mounted for oscillatory movement the tool-block 11. Passing transversely through the tool-block 11 are bolts 12, which are threaded at 13 and are pro-

vided with integral collars 14. The outer ends of said bolts are squared, as at 15, to permit of movement being imparted to said bolts by a wrench. The front wall of the tool-holding block is counterbored, as at 16, for the reception of the collars 14. The upper face of the tool-block 11 is oppositely beveled, as at 17 and 18, for a purpose which will be hereinafter set forth. Stop-lugs 19, carried upon tool-block 11, serve to limit the movement of said block in either direction by contact with the upper and lower portions of the front edges of the walls 6 and 7, as will be readily understood by referring to Fig. 1. Secured to the front of wall 5 of the supporting-frame by means of a bolt or other fastening device 20 is a leaf-spring 21, which has secured to its outer or free end a shoe 22, the lower face of which is oppositely beveled, as at 23 and 24, for a purpose which will be hereinafter set forth. The shoe 22 is provided at its opposite ends with upstanding pins or lugs 25, in which is mounted a rock-shaft 26. Secured upon one end of rock-shaft 26 is a bifurcated arm 27, the lower end of which engages a pin or stud 28, secured to the tool-block 11. The ends of the bolts 12, which extend beyond the front wall of the tool-block, pass through clamping-bars 29 and have nuts 30 threaded upon the threaded portions 13 thereof. The opposite ends of said bolts, which extend beyond the rear wall of the tool-block, are threaded into clamping-bars 31, as is clearly illustrated in Fig. 2. The tools 33 and 34 are adapted to be clamped between the clamping-bars 29 and 31 and the adjacent faces of the tool-block 11.

The operation of the device is as follows: The frame, composed of the walls 5, 6, and 7, having been secured upon the planer and adjusted, supports the tools which operate upon work carried by the bed or platen of the planer. It is usual in machines of this class to have the movement of the bed or platen automatically reversed at the end of a cut by causing a portion of said bed to come in contact with a shifting lever to thereby reverse the motion of the machine. In the present invention the movement of the bed is also utilized to impart movement to shaft 26 at the end of the movement of the bed in one direction through mechanism not shown. When the platen is moving toward the left in Fig. 2, the parts will assume the position shown in the said figure, the lower edge of

tool 33 at that time being in position to make a cut and the lower lugs 19 resting at that time against the lower outer edges of the walls 6 and 7 directly beneath the bosses 9, thereby providing a firm and rigid abutment upon which the strain will be received. At this time the beveled face 24 of shoe 22 lies in contact with the beveled face 17 of tool-block 11. It is to be understood that the shoe 22 is not secured rigidly upon the shaft 26, but merely forms a support for said shaft, the shoe 22 and the spring 21 forming a spring-detent to prevent the tool-block from moving except when motion is positively imparted thereto, as will be hereinafter set forth. When the platen of the machine reaches its limit of movement to the left in Fig. 2, mechanism not shown imparts movement to shaft 26 to move arm 27 toward the left in Fig. 2. This rocks the tool-block upon the pin 10 and forces the tool 33 into position to make a cut upon the return stroke. As the tool-block is thus thrown to its opposite position the spring 21 gives sufficiently to permit the shoe 22 to slip over the top of the tool-block until its beveled face 23 lies in contact with the beveled face 18 of the tool-block. It will be readily understood that upon its return stroke the upper lugs 19 will lie in contact with the upper front edge of the walls 6 and 7.

From the foregoing description it will be seen that simple and efficient means are herein provided for holding the tools in such position that a cut may be made upon the stroke of the planer-bed in either direction and for throwing the tool-holder against such an abutment as will provide a rigid support for the tool.

While the elements herein shown and described are well adapted to serve the purpose

for which they are intended, it is to be understood that the invention is not limited to the precise construction set forth, but that changes within the scope of the appended claims may be resorted to without departure from said invention.

Having thus described my invention, what I claim is—

1. In a device of the character described, the combination with a supporting-frame, of a tool-block pivotally mounted in said frame and having oppositely-beveled faces, a detent comprising a yieldably-mounted spring-pressed shoe having faces inversely beveled to the faces of said block, one of the faces of said detent being designed to frictionally engage the corresponding face of said block and means carried by said shoe and operatively connected to said block whereby the latter may be rocked on its pivot at selected intervals.

2. In a device of the character described, the combination with a supporting-frame, of a tool-block pivotally mounted in said frame and having oppositely-beveled faces, a detent comprising a yieldable spring-pressed shoe having faces inversely beveled to the faces of said block, one of the faces of said detent being designed to frictionally engage the corresponding face of said block, and means whereby said block may be rocked on its pivot, said means comprising a rock-shaft journaled in said shoe, a laterally-extending pin carried upon said block and a yoke carried upon said shaft and straddling said pin.

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

EUGENE PIERCE.

Witnesses:

WM. P. TAYLOR,
GEORGE R. BACON.