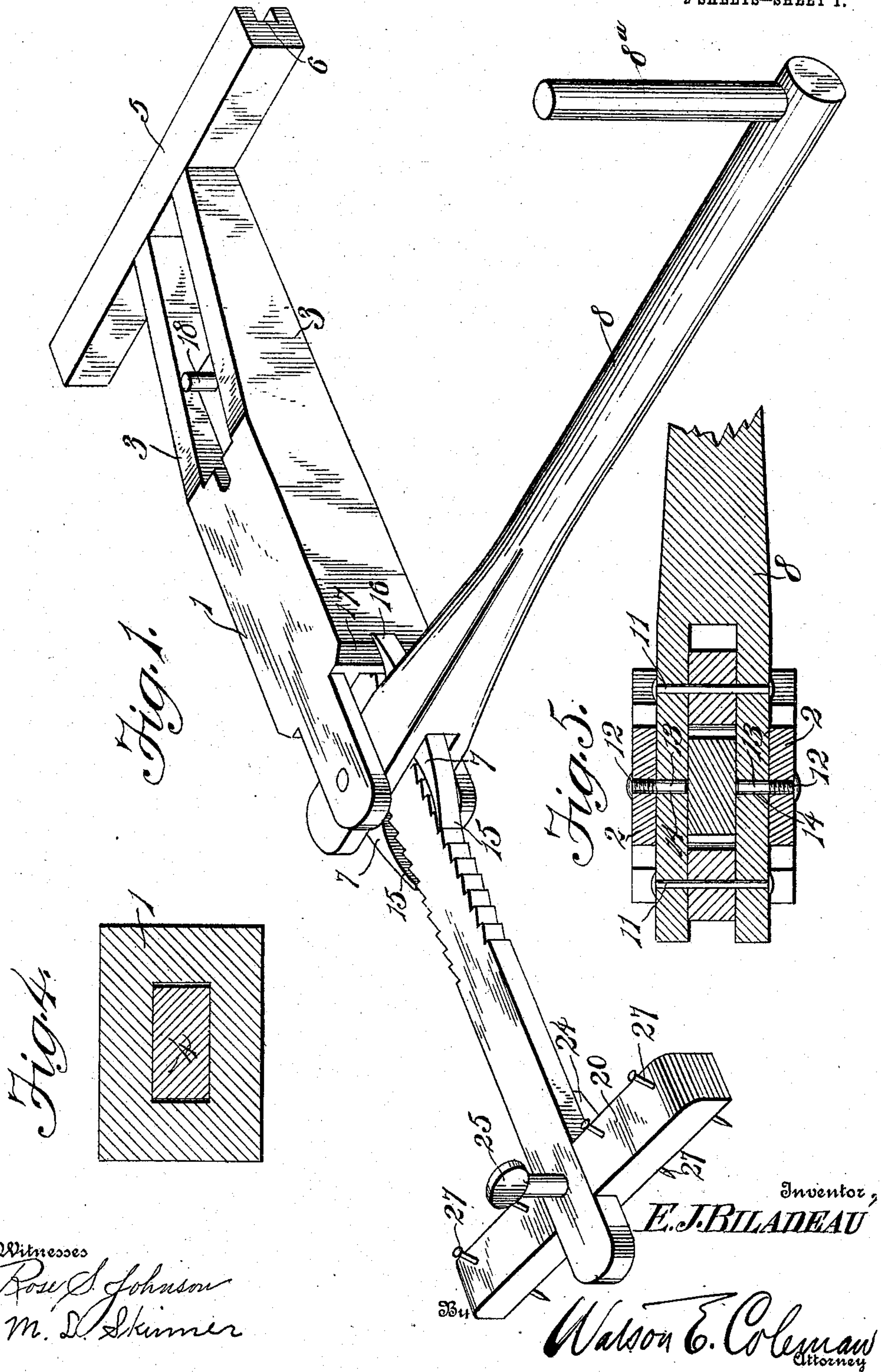


FLOOR JACK.

Patented Dec. 29, 1908.

2 SHEETS--SHEET 1.

907,959.



Witnesses

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FLOOR JACK.

APPLICATION FILED MAY 21, 1908.

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2 SHEETS—SHEET 2.

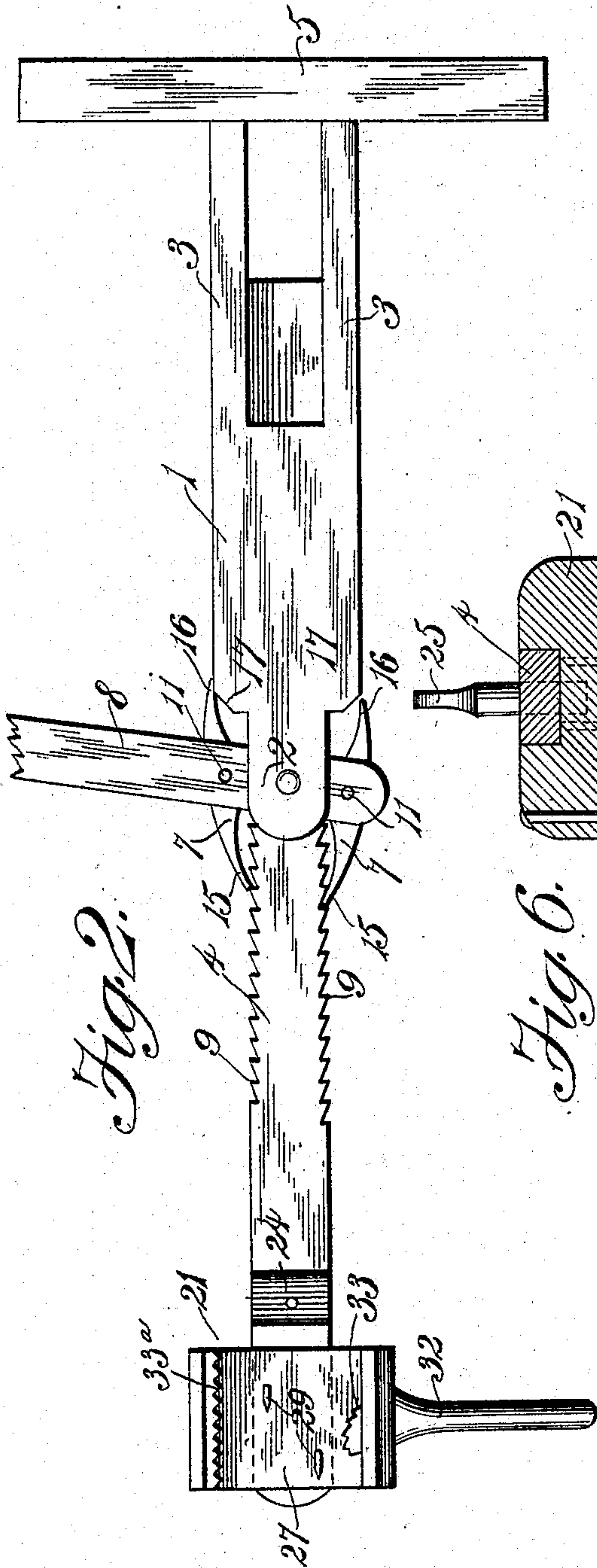


Fig. 2.

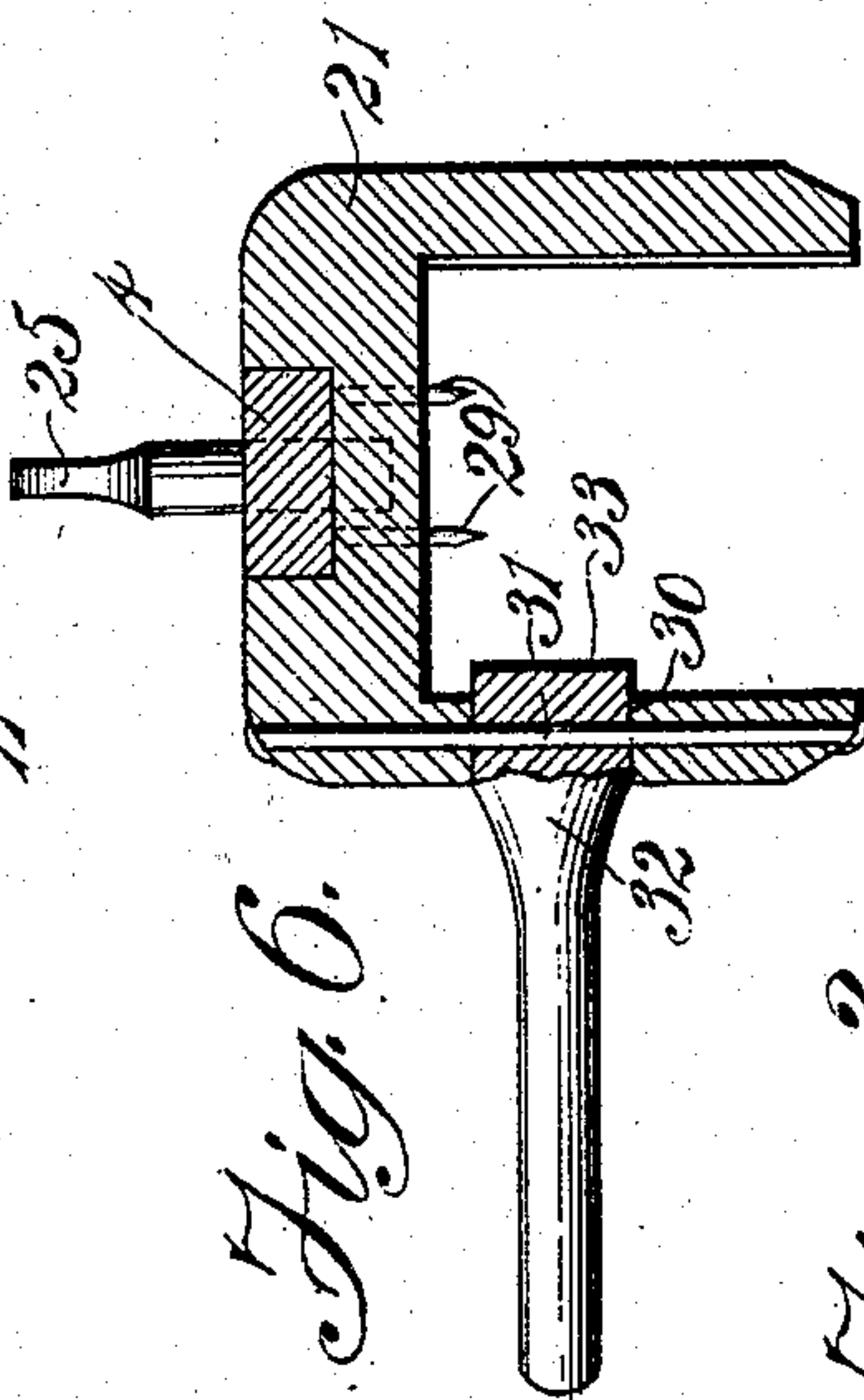


Fig. 6.

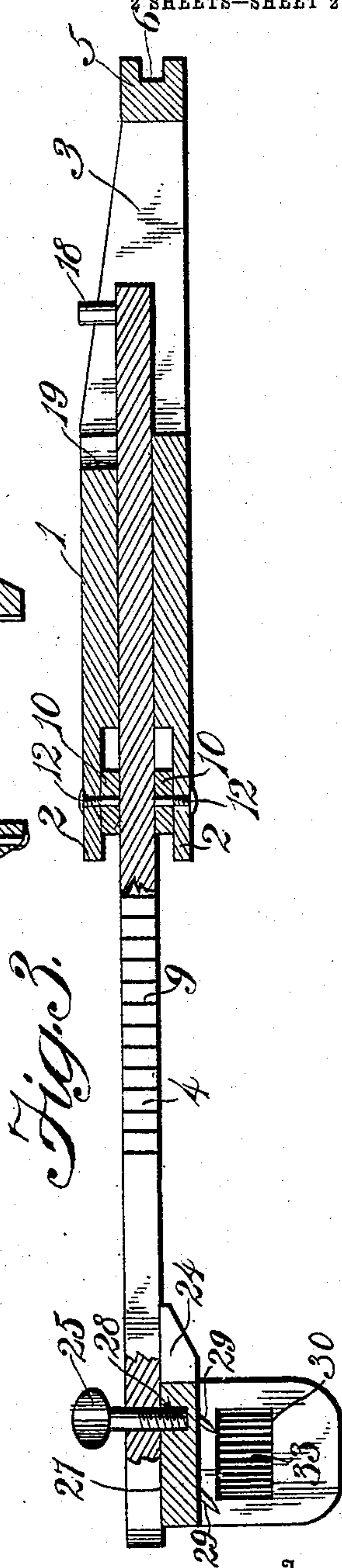


Fig. 3.

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UNITED STATES PATENT OFFICE.

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FLOOR-JACK.

No. 907,959.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed May 21, 1908. Serial No. 434,155.

To all whom it may concern:

Be it known that I, EDWARD J. BILADEAU, a citizen of the United States, residing at Bainville, in the county of Valley and State of Montana, have invented certain new and useful Improvements in Floor-Jacks, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in floor jacks or devices for laying floors, ceilings, weather boards, stretching carpets, jacking up vehicle wheels and the like.

The object of the invention is to improve and simplify the construction and operation of devices of this character and thereby render the same stronger, more durable, convenient and efficient and less expensive.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved floor jack, showing it provided with a removable jaw member or head for use in laying top flooring; Fig. 2 is a bottom plan view of the same, showing it provided with a removable jaw member or head for use when laying a bottom flooring, ceilings, weather boards, etc.; Fig. 3 is a central vertical longitudinal section; and Figs. 4, 5 and 6 are vertical transverse sections taken, respectively, on the planes indicated by the lines 4—4, 5—5 and 6—6 in Fig. 2.

My improved floor jack comprises a tubular or hollow body 1 from one end of which projects spaced horizontal arms 2 which form continuations of the top and bottom of the body and from the other end of which project outwardly tapered and vertically disposed arms 3 which form a continuation of the sides of said body, the latter being preferably of rectangular shape in cross section and having a similar shaped bore or opening to receive a slidable ratchet bar 4 which works between the arms 2. The arms 3 are united by a cross bar 5 which forms a movable jaw member or head and which is preferably formed in its flat outer face or edge with a longitudinal groove 6 to receive the tongue on the usual flooring and ceiling boards, weather boards, and the like.

Co-acting with the ratchet bar 4 is a pair of double ended dogs or pawls 7 mounted in

an operating lever 8 and arranged on opposite sides of the bar for engagement with longitudinal series of ratchet teeth 9 formed in the side edges of said bar. Said pawls are arranged in the forked or bifurcated inner end of the lever and are pivoted between the branches 10 of said forked portion by vertical pivot pins 11. The branches 10 of the forked portion of the lever are adapted to straddle the ratchet bar and to enter between the arms 2 of the body, to which arms they are detachably pivoted by screws 12. The latter have screw threaded outer portions which engage threaded apertures in the arms 2 and smooth or unthreaded inner portions 13 which enter openings or sockets 14 formed in the branches or arms 10 of said lever.

The inner ends 15 of the pawls 7 are adapted to successively engage the ratchets 9 as the lever is oscillated to move the body 1 longitudinally upon the ratchet bar and their other ends 16 are shaped to engage actuating cam faces 17 formed preferably by beveling or rounding the side walls of the adjacent end of the body 1, as clearly illustrated in the drawings. It will be seen that as the lever is oscillated one pawl will engage one of the teeth of its ratchet and move the body outwardly upon the bar while the other pawl slips back over a tooth of its co-acting ratchet and at the same time is swung inwardly owing to the engagement of its end 16 with the cam or inclined surface 17 so that when the lever is swung in the opposite direction the last mentioned pawl will continue the movement of the body while the other pawl slips back to engage the next tooth. The body is prevented from moving off of the bar by providing a stop pin 18 in the form of a screw arranged in the top of the inner end of said bar and adapted to enter a notch or recess in the inner end of the top of the body 1. Upon the outer end of the lever 8 I preferably provide an outwardly projecting crank handle 8^a.

The ratchet bar or member 4 may be fixed in any suitable manner, but I preferably employ the two jaw members or heads 20, 21 illustrated in Figs. 1 and 2 which I make removable and interchangeable. The jaw member 20 is in the form of a cross bar or head provided in its top with a centrally disposed, transversely extending notch or recess 23 to receive the inner end of the ratchet bar 4. Said end of the latter is formed upon

its bottom with a depending lug 24 which provides a stop shoulder adapted to be engaged by the cross bar or head 20 to prevent the latter from slipping upon said bar. Said cross bar or head 20 is detachably retained in position upon the bar 4 by a removable set screw 25 which is passed through an opening in the bar 4 and into a screw threaded opening or socket 26 in the bottom of the groove or notch 23 in the bar 20. The latter may be provided with any suitable means which will enable it to take a firm grip upon the surface with which it is engaged but I preferably provide it with spurs 27 which are inclined downwardly and angularly from its bottom face.

The gripping jaw or member 21 is of inverted U-shape and of such size as to permit it to be placed upon a joist, a piece of stud-
ding, or a bar upon which the flooring or ceiling boards are to be fastened. In the connecting or top portion of the jaw member 21 is formed a groove or recess 27 to receive the inner end of the bar 4, and in the bottom of the recess 27 is a threaded socket 28 to receive the threaded end of the screw 25, which latter is also adapted to retain the jaw member 24 upon the bar 4 in engagement with the stop lug or shoulder 24. Upon the bottom face of the top or connecting portion of the member 21 are downwardly and inwardly inclined spurs 29 to prevent said member from slipping but in order to more effectively clamp said member to the joist or beam upon which it is placed I form in one of the depending arms of it a slot or opening 30 in which I pivot, as at 31, a cam lever 32. The inner portion of said lever has a serrated cam face 33 to press the joist or beam against the roughened or serrated face 33^a of the opposite arm of the jaw member 21.

In operation, when it is desired to lay the bottom flooring or lower layer of a floor the jaw member or head 21 is applied to the bar 4, as shown in Figs. 2 and 3, and then secured to one of the joists. The movable jaw or cross head 5 is then engaged with the board to be set and the lever 8 is oscillated to move the body 1 outwardly upon the ratchet bar as will be readily understood. After the lower layer of the flooring has been secured the head or clamp 21 is replaced by the cross bar or head 20 which, owing to its spurs, may engage the boards of the lower layer at any point while the device is being used for setting the boards of the upper layer of the flooring. While the invention is especially useful in setting the boards of floors it will be understood that it may be

used for setting boards of ceilings, for setting weather boards, and, with slight modifications, may be used for stretching carpet and analogous purposes. The device may also be used as a carriage or wagon jack.

Having thus described my invention what I claim is:

1. A device of the character described comprising a hollow body having pairs of spaced arms projecting from its opposite ends, a grooved cross bar or head uniting the arms of one pair, a double ratchet bar arranged in the body and projecting between the arms of the other pair, a lever having a forked end arranged between the last mentioned arms of the body and adapted to straddle the ratchet, pivots uniting the lever to the last mentioned arms of the body, pivoted pawls upon the lever for engagement with the ratchets of said ratchet bar, means for moving said pawls into engagement with said ratchets and a clamping or stationary jaw member upon the ratchet bar.

2. A device of the character described comprising a hollow body having pairs of spaced arms projecting from its opposite ends, a grooved cross bar or head uniting the arms of one pair, a double ratchet bar arranged in the body and projecting between the arms of the other pair, a lever having a forked end arranged between the last mentioned arms of the body, double ended pawls arranged to engage the ratchets of said bar and pivoted in the forked portion of the lever, cams upon the body to engage the ends of said pawls and actuate their opposite ends inwardly into engagement with the teeth of the ratchets and a stationary clamping member or jaw upon the ratchet bar.

3. A device of the character described comprising a ratchet bar, a body slidable thereon and carrying a movable jaw member, a lever pivoted to the body and provided with pawls to engage the ratchets of said ratchet bar, the latter having at one end a stop shoulder and an aperture, a stationary jaw member having a portion grooved to receive said end of the ratchet bar and to engage its shoulder, the bottom of said groove being formed with a threaded socket, and a set screw passed through the aperture in the ratchet bar and into the threaded opening in the bottom of said groove.

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

EDWARD J. BILADEAU.

Witnesses:

HENRY SCHOENECK,
C. A. DARROW.