

W. QUEITSCH.
TOOL FOR REMOVING DRIVING BOX CELLARS.
APPLICATION FILED SEPT. 22, 1914.

1,155,274.

Patented Sept. 28, 1915.
2 SHEETS—SHEET 1.

Fig. 1.

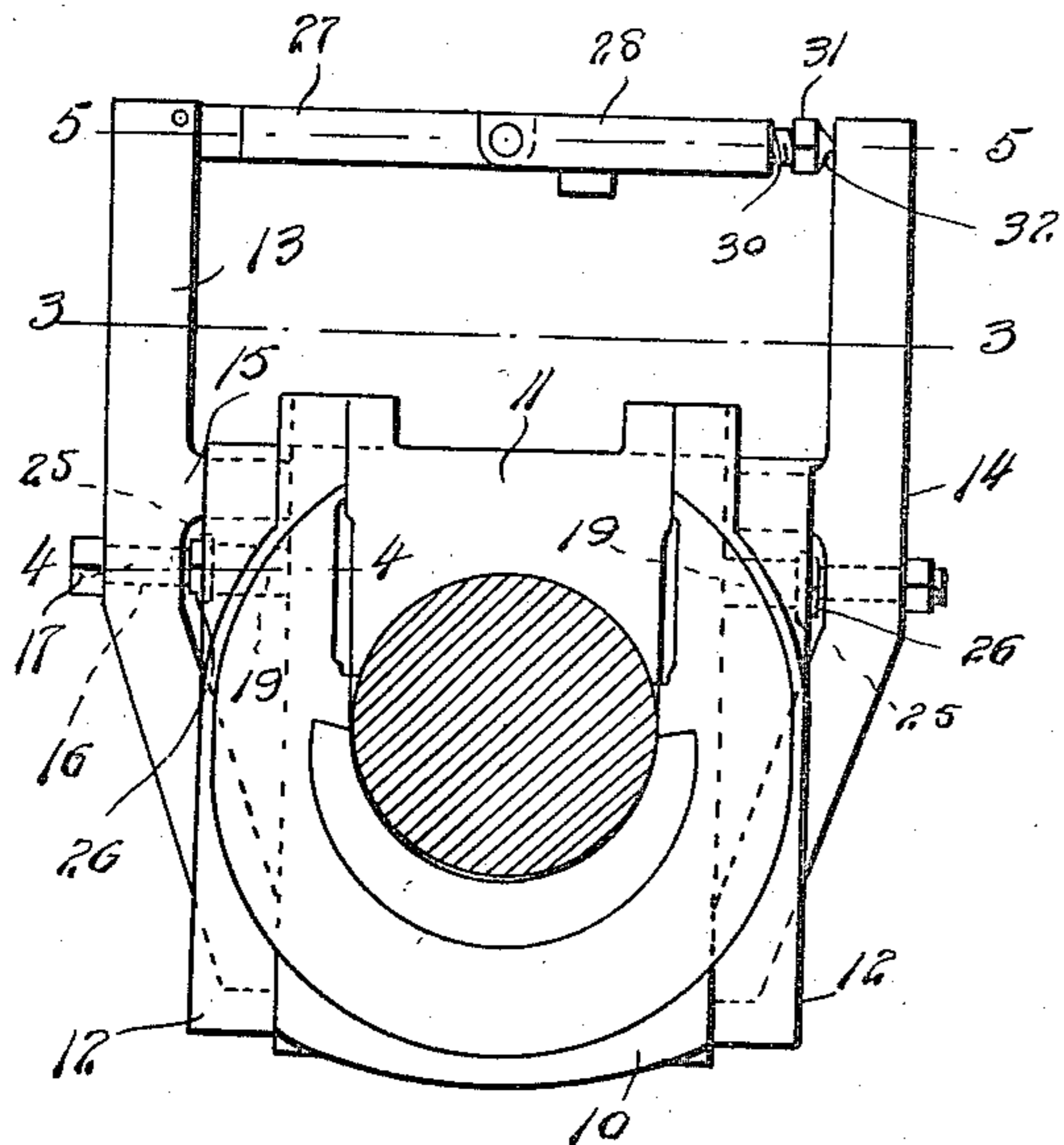


Fig. 2.

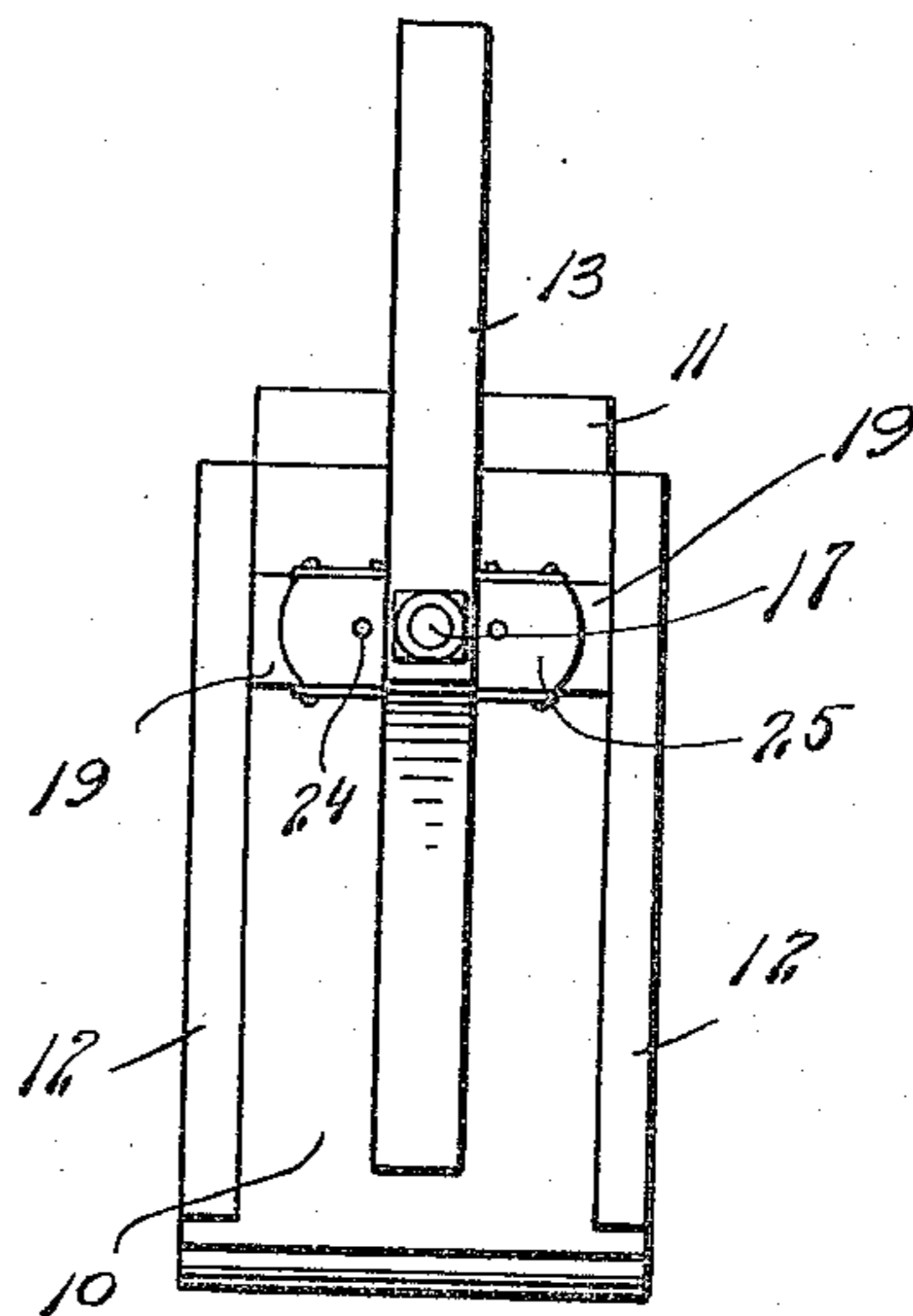
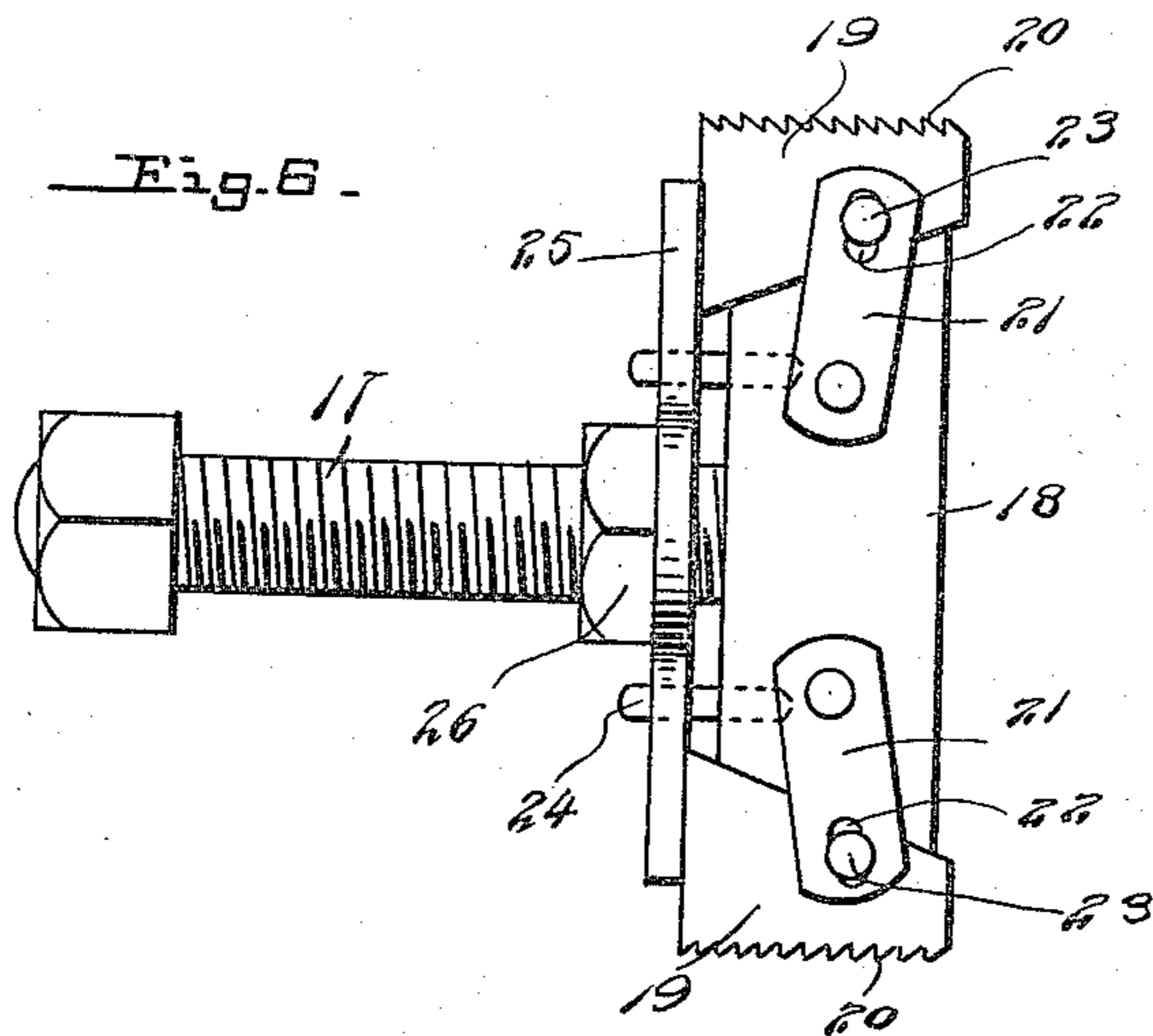


Fig. 3.



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Fig. 3.

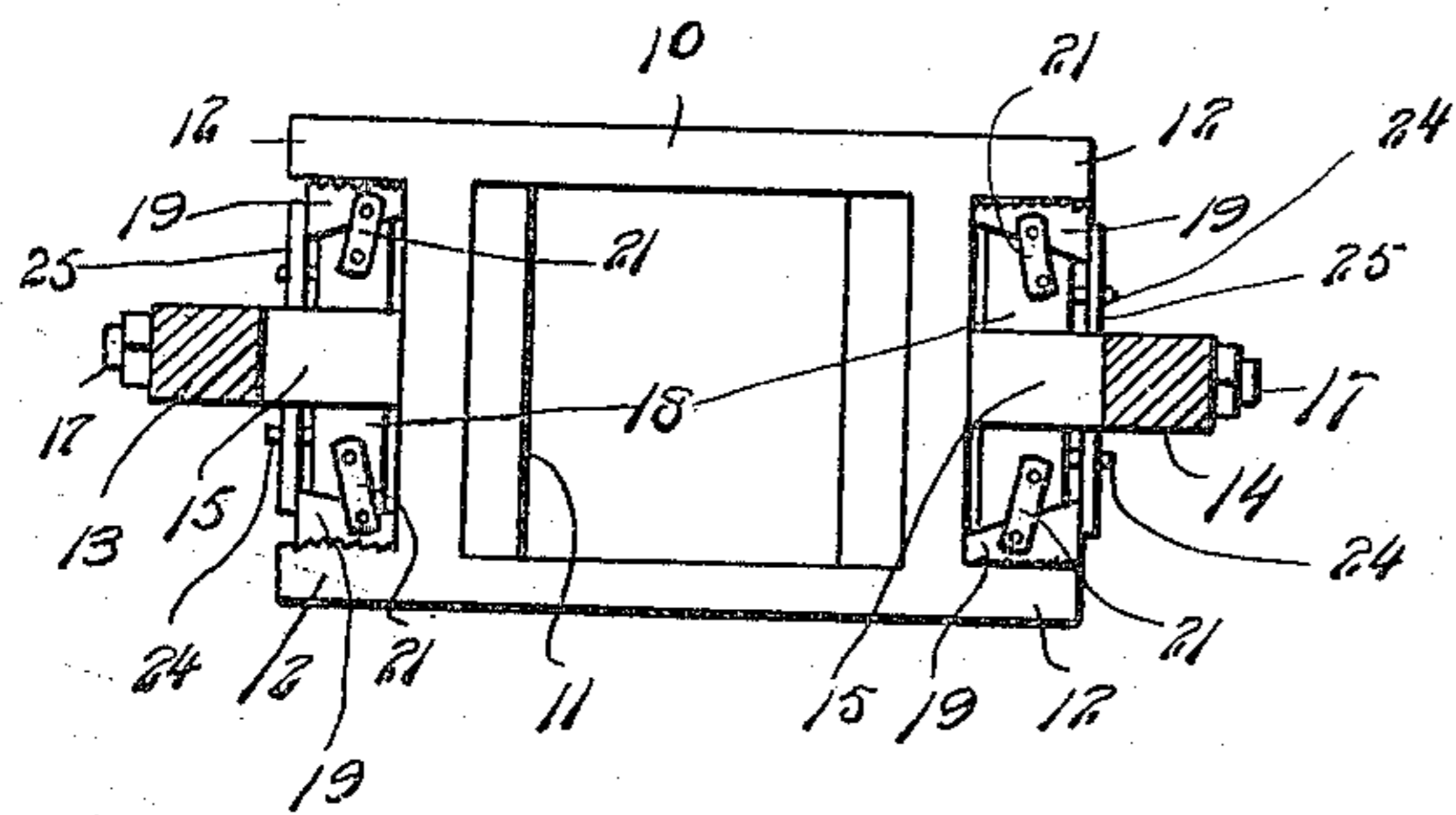


Fig. 4.

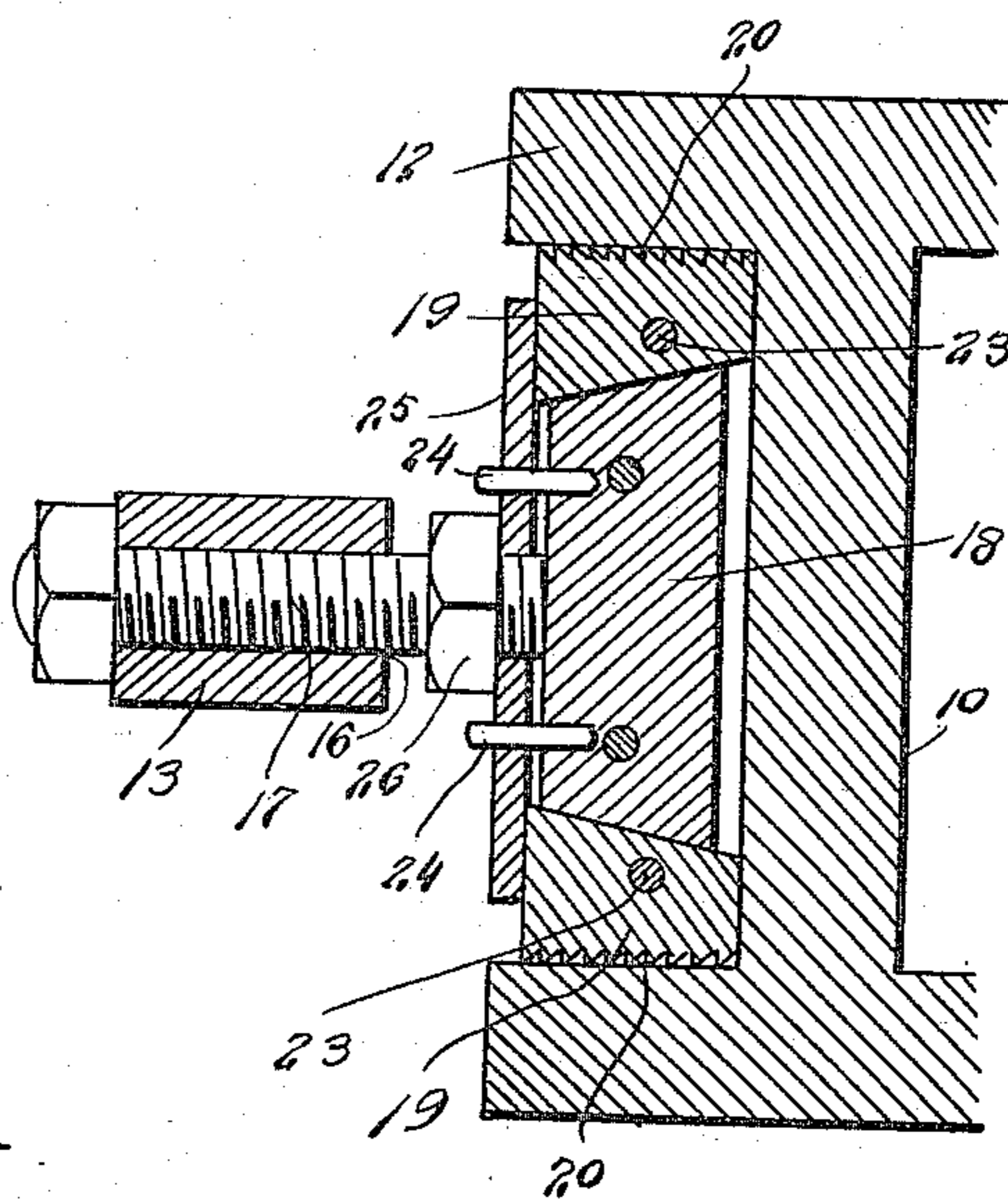
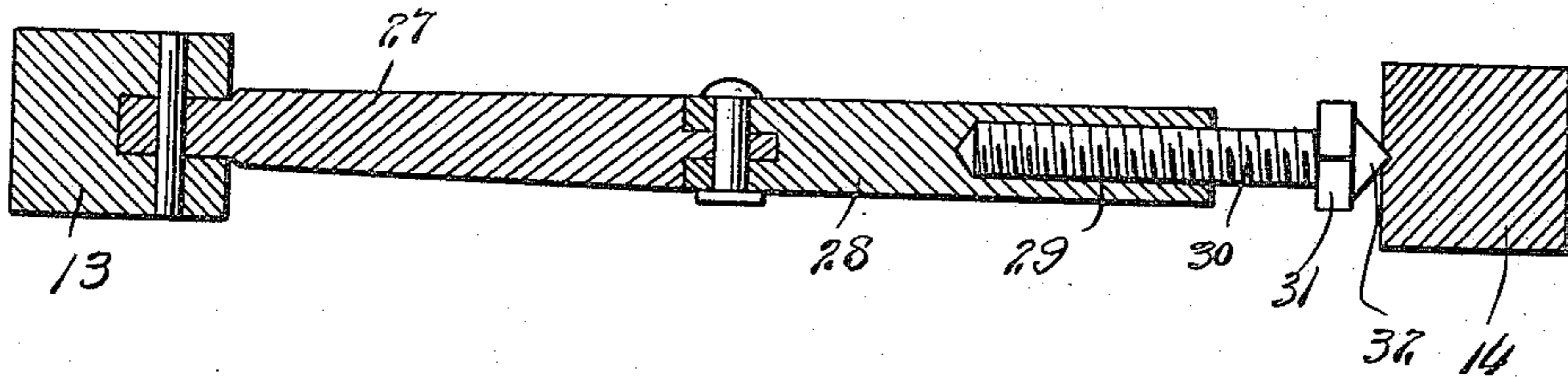


Fig. 5.



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UNITED STATES PATENT OFFICE.

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TOOL FOR REMOVING DRIVING-BOX CELLARS.

1,155,274.

Specification of Letters Patent.

Patented Sept. 28, 1915.

Application filed September 22, 1914. Serial No. 863,052.

To all whom it may concern:

Be it known that I, WILLIAM QUEITSCH, a citizen of the United States, residing at Tacoma, in the county of Pierce, State of Washington, have invented certain new and useful Improvements in Tools for Removing Driving-Box Cellars; 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.

This invention relates to improvements in tools, and particularly to tools for removing the lubricating cellars from locomotive driving boxes.

The principal object of the invention is to provide a simple and novel device of this character by means of which the driving box collar can be spread so as to disengage the cellar and permit the ready removal of the cellar without in any way injuring or breaking any of the parts of the driving box.

Another object is to provide a device of this character which is not only simple in its construction and operation, but which can be very quickly and easily applied to a driving box, operated thereon and removed therefrom.

Other objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawings.

In the drawings: Figure 1 is an elevation of the locomotive driving box looking toward the end of the axle, with my invention in applied position. Fig. 2 is a side elevation of the same. Fig. 3 is a horizontal sectional view on the line 3—3 of Fig. 1. Fig. 4 is an enlarged horizontal sectional view on the line 4—4 of Fig. 1. Fig. 5 is a horizontal section on the line 5—5 of Fig. 1. Fig. 6 is a plan view of one of the clamps.

It is well-known that the lubricating cellar of the locomotive driving box becomes tightly gripped by the surrounding collar, and the ordinary method of removing this cellar is to drive the cellar from its place with a sledge hammer. This is a process which takes considerable time, and at the same time badly damages the cellar or collar making it necessary to replace the collar with a new one.

It is the principal object of the present invention to provide a device which will spread the collar open so as to permit the

cellar to quickly and easily slide out of the collar, without in any way damaging or breaking the driving box.

Referring particularly to the accompanying drawings, 10 represents the driving box and 11 the lubricating cellar which is held between the ends of the box. The opposite vertical sides of the box are formed with the longitudinal parallel rods 12 which slidably engage on the sides of the pedestals of the locomotive frame, as will be understood, it not being thought necessary to show the pedestals.

The box spreading device includes a pair of vertical side members 13 and 14 the lower portions of which are bent inwardly at an obtuse angle as clearly shown, these lower ends being arranged to engage the sides of the box between the ribs 12. Extending inwardly from each of the side members 13 and 14 and movable vertically between the said ribs is a lug 15, and below the lug an opening 16 is formed through the side members. Disposed through the opening 16 is a threaded bolt 17 which carries on its inner end a transversely extending head 18 the outer ends of which incline in a direction toward the point of attachment of the bolts 17. Engaged on these inclined ends are the wedge blocks 19 the outer faces of which are serrated as indicated at 20. Links 21 are secured to the head 18 at one end and have their other ends provided with elongated slots 22 through which are passed the bolts 23 also passed through the blocks 19. The blocks are thus capable of sliding movement on the inclined ends of the head but are held from displacement by means of the links. Carried by the rear face of the head 18 are the rearwardly extending pins 24 and disposed on the bolt 17 and provided with openings receiving the pin 24 is a plate 25, this plate being slidably engaged on the bolt and bearing with its opposite ends against the rear faces of the blocks 19. Threaded onto the bolt 17 in rear of the plate 25 is a nut 26 which, when screwed toward the head 18, moves the plate 26 against the blocks 19 and causes them to slide on the inclined ends of the head thus moving them away from each other.

Pivotally mounted in the upper end of the side member 13 is a bar 27 the other end of which is pivotally connected to a second bar 28. In the outer end of this bar 28 is

a threaded socket 29 in which is engaged a screw 30, the said screw having a head 31 provided with a hardened steel point 32.

In the operation of the device, the members 13 and 14 are disposed on opposite sides of the box 10 so that the heads 18 and lugs 15 are disposed between the ribs 12. The heads 18 extend transversely between the ribs, and upon forcing the nuts 26 in a direction toward the box the plate 25 will be moved against the blocks 19 and force the serrated faces of said blocks into firm biting engagement with the mutual adjacent faces of the ribs 12. The side members 13 and 14 are thus held in vertical position on the box. The bars 27 and 28 are then swung downwardly until the point 32 engages the inner face of the upper end of the member 14, it of course being understood that the bars 27 and 28 are disposed in alignment so that they form in effect a single bar. The head 31 is then turned so that the screw 30 exerts pressure to force the upper ends of the side members 13 and 14 apart. The blocks 19 firmly gripping the sides of the box exert outward pull so as to separate the sides of the open end of the box and thus release the cellar therefrom. When the box is thus released from the cellar, the box together with the side members 13 will slide downwardly at the sides of the cellar; when the bars 27 and 28 engage with the cellar, the pivotal connection between the said bars will be forced upwardly so that the box will be permitted to spring back into its normal

shape. By loosening the nuts 26 the blocks 19 can be disengaged from the ribs 12 and permit the removal of the device from the box.

It will thus be seen that with a device of this character the driving box can be readily spread so as to release the cellar without danger of injuring or breaking either the box or the cellar.

What is claimed is:

1. A device for removing the cellar of a driving box, comprising side members, spreading clamps carried by said side members and adapted for engagement with the flanges of a box, and a folding adjustable spreading device carried by one of the side members and pivotally engaging the other side member for forcing said members apart.

2. A device for removing the cellar of a driving box, comprising side members, adjustable bolts carried by said side members, expanding clamps carried by said bolts, and a spreading element pivoted to one of said side members said spreading element including a plurality of hinged sections, and means disposed in one of said sections for engagement with the other side member, for forcing the side members apart so as to release the cellar from the box.

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

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."