

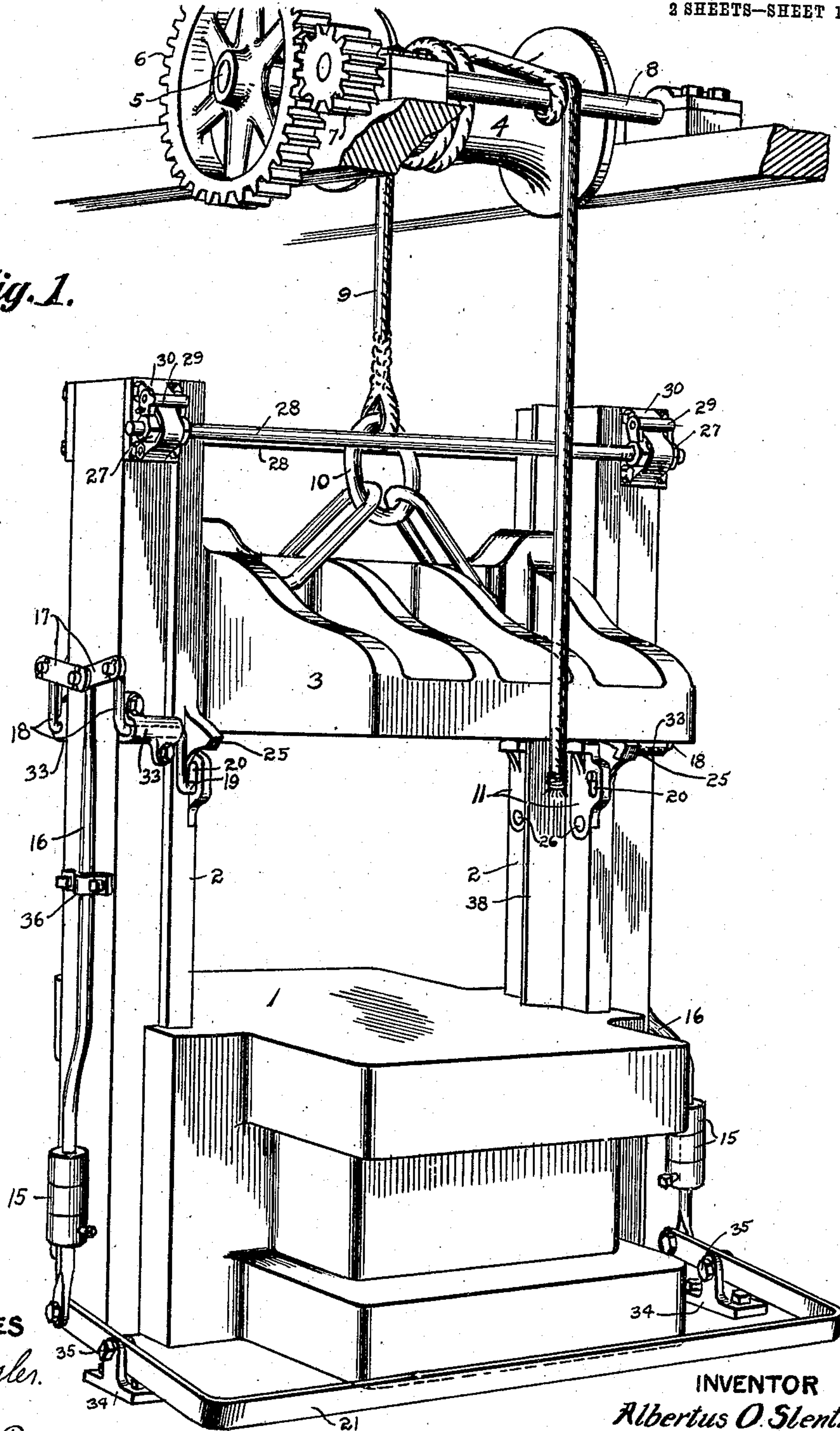
A. O. SLENTZ.
ATTACHMENT FOR DROP PRESSES.
APPLICATION FILED NOV. 12, 1908.

923.904.

Patented June 8, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

Geo. J. Hosler.

Sylvia Boron,

INVENTOR

Albertus O. Slentz

BY

Rond Miller
ATTORNEYS

A. O. SLENTZ.
ATTACHMENT FOR DROP PRESSES.
APPLICATION FILED NOV. 12, 1908.

923,904.

Patented June 8, 1909.
2 SHEETS—SHEET 2.

Fig. 2.

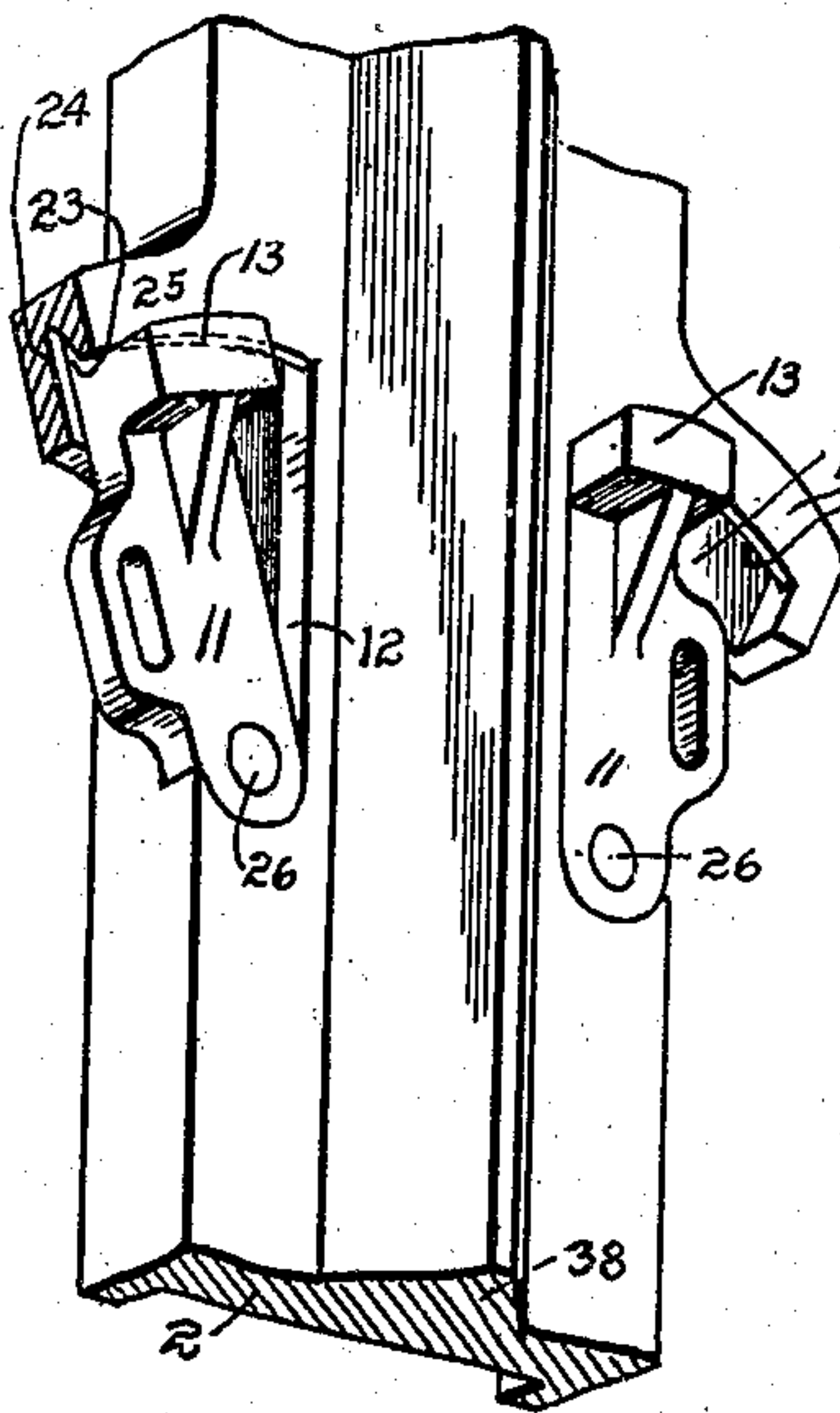
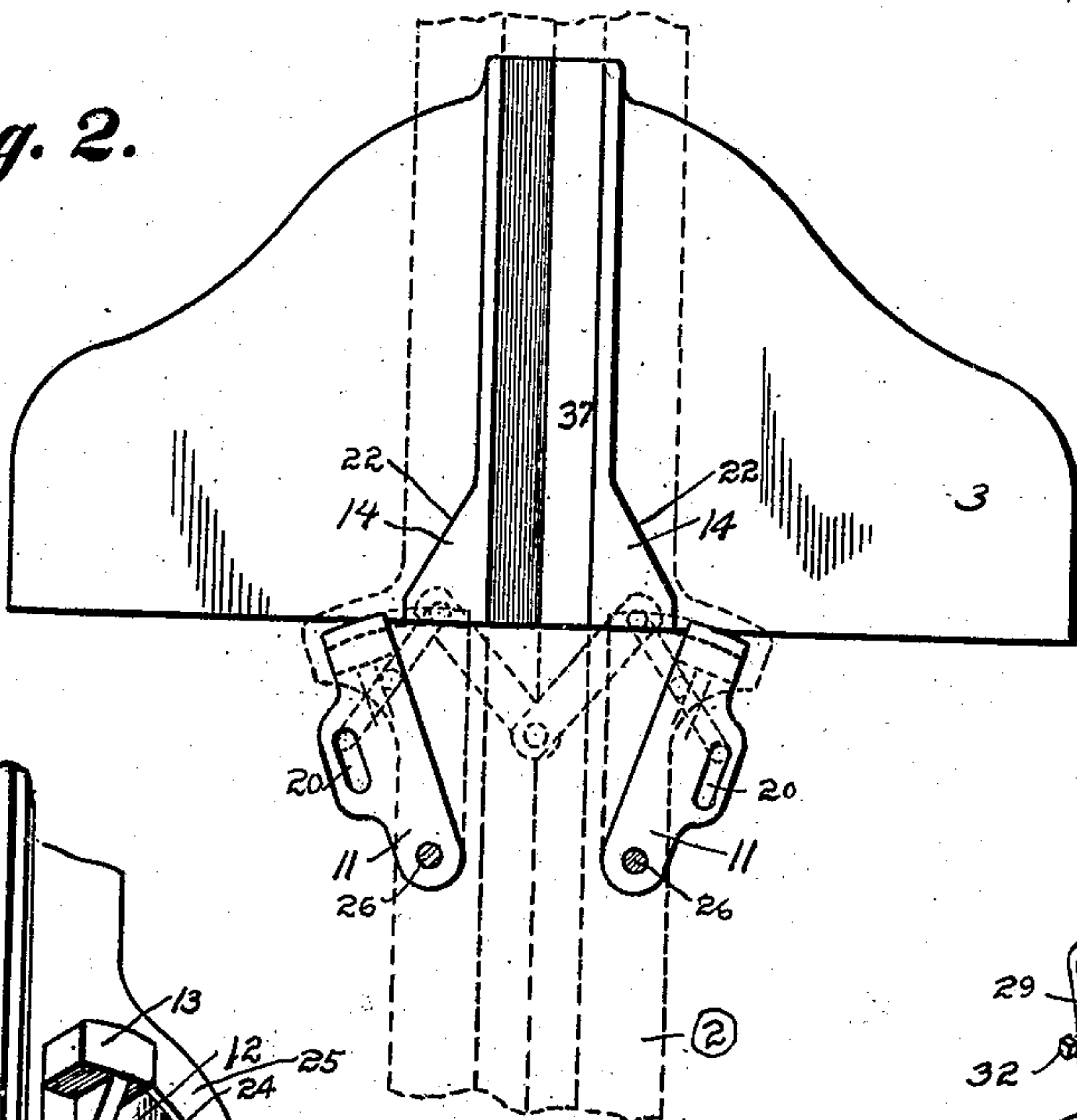


Fig. 3.

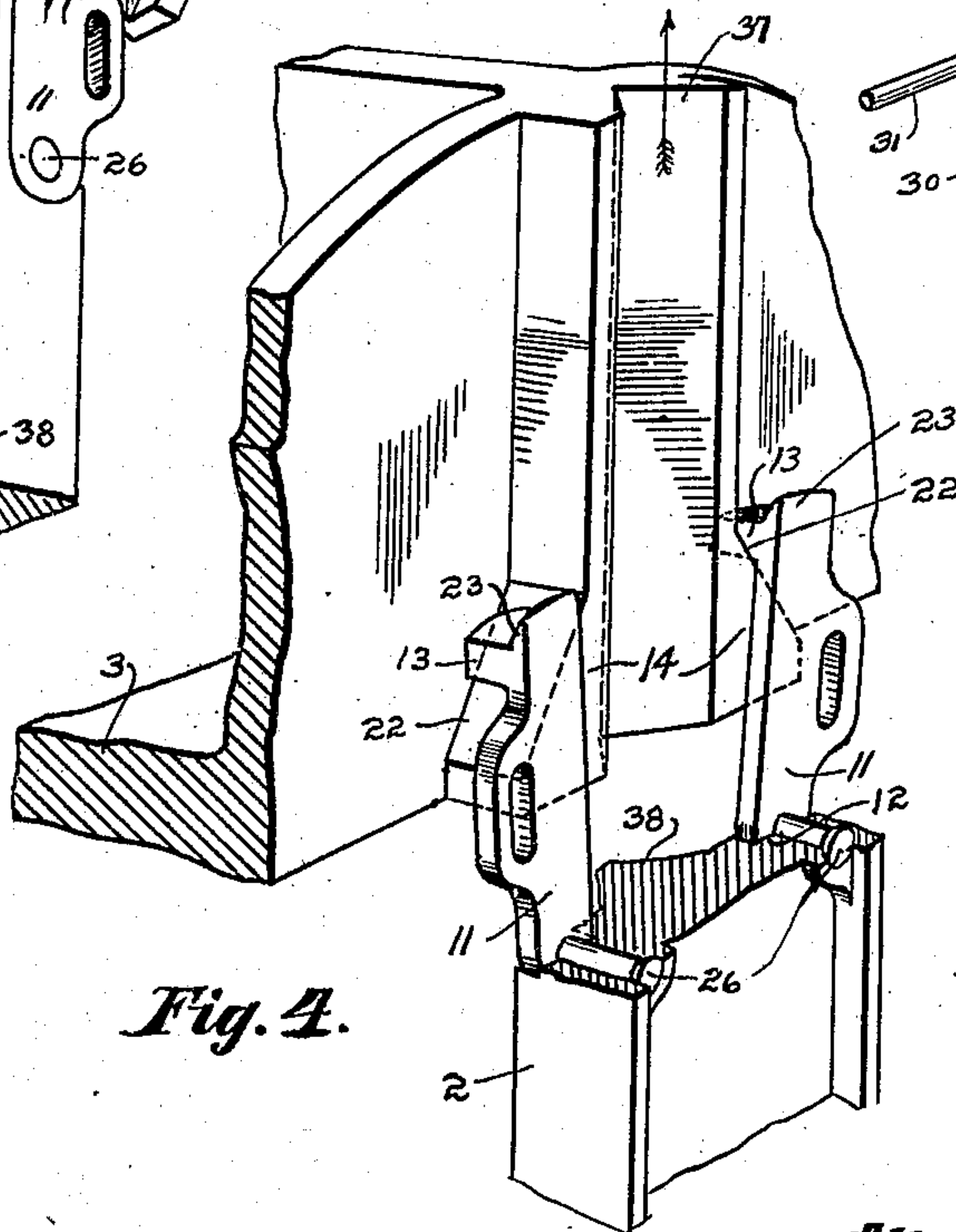


Fig. 4.

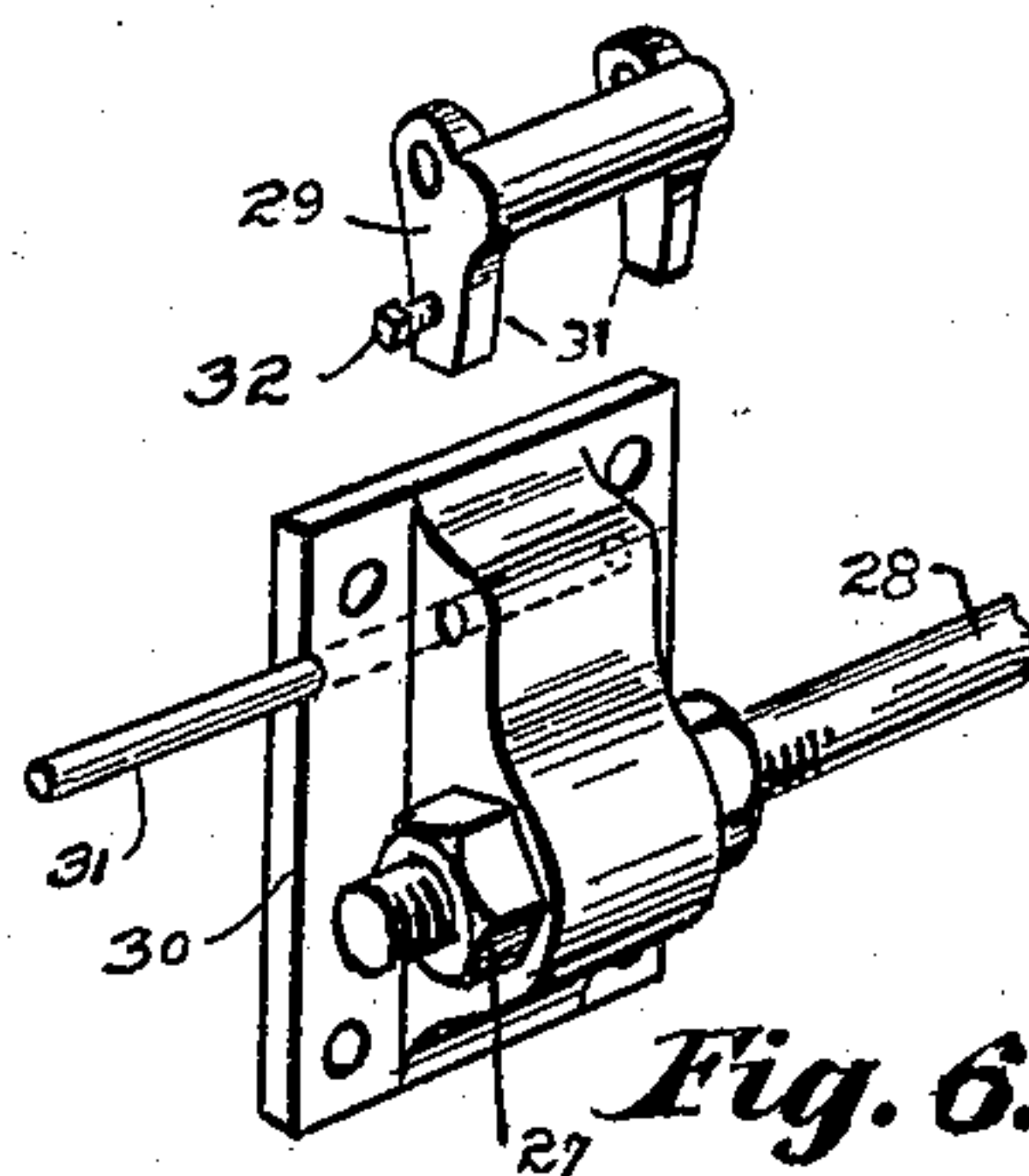


Fig. 6.

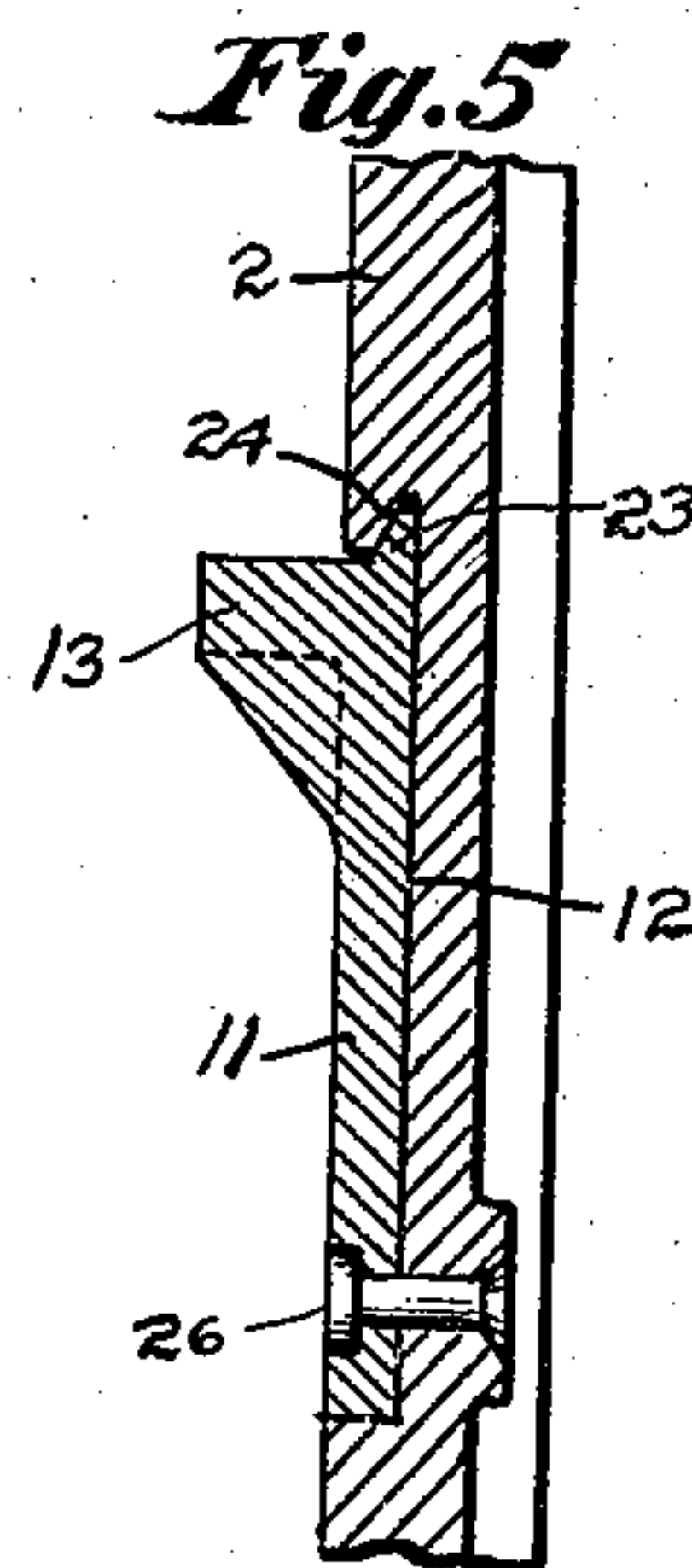


Fig. 5.

WITNESSES

Jos. J. Hoelen.
Sylvia Boron

INVENTOR

Albertus O. Slentz

BY

Bond & Miller
ATTORNEYS

UNITED STATES PATENT OFFICE.

ALBERTUS O. SLENTZ, OF CANTON, OHIO, ASSIGNOR OF ONE-HALF TO THE CANTON FOUNDRY & MACHINE COMPANY, OF CANTON, OHIO, A CORPORATION OF OHIO.

ATTACHMENT FOR DROP-PRESSES.

No. 923,904.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed November 12, 1908. Serial No. 462,208.

To all whom it may concern:

Be it known that I, ALBERTUS O. SLENTZ, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Attachments for Drop-Presses.

The object of the invention is to provide devices and means whereby the hammer can be held at rest without any strain upon the operating rope and at the same time provide means whereby accidents are avoided. These objects are accomplished as hereinafter more particularly described in the following specification which is a full, clear and exact description of the invention, reference being had to the accompanying drawings making a part of this specification and to the numerals of reference marked thereon in which:

Figure 1 is a perspective view showing the hammer elevated and at rest. Fig. 2 is an end view of the hammer showing one of the guides in dotted lines and illustrating the hammer holding dogs in position to release the hammer. Fig. 3 is a view showing a portion of one of the hammer guides and illustrating one of the hammer holding dogs in position to hold the hammer and the other dog in position to release the hammer. Fig. 4 is a view showing a portion of the hammer and a portion of one of the guides, showing the hammer brought into position to open or move the dogs outward. Fig. 5 is a longitudinal section showing a portion of one of the guides and a longitudinal section of one of the hammer holding dogs in proper relative position with reference to the guide. Fig. 6 is a view showing the device designed to lock the nuts of one of the guide tie bars. Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the base or anvil, which is of the usual construction and arrangement, from which base or anvil extend the hammer guides 2, which hammer guides are formed of such a length that the hammer 3 can be elevated to the proper height to accomplish the result designed to be accomplished by an ordinary drop press. Directly above the hammer guide, 2 is located the usual and common mechanism designed to lift the hammer, which mechanism consists of the ordinary elevating rope drum 4 and its shaft 5 to-

gether with the gear wheel 6, the pinion 7, and the shaft 8 together with the elevating rope 9, which elevating rope may be looped around the shaft 8 or not as desired.

The parts of the mechanism designed to operate the hammer are common and form no specific part of the present invention, except that such parts must necessarily be present. The elevating rope 9 is connected to the hammer 3 by means of the outer links 10 and their equivalents and the opposite end of the rope left free to be operated in the usual manner; that is to say to be given a down pull when the hammer is to be elevated but at other times the rope is simply suspended and its convolutions loosely located upon the drum or the shaft, except when the rope is brought into action by a down pull. At any desired distance above the anvil is located the hammer holding dogs 11, which hammer holding dogs are pivotally attached to the hammer guides 2 and are located in the sockets 12 formed in the guides 2 and their inner faces are substantially flush with the outer faces of the guides 2 except the holding hammer or heads 13, which heads extend a short distance laterally and inwardly as best illustrated in Fig. 5.

It will be understood that by providing the hammer heads 13 and extending the same inward that they will come directly under the lower ends of the side lugs 14 when the hammer rests upon the dogs as best illustrated in Fig. 1, but when the hammer holding dogs 11 are brought into the position illustrated in Fig. 2 the head portions of the holding dogs are moved away from under the flanges 14, which permits the hammer to move downward passing the side faces of the dogs. The normal position of the dogs is that shown in Fig. 2, which dogs are held in the position shown in Fig. 2 by means of the weights 15, which weights are carried by the rods 16, said rods being pivotally attached at their upper ends to the links 17, which links are also pivotally attached to the upper free ends of the rock shafts 18, said shafts being provided with the lower crank portions 19, which crank portions are operatively connected to the hammer holding dogs 11 by means of the elongated slots 20 and the crank portions located through said slots. It will be understood that by a downward pressure of the rock bale or treadle 21, the rods 16 will be moved upward,

which in turn moves the upper free ends of the rock shafts 18 outward and the lower crank portions inward carrying with said crank shafts the hammer holding dogs, or
 5 in other words oscillating said dogs, which oscillating movement brings the heads 13 directly under the flanges 14 and when in this position, and when the treadle 21 is held down the dogs 11 are in position to hold
 10 the hammer 3 in elevation and at rest, but by a downward pull of the rope 9 the convolutions of said rope will be brought into frictional contact with the drum 4 and the hammer will be elevated so as to remove the
 15 same from the holding dogs at which time the weights 15 will move the rods 16 downward and bring the dogs 11 out from under the flanges 14 so that the hammer can move downward toward the anvil and into contact
 20 with the work designed to be stamped.

For the purpose of preventing any accident or injury to the dogs in case they should be moved inward at their upper free ends during the time that the hammer is
 25 moving upward the flanges 14 are provided with the beveled faces 22, which beveled faces will move the dogs outward or into the position shown in Fig. 2, thereby allowing the hammer to move upward without any in-
 30 jury to the dogs. For the purpose of assisting in guiding the hammer holding dogs 11, the head portions 13 of said dogs are provided with the upward extended flanges 23, which upward extended flanges are seated
 35 in the corresponding shaped grooves 24 formed in the lateral flanges 25. It will also be understood that by setting the dogs 11 into the sockets 12 and seating the dogs at the bottoms of the sockets 12 as best
 40 illustrated in the drawings and especially in Figs. 1, 2 and 3 the weight of the hammer will be removed from the hammer dog connecting rivets or bolts 26. In drop presses it is well understood that the parallel guides
 45 2 should be held in true parallel position with reference to each other at all times and under all circumstances, but owing to the heavy jarring common and unavoidable in drop presses, the nuts 27 are liable to be-
 50 come loosened, which in turn loosens the tie rods 28.

In order to properly hold the nuts 27 the

locking heads 29 are provided which locking heads are so connected to the flange plates 30 that the lower ends of the heads 55 will abut against the faces of the nuts and hold said nuts against rotation. For the purpose of holding the locking head the ends 31 are provided with the set screws 32.

It will be understood that suitable bearings 33 should be provided for the rock shafts 18 and also suitable pivotal connections for the bale 21, such as the flange plates 34 and the bolts 35.

For the purpose of holding the rods 16 65 against any undue swinging movement or vibrations the guide plates 36 should be provided, which guide plates are connected to the hammer guides 2. It will also be understood that the hammer 3 should be provided 70 with grooves 37 and the guides 2 with ribs 38, which grooves and ribs are of the usual construction in drop presses of the class to which my improved attachment applies.

Having fully described my invention what 75 I claim as new and desire to secure by Letters Patent, is—

1. The combination of a drop press consisting of an anvil and hammer guides adapted to guide said hammer, pivoted 80 hammer holding dogs provided with hammer holding heads, rock shafts carried by the hammer guides, links pivoted to the rock shafts, weighted rods connected to said links, and a treadle adapted to elevate the 85 weighted rods, substantially as and for the purpose specified.

2. The combination of an anvil and a hammer, guides adapted to guide the hammer, hammer holding dogs provided with 90 hammer holding heads, grooved flanges located upon the hammer guides and the hammer holding heads provided with flanges adapted to fit the grooves of the grooved flanges and means for oscillating the ham- 95 mer holding dogs, substantially as and for the purpose specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

ALBERTUS O. SLENTZ.

Witnesses:

JOHN H. SPONSELLER,
 F. W. BOND.