

No. 898,397.

PATENTED SEPT. 8, 1908.

W. A. WHITNEY.

PUNCH.

APPLICATION FILED JAN. 14, 1907.

FIG. 3.

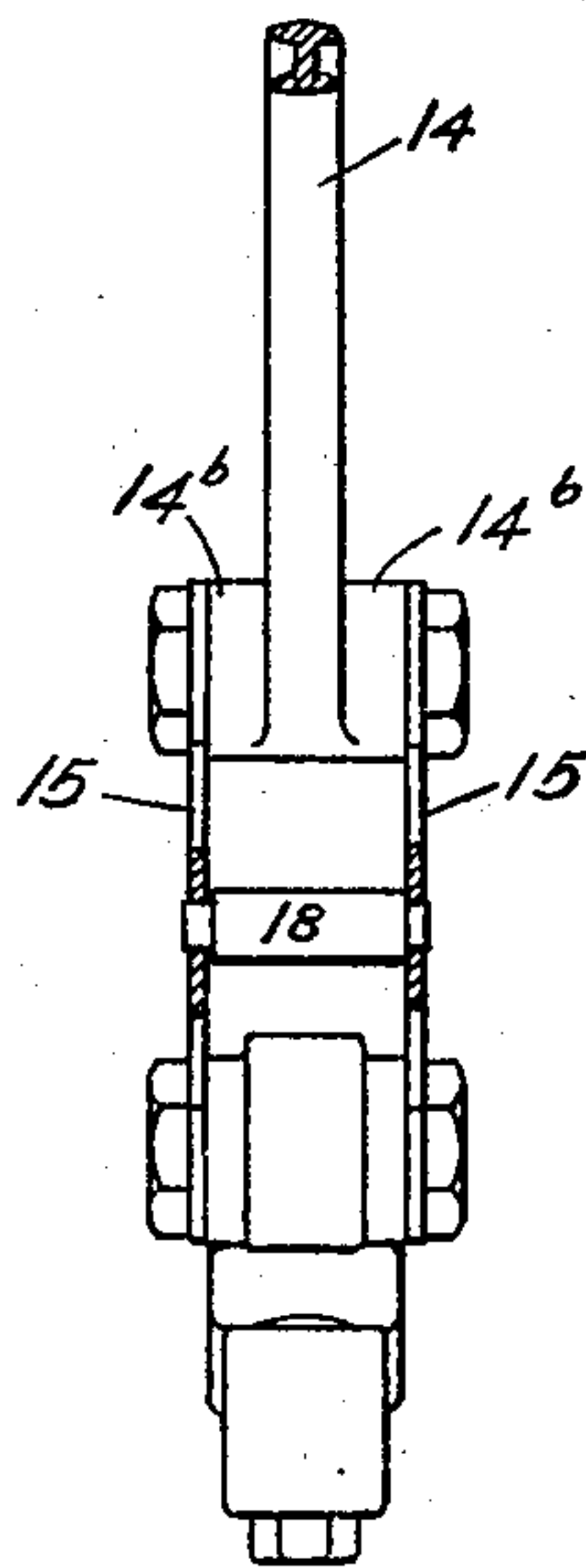


FIG. 2.

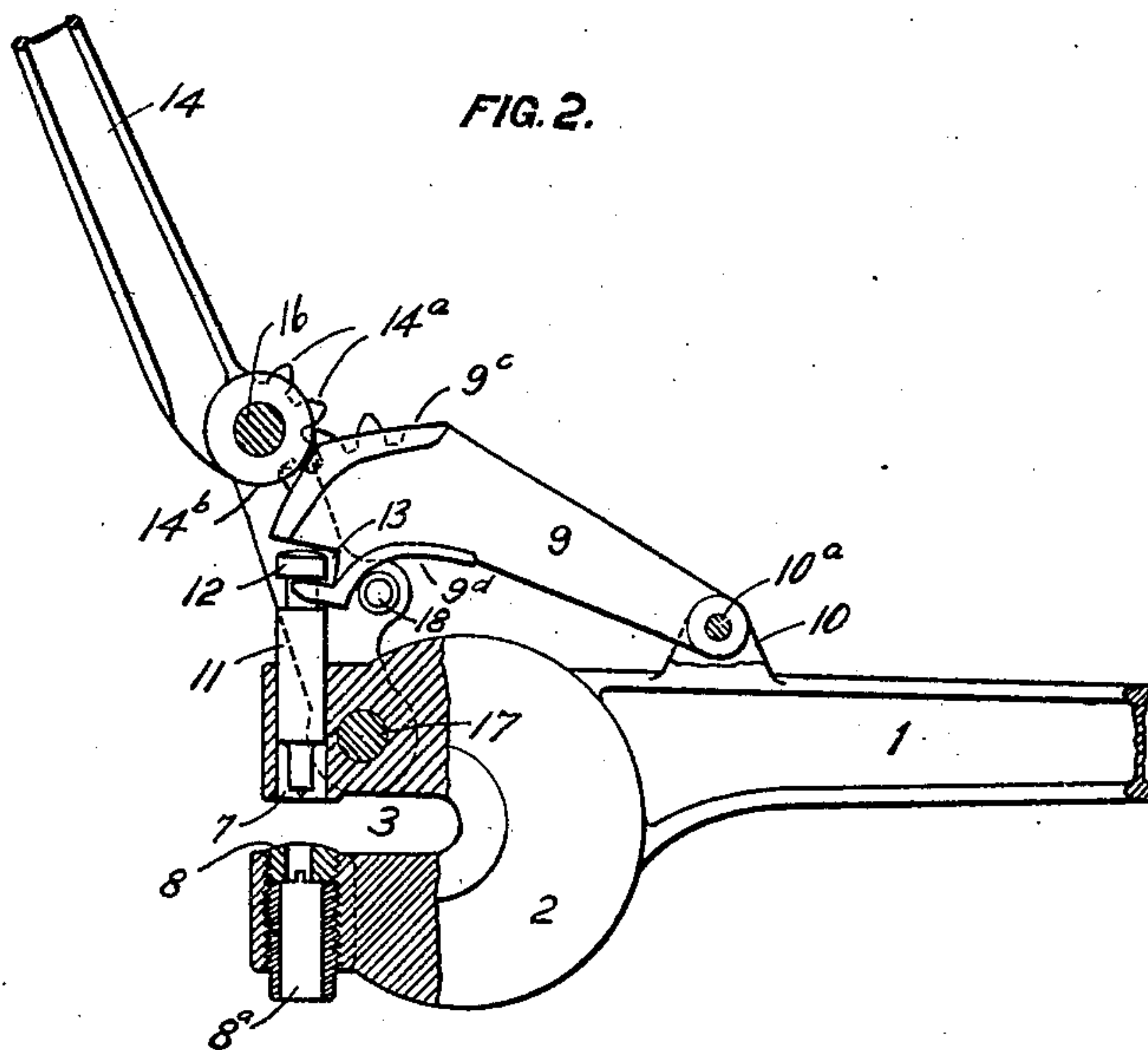
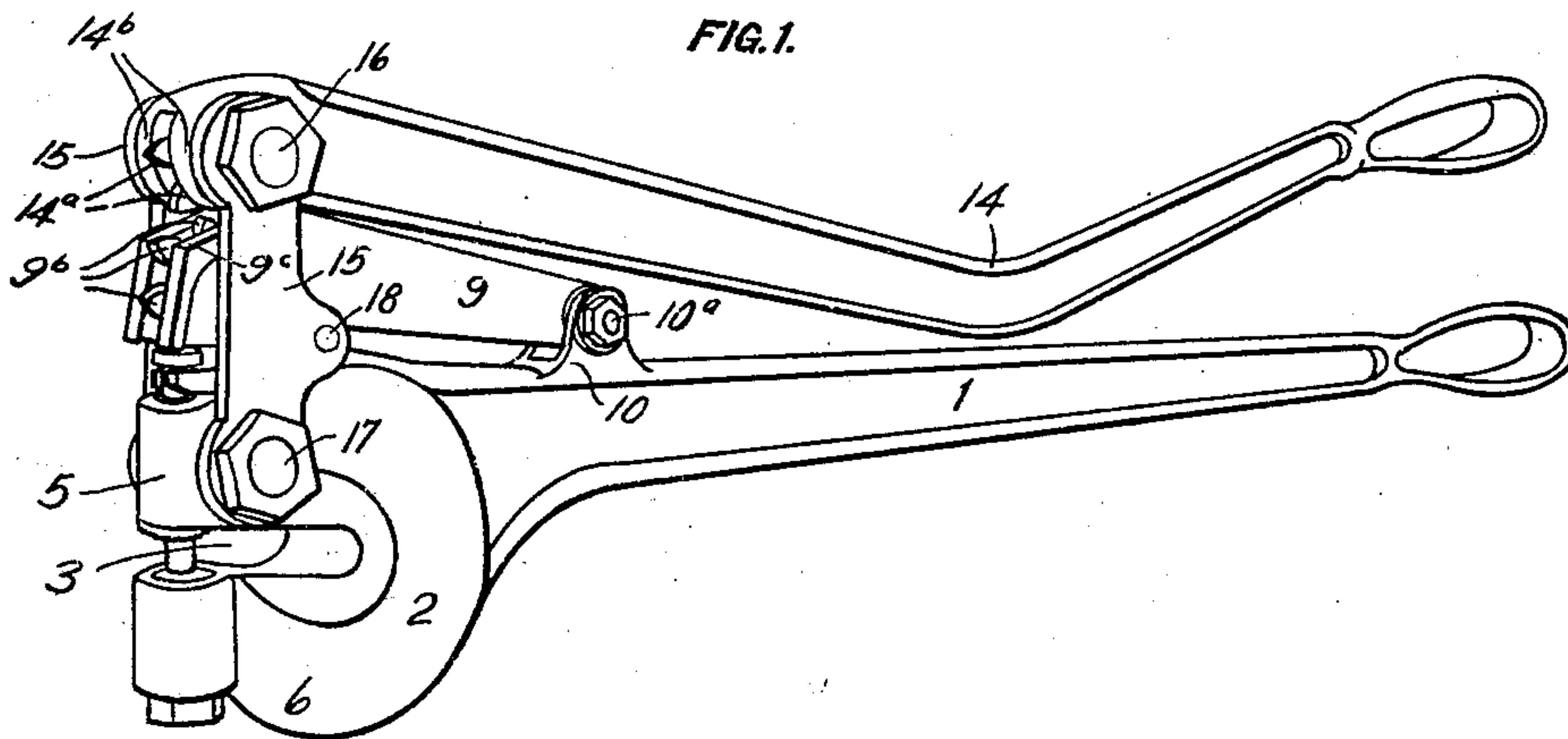


FIG. 1.



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# UNITED STATES PATENT OFFICE.

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PUNCH.

RECEIVED

No. 898,397.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed January 14, 1907. Serial No. 352,324.

*To all whom it may concern:*

Be it known that I, WILLIAM A. WHITNEY, a citizen of the United States of America, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Punches, of which the following is a specification.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is an isometrical view of the punch with its handle closed. Fig. 2 is a side elevation of the same in vertical central longitudinal partial section with parts wanting and the handles open. Fig. 3 is a front end view of the punch with parts wanting and other parts broken away.

The object of my invention is the production of a punch of simple construction, efficient operation and one which may be readily transported from place to place; and it consists of certain new and useful features of construction and combinations of parts especially devised to those ends, all as hereinafter fully described and specifically pointed out in the claims.

Like reference characters indicate corresponding parts throughout the several views.

1 is a stationary handle provided at its forward end with a head 2, slotted, as at 3, for the reception of the metal to be punched. The head 2 is provided with an upper arm 5 and a lower arm 6, which lie, respectively, above and below the slot 3, the upper arm 5 being provided with a normally vertically disposed perforation 7, while the arm 6 has tapped thereinto, in vertical alinement beneath the perforation 7, a vertically adjustable female die 8 and a tubular locking-plug 8<sup>a</sup> for securing the same in position therein.

9 is an arm-like member, pivoted at its rear end between ears 10, projecting upward from the handle 1 at the forward end of the same. This member 9, which is adapted to swing on its pivot 10<sup>a</sup> towards and from the head 2, carries at its forward end the movable male member 11 of the punch which is provided at its upper end with a shouldered head 12, removably engaging a shouldered recess 13 formed in the member 9 near its outer end. During the movements of such member 9 towards and from the head 2, the male member 11 travels in and is guided by the perforation 7 and moves into and out of active position relative to the female die 8.

The member 9 also has formed on the free end portion thereof gearing 9<sup>b</sup> and cam surfaces 9<sup>c</sup>, and on the under surface thereof a cam surface 9<sup>d</sup>, for purposes to be explained hereinafter.

14 is the relatively movable handle of the punch and has gearing 14<sup>a</sup> and rolls 14<sup>b</sup> formed on the pivoted end thereof, the gearing 14<sup>a</sup> coöperating with the gearing 9<sup>b</sup> and the rolls 14<sup>b</sup> with the cam surfaces 9<sup>c</sup> on the member 9.

15 are a pair of links located on either side of the handles 1 and 14 and pivoted, as at 16, to the handle 14, and, as at 17, to the head 2 of the handle 1. The rear end of the handle 14 is bent at an angle relative to the handle 1.

18 is a roller mounted in and between the links 15 and coöperates with the cam surface 9<sup>d</sup> on the member 9 to move the male die 11 out of and away from the female die 8, when the handle is swung from a closed to an open position.

During the operation of the punch if the handle is swung from a closed to an open position such movement will serve through the coöperation of the gearing 14<sup>a</sup> thereon with the gearing 9<sup>b</sup> on the member 9 and the roller 18 in the links 15 with the cam surface 9<sup>d</sup> on such member 9, to raise the male member to its upper limit of travel or to its inactive position. If now the handle 14 is swung to a closed position, such movement will serve, through the coöperation of the gearing 14<sup>a</sup> and rolls 14<sup>b</sup> thereon with the gearing 9<sup>b</sup> and the cam surfaces 9<sup>c</sup> on the member 9 to depress the male member 11 to its lower limit of travel, or to its active position. It will thus be seen that the handle 14 must be swung from an open to a closed position and thereafter from a closed to an open position in order to cause the male die to perform a complete reciprocation or punching operation.

The hereindescribed device will be found to be very powerful and efficient.

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

1. The combination with a stationary handle, of a member pivotally associated therewith, a die carried by the stationary handle, a coöperating die carried by the member, a relatively movable handle, links connecting the stationary and relatively movable handle, gearing and rolls on the pivoted end portion of the relatively movable handle, gear-



ing and cam surfaces on the free end portion of the member cooperating respectively with the gearing and rolls on the relatively movable handle, said member being operable to  
5 move its die to an active position by swinging the relatively movable handle from an open to a closed position.

2. The combination with a stationary handle, of a member pivotally associated therewith, a die carried by the stationary handle,  
10 a cooperating die carried by the member, a relatively movable handle, links connecting the stationary and relatively movable handle, gearing on the pivoted end portion of the  
15 relatively movable handle, gearing on the free end portion of the member, a cam surface on the under side of the member and a

roller mounted in the connecting links, the gearing on the relatively movable handle cooperating with the gearing on the member  
20 and the cam surface on the under side of the member cooperating with the roller in the links, said member being operable to move its die to an inactive position by swinging the  
25 relatively movable handle from a closed to an open position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

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Witnesses:

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