

5. WOOD-WORKING TOOLS,

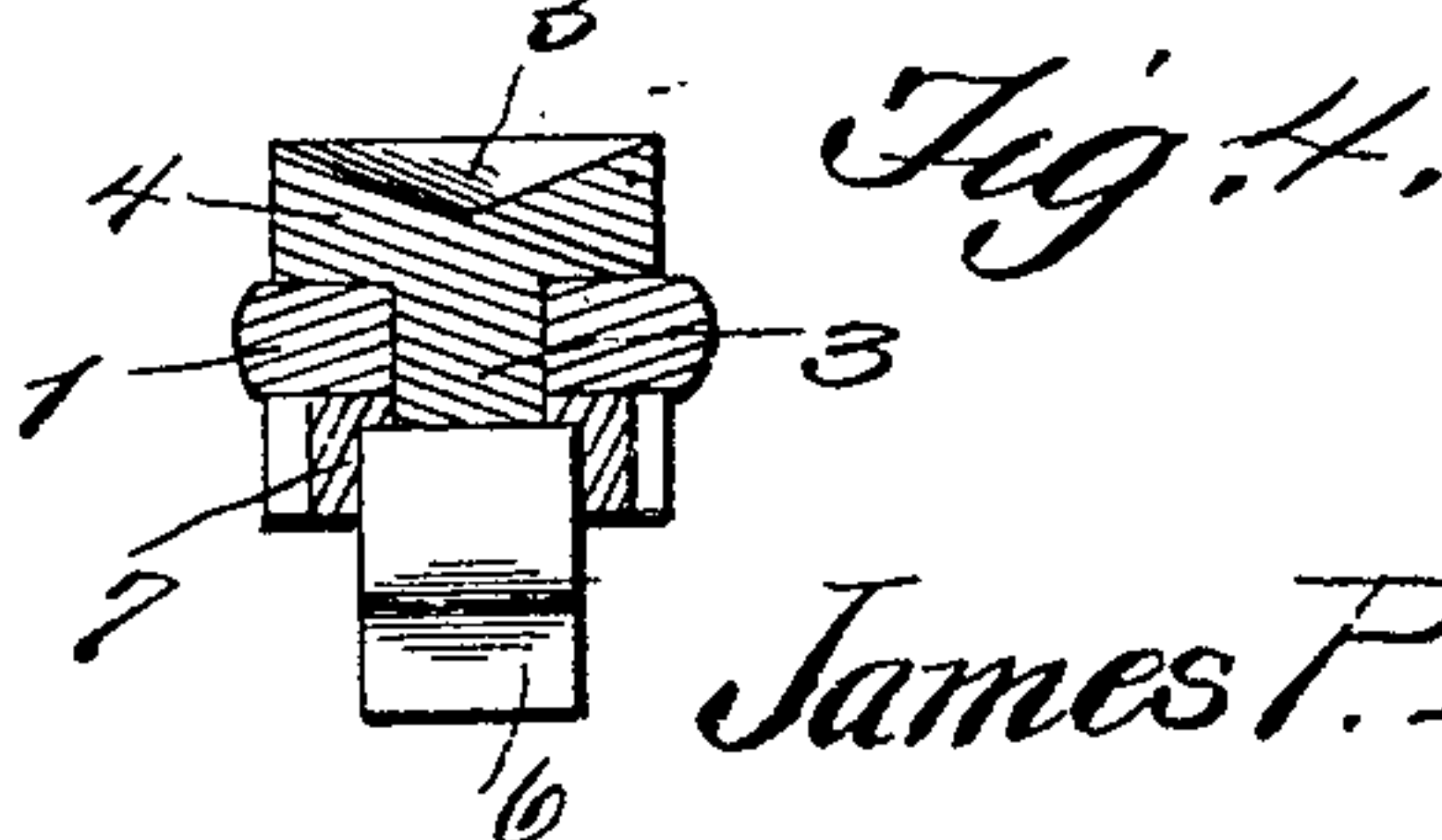
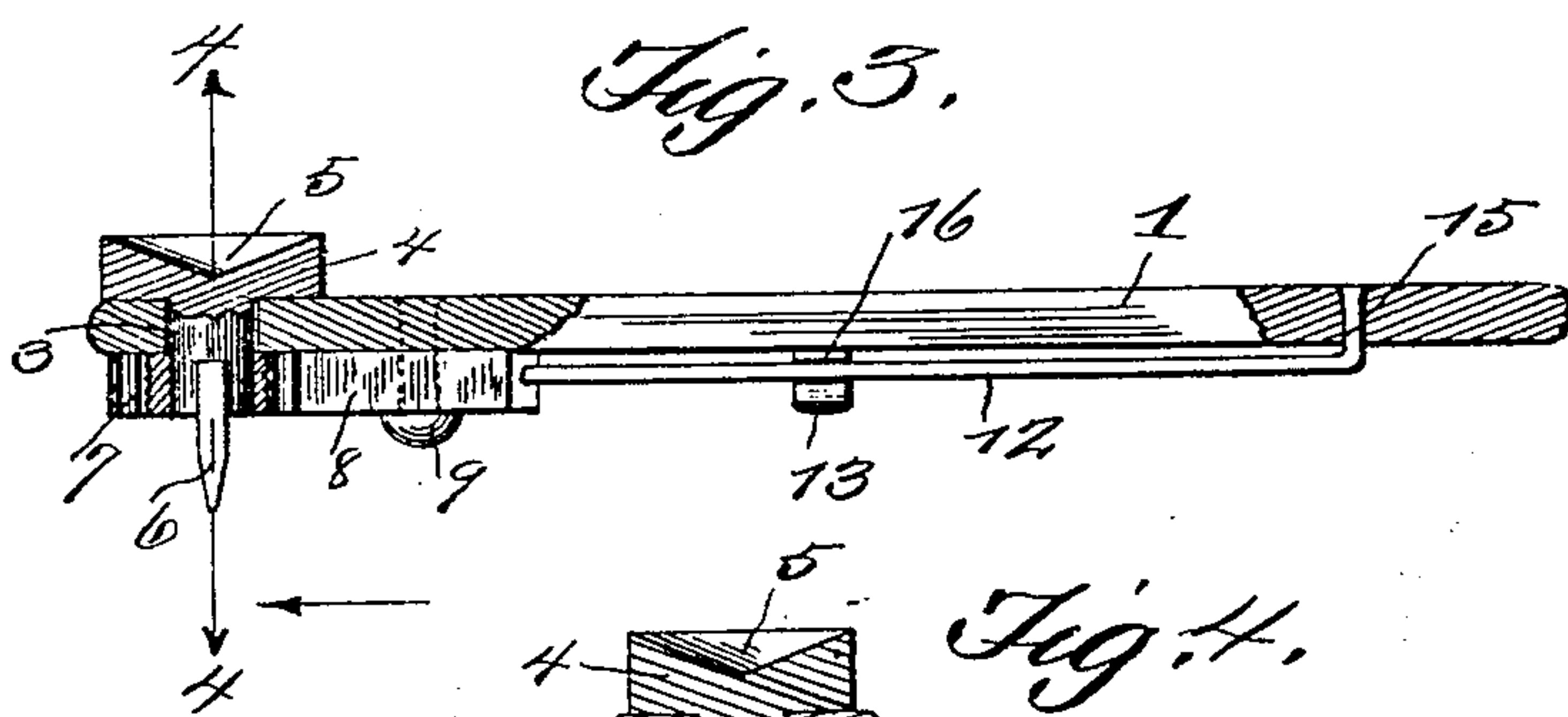
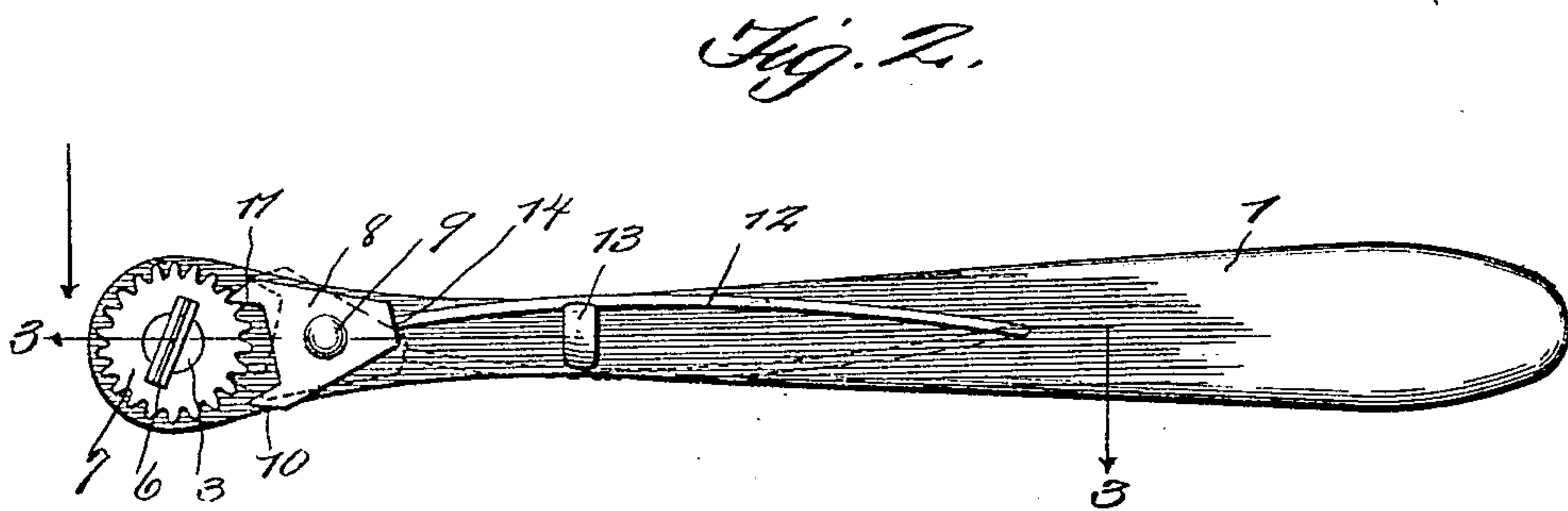
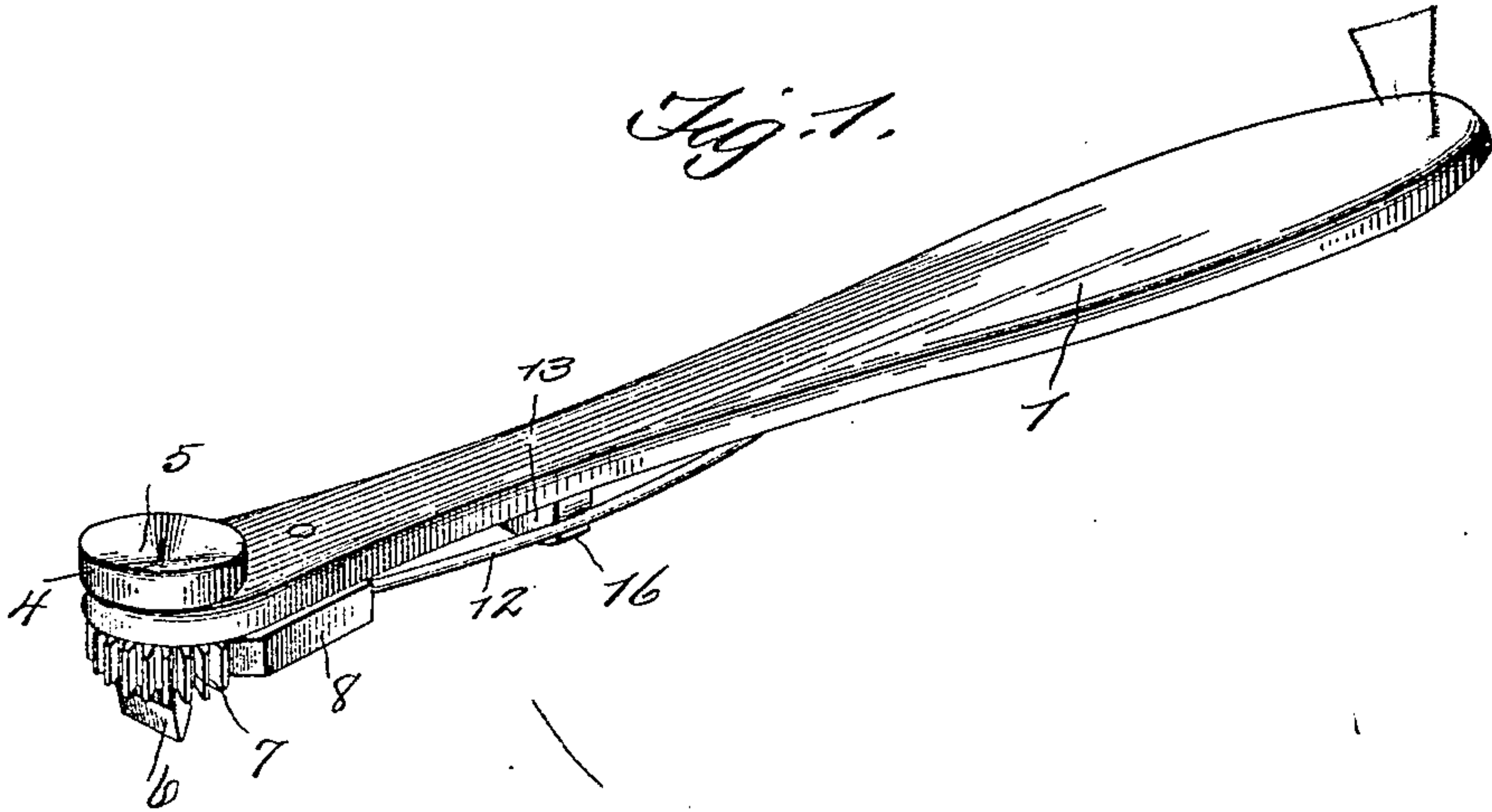
Bit Stocks, Ratchet,
Straight Crank Arm,

Draftsman

No. 876,680.

PATENTED JAN. 14, 1908.

J. P. BARTHOLOMAY.
RATCHET SCREW DRIVER.
APPLICATION FILED OCT. 14, 1907.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES P. BARTHOLOMAY, OF ROXBURY, MASSACHUSETTS.

RATCHET SCREW-DRIVER.

No. 876,680.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed October 14, 1907. Serial No. 397,357.

To all whom it may concern:

Be it known that I, JAMES P. BARTHOLOMAY, a citizen of the United States, residing at Roxbury, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Ratchet Screw-Drivers, of which the following is a specification.

This invention relates to certain new and useful improvements in ratchet screw drivers and it has for its objects among others to provide a simple and cheap reversible ratchet screw driver, capable of use in a small space, easily reversed and having provision for pressing down upon the screw in starting the same or, if desired, while operating the screw driver.

I employ a flexible rod having one end connected with the cam or ratchet and the other end with the handle, there being a lug on the handle intermediate the ends of the bendable rod, the bendable rod being engageable with either side of the lug so that movement of the handle in the same direction moves the screw in or out according to the position of the bendable rod.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification and in which

Figure 1 is a perspective view of my improved screw driver. Fig. 2 is a bottom plan thereof. Fig. 3 is a section on the line 3—3 of Fig. 2 with portions broken away, looking in the direction of the arrows. Fig. 4 is a cross section on the line 4—4 of Fig. 3, looking in the direction of the arrow.

Like numerals of reference indicate like parts throughout the several views.

Referring to the drawings 1 designates the handle which is substantially flat having at one end an opening through which passes a shank 3 of a button 4, the upper face of which is concaved, as seen at 5, to receive the thumb or finger for use in holding the screw driver down when in use. This shank 3 is bifurcated to receive the screw driver 6, as shown in Figs. 3 and 4, and upon this shank is secured the gear or ratchet wheel 7, the gear being disposed upon the under side of the handle, and the button head upon the

upper side, as clearly indicated in the various views.

8 is a double pawl pivotally mounted upon the under side of the handle, as at 9, and provided with two teeth or engaging portions 10 and 11, either one of which is made to engage with the ratchet wheel 7 by means of a flexible rod 12, according to the position of the spring with relation to a lug 13 which is rigid with the under side of the handle, as shown. This flexible rod has one end secured to the pawl 8, as at 14, and its other end is bent at a right angle, as at 15, and extends into the handle where it is secured in any suitable manner. The opposite faces of the lug 13 are preferably recessed or grooved, as seen at 16, to better receive the flexible rod 12.

The mode of use will be apparent;—when the flexible rod is in the position seen in full lines in Fig. 2, the tooth 11 of the pawl engages the ratchet wheel 7, when movement of the handle in one direction will cause the screw to move inward, and by simply reversing the position of the flexible rod into that shown in dotted lines in the same figure, the pawl is reversed so that its other tooth 10 engages the ratchet when movement of the handle in the same direction will move the screw outward. The flexible rod is sufficiently stiff to hold the pawl firmly in position and yet permit of its being easily moved away from the handle and shifted into position upon the opposite side of the lug. This can be done easily with the thumb of the hand which grasps the handle without removing the hand therefrom and without removing the screw driver from the screw. But slight movement of the handle is necessary and the screw driver can be used in places where there is but small space for operating the same.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What is claimed as new is:—

1. A ratchet screw driver comprising a handle, a holder for the screw driver rotatably mounted therein, a ratchet wheel movable therewith, a double pawl pivotally mounted on the handle, a flexible rod extending lengthwise of the handle and connected with the pawl for holding it in either position, and a lug on the handle between the ends of the rod over which the rod is

movable and with either side of which the spring is engageable, the opposite sides of said lug being recessed to receive the rod.

2. The improved ratchet screw driver
5 herein described comprising a flat handle with an opening therethrough, a button having a shank passed through said opening and having a concaved head upon one side of the handle, a ratchet wheel on said shank
10 upon the opposite side of said handle, a screw driver held in said shank, a double pawl pivotally mounted on the under side of said

handle, a flexible rod extending lengthwise of the handle with one end secured to the handle and the other to said pawl, and a 15 fixed lug on said handle between the ends of said rod and over which said rod can be sprung, said lug having recessed sides with either of which said flexible rod is engageable by reversing its position.

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Witnesses:

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