

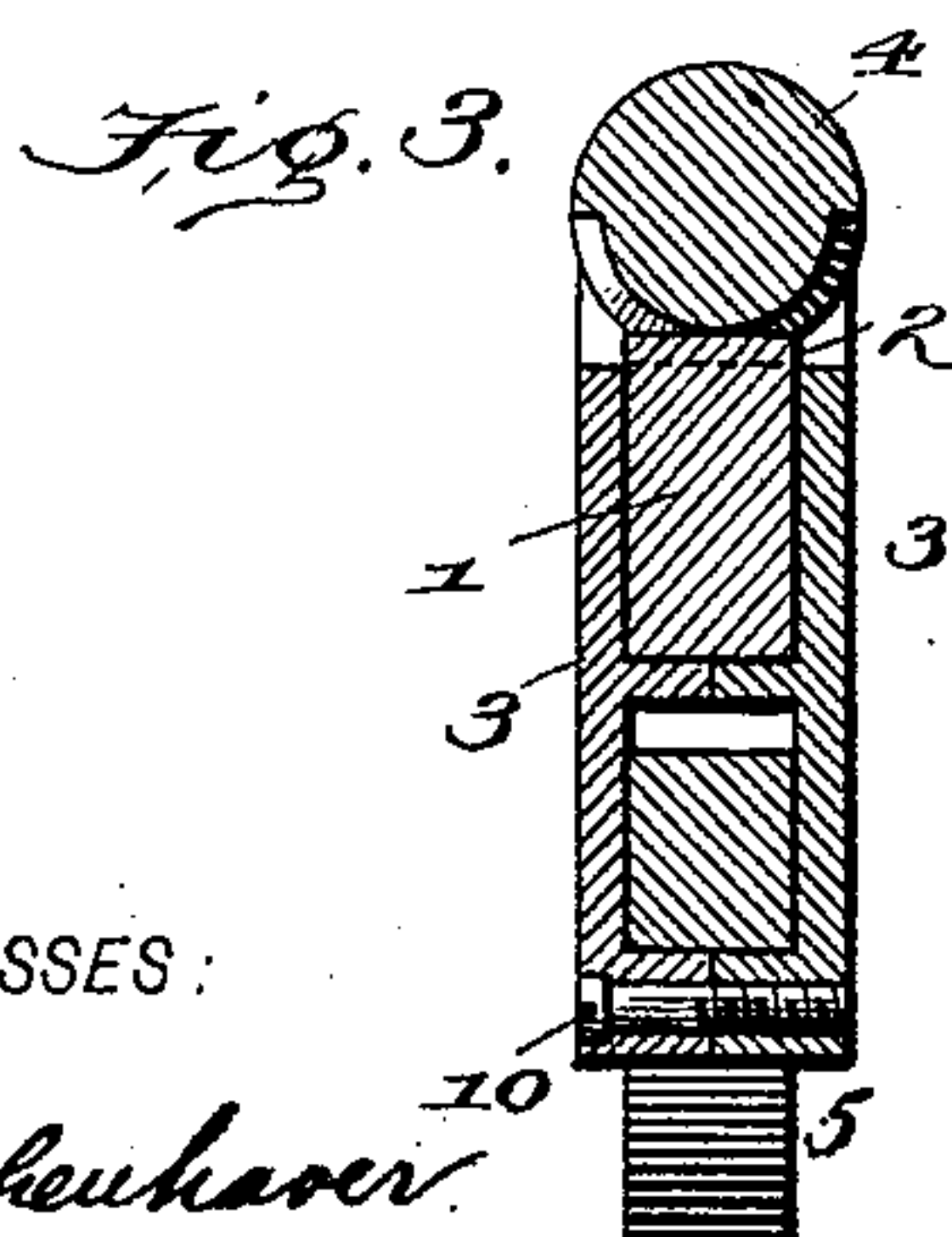
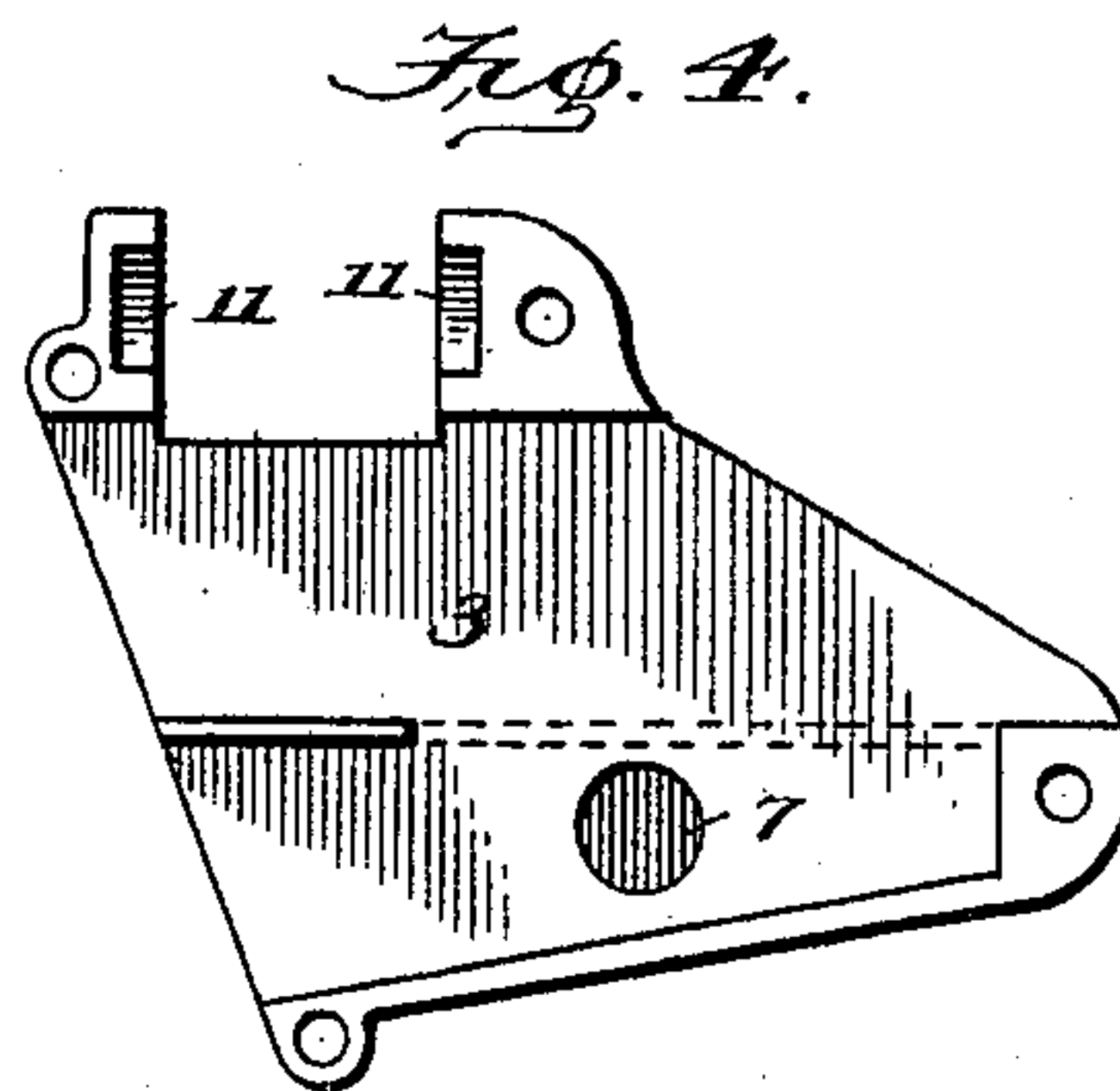
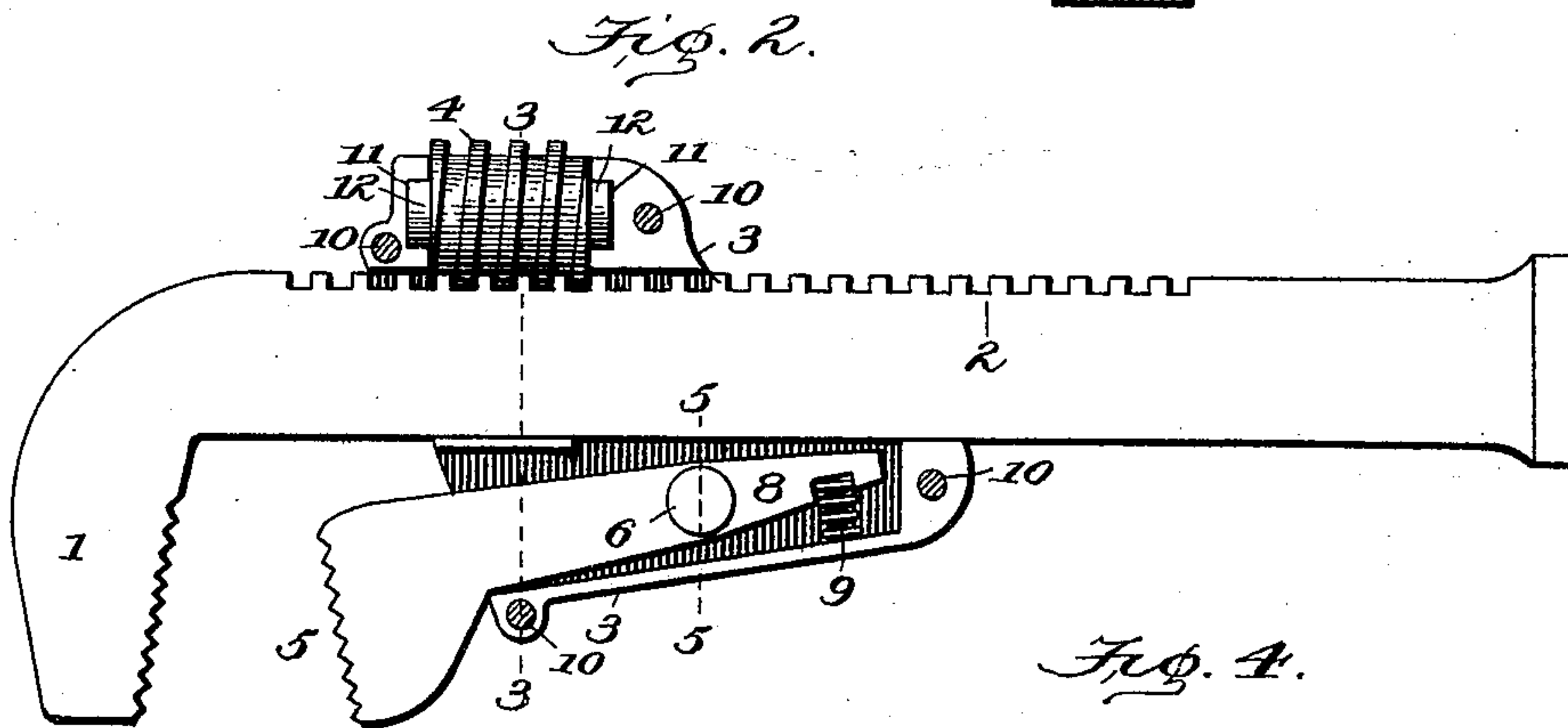
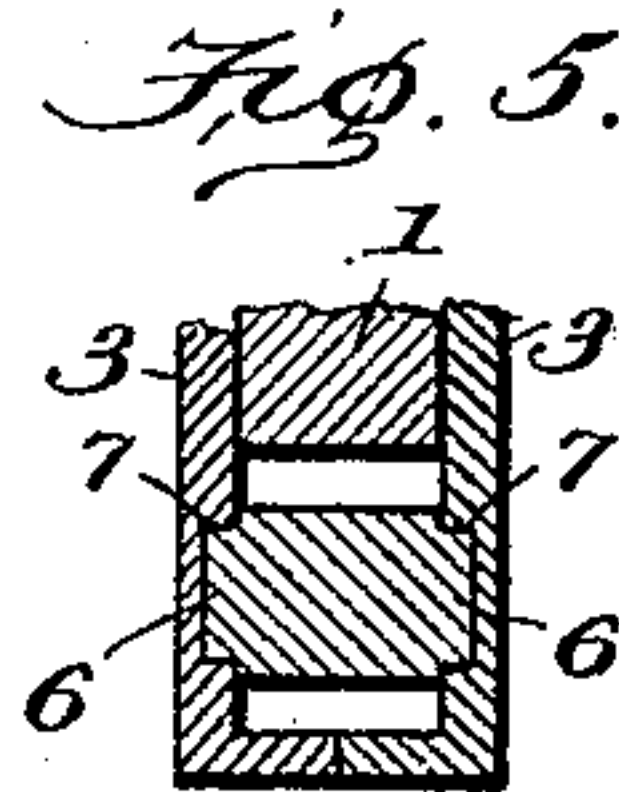
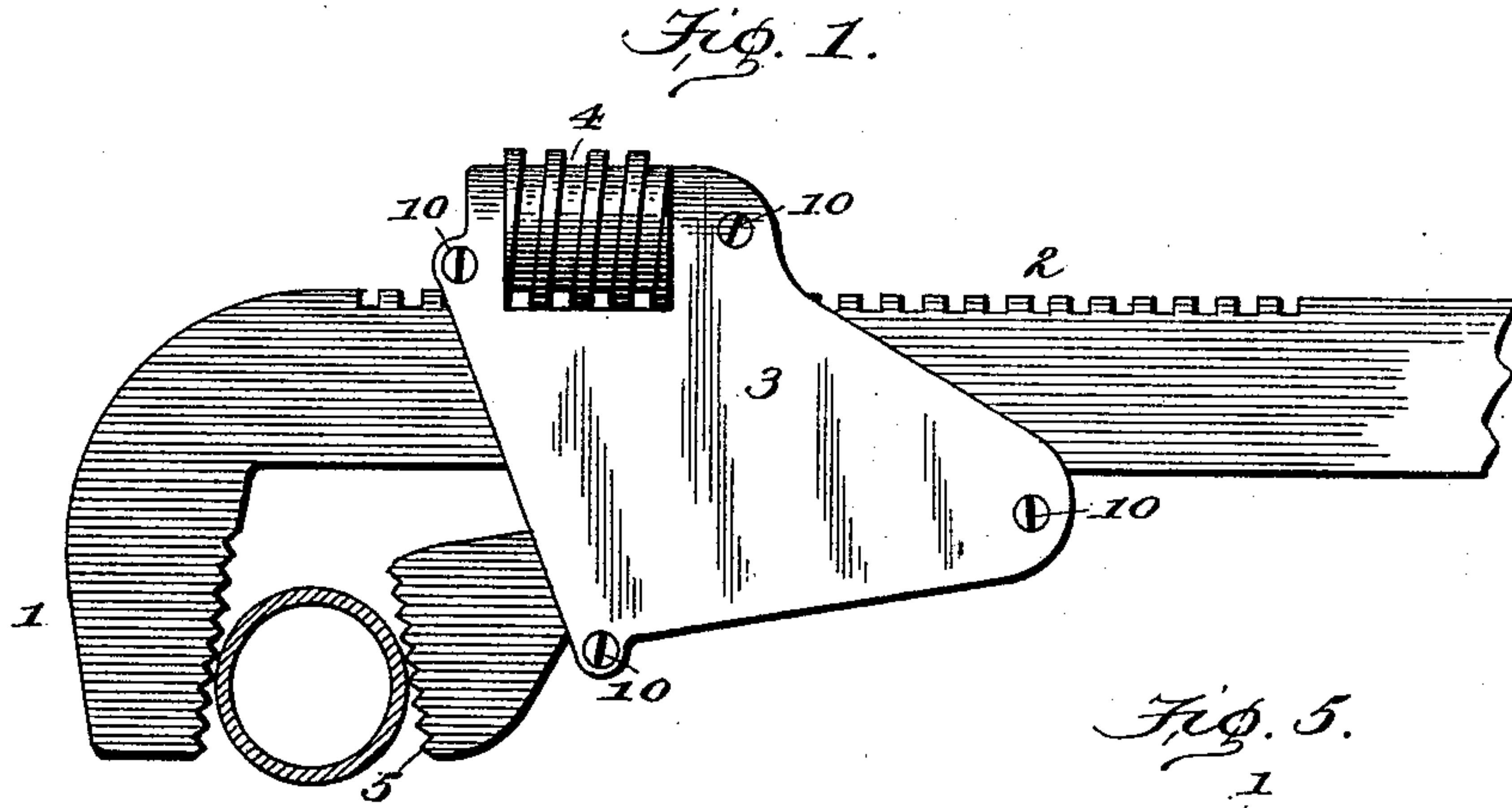
No. 607,288.

Patented July 12, 1898.

O. C. STANLEY.  
PIPE WRENCH.

(No Model.)

(Application filed Dec. 3, 1897.)



WITNESSES:

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# UNITED STATES PATENT OFFICE

ORAMEL CHARLES STANLEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR  
OF TWO-THIRDS TO CHARLES W. MORRISON AND JOHN J. MCKINLEY,  
OF SAME PLACE.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 607,288, dated July 12, 1898.

Application filed December 3, 1897. Serial No. 660,666. (No model.)

*To all whom it may concern:*

Be it known that I, ORAMEL CHARLES STANLEY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Pipe-Wrenches, of which the following is a specification.

I have improved that type of pipe-wrenches in which a swing grip-jaw is mounted in a box which is adapted to slide upon the handle jaw-bar; and my improvement resides in the construction of the box whereby the jaw is mounted therein by trunnions cast thereon and whereby the worm-nut which engages the handle-bar rack is mounted in sockets in the box by trunnions. This construction is advantageous by reason of mounting the trunnioned parts in corresponding bearing-sockets in the box, giving a durable and economical construction and dispensing with pivot-bearings.

In the accompanying drawings my improved wrench is shown in elevation in Figure 1 as applied to a pipe. Fig. 2 is a sectional view of the same. Fig. 3 is a transverse section of the same, taken through the worm-nut on the line 3 3 of Fig. 2. Fig. 4 shows one-half of the divided box; and Fig. 5 is a cross-section on the line 5 5 of Fig. 2, showing the trunnions of the swing grip-jaw.

The handle-bar has the usual end jaw 1, formed with a rack 2 on its back edge. A box 3 of two equal parts and bolted together is fitted to slide upon the bar and is provided with a worm-nut 4 to engage the bar-rack to set the swing grip-jaw upon the pipe. The box has a compartment to receive and support the shank of the swing grip-jaw, so that its enlarged gripping end 5 will project from the box and overhang it in its normal position, with its shank inclining outward from the handle-bar, and the gripping-surface will stand at an angle to form a wedge-shaped space between it and the jaw of the handle-bar to receive the pipe between them in gripping it. On the other side of the box the worm-nut is mounted, and it is the manner of mounting the swing grip-jaw and the worm-nut and the construction of the box for such mounting that constitutes my improvement.

For this purpose I cast the shank of the swing grip-jaw with trunnions 6 6, coincidently located on its opposite sides at a point about one-third its length from its inner end, and corresponding with these trunnions sockets 7 7 are cast coincidently in the opposite walls of the box to receive the trunnions. The shank is extended beyond the trunnions to form a tail-arm 8 for the engagement of a spring 9, the function of which is to constantly press the tail of the shank toward the handle-bar jaw and maintain thereby the grip end of the swing-jaw in its normal position to receive the pipe. These trunnion-sockets are formed in the opposite solid walls of the box, as in Fig. 4, and it is to fit the trunnions therein that I make the box in two equal parts and secure them together by screws 10 at different parts of the box. In like manner I form sockets 11 for the trunnions 12 of the worm-nut in the box, the sockets being formed at the section-line of the box, and in securing the two parts of the box together the worm-nut trunnions are held in the sockets. The sockets for the nut are formed in the solid parts of the box, which gives greater strength in resisting the force upon the nut, and between the solid parts the box is open for the engagement of the nut with the rack. The location of the nut on the back edge of the handle jaw-bar leaves the other side of the box for the shank of the swing grip-jaw and its trunnion-mounting.

The casting of the box in equal half parts provides the sockets for holding the swing grip-jaw and the nut in work position, and the jaw and the nut are cast with the trunnions, whereby they are seated in the box and readily put together, with the handle jaw-bar in one half of the box, as in Fig. 2, and the other half of the box secured to complete the mounting of the seated parts without further fitting.

The guide-walls of the box are interrupted by the nut on one side of the box and may or may not extend unbroken the length of the box of the swing-jaw side.

The sliding box being in divided parts, the handle of the fixed jaw-bar may be die-formed.

I claim as my improvement—

1. In a pipe-wrench, the combination of the



handle jaw-bar, a sliding box of two equal parts, each part having a coincident socket on its inner wall, and the swing grip-jaw having the cast trunnions on its opposite sides for engaging said sockets whereby to effect the mounting of the swing grip-jaw.

2. The combination, in a pipe-wrench, of the handle jaw-bar having a rack on its back edge, the swing grip-jaw having the cast trunnions on the opposite sides of its shank, the worm-nut engaging the rack and having the cast trunnions, and a box divided into two equal parts each part having sockets wherein to mount the trunnions of the jaw and the nut in securing the box-sections.

3. In a pipe-wrench, the combination of the handle jaw-bar having a rack on its back edge, a worm-nut for engaging said rack, having cast trunnions and a box divided into two equal parts, each part having sockets where-

in to mount the nut-trunnions, and a swing grip-jaw mounted in the opposite sides of said box.

4. The combination, in a pipe-wrench of the handle jaw-bar, a sliding box of two equal parts, each part having a coincident socket on its inner wall, and the swing grip-jaw having cast trunnions on its opposite sides for engaging said sockets, the shank of the said swing-jaw having a tail-arm beyond the trunnions and a spring engaging said tail-arm whereby to maintain the swing grip-jaw in its normal position.

In testimony whereof I have signed this specification in the presence of witnesses.

ORAMEL CHARLES STANLEY.

Witnesses:

JOHN J. CROUT,  
A. HAGEN, Sr.