

No. 659,293.

Patented Oct. 9, 1900.

R. F. DOWNEY.  
WRENCH.

(Application filed Apr. 16, 1900.)

(No Model.)

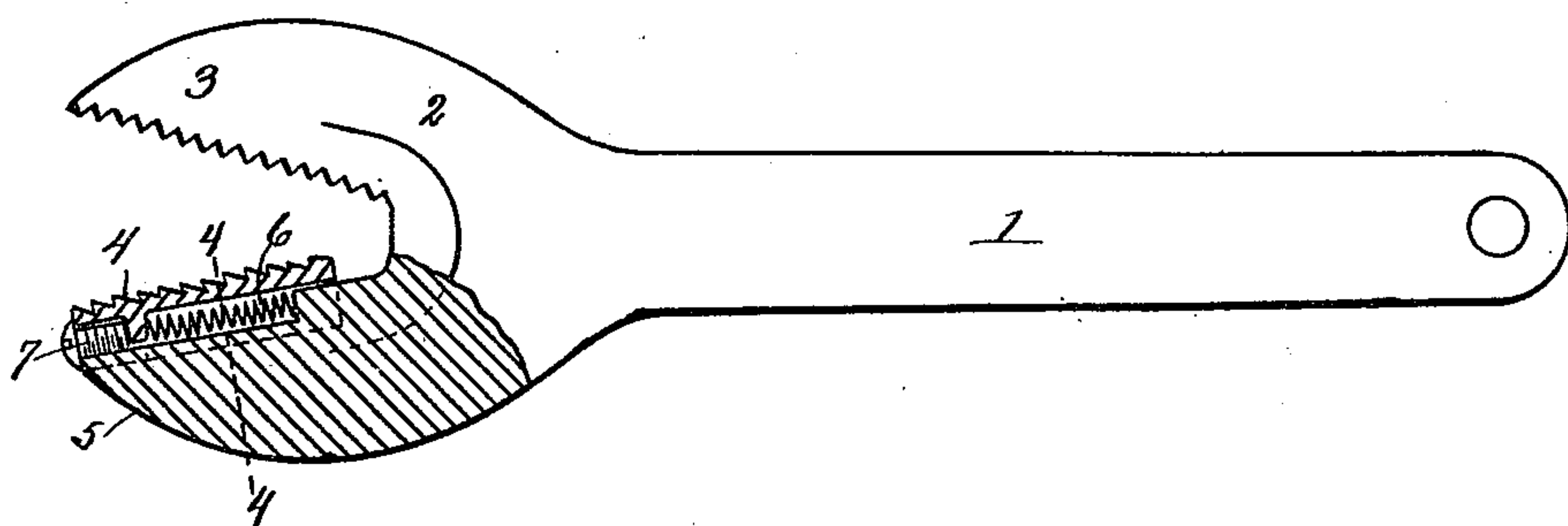


Fig. 1.

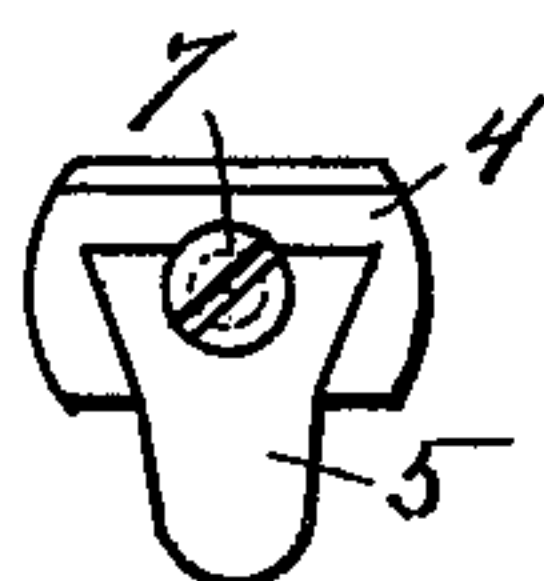


Fig. 2.

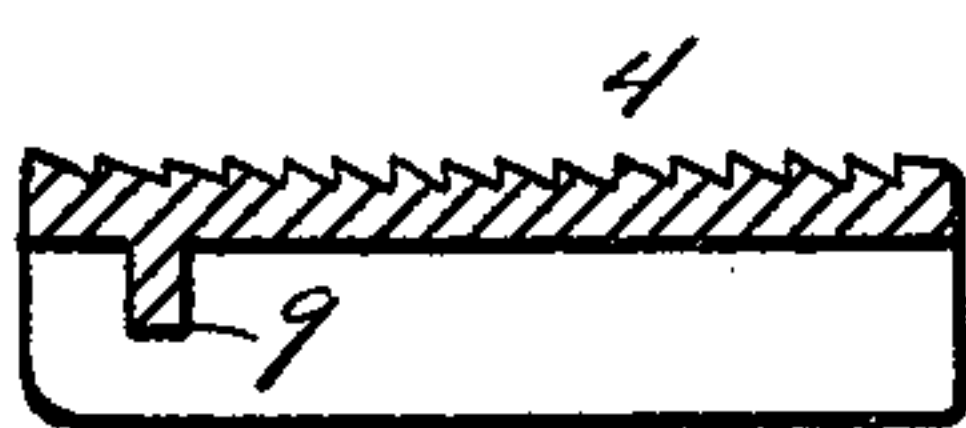


Fig. 3.

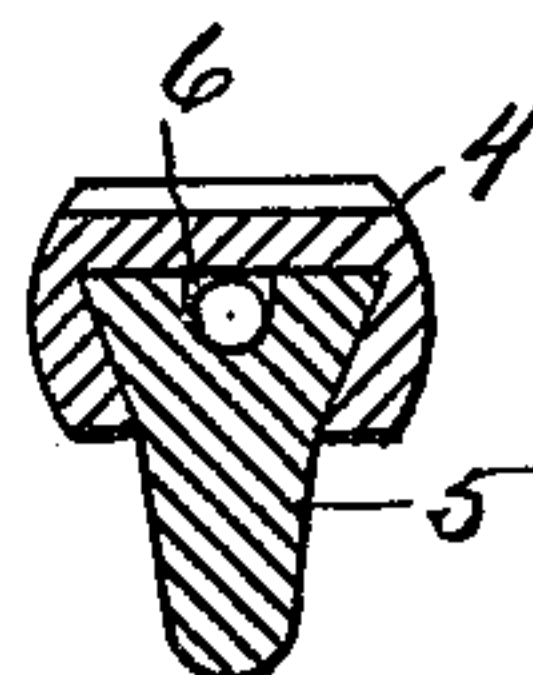


Fig. 4.

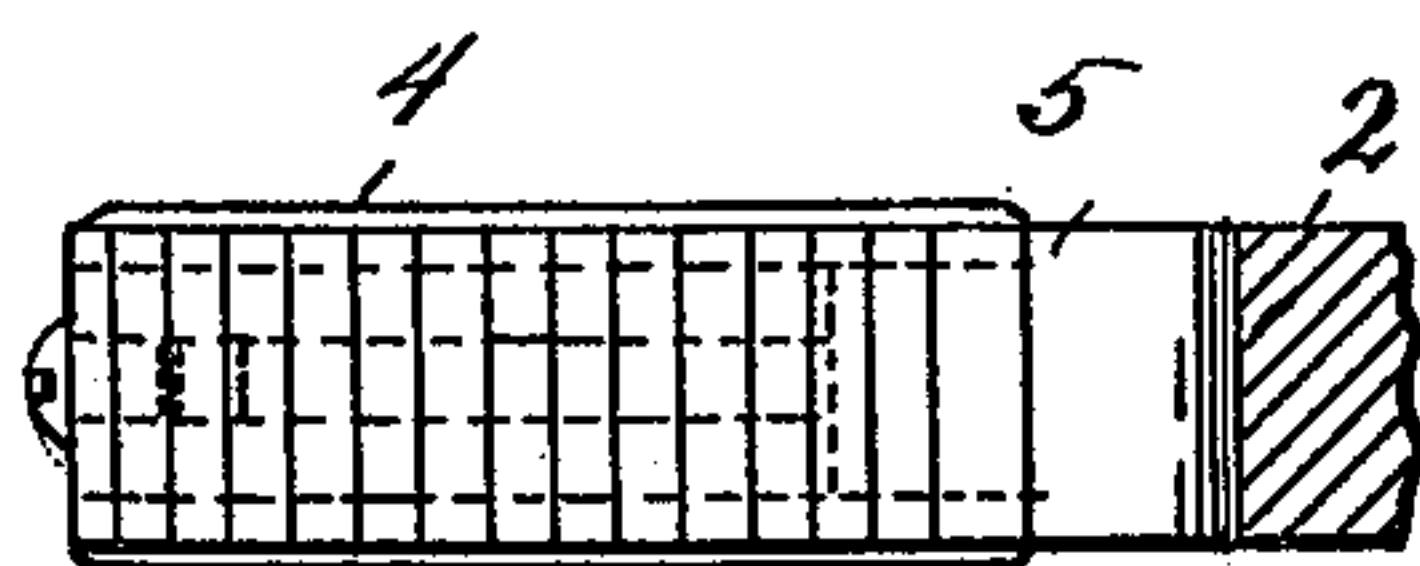


Fig. 5.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

RICHARD F. DOWNEY, OF MENOMINEE, MICHIGAN, ASSIGNOR OF FOUR-FIFTHS TO MATHEW A. BURNS AND ALBERT DUDLY, OF SAME PLACE.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 659,293, dated October 9, 1900.

Application filed April 16, 1900. Serial No. 12,972. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD F. DOWNEY, a citizen of the United States, residing at Menominee, in the county of Menominee, State of Michigan, have invented certain new and useful Improvements in Wrenches; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to wrenches, and especially to the class known as "alligator-wrenches;" and it consists in the construction and arrangement of parts hereinafter fully set forth, and pointed out in the claims.

The object of the invention is to produce a wrench of the class described in which the arrangement is such as to afford an increased grip on the pipe or bolt and provide for the ready release of the jaws of the wrench from the pipe or bolt when the movement of the handle is reversed.

The above object is attained by the construction shown in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved wrench, parts being in section. Fig. 2 is an end elevation of the lower jaw. Fig. 3 is a longitudinal section through the sliding member of the lower jaw. Fig. 4 is a transverse section as on line 4 4 of Fig. 1. Fig. 5 is a plan view of the lower jaw, the upper jaw and handle being broken away.

Referring to the characters of reference, 1 designates the handle of the wrench, and 2 the head thereof. Formed in the head of the wrench is an acute-angle opening, which converges inwardly and whose walls serve as the jaws of the wrench. The upper jaw 3 is fixed and is serrated upon its inner face in the ordinary manner. The lower jaw 4 is also serrated and is made movable, being adapted to slide upon the lower jaw member 5 of the wrench-head, to which said sliding jaw is dovetailed, as clearly shown in Figs. 2 and 4,

whereby said movable jaw is held in place 50 and directed in its movement.

Formed in the upper face of the jaw member 5 is a channel 6, which opens through the outer end of said jaw and whose outer opening is threaded to receive the screw 7, which is screwed thereon, said screw serving as a shoulder against which the depending lug 9 on the movable jaw engages to prevent the movable member of the jaw from sliding too far in an outward direction. By removing the screw 7 the movable jaw member may be removed, as will be readily understood. 55 60

Located in the channel 6 of the jaw member 5 is a coiled spring 8, whose outer end bears against the lug 9 of the movable jaw and normally maintains it in an extended or outward position. 65

In applying this wrench to a pipe or bolt it is placed upon the pipe with the movable jaw preferably undermost. A downward pressure from the handle of the wrench causes the movable jaw to travel inwardly against the spring 8, thereby wedging the pipe securely between the jaws and locking it firmly therein as the pressure on the handle is increased, whereby the slipping of the pipe within the jaws is obviated. Upon a movement of the handle of the wrench in an opposite direction the pressure on the lower jaw is released, when the spring 8 will tend to force said jaw outwardly, thereby increasing the space between said jaws and unlocking the wrench from the pipe. 70 75 80

Having thus fully set forth my invention, what I claim is— 85

1. A wrench having in its head an acute-angle opening, forming opposed jaws, which converge inwardly, one of said jaws comprising a movable member dovetailed to the portion of the wrench which supports it, said supporting member having a channel in its upper face, a spring located in said channel covered by said movable member, said spring being confined between a lug on said movable member and the end of said channel and a screw or stop in the outer end of said channel. 90 95

2. A wrench having in its head an acute-angle opening forming opposing jaws which



5 converge inwardly one of said jaws comprising a movable member adapted to slide upon the supporting portion, a channel in the face of said supporting portion below said movable member, a spring in said channel, said movable member having a depending lug engaged by said spring and a screw entering the outer end of said channel longitudinally

whereby an adjustable stop is provided for said movable member. 10

In testimony whereof I sign this specification in the presence of two witnesses.

RICHARD F. DOWNEY.

Witnesses:

LEWIS D. EASTMAN,

STELLA C. BOURION.