

No. 734,872.

PATENTED JULY 28, 1903.

J. HORLACHER.
WRENCH.

APPLICATION FILED FEB. 7, 1903.

NO MODEL.

Fig.1.

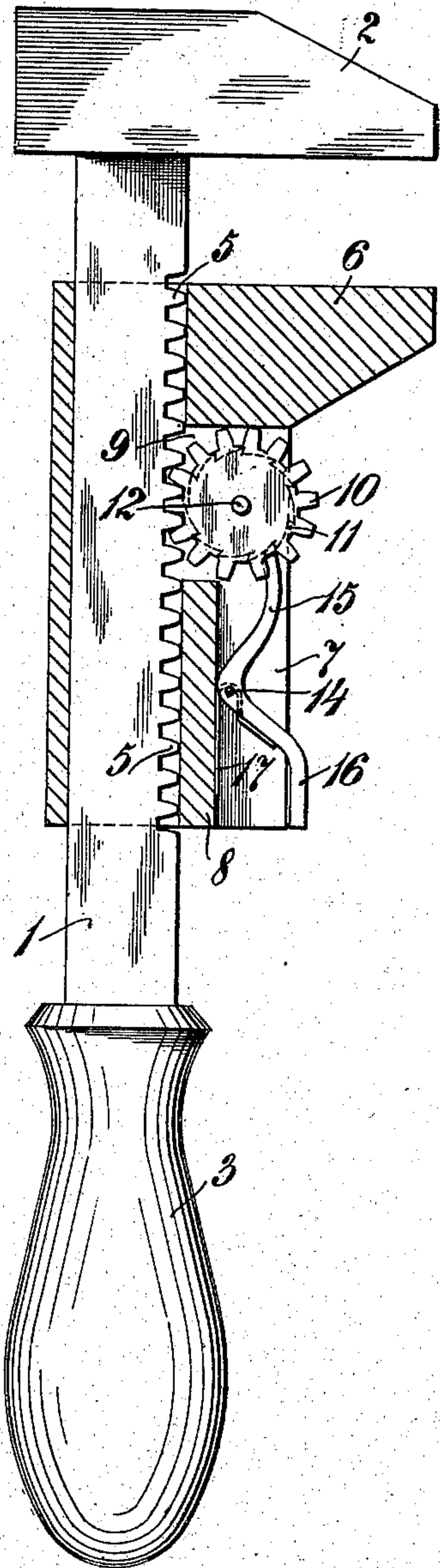


Fig.2.

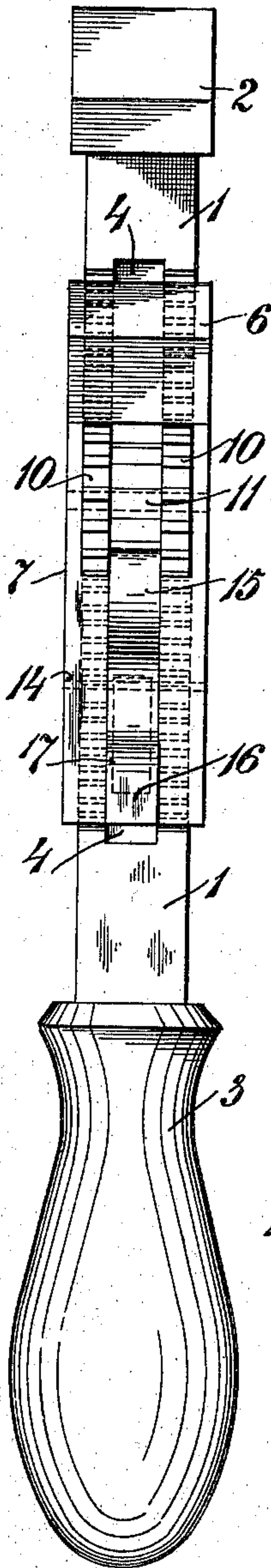


Fig.3.

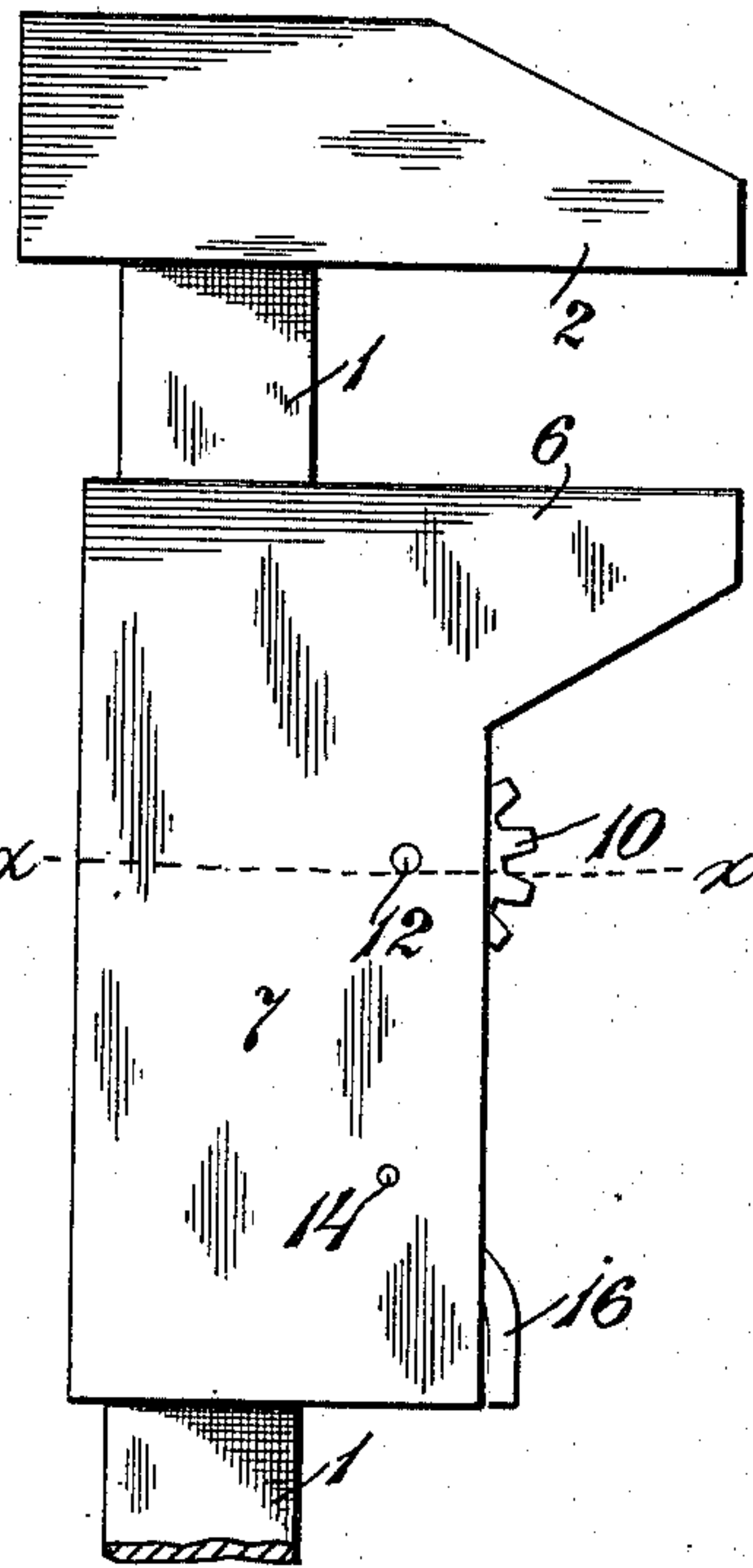
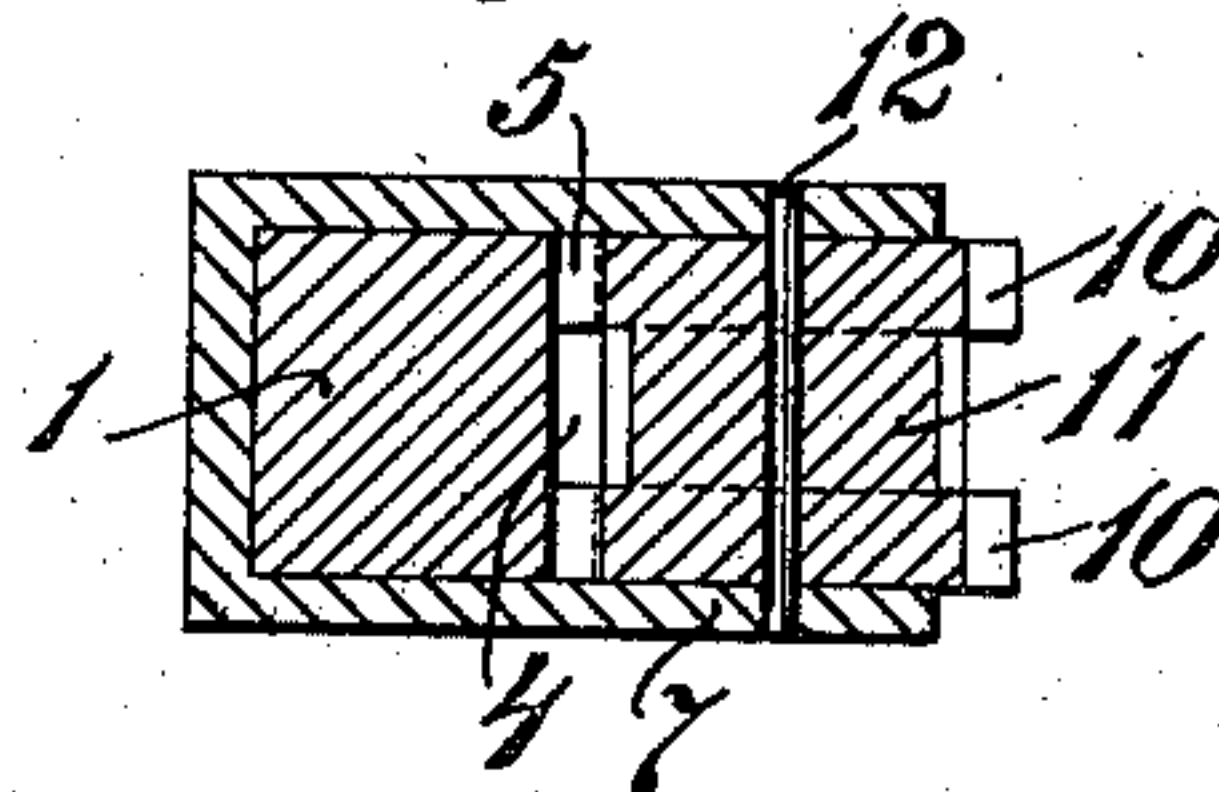


Fig.4.



Witnesses
Handwritten
E. S. Potter.

Inventor
J. Horlacher
by H. C. Everett
Attorneys

UNITED STATES PATENT OFFICE.

JOHN HORLACHER, OF CLIFF MINES, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 734,872, dated July 28, 1903.

Application filed February 7, 1903. Serial No. 142,363. (No model.)

To all whom it may concern:

Be it known that I, JOHN HORLACHER, a citizen of the United States of America, residing at Cliff Mines, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in wrenches, and relates more particularly to that type generally known in the trade as "monkey-wrenches."

The object of the invention is to construct a wrench of this type in which the movable jaw will be easily and quickly adjusted along the shank of the wrench to the desired position and securely held.

Briefly described, my invention comprises, in connection with the wrench-shank provided with teeth and having a rigid jaw at its outer end, a movable jaw formed integral with the casing, which embraces the shank of the wrench and has journaled therein a shaft on which is mounted engaging means for the teeth of the wrench-shank, and in the casing of the movable jaw is also mounted a spring-pressed dog or pawl, forming a catch to engage with the toothed wheel intermediate of the two wheels which travel on the racks or teeth of the shank, whereby to hold the movable jaw against rearward movement, permitting, however, its free forward movement under pressure on the rear end of the casing.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation showing the movable jaw and casing in section. Fig. 2 is a front elevation of the wrench. Fig. 3 is a transverse side elevation. Fig. 4 is a horizontal section taken on the line $x-x$ of Fig. 3.

To put my invention into practice, I provide a wrench-shank 1 substantially square in cross-section, which is provided with a rigid jaw 2 at its outer end and a suitable handle 3 at its other end. This shank is provided on its front face with a groove 4, and a

portion of said front face at the sides of said grooves is notched to form the teeth or racks 5. The movable jaw 6 has formed integral therewith the side plates 7, which embrace the sides of the wrench-shank and form the keeper through which the shank of the wrench slides. The space between the side plates 7 where the same project beyond the shank 1 may be made open throughout the length of the plates from the outer edge thereof to the teeth of the shank, or these plates may be connected together by the cross-plate 8, as seen in Fig. 1, and where this intermediate cross-plate is employed it will be necessary to make the same of less length than the side plates in order to provide the opening 9, through which the sprocket or gear wheels 10, which engage with the racks 5, may project. These sprocket or gear wheels 10 and the intermediate wheel 11 of less diameter are all preferably made from the same piece of material, being integral one with the other, and are mounted on the shaft 12, journaled in the side plates 7. A spring-pressed locking-dog is carried on the shaft 14, journaled in the side wall 7, the arm 15 of this dog adapted to engage with the teeth of the wheel 11, while the arm 16 is adapted to project beyond the edge of the side walls, forming a thumb-piece, by means of which the arm 15 may be elevated out of engagement with the wheel 11, whereby to permit the longitudinal movement of the jaw 6. The arm 15 is normally held in engagement with the wheel 11 by means of a spring 17, one leg or arm of which bears against the underneath face of the arm 16 and the other leg of which rests upon the plate 8, and where this plate is not employed this leg or arm of the spring will rest in the bottom of the groove 4. The spring is wrapped around the shaft 14, the spring-dog being recessed in its underneath face to receive said spring. The depression of the arm 16 elevates the arm 15 away from wheel 11 and allows the movable jaws 6, together with its casing, to slide freely along the wrench-shank. When pressure on the arm 16 is relieved, the spring forces the arm 15 into engagement with the wheel and the rearward movement of the jaw and casing is prevented. It is to be observed that this jaw and casing may be moved toward

the rigid jaw 2 by pressure against the rear end of the casing without necessitating the elevation of the arm 15.

5 In the practice of the invention it will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

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

The combination with the shank provided on one of its faces with two series of teeth spaced apart whereby a groove is formed therebetween, and the fixed jaw, of the mov-
15 able jaw, formed with side plates projecting

beyond the toothed face of the shank, a shaft journaled in said side plate, toothed wheels mounted on said shaft, the intermediate of which aligns with the groove of said shank, the other wheels engaging the teeth thereof, 20 and a spring-pressed dog arranged between said side plates and engaging the intermediate wheel and having its opposite end projecting beyond said side walls.

In testimony whereof I affix my signature 25 in the presence of two witnesses.

JOHN HORLACHER.

Witnesses:

CHARLES SCHUMACHER,
HENRY AHLBORN.