

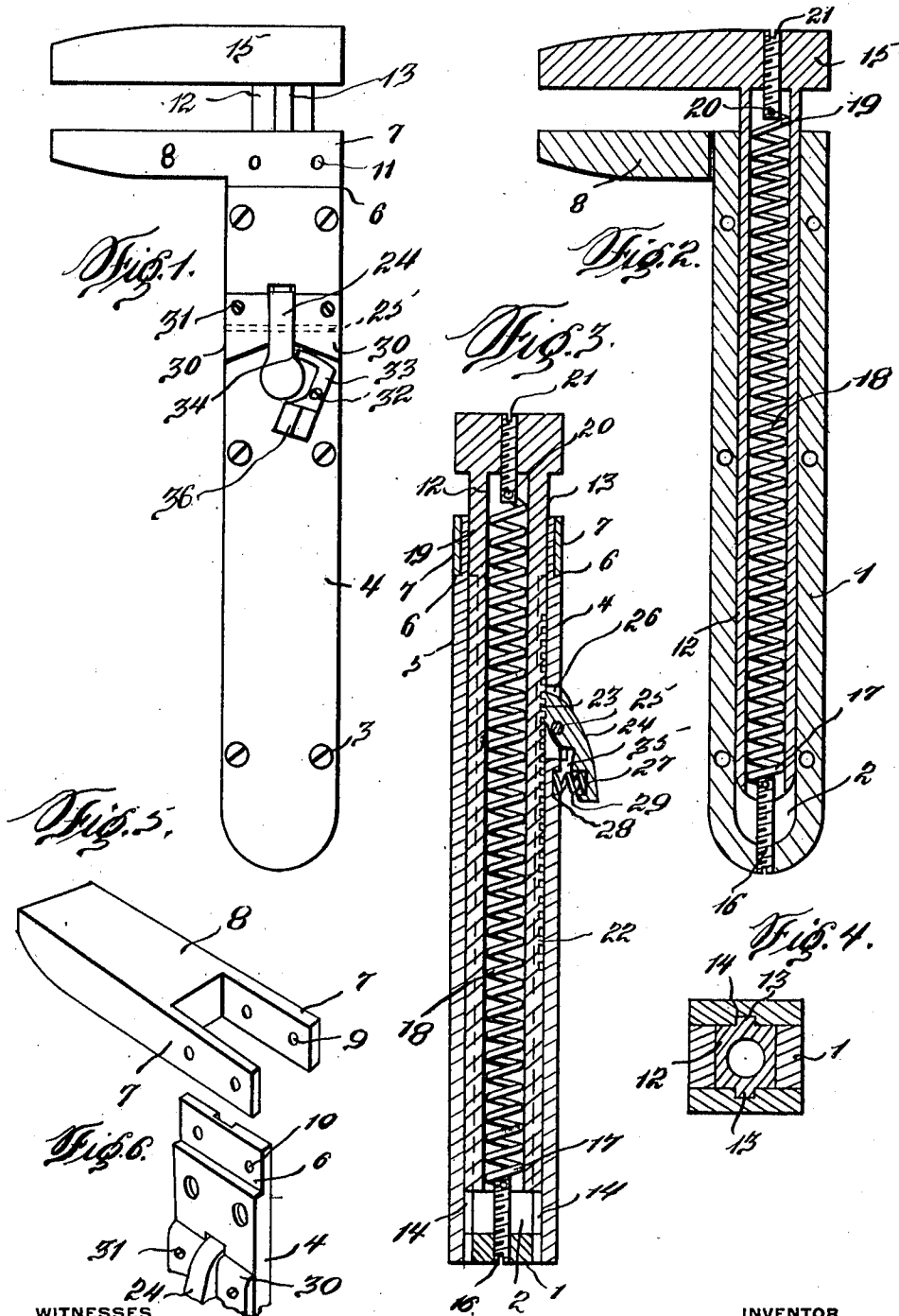
F. LUKAS.

WRENCH.

APPLICATION FILED MAY 21, 1910.

984,280.

Patented Feb. 14, 1911.



WITNESSES
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UNITED STATES PATENT OFFICE.

FRANK LUKAS, OF OMAHA, NEBRASKA.

WRENCH.

984,280.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK LUKAS, a subject of the King of Hungary, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to wrenches particularly designed for use in connection with bodies having flat facets, as taps or nuts.

The objects of my invention are to provide a quick acting wrench of the above type that can be advantageously used by machinists and similar artisans, and to obviate the necessity of using screw-threads for adjusting the movable jaw of a wrench.

Further objects of my invention are to furnish a wrench with positive and reliable means for shifting one of the jaws of the wrench when an element of the wrench is released, and to provide a novel locking mechanism for holding the said jaw in a fixed position.

These and such other objects as may hereinafter appear are attained by a wrench that is simple in construction, durable, easy to manipulate and highly efficient for the purposes for which it is intended, and the detail construction of the wrench will be hereinafter specifically described and then claimed.

Reference will now be had to the drawing forming a part of this specification, wherein:—

Figure 1 is a side elevation of the wrench, Fig. 2 is a longitudinal sectional view of the same, Fig. 3 is a longitudinal sectional view of the wrench at right angles to that shown in Fig. 2, Fig. 4 is a cross sectional view of the same, Fig. 5 is a perspective view of the stationary jaw of the wrench, and Fig. 6 is a perspective view of one end of one of the side plates of the wrench.

In the accompanying drawing the reference numeral 1 denotes an oblong U-shaped handle bar providing a central slot 2. Secured to the sides of the handle bar 1 by screws 3 or other fastening means are side plates 4 and 5, these plates having one end thereof cut away to provide a seat 6 for oppositely disposed straps 7 of a stationary jaw 8. The straps 7 and the cut away ends of the side plates 4 and 5 are apertured, as

at 9 and 10 respectively to receive rivets 11 or other fastening means for connecting the jaw 8 to the side plates 4 and 5.

Slidably mounted in the slot 2 of the handle bar 1 is a rectangular shank 12 having opposite sides thereof provided with longitudinal ribs 13 adapted to slide in longitudinal grooves 14 provided therefor in the confronting faces of the side plates 4 and 5. The inner end of the shank 12 is open and the outer end thereof is formed integral with a gripping jaw 15 adapted to confront the jaw 8, whereby the oppositely disposed facets of a nut or tap can be gripped by the jaws.

Mounted in the closed end of the handle bar 1 is a screw 16 and attached to said screw is the inner convolution 17 of a retractile spring 18, said spring having the outer convolution 19 thereof connected, as at 20 to the inner end of a screw 21 mounted in the jaw 15 and extending into the shank 12.

One of the ribs 13 of the shank 12 is provided with transverse teeth 22 and adapted to engage said teeth is the toothed end 23 of a pawl 24 pivotally mounted upon a pin 25 arranged transversely of the plate 4, said plate having a slot 26 providing clearance for the toothed end 23 of the pawl 24. The inner face of the pawl 24 is provided with a socket 27 confronting a socket 28 formed in the side plate 4, and in these sockets is located a coiled spring 29 adapted to normally retain the toothed end 23 of the pawl 24 in engagement with the teeth 22 of the shank 12. The side plate 4 at the sides of the slot 26 is provided with enlargements 30 adapted to shield the pawl 24 and prevent the same from being injured when the wrench is roughly handled. The enlargements 30 are secured to the side plate 4 by screws 31 or other fastening means.

Pivotally mounted upon the side plate 4 by a screw or pin 32 is a latch 33 having a toothed end 34 adapted to be swung under the lower end of the pawl 24, between the coiled compression spring 29 and the enlargements 30, such clearance for the toothed end 34 of the latch 33 being shown and designated 35 in Fig. 3 of the drawing. The latch 33 is provided with a suitable grip or projection 36, whereby the latch can be easily swung into and out of position relatively to the pawl 24.

The spring 18 acts to draw the jaw 15

toward the jaw 8, the movement of the jaw 15 being arrested when the pawl 24 engages the transverse teeth 22. When the pawl 24 is released from the teeth 22 the operator catches hold of the jaw 15 and pulls the same away from the jaw 8 and positions the jaws adjacent to a nut or tap. The operator then releases the jaw 15 and the spring 18 pulls the jaw 15 against the nut or tap. The spring 18 causes the jaws 8 and 15 to snugly engage the object operated upon. The shank 12 is then locked by the engagement of the toothed end of the pawl 24 with the transverse teeth 22. The pawl 24 is locked by the toothed end of the latch 33.

The wrench in its entirety is made of strong and durable metal, and while in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements thereof can be varied or changed without departing from the scope of the appended claims.

Having now described my invention what I claim as new, is:—

1. A wrench comprising a U-shaped handle bar, side plates connected to said bar, a stationary jaw provided with straps connected to one end of said side plates, a hollow shank shiftably mounted in said handle bar and provided with teeth, a jaw carried by one end of said shank, a spring arranged in said shank and having one end connected to the jaw of the shank and its other end

attached to the closed end of the handle bar and constituting means for pulling one jaw toward the other, and a spring pressed pawl carried by and extending through one of the side plates and having a toothed inner end adapted to engage with the teeth of the shank to arrest movement of the same.

2. A wrench comprising a U-shaped handle bar, side plates connected to said bar, a stationary jaw provided with straps connected to one end of said side plates, a hollow shank shiftably mounted in said handle bar and provided with teeth, a jaw carried by one end of said shank, a spring arranged in said shank and having one end connected to the jaw of the shank and its other end attached to the closed end of the handle bar and constituting means for pulling one jaw toward the other, a spring pressed pawl carried by and extending through one of the side plates and having a toothed inner end adapted to engage with the teeth of the shank to arrest movement of the same, and means carried by that side plate which is provided with a pawl adapted when shifted to operative position to lock the pawl in engagement with the teeth of the shank.

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

FRANK LUKAS.

Witnesses:

STEPHEN PETER,
JOHN SPELL.