

(No Model.)

W. F. LAWLER.
WRENCH.

No. 603,194.

Patented Apr. 26, 1898.

Fig. 1 Fig. 2.

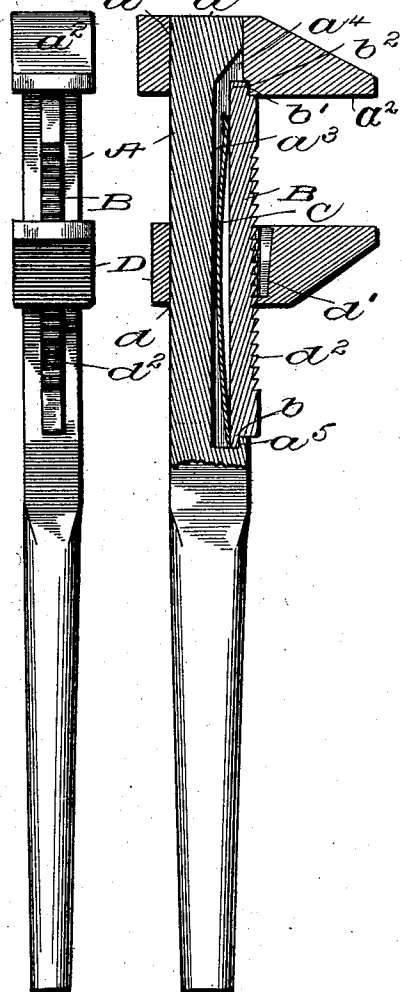


Fig. 4.

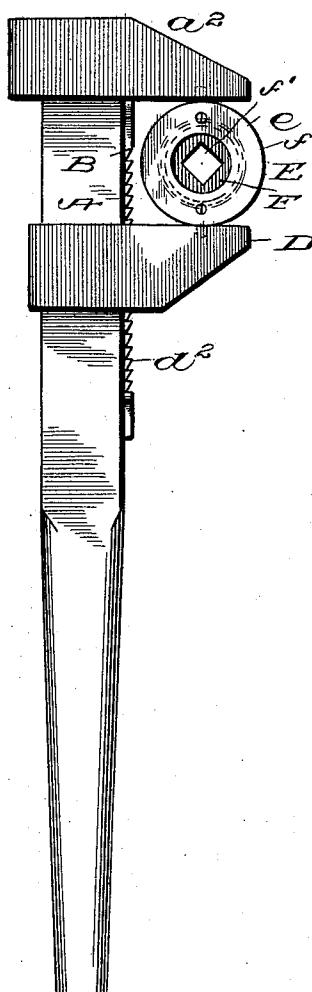


Fig. 5.

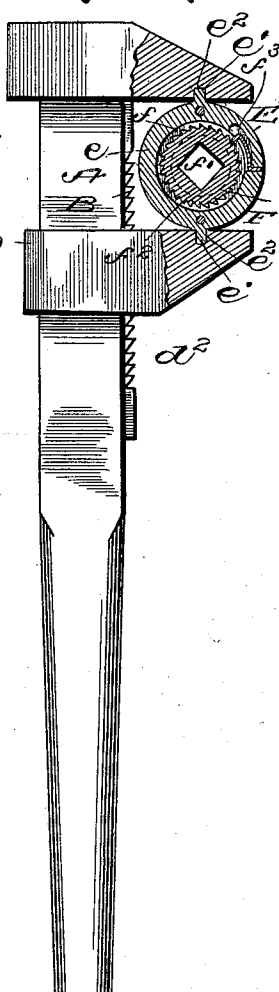
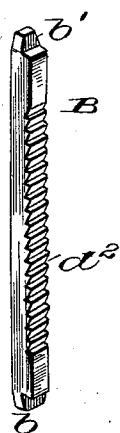


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM F. LAWLER, OF ANDERSON, INDIANA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 603,194, dated April 26, 1898.

Application filed February 11, 1897. Serial No. 623,003. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. LAWLER, a citizen of the United States, residing at Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Wrenches; and I do hereby 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.

This invention relates to certain new and useful improvements in wrenches; and it has for its object the production of a sliding-jaw wrench in which the lower or adjustable jaw can be readily and quickly adjusted to any desired position.

A further object is to provide an attachment for wrenches by means of which the same can be readily and quickly converted into a ratchet-wrench.

In carrying out my invention I provide a shank with a longitudinal chamber adapted to receive a spring-pressed rack-bar the ends of which fit, respectively, beneath the upper jaw of the wrench and an overhanging flange at the lower end of said chamber, whereby said rack-bar is retained in position. The lower jaw is adapted to slide over said shank and rack-bar, the lower edge thereof being engaged by the teeth of the latter. When it is desired to employ the device as a ratchet-wrench, a suitable ring having pins or lugs projecting therefrom is secured between the jaws thereof, said pins or lugs being designed to enter suitable recesses in said jaws, whereby said ring is prevented from slipping. Between side flanges of said ring is mounted a circular member having peripheral teeth normally engaged by a spring-pressed pawl carried by said ring or body portion, said member having a suitable hole or opening therein adapted to engage a nut or the like.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front view of my improved wrench. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a view of the rack-bar detached. Fig. 4 is a view in side elevation illustrating a

wrench with my improved ratchet attachment applied thereto. Fig. 5 is a longitudinal sectional view of the latter.

Referring to the drawings, A designates the shank of my improved wrench, the same having its upper end *a* cut away or reduced to enter a correspondingly-shaped hole or opening *a'* of the upper jaw *a*². A longitudinal chamber *a*³ is formed in shank A, the same being provided with an upper open end *a*⁴ and a lower overhanging flange *a*⁵, said chamber being designed to receive the rack-bar B, which latter is provided with reduced ends *b b'*, the former fitting under the overhanging flange *a*⁵ and the latter entering an offset *b*² of the hole or opening *a'* of jaw *a*². Said rack-bar is held in a normally forward position by a bow-spring C, located in said chamber.

D designates the lower or movable jaw, the same being provided with a hole or opening *d*, through which the shank A extends, an inclined groove *d'* being formed in the front wall of said hole or opening to receive the rack-bar B. The teeth *d*² of said rack-bar are designed to engage the lower edge of jaw D and support the same in any adjusted position. In practice when it is desired to adjust the lower jaw the rack-bar is pressed back against the action of its spring, whereupon the position of said jaw can be shifted at will, and when the desired adjustment is obtained said rack-bar is released and allowed to again engage said jaw, firmly securing the latter against displacement.

E designates my improved ratchet attachment. The same comprises a ring or body portion *e*, which is provided with projecting peripheral pins or lugs *e'*, adapted to enter corresponding holes or recesses *e*², formed in the upper and lower jaws of the wrench.

F is the tap or ratchet member, which is of circular form and adapted to fit within ring *e*, the same being held from displacement by side plates *f*, the edges of which project over said tap or member, said side plates being removably secured to said ring or body portion. The tap or member F is provided with a central squared opening *f'*, adapted to receive a nut, and on the periphery thereof are formed

ratchet-teeth f^2 , with which a spring-pressed pawl f^3 , pivoted to ring e , is normally in engagement.

In practice my improved ratchet attachment is first secured between the jaws of the wrench and then the hole or opening in the tap or ratchet member is made to engage a nut or the like. The wrench is then operated in a manner similar to the operation of ratchet-wrenches now in general use.

The advantages of my improved wrench are apparent to those skilled in the art to which it appertains, and it will be specially observed that the same being composed of but few parts is not liable to readily get out of order or become deranged.

I claim as my invention—

1. The herein-described improved wrench, comprising a shank having a chamber therein, a spring-pressed rack-bar located in said chamber, an upper jaw secured to the end of said shank and engaging one end of said rack-bar, and a movable jaw working on said shank, as set forth.

2. The herein-described improved wrench, comprising a shank having a chamber therein provided with an overhanging flange, a spring-pressed rack-bar having one end in engagement with said flange, an upper jaw secured to said shank and engaging the other end of said rack-bar, and a movable jaw working on said shank, as set forth.

3. The herein-described improved wrench, comprising a shank having a chamber there-

in provided with an overhanging flange, a rack-bar having reduced ends, one of which is in engagement with said flange, a spring in said chamber bearing against said rack-bar, an upper jaw secured to said shank and having a recess therein adapted to receive the other end of said shank, and a movable jaw working on said shank, substantially as set forth.

4. The herein-described improved wrench, comprising a shank having a chamber therein, a spring-pressed rack-bar located in said chamber, an upper jaw secured to the end of said shank and engaging one end of said rack-bar, and a movable jaw working on said shank and having an inclined groove adapted to receive said rack-bar, as set forth.

5. The combination with a wrench having recesses in its jaws, of a ring or body portion having opposite pins or lugs adapted to enter said recesses, side plates removably secured to said ring or body portion, a circular member mounted between said side plates and provided with peripheral teeth and a central opening, and a spring-pressed pawl mounted in said ring or body portion and engaging said teeth, substantially as set forth.

In testimony whereof I, the said WILLIAM F. LAWLER, have signed this specification in the presence of two witnesses.

WILLIAM F. LAWLER.

Witnesses:

WILLIS S. ELLIS,

THOS. F. CORNELIUS.