No. 754,063. PATENTED MAR. 8, 1904.

C. E. HAWKINS & F. CARY.

WRENCH.

APPLICATION FILED APR. 10, 1903.

NO MODEL.

Fig. 1.

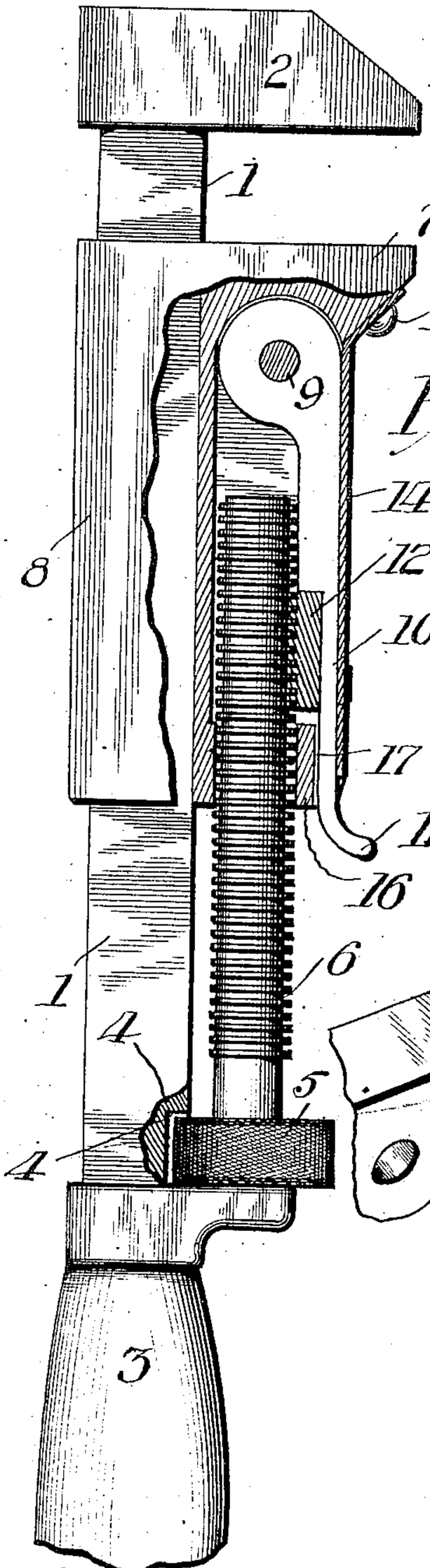


Fig. 2.

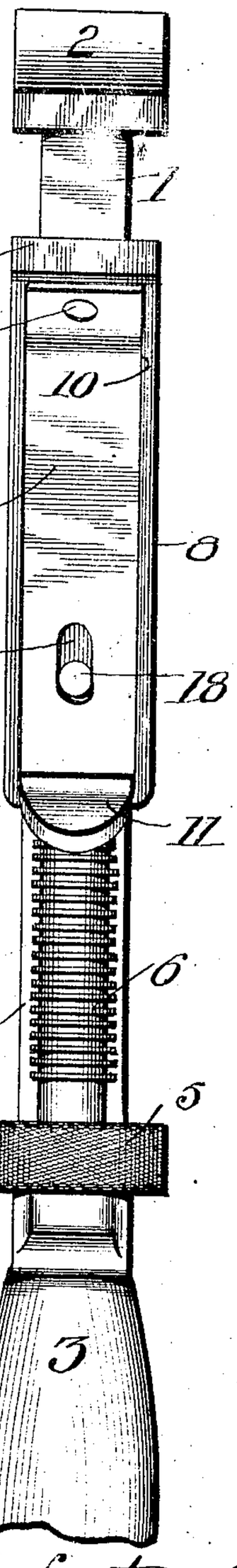


Fig. 3.

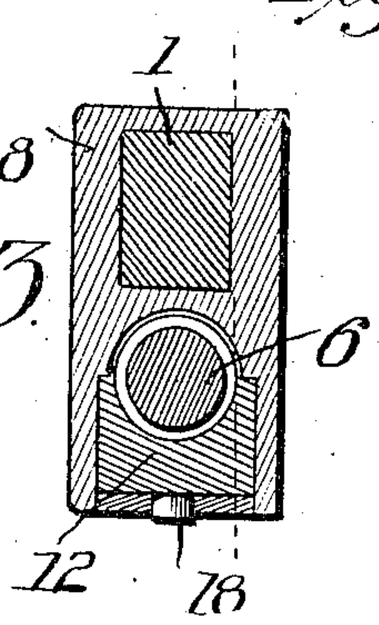
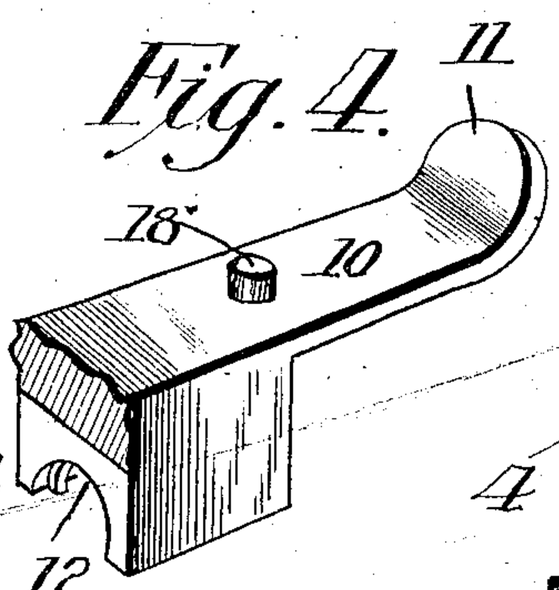


Fig. 4.



Witnesses:
L. H. Butler.
C. E. Potter.

Inventors,
Charles E. Hawkins,
Frank Cary,
By H. C. Evarts & Co.
Attorneys.

No. 754,063. Patented March 8, 1904.

UNITED STATES PATENT OFFICE.

CHARLES E. HAWKINS, OF EAST PITTSBURG, AND FRANK CARY, OF WILKINSBURG, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 754,063, dated March 8, 1904.

Application filed April 10, 1903. Serial No. 151,961. (No model.)

To all whom it may concern:

Be it known that we, CHARLES E. HAWKINS, residing at East Pittsburg, and FRANK CARY, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, citizens of the United States of America, 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 particularly to that type of wrenches generally known in the trade as "monkey-wrenches;" and the primary object of the invention is to construct a wrench of this type in which the movable jaw may be easily, quickly, and conveniently shifted to different positions in order to accommodate different-sized nuts or burs.

Another object of our invention is to provide a movable jaw for wrenches of this type that may be applied to the ordinary monkey-wrenches now generally employed, and a further object is to construct a wrench of extremely simple, strong, and durable construction.

The invention consists in the novel construction, combination, and arrangement of parts to be hereinafter more specifically described and then particularly pointed out in the accompanying drawings, and in describing the invention in detail reference will be had to the said drawings, wherein like numerals of reference will be employed for indicating like parts throughout the different views, in which—

Figure 1 is a side elevation of our improved wrench, partly broken away and partially in longitudinal section. Fig. 2 is a rear elevation of the wrench with the handle partially broken away. Fig. 3 is a transverse vertical sectional view through the movable jaw; and Fig. 4 is a detached detail perspective view of the locking-lever, partially broken away.

To put our invention into practice, we provide a wrench-shank 1, which is provided at its outer end with a rigid jaw 2 and at its other or inner end with a suitable handle 3. The shank 1 is preferably provided adjacent the inner end of the handle 3 with a notch or recess 4 to receive the nut or bur 5 of the screw-shaft 6. In our improved wrench this screw-shaft is employed only as an element of the means for holding the movable jaw in the adjusted position and also for imparting a slight movement or adjustment to the movable jaw after the latter has been adjusted to approximately the distance or position desired by the means to be hereinafter explained. In this connection our improved wrench differs from the ordinary construction of monkey-wrenches in which the screw-shaft is employed for making the adjustment of the movable jaw, ordinarily necessitating the use of both hands and affording a tedious adjustment. The movable jaw 7 is formed integral with a casing 8, slidably mounted on the wrench-shank 1. This casing is cut away on its inner face and has mounted therein on a journal-pin 9 a locking-lever 10, the free end 11 of which extends beyond the rear end of the casing and is turned or curved outwardly in order that it may be readily engaged by the thumb or finger of the operator for actuating the same. This locking-lever lies countersunk within the casing and carries a half-nut 12 for engagement with the threads or screw of the shaft 6, the said nut being held normally in engagement with said shaft 6 by means of a stiff flat spring 14, the forward end of which fits against the inclined face of the jaw 7 and is secured thereto by a screw, pin, or other like fastening 15. The screw-shaft 6 operates freely through an integral sleeve 16, which is a part of the casing, and is also free from engagement with the casing at any point, being only engaged by the half-nut 12, and in order that the spring 14 may exert its full tension upon the locking-lever to hold the half-nut 12 in engagement with the shaft 6 clearance 17 is provided between the sleeve 16 and the lever 10. The locking-lever carries on its upper face a stud 18, which projects into a slot 19, provided therefor in the spring 14, this stud engaging in the spring, serving to steady the same and prevent any accidental lateral displacement thereof.

To adjust the movable jaw, it is simply nec-

essary to force the rear end of spring outwardly, which is done by pressure against end 11 of locking-bar, thus disengaging half-nut 12 from the screw-shaft, at which time the jaw is free to slide on the shank. After adjusting to the approximate position if a finer adjustment is desired the turning of the shaft 6 by means of the nut 5 will accomplish the desired end. Upon pressure being relieved from outer end of lever 10 the spring 14 immediately forces the half-nut 12 into engagement with the screw-shaft 6. It is to be noted that by this construction a wide range of adjustment is at the will of the operator for easy and quick execution and that as fine an adjustment as can be attained by the screw is also afforded. It is to be noted also that the movable jaw herein shown and described may be applied to the ordinary monkey-wrench employing the adjusting-screw by simply detaching the handle of such wrench and applying the jaw to the shank, using the screw formerly employed on the wrench in connection with our improved form of movable jaw.

While we have herein shown and described the wrench in detail as it is practiced by us, yet we do not wish to confine ourselves unduly to the specific construction, as it will be evident that various slight changes may be made without departing from the general spirit of our invention.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a wrench, the combination with the shank having a rigid jaw at its outer end and a handle on its inner end, of a jaw slidably mounted on the shank and provided with a plain bore-nut in its rear end, a screw-shaft extending through said nut into the casing of the slidable jaw, a locking-lever pivoted in said casing and provided with a half-nut to engage the screw-shaft, a stud carried by said locking-lever, and a spring affixed near its one end to the sliding jaw and lying in engagement with said locking-lever for holding the half-nut of the latter in engagement with the screw-shaft, said spring having a slot to receive the stud of the locking-lever, as and for the purpose described.

In testimony whereof we affix our signatures in the presence of two witnesses.

CHARLES E. HAWKINS.
FRANK CARY.

Witnesses:
H. C. EVERT,
E. E. POTTER.