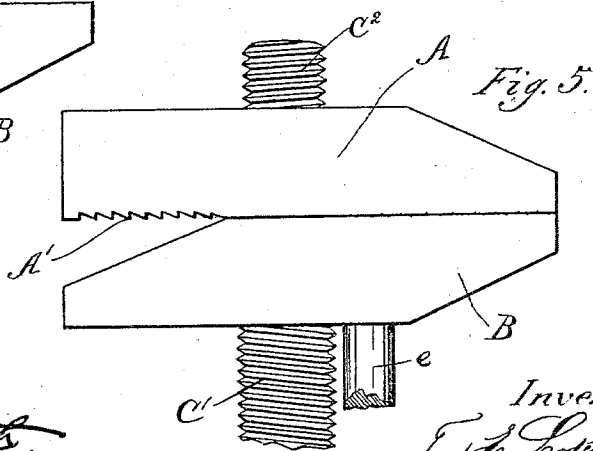
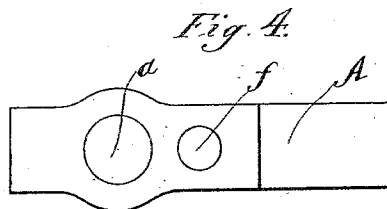
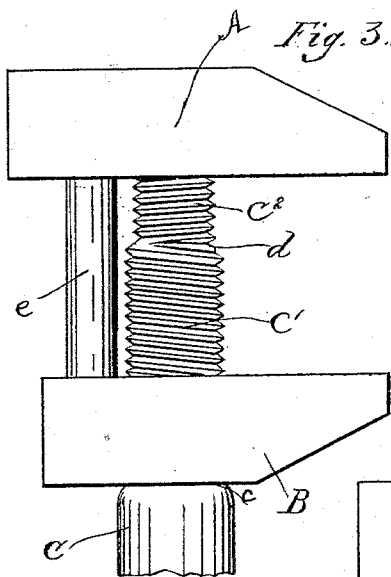
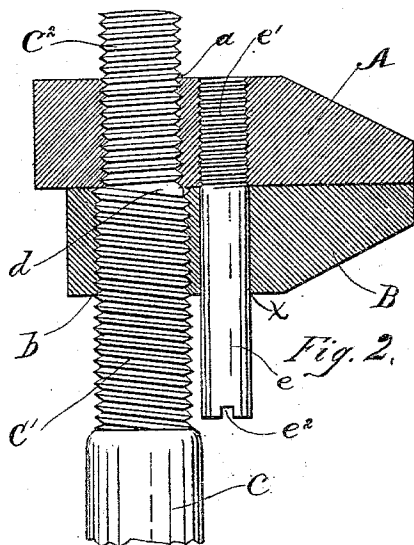
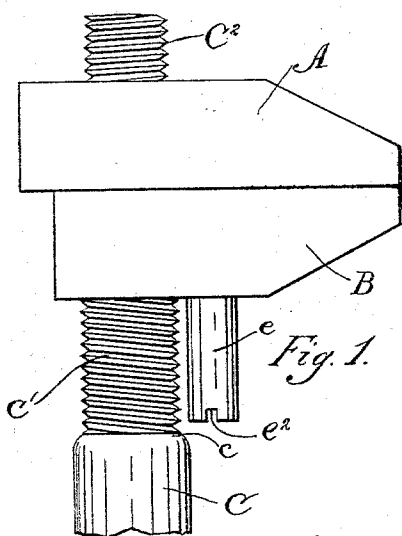


(No Model.)

F. E. LODETTI.
WRENCH.

No. 553,008.

Patented Jan. 14, 1896.



Witnesses
Chas. J. Hiffich
A. M. Cusack

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UNITED STATES PATENT OFFICE.

FRANK EMILIUS LODETTI, OF RONDOUT, NEW YORK.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 553,008, dated January 14, 1896.

Application filed February 28, 1895. Serial No. 539,969. (No model.)

To all whom it may concern:

Be it known that I, FRANK EMILIUS LODETTI, a citizen of Italy, and a resident of Rondout, county of Ulster, and State of New York, have invented certain new and useful Improvements in Monkey - Wrenches, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts in all the figures.

This invention relates to monkey-wrenches, and has for its object, first, to provide a device of simple construction, strength and durability; second, to produce an extremely cheap device, and, lastly, to provide a combined monkey-wrench and pipe-wrench.

The invention consists in the novel construction and arrangement of parts whereby the above-mentioned and other desirable results are attained and hereinafter more fully described.

Referring to the drawings, Figure 1 is a side elevation of the upper portion of a wrench embodying my invention. Fig. 2 is a similar view with the jaws in vertical section. Fig. 3 is a side elevation of the device opened out. Fig. 4 is a plan view of the upper jaw. Fig. 5 is an elevation of the combination-wrench.

In the practice of my invention I construct the upper jaw, A, with a threaded or tapped aperture or bearing *a* at or rearward of the center thereof and the lower jaw, B, with an aligning aperture *b* of greater diameter and reversely threaded for a left-hand screw. These jaws are mounted upon the end of the handle C, which is reduced to form a shank C', reversely threaded to coincide with and enter the aperture *b* in the lower jaw, B. Above the shank C', which is of suitable length, is a preferably integral shank C² of further reduced diameter and threaded to register with the right-hand thread of the aperture *a* of the upper jaw.

The handle C forms, at its junction with the shank C', a shoulder *c*, which limits the rearward or downward movement of the lower jaw, and the said shank C', at its junction with its shank C², forms a shoulder *d* to similarly limit the movement of the upper jaw.

The jaws are secured together in alignment and the opening or closing thereof

guided by a rod or spindle *e*, having a threaded end *e'*, which is screwed into an aperture *f* in the jaw A immediately forward of the aperture *a*, the remainder of said spindle projecting through an aperture *x* in the lower jaw, B, which slides thereon, said portion being cylindrical or peripherally smooth to be capable of being turned for insertion, removal, or tightening, which turning is effected by hand, and also by an ordinary screw-driver inserted in a groove *e*² formed in the lower end thereof.

In Fig. 5 I have shown the jaws projected rearwardly, and the upper jaw, A, serrated or provided with beveled teeth A' upon the under face thereof at the rear and the lower jaw, B, being similarly projected and beveled or tapered upon its upper face, whereby the grasping of a cylindrical object is facilitated; and in Fig. 3 I have shown the spindle *e* at the rear of the wrench.

The operation of the device will be readily understood from the foregoing description, taken in connection with the accompanying drawings. The wrench being closed, as shown in Fig. 1, and the handle turned to the left, the screw-shank C' is forced farther into the lower jaw, B, and the latter therefore opened or depressed, and the shank C² is at the same time withdrawn and the upper jaw correspondingly raised thereon.

The wrench being placed over the object to be manipulated, the handle is turned to the right and the jaws thereby brought as nearly together as possible to rigidly and tightly grasp the object. The jaw B slides on the rod or spindle *e*, and the reverse tendency of the jaws is prevented from causing the same to depart from their usual alignment, the said spindle being screwed up by a driver from time to time, as required. The shoulder *c* defines and limits the downward movement of the jaw B, and as such limitation of the movement of the jaw prevented further turning of the handle to the left the upper jaw, A, is thereby prevented from leaving the shank C². Consequently the spindle *e* is necessarily withdrawn to remove either or both jaws. The shoulder *d* limits the downward movement of said upper jaw, A, and the latter acts as a stop to prevent further movement of the jaw B.

The advantages resultant from the use of my invention will be manifest to all who are conversant with the general class of devices to which the same appertains.

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

10 In a monkey wrench, the combination of an upper jaw A, having a threaded aperture *a*, a lower jaw B having a reversely threaded aperture *b* of greater diameter than the aperture *a*, a handle C having a shank C' reduced to fit in the aperture *b*, and a further

reduced shank C² to enter the aperture *a*, a shoulder *c* to limit the downward movement of the lower jaw and a shoulder *d* to limit the downward movement of the upper jaw, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 26th day of February, 1895.

FRANK EMILIUS LODETTI.

Witnesses:

ARTEMAS S. WALKER,
JENNIE HYDE.