

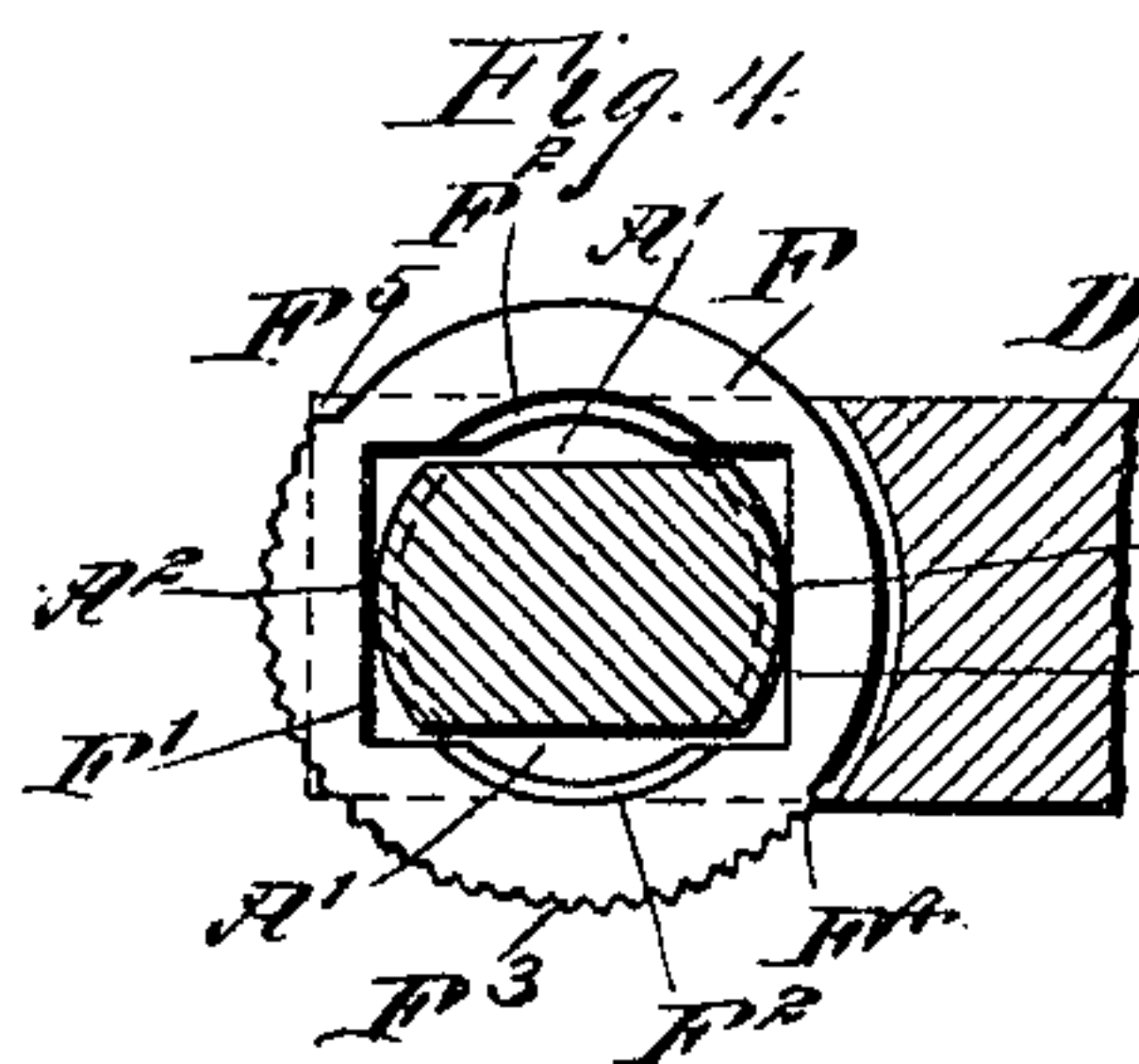
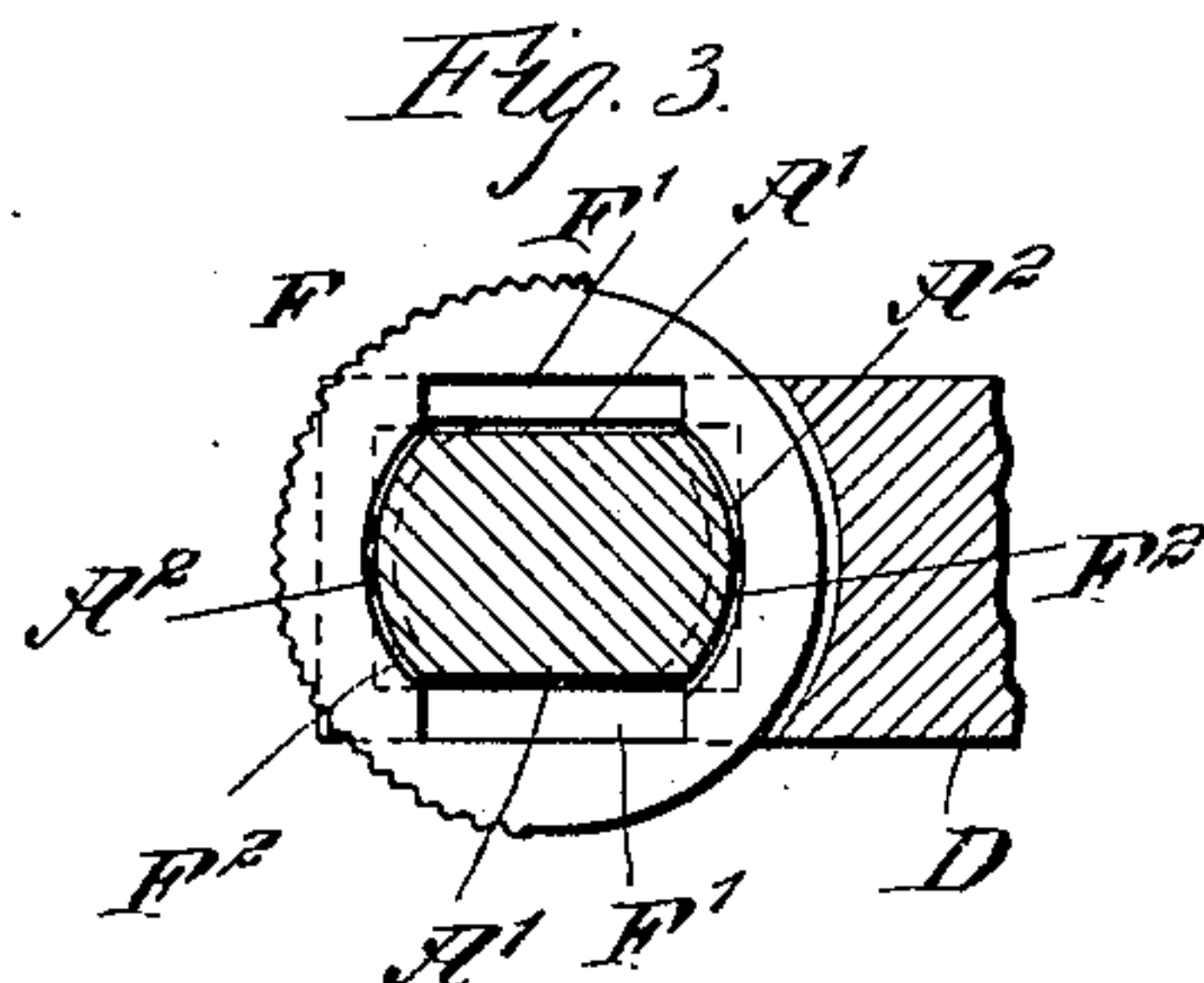
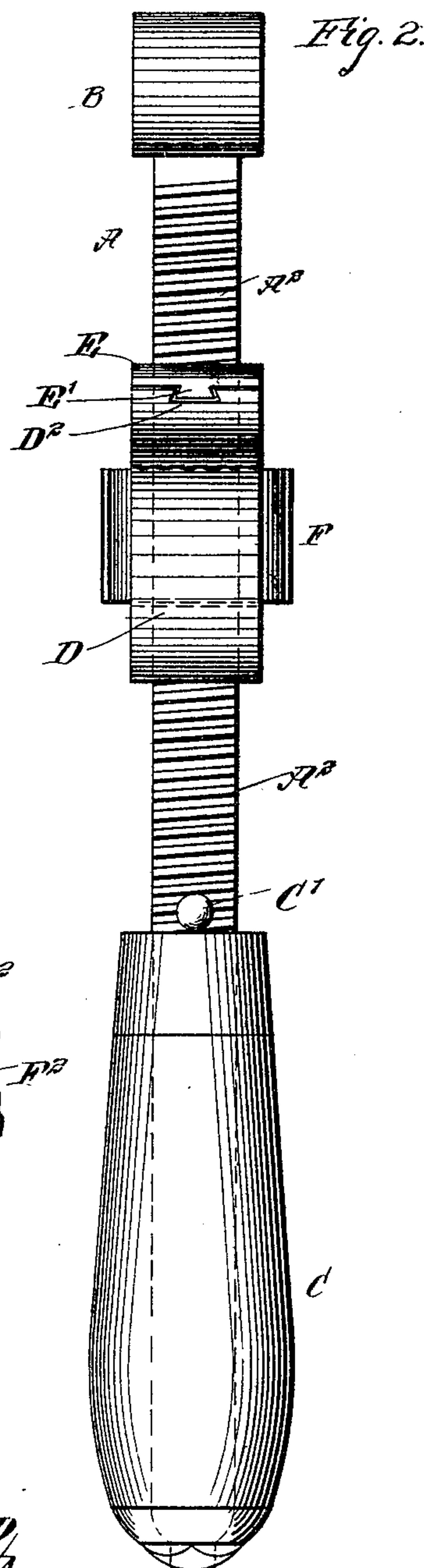
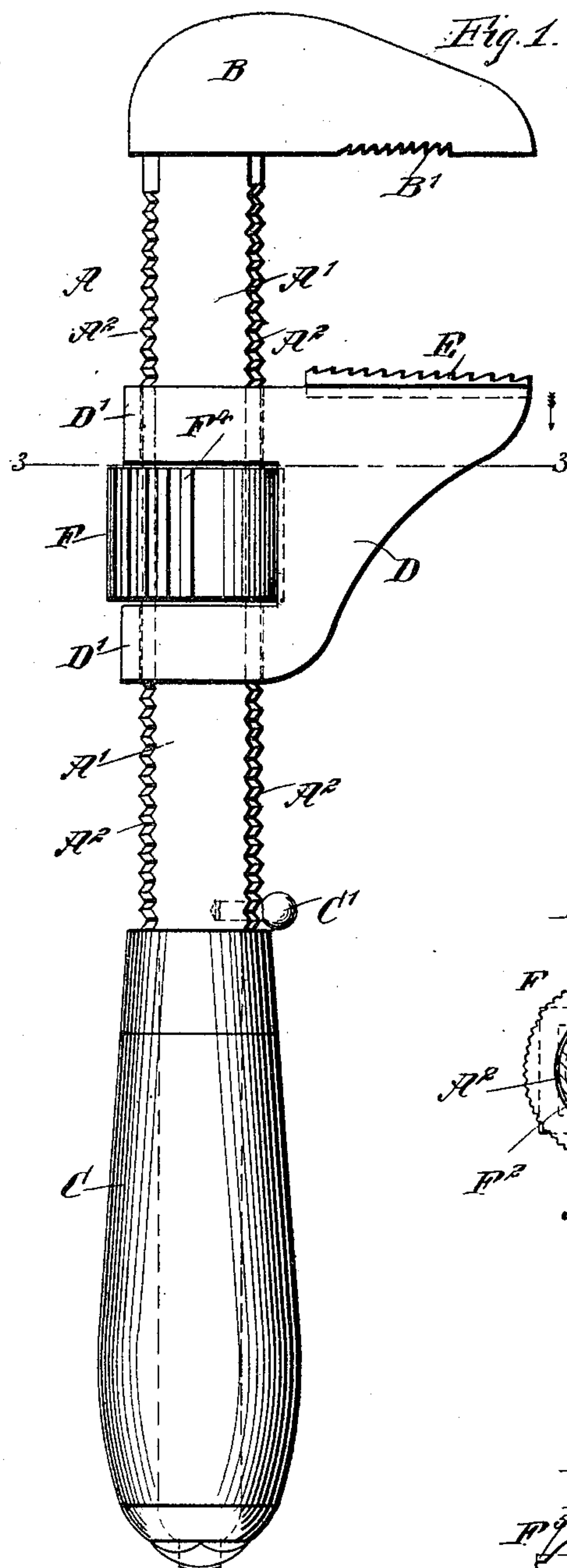
No. 632,082.

Patented Aug. 29, 1899.

A. ANDERSON.
WRENCH.

(Application filed May 24, 1899.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

ALEXANDER ANDERSON, OF GREENVILLE, MISSISSIPPI.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 632,082, dated August 29, 1899.

Application filed May 24, 1899. Serial No. 718,094. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER ANDERSON, of Greenville, in the county of Washington and State of Mississippi, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved wrench which is simple and durable in construction and easily adjusted to readily fit and securely grip an object, said wrench being more especially designed for use as a combination-tool on either pipes or nuts.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement. Fig. 2 is an edge view of the same. Fig. 3 is a sectional plan view of the same on the line 3 3 in Fig. 1, and Fig. 4 is a similar view of the same with parts in a different position.

The improved wrench is provided with a shank A, on one end of which is secured a fixed jaw B and on the other end is arranged a suitable handle C. On the shank A is fitted to slide loosely a movable jaw D, provided for this purpose with bearings D', placed a suitable distance apart and loosely fitting on the shank, but being held against turning thereon. In the top face of the jaw D is formed a dovetailed groove D², adapted to receive a correspondingly-shaped tongue E', formed on a toothed cheek-piece E, arranged directly opposite the teeth B' on the inner face of the fixed jaw B. The cheek-piece E is used when employing the wrench on pipes and is removed from the movable jaw D when the wrench is intended for use on nuts and similar objects.

The shank is made rectangular in cross-section, as plainly indicated in Figs. 3 and 4, the long sides A' being made flat or blank and the narrow sides A² being threaded, as is plainly indicated in the drawings.

The bearings D' have their openings shaped corresponding to the cross-section of the shank A to freely slide thereon, and between said bearings is held loosely a nut or sleeve F, mounted to slide on the shank when in one position, as shown in Fig. 4, and adapted to be locked against sliding movement on the shank when in the position shown in Fig. 3—that is, with a quarter-turn given to the nut from the position shown in Fig. 4 to that shown in Fig. 3. For this purpose the nut is formed in its opening with two oppositely-arranged flat or blank sides F', placed a distance apart corresponding to the distance between the threaded sides A² of the shank and with the two other sides F² of the nut formed with segmental threads adapted to mesh with the threads of the sides A².

The peripheral surface of a portion of the nut is formed with longitudinally-extending ribs F³, of which the end ribs F⁴ F⁵ are adapted to abut against the sides of the jaw D to limit the turning movement of the nut on the shank, so that the nut occupies either the position shown in Fig. 3 or that shown in Fig. 4.

Now it is evident that when the operator turns the nut to the position shown in Fig. 4 the threaded sides F² are opposite the flat sides A' of the shank A and a distance away from the same, while the flat sides F' of the nut are opposite the threaded sides A² of the shank, and as the sides F' fit loosely over said threads on the sides A² it is evident that the nut is free to slide on the shank with the jaw D when the latter is moved up or down on the shank to or from the object to be gripped. As soon as the object is engaged between the two jaws B and D the operator gives a quarter-turn to the nut F, so as to move the threaded sides F² in mesh with the threaded sides A² of the shank to hold the nut, and consequently the jaw D, against sliding movement on the shank.

From the foregoing it is evident that the nut is slidable on the shank when in one position and locked against sliding when in the other position, as previously explained, so that in one case the jaw can be moved and in the other position the jaw is locked against movement.

The device is very simple and durable in

construction, and the jaws are so arranged that they are not liable to get out of order, and at the same time a secure gripping of the object can be obtained without danger of the movable jaw slipping and loosening its hold on the object. In case the handle is dispensed with, a stop C' is provided to prevent the jaw D from becoming accidentally detached from the shank.

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

1. A wrench, comprising a shank rectangular in cross-section, and having a handle at one end and a fixed jaw at the other, the narrow sides of the shank being threaded and the wide sides being flat or blank, a movable jaw having spaced guideways to receive the shank and upon which it is slidable, and a nut held loosely between said guideways to move bodily with the jaw, said nut being mounted to turn on the shank and its interior surface being formed with opposite flat sides and opposite threaded sides, the flat or blank sides of the nut being spaced apart to freely ride over the threaded sides of the shank, and the threaded sides of the nut being adapted to move in mesh with the threaded

sides of the shank, substantially as shown and described.

2. A wrench, comprising a shank rectangular in cross-section, and having a handle at one end and a fixed jaw at the other, the narrow sides of the shank being threaded and the wide sides being flat or blank, a movable jaw having spaced guideways to receive the shank and upon which it is slidable, a nut held loosely between said guideways to move bodily with the jaw, said nut being mounted to turn on the shank, and its interior surface being formed with opposite flat sides and opposite threaded sides, the flat or blank sides of the nut being spaced apart to freely ride over the threaded sides of the shank, the threaded sides of the nut being adapted to move in mesh with the threaded sides of the shank, and stop-lugs on the exterior of the nut and adapted to abut on opposite faces of the movable jaw, to limit the turning of the nut on the shank, substantially as shown and described.

ALEXANDER ANDERSON.

Witnesses:

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