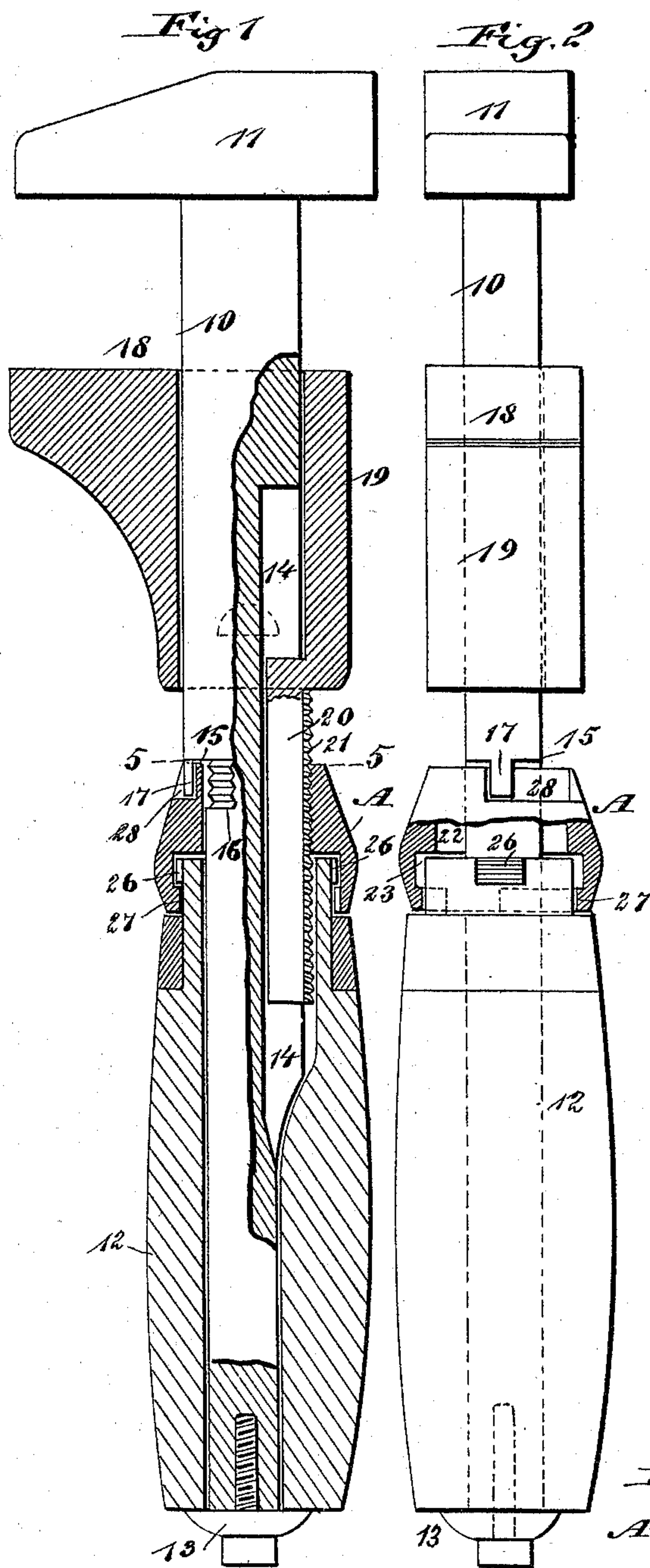


(No Model.)

W. H. KALTENBECK.
WRENCH.

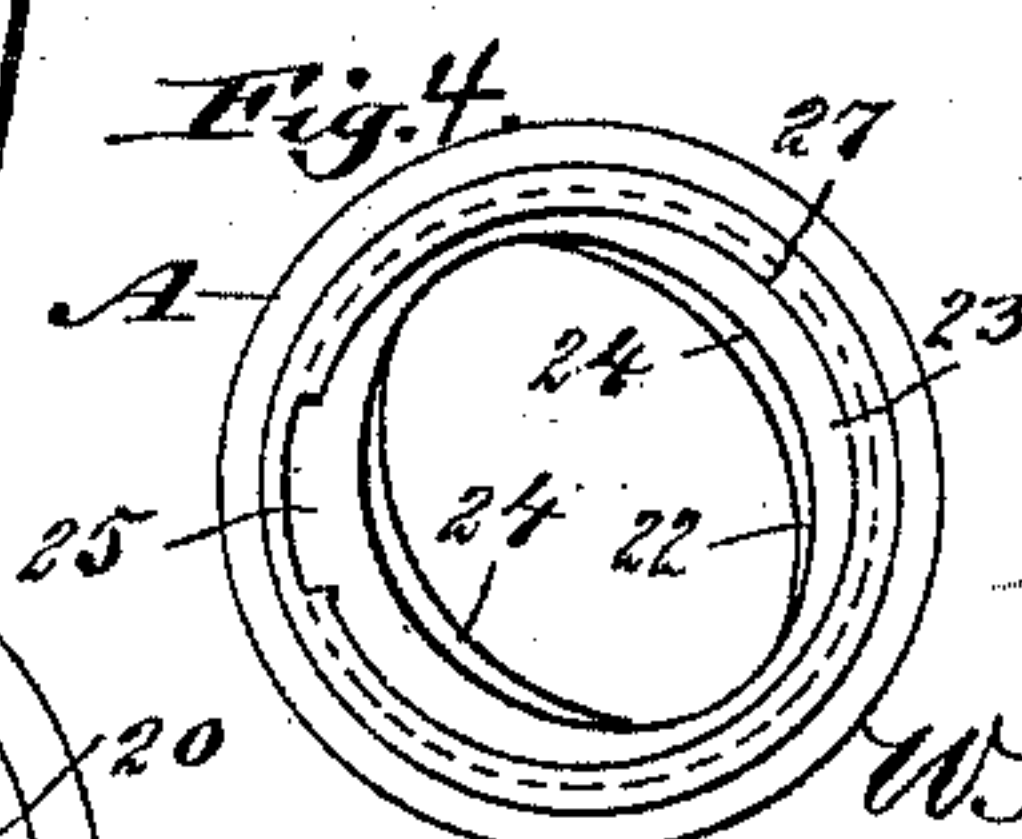
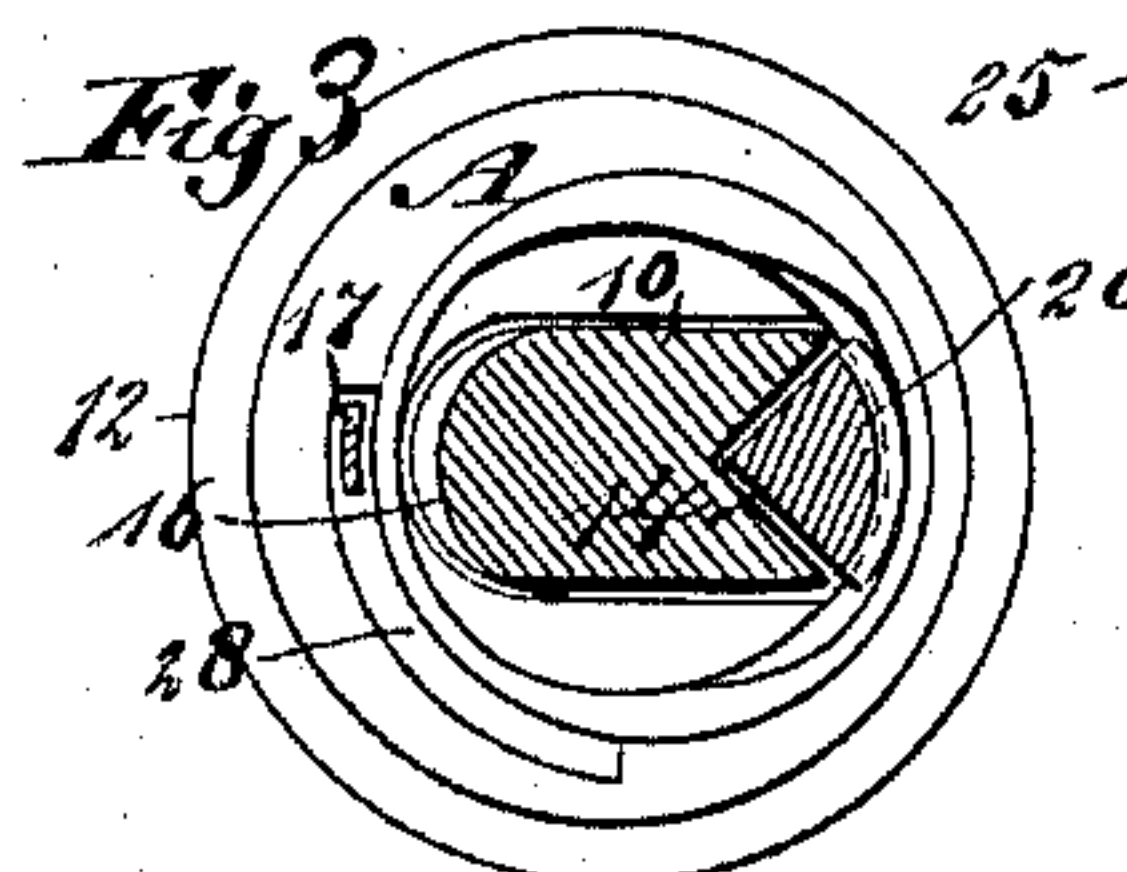
No. 492,401.

Patented Feb. 28, 1893.



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

WILLIAM H. KALTENBECK, OF MIDDLESBOROUGH, KENTUCKY.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 492,401, dated February 28, 1893.

Application filed June 10, 1892. Serial No. 436,198. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. KALTENBECK, of Middlesborough, in the county of Bell and State of Kentucky, have invented a new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

My invention relates to an improvement in wrenches, and has for its object to construct a wrench in an exceedingly simple yet durable manner, and in its construction to provide but few pieces; and further to provide a means whereby through the medium of a lock nut or sleeve the lower jaw of the wrench may be made to slide up or down upon the shank or body bar, or be locked at any desired position upon said body bar between the upper jaw and handle of the wrench.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section taken through the wrench. Fig. 2 is a front elevation partly in section. Fig. 3 is a transverse section on the line 5—5 of Fig. 1. Fig. 4 is a bottom plan view of the locking nut or sleeve.

The body bar 10, is provided at its upper end with the usual fixed jaw 11; and the lower end of the bar is fitted in a handle 12, and is usually made to extend through said handle, the handle and body bar being united at their lower ends by means of a bolt and nut 13, or the equivalents thereof.

In what may be termed the rear edge of the body bar a groove 14, is produced longitudinally thereof, the groove being U or V-shaped in cross section, preferably the latter; and this groove extends from a point above the center of the body bar some distance down, terminating between the center and its lower end, a portion of the groove extending downward in the handle 12, the bore of the handle being enlarged at that point where the groove in the body bar is located, as shown in Fig. 1. The body bar just above the handle, at what may be termed its front edge is provided with

an extension or shoulder 15, as where the shoulder is formed the body bar is of greater width than at any point below it; but from the shoulder up to the fixed jaw the body bar is of the same cross sectional area. Beneath the shoulder the forward edge of the body bar is made cylindrical, and an exterior thread 16, is produced upon the cylindrical surface. In front of the thread 16 a finger 17, is projected down from the outer face of the shoulder 15, as shown in both Figs. 1 and 2. The lower jaw 18, has integral therewith a socket 19, the socket being adapted to travel upon the body bar between the handle of the wrench and its upper or fixed jaw.

Upon the inner face of the socket at its rear wall an arm 20, is formed, corresponding in cross sectional shape to the cross sectional contour of the slot 14 in the body bar, as the arm 20 is adapted to travel in said slot, as shown in Fig. 1. The exterior surface of the arm 20, is cylindrical, and is provided with a thread 21, extending from top to bottom.

Upon the upper end of the handle 12 a locking nut or sleeve A, is swiveled, or is held to turn, the said locking nut or sleeve being capable of detachment or removal from the handle, and of ready attachment thereto. Usually, as shown in Fig. 4, this locking nut or sleeve is made in two diameters, an upper diameter 22 and a lower diameter 23, the latter being greater than the former; and at the lower diameter of the sleeve the inner contour is circular, while at the upper diameter the inner contour is somewhat elliptical; and in the opposite side walls of the smaller diameter of the nut or sleeve threads 24, are produced, while in one side, at the bottom of the nut or sleeve a recess 25, is made, likewise shown in Fig. 4. Upon the upper end of the handle, which is cylindrical and reduced, lugs 26, are formed, said lugs being preferably located diametrically opposite to each other. When the sleeve or nut A, is to be placed upon the handle the lug 26 is made to enter the recess 25, and the sleeve is sprung over the second lug. The sleeve is prevented from leaving the handle when it is turned so as to carry the lugs out of registry with the recess 25, by forming an inwardly-extending flange upon the bottom portion of the sleeve, as shown at 27, the recess 25 being in this

flange. In the front upper and outer face of the sleeve a circular slide-way 28, is made as shown in Fig. 3, and in this slide-way the finger 17 of the body bar extends. The movement of the nut or sleeve in either direction is limited by the finger coming in engagement with the end walls of the slide-way.

Thus, in operation, when it is desired to adjust the lower jaw to or from the upper one, the sleeve or nut A, is turned in a manner to bring the under surfaces of its reduced diametrical portion 22 opposite the threaded surfaces 21 and 16. At this time the lower jaw may be moved freely upon the body bar. When a proper adjustment of the lower jaw has been effected, by turning the sleeve or nut in a direction opposite that in which it was first turned, the threads 24 in the nut or sleeve will be made to engage with the threaded surfaces 21 and 16 formed respectively upon the arm 20 and the shank of the body, and the lower jaw will at that time be firmly locked in the desired position. The simplicity, durability and economy with which a wrench of the character above described may be constructed are apparent.

It will be understood that the jaws of the improved wrench may be shaped for use either as a monkey wrench or as a pipe wrench.

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

1. In a wrench, the combination, with a body bar provided with a groove in one side, a handle receiving the lower end of the body bar, a shoulder projected outward from the side opposite that in which the groove is formed, the shoulder being provided with a downwardly-extending finger, and the body below

the shoulder with an exterior thread, of a socket shaped as a lower jaw and having free sliding movement upon the body, an arm attached to the socket and fitted to slide in the groove of the body bar, the exterior surface of the arm being cylindrical and threaded, and a locking nut or sleeve held to turn upon the handle, having a slide way for the reception of the body finger, and having its interior approximately oval in shape, the sides being threaded, as and for the purpose set forth.

2. In a wrench, the combination, with a body bar having an essentially U-shaped groove produced longitudinally in one edge, the body being practically rectangular in cross section, the said body being provided with an extension upon one side, forming a shoulder, and a finger projected downward from the shoulder, the body being further provided with a threaded exterior cylindrical surface immediately below the shoulder, of a socket carrying a lower jaw, the socket having free movement upon the body, an arm projected downward from the socket, essentially U-shaped in cross section and fitted to slide in the body groove, the outer surface of the arm being cylindrical or threaded, a nut or sleeve having a removable and swivel connection with the upper end of the handle, and having its interior shaped more or less oblong, the side walls being threaded, and the sleeve or nut being further provided with an exterior slide-way receiving the finger from the body shoulder, as and for the purpose specified.

WILLIAM H. KALTENBECK.

Witnesses:

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