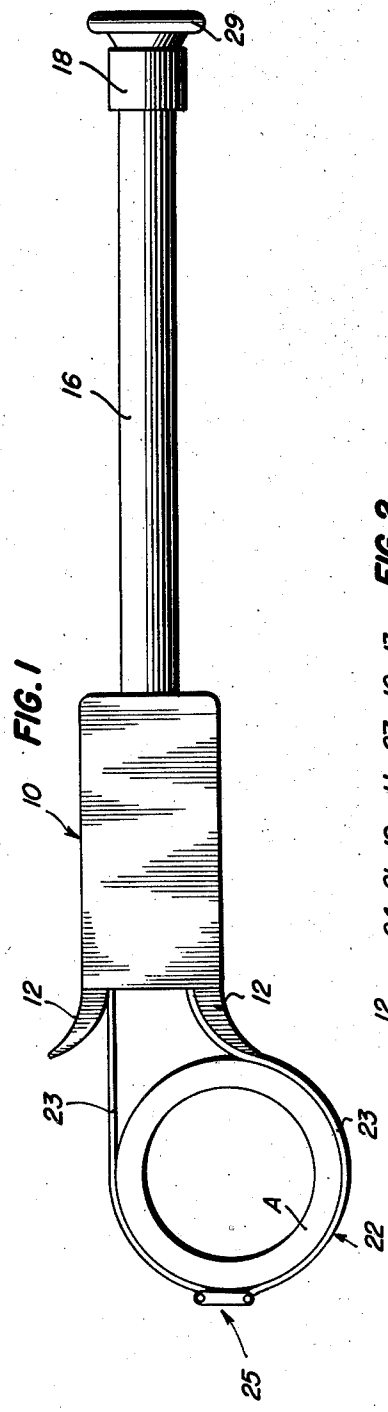
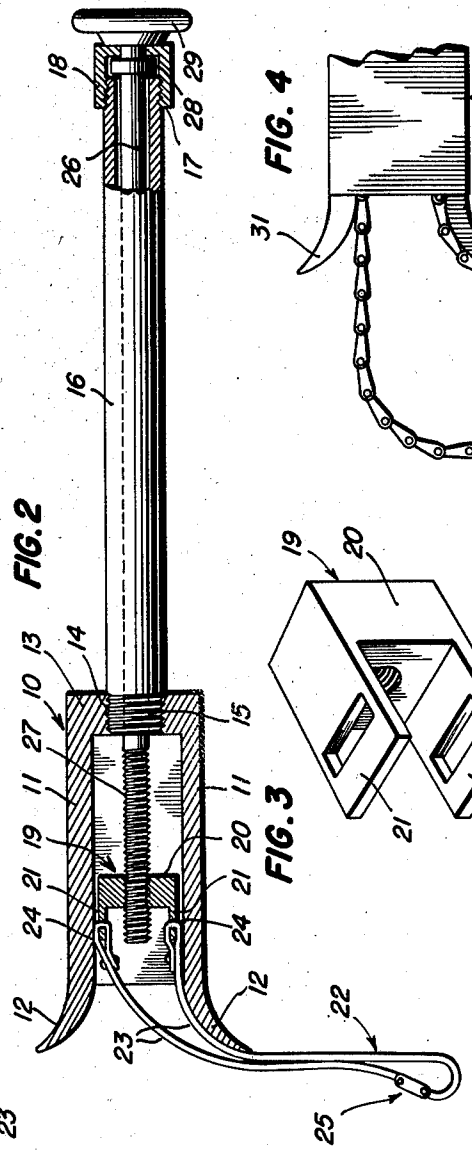
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THREADEDLY-ADJUSTABLE FLEXIBLE-STRAP WRENCH

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THREADEDLY ADJUSTABLE FLEXIBLE-STRAP WRENCH

Fred J. Mouser, Hope, Ark.

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1 Claim. (Cl. 81—65)

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This invention relates to improvements in wrenches and has more particular reference to a type of wrench in which the work gripping means is in the form of either a chain or strap.

I am sufficiently conversant with the state of the art to which the invention appertains, full well appreciate that it is not new in the art of wrenches to utilize an embracing element, such as a chain or a strap, and to employ means for tightening same about the work, the character of the grip being such and sufficient to enable the work, such as tube or pipe, to be rotated.

More specifically I contemplate the adoption and use of a simple and expedient wrench characterized by an embracing flexible strap, the preferred embodiment being expressly, but not necessarily, adapted for use on steel artillery gun barrels or tubes to screw or unscrew same from breech rings.

I also contemplate the adoption and provision of a wrench characterized by a chain, said chain made up of links and said links being such as to lend themselves for effectively gripping, pipes, rods and the like. These types of wrenches are thus adaptable for use by pipe-fitters.

More specifically the invention relates to a tubular handle provided on its outer end with a hollow box-like head, said head being adapted to accommodate a slide, said slide being mounted for reciprocation in the head and in turn, constructed to accommodate either a chain or strap as the case may be.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the same:

Figure 1 is a side elevational view of a strap wrench constructed in accordance with the principles of the present invention and showing the manner in which the strap embraces the barrel, tube or part to be grasped and turned.

Figure 2 is a view of the same, said view being partly in section and partly in elevation.

Figure 3 is a perspective view of the block-like strap mounting and accommodating slide.

Figure 4 is a fragmentary view showing that which is covered in Figure 1 and substituting a chain for a strap.

Referring now to the drawings by distinguishing reference numerals it will be seen that the box-like shell or head is denoted by the numeral 10. Although this part of the structure may be

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made up of sections, it is herein shown as of one piece construction, the walls 11 being provided with extensions, said extensions being of curved form as at 12 and these functioning as strap applying and head fulcruming jaws. The right hand end of the head, as shown in Figure 2 and as indicated at 13, is suitably bored and the bored hole is then screw threaded as at 14, this is to accommodate the coacting screw threads 15 on the adjacent end of the tubular handle 16. The outer or right hand end of the handle 16 is screw threaded as at 17 to accommodate a cap 18, that is, an assembling cap as illustrated in the drawings.

Attention is next directed to the unit illustrated in Figure 3. This is in the form of a block-like slide 19, the same including a feed nut 20 and spaced parallel and slotted arms 21. This slide constitutes an adapter for the strap 22, that is the strap which embraces the gun barrel or other tubular body A as shown for example in Figure 1. The strap, unitarily speaking, is actually made up of a pair of companion straps 23, these having looped inner ends 24 connected with the slotted arms 21. The adjacent free end of said straps are fastened together by an appropriate clamp 25.

The adapter block slides back and forth in the socket formed by said shell or head 10. To accomplish this I provide a turnable rod 26, said rod being screw threaded as at 27 and the threaded shank being screwed into the nut 20. The rod 26 extends through and beyond opposite ends of the tubular handle 16 and on its outer end it is provided with a collar 28, said collar being retained in assembled position by the aforementioned hood-cap 18. A knob 29 is provided on the outer end of the rod for turning same. It follows that by turning the knob 29 the feed screw 27 acting in the nut 20 moves the block-like adapter 19 in and out and this either lengthens or shortens the strap in relation to the work embraced by said strap.

In the modification seen in Figure 4 the head is indicated at 30 and the jaws at 31, said jaws having an appropriately constructed link chain 32 coacting therewith. This chain takes the place of the strap 22 when it is desired to convert the wrench from a strap form to a chain form.

The chief advantages of this strap wrench over similar wrenches are these: It will ratchet right or left without removing the wrench from the barrel or pipe. The adjusting knob on the end of the handle will draw the strap into the inside of the wrench and lock the wrench on the gun

barrel, thereby permitting one to "spin" the barrel in unscrewing or screwing for quick change results.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

I claim:

A wrench of the class described comprising an elongated tubular handle, externally screw-threaded at its opposite ends, a screw-cap screwed on one screw-threaded end of said handle, said screw-cap having a central aperture therein in alignment with the bore in said handle, a head detachably threaded on the remaining screw-threaded end of said handle, said head being in the form of a hollow elongated shell of rectangular cross-sectional form constituting a socket, the outer end portions of two opposed walls of said shell being provided with outstanding extensions lengthwise curved and flared outwardly to provide fulcruming jaws, a rectangular nut slidably mounted for actuation and adjustment in said socket, said nut being provided on opposite marginal sides with a pair of spaced parallel arms having apertures, a work-embracing strap, the ends of said strap being connected with said apertured arms and a rod mounted for rotation in the aforementioned tubular handle, said rod having a screw-threaded shank projecting into said socket and adjustably connected with said nut, the remaining end of the rod projecting through the aperture in said cap and being provided with a hand-grip, and means on said rod swivelly connecting same with said handle.

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