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OPEN-END WRENCH CONVERTIBLE TO BOX-TYPE WRENCH

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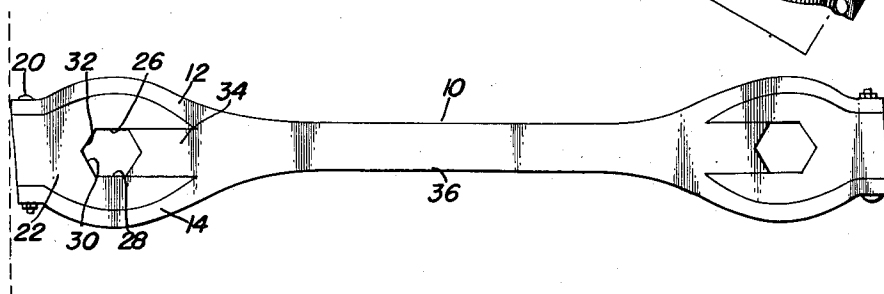
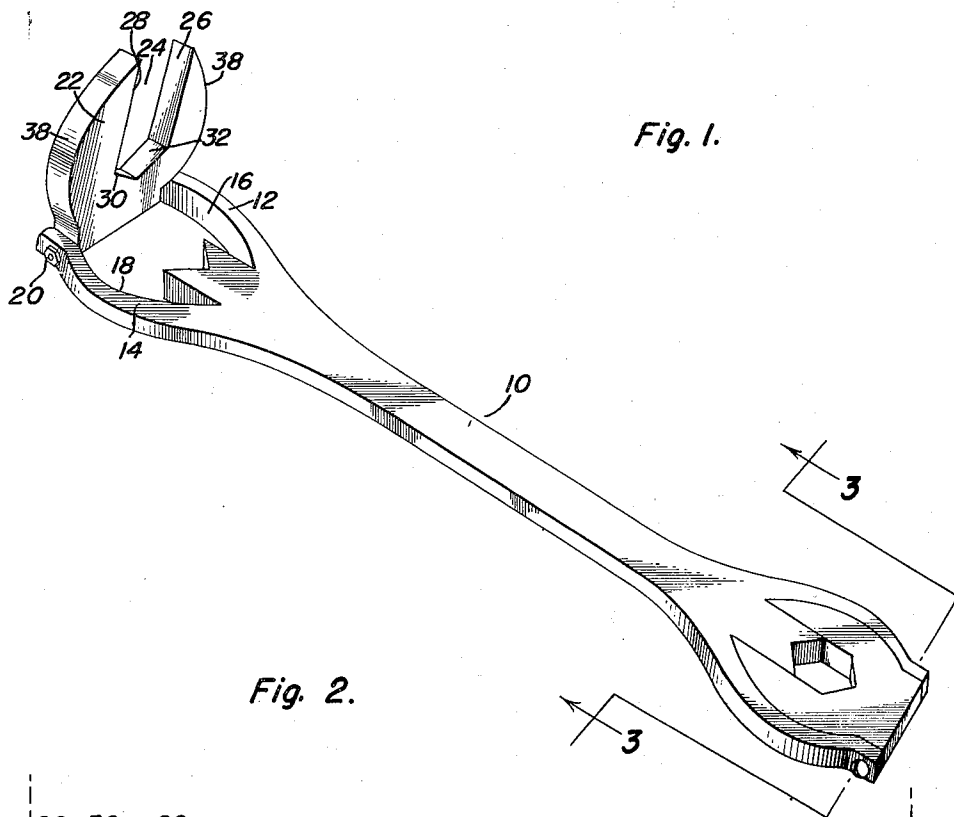


Fig. 3.

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OPEN-END WRENCH CONVERTIBLE TO
BOX-TYPE WRENCH

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1 Claim. (Cl. 81-119)

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This invention comprises novel and useful improvements in wrenches and more particularly pertains to wrenches having pivotally mounted wrench heads.

An important object of this invention is to provide a wrench having a pivotally mounted head, which head may be designed for light work but which can be pivoted into a reinforced position for heavier work.

An additional object of this invention, in accordance with the foregoing object, is to provide a wrench having a pivotally mounted open-end wrench head which may be converted from an open-ended wrench head into a socket wrench.

Yet another object of this invention is to provide a wrench having a pivotally mounted, open-ended wrench head which may be converted from an open-ended wrench into a box-type socket wrench having a smaller work-receiving opening than said open-end, even though both the open-end and socket wrenches can take only a single size hexagonal nut.

An important feature of this invention resides in the provision for a projection which extends from the handle of the wrench and which is receivable in a slot in the pivotally mounted wrench head, when the latter is pivoted to lie between the wrench head supporting means, the projection on the handle reinforcing the wrench head, the projection partially closing the slot in the wrench head and forming a box-type socket wrench.

Another important feature of this invention resides in the provision for a wrench having wrench head supporting arms, with a wrench head the sides of which are complementary to the inner surfaces of the supporting arms, whereby the wrench head is reinforced when it is pivoted so as to lie between the supporting arms.

These, together with various ancillary objects and features are attained by this invention, the preferred embodiment of which has been illustrated, by way of example only, in the accompanying drawings, wherein:

Figure 1 is a perspective elevational view of the wrench, one end of the wrench having the wrench head pivoted outwardly to form an open-ended wrench, the other end having the wrench head pivoted to lie between the wrench head supporting arms, thereby providing a socket wrench.

Figure 2 is a top view of the device showing the wrench head pivoted to lie between the wrench head supporting arms.

Figure 3 is a vertical sectional view of the de-

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vice taken substantially on the plane 3—3, part of the device being shown in elevation.

Referring now to the accompanying drawings, wherein like numerals designate similar parts throughout the various views, it can be seen from a consideration of Figures 1 and 2 that the wrench indicated generally by the numeral 10 is provided at one or both ends, as desired, with a pair of lateral arms 12 and 14 having confronting vertical surfaces 16 and 18. Terminally pivoted to the arms 12 and 14, in any desired manner, such as by the nut and bolts 20, is a wrench head 22.

Provided in the wrench head 22 is a vertical slot 24 which preferably has parallel and laterally spaced sides 26 and 28, the inner end of the slot being of any polygonal shape which may be found desirable, such as the symmetrical converging end walls 30 and 32, depending upon the type of nuts upon which the wrench head 22 is to be used.

A projection 34 is provided on the handle 36 of the wrench 10 which projection extends between the lateral arms 12 and 14 and is receivable in the slot 24, between the walls 26 and 28. As will be readily appreciated from a consideration of Figure 2, the projection 34 not only provides a reinforcement for the wrench head 22, which wrench head may, for various purposes such as tappet adjusting, be very thin, but the wrench head 34 also converts the wrench 10 into a box-type socket wrench when the wrench head 22 is pivoted to lie between the lateral arms 12 and 14. It is believed to be further evident that the projection 34 may be of such dimensions that the aperture formed between the wrench head 22 and the projection 34 will receive the same size nut as that which is receivable between the sides 26 and 28 of the wrench head when the latter is pivoted to its open-end position.

For purposes of further reinforcing the wrench head 22 which, as stated previously, may, for certain purposes, be constructed of thin material, the sides of the wrench head 38 may be constructed so as to be complementary to the inner surfaces 16 and 18 of the arms 12 and 14.

In order to facilitate reaching nuts which are disposed in obstructed places, the wrench head 22 is preferably pivoted at an angle which deviates from the perpendicular to the wrench handle 36, the amount of the deviation being discretionary.

From the foregoing, it is thought that the manner of operating the invention and the ad-

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vantages arising therefrom will be readily understood and, accordingly, further explanation is believed to be unnecessary. However, since numerous modifications will readily occur to those skilled in the art after a study of the foregoing specification and attached drawings, it is not intended to limit the invention to the exact construction shown and described, but to all suitable modifications and equivalents which may be resorted to, and which fall within the scope of the appended claim.

Having described the invention, what is claimed as new is:

A wrench comprising a handle, a pair of laterally spaced arms on one end of said handle, inner sides of said arms providing confronting surfaces, an open-end wrench head terminally pivoted to said arms, outer sides of said head being complementary to the confronting surfaces of said arms, and a projection on said handle

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receivable in the open end of said wrench head when said head is pivoted toward said handle so as to lie between said arms, said projection having a work-engaging face which then co-operates with said open-end wrench head to form a box-type socket wrench.

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