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SOCKETED WRENCH HOLDER

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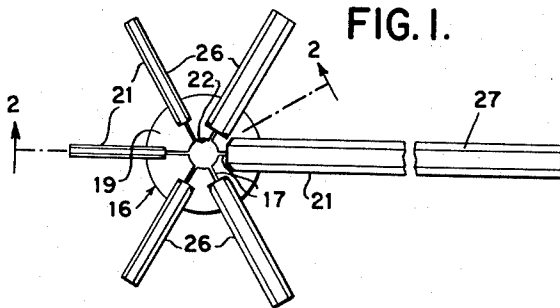


FIG. 1.

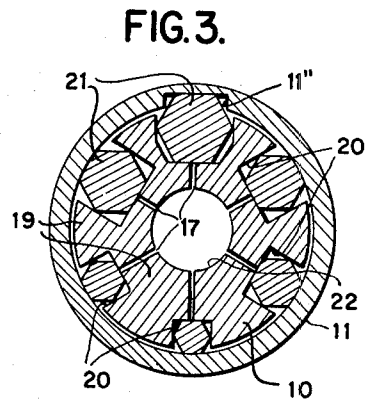


FIG. 3.

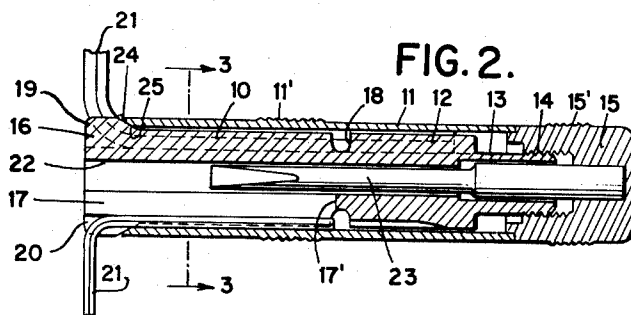


FIG. 2.

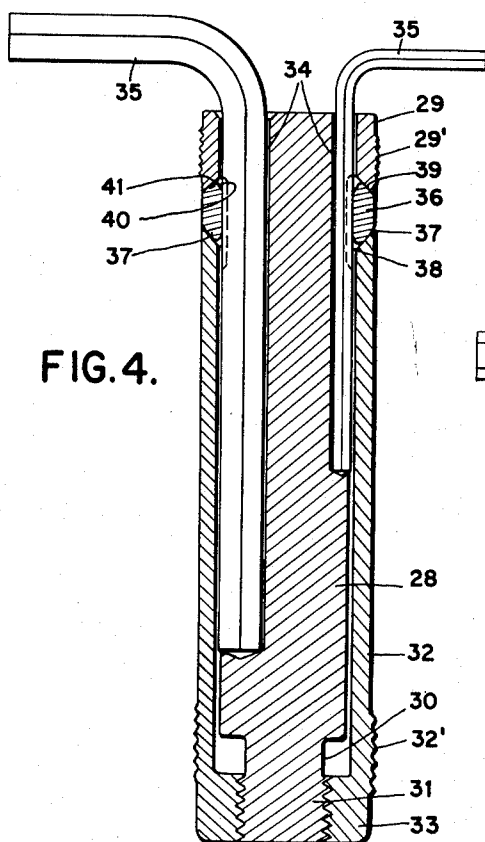


FIG. 4.

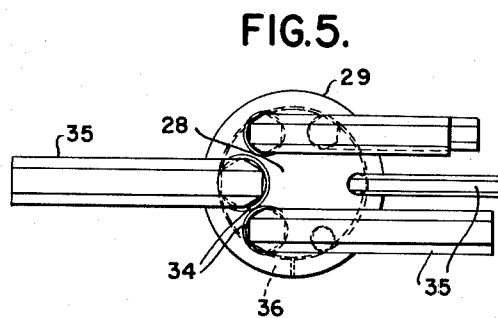


FIG. 5.

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2,715,028

SOCKETED WRENCH HOLDER

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6 Claims. (Cl. 279-9)

This invention relates to what I term a gripper head wrench, wherein a tool body has a gripper head for clamping a number of Allen wrenches therein in support of said wrenches for use. Still more particularly, the invention deals with a device of the character described, wherein each wrench may be supported in either one of two different positions with respect to the head of the tool body in the use of the wrench.

The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which, the separate parts are designated by suitable reference characters in each of the views and, in which:

Fig. 1 is a plan view of a tool made according to my invention, illustrating one of the wrenches in a different use position than that of the other wrenches.

Fig. 2 is a section on the broken line 2-2 of Fig. 1.

Fig. 3 is an end view of the wrench with part of the construction shown in section, the section being on the line 3-3 of Fig. 2.

Fig. 4 is a view, similar to Fig. 2, showing a modified form of construction; and

Fig. 5 is a view, similar to Fig. 1, illustrating the method of gathering a group of the wrenches in the operation of using one wrench.

In Figs. 1 to 3, inclusive, I have shown at 10 a tool body on which is supported a tube or casing 11, the tool body comprising a long cylinder portion 12 reduced, as seen at 13, at its inner end. Beyond the reduced portion is a slightly enlarged externally threaded portion 14, with which is coupled an internally threaded clamp nut 15.

At the other end of the body 10 is a chuck head 16 having a plurality of circumferentially spaced radial slots 17 extending along the body to the jaws 17', note Fig. 2, adjacent an annular groove 18 and these slots form a plurality of circumferentially spaced jaws 19, adjacent jaws forming sockets 20 for clamping a plurality of Allen wrenches 21 in the body 10. The slots 17 are radial with respect to the axis of said body and open into the sockets and the sockets 20 extend to the reduced portion 13 of the body, as clearly seen in Fig. 2 of the drawing.

The bore 22 of the body 10 extends the full length of said body and this bore is adapted to receive a screw driver 23, which is fixed to the clamp nut 15 and, by detaching the nut, the screw driver may be used as an independent tool. The sleeve or casing 11 has a milled gripper portion 11' and a similar gripper portion 15' is provided on the nut 15. The head 16 is of greater diameter than the remainder of the body 10 and joins the body in a bevelled wall 24. The adjacent part of the sleeve or casing 11 has a bevelled portion 25 which seats upon the head and serves to move the jaws 19 into clamping engagement with the tools or wrenches 21 arranged in the sockets 20.

In Fig. 1 of the drawing, I have shown most of the

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Allen wrenches supported in the normal position with the short ends 26 thereof projecting radially from the head 16. However, one of the wrenches, that is to say, the largest diameter wrench is shown with the long end 27 projecting beyond the head; the wrenches can be used in either position. They are extended in the long manner when it is necessary to get into tight quarters. Otherwise, the same may be used in the normal extension thereof as seen by the smaller size wrenches shown in Fig. 2. The jaws 19 of the chuck head are free to yield due to the long slots 17 and the annular recess 18, as will be apparent.

The casing 11 is grooved, as seen at 11' in Fig. 3 of the drawing, to receive the largest diameter tool and this construction serves to key the casing 11 against rotation on the body 10.

In Figs. 4 and 5 of the drawing, I have shown a modified form of construction and in said figures 28 shows the body of the tool having a head 29 at one end, a reduced portion 30 at the other end terminating in a slightly enlarged externally threaded member 31. At 32 is shown a sleeve or casing, generally similar to the casing 11, with the exception that the casing 32 includes a heavy walled end 33 which is internally threaded to receive the member 31. The casing 32 is knurled, as seen at 32', to provide a gripper surface to facilitate rotation thereof. The head 29 is also preferably knurled, as seen at 29'.

The head 29 has a series of circumferentially spaced apertures or sockets 34 of different diameters to receive different diameter Allen wrenches 35, similar to the wrenches 21. The apertures 34 extend into the body 28 and open outwardly through the surface of said body in a direction radial with respect to the axis of the body 28, as clearly appearing in Fig. 4, so as to expose the wrenches for clamping engagement by a split spring collar 36. The collar 36 has a rounded lower end 37, in conjunction with which a bevelled surface 38 on the casing 32 operates to compress the collar 36 into firm engagement with the several wrenches. The upper surface of the collar has two bevels 39 and 40. The bevel 40 serves to facilitate frictional movement of the wrenches in passage downwardly through the apertures 34, in which operation the collar 36 is expanded slightly. The bevel 39 operates in conjunction with a bevelling 41 on the inner surface of the head 29 to further aid in clamping the collar 36 onto the tools supported in the body 28. Either the long or short end of the Allen wrenches can be supported in the body and clamped in position by the collar 36.

Considering Fig. 5 of the drawing, it will appear that, in some instances, it may be desired to swing all but one of the wrenches into the bunched position shown in said figure in the operation of using one of the wrenches. This is particularly desirable when the short end of the wrench is in operative position.

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

1. A tool of the character described, said tool comprising an elongated tubular body, one end portion of the body having longitudinally extending circumferentially spaced radial slots dividing said end of the body into a plurality of correspondingly spaced jaws, outer end portions of the jaws being enlarged and joining the remainder of the body in a bevelled wall portion, a plurality of elongated tool receiving sockets opening outwardly through sides of said body and extending longitudinally of said jaws and throughout the major portion of the length of said body, the periphery of said body at the base of the jaws having an annular groove to provide yielding properties to said jaws, and means in threaded engagement with the other end portion of

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said body and including means in operative engagement with the bevelled wall portions of said jaws to control gripping of tools supported in said sockets.

2. A tool of the character described, said tool comprising an elongated tubular body, one end portion of the body having longitudinally extending circumferentially spaced radial slots dividing said end of the body into a plurality of correspondingly spaced jaws, outer end portions of the jaws being enlarged and joining the remainder of the body in a bevelled wall portion, a plurality of elongated tool receiving sockets opening outwardly through sides of said body and extending longitudinally of said jaws and throughout the major portion of the length of said body, the periphery of said body at the base of the jaws having an annular groove to provide yielding properties to said jaws, means in threaded engagement with the other end portion of said body and including means in operative engagement with the bevelled wall portions of said jaws to control gripping of tools supported in said sockets, said last named means comprising a nut, and a sleeve encircling said body and actuated by said nut.

3. A tool of the character described, said tool comprising an elongated body having a plurality of longitudinal slots of different cross-sectional dimensions extending the major portion of the length of said body and adapted to receive a corresponding number of tools of different cross-sectional dimensions, said sockets, throughout their length, opening outwardly through the sides of said body in a direction radial with respect to the axis of said body, means at one end portion of the body for gripping the tools supported in said sockets, and means in threaded engagement with the other end portion of said body for actuating the first named means in controlling gripping of the tools in said body.

4. A tool of the character described, said tool comprising an elongated body having a plurality of longitudinal slots of different cross-sectional dimensions extending the major portion of the length of said body and adapted to receive a corresponding number of tools of different cross-sectional dimensions, said sockets, throughout their length, opening outwardly through the sides of said body in a direction radial with respect to the axis of said body, means at one end portion of the body for gripping the tools supported in said sockets, means in threaded engagement with the other end portion of

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said body for actuating the first named means in controlling gripping of the tools in said body, and said first named means comprising a split collar.

5. A tool of the character described, said tool comprising an elongated body having a plurality of longitudinal slots of different cross-sectional dimensions extending the major portion of the length of said body and adapted to receive a corresponding number of tools of different cross-sectional dimensions, said sockets, throughout their length, opening outwardly through the sides of said body in a direction radial with respect to the axis of said body, means at one end portion of the body for gripping the tools supported in said sockets, means in threaded engagement with the other end portion of said body for actuating the first named means in controlling gripping of the tools in said body, said first named means comprising a split collar, said split collar and body having interengaging bevelled surfaces, the second named means having a bevelled surface engaging an opposed bevelled surface on said collar, and the collar having an inwardly bevelled surface exposed to said sockets for guiding tools inserted into said sockets.

6. A tool of the character described, said tool comprising an elongated body having a plurality of longitudinal slots of different cross-sectional dimensions extending the major portion of the length of said body and adapted to receive a corresponding number of tools of different cross-sectional dimensions, said sockets, throughout their length, opening outwardly through the sides of said body in a direction radial with respect to the axis of said body, means at one end portion of the body for gripping the tools supported in said sockets, means in threaded engagement with the other end portion of said body for actuating the first named means in controlling gripping of the tools in said body, said second named means comprising a nut, and an elongated casing enveloping the body and actuated by said nut.

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