

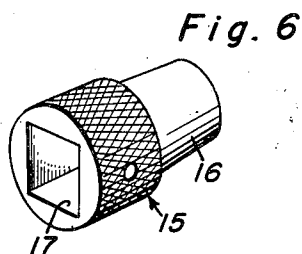
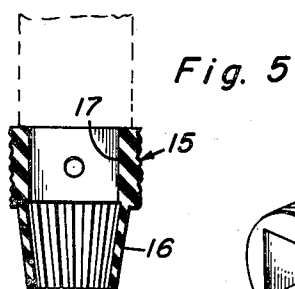
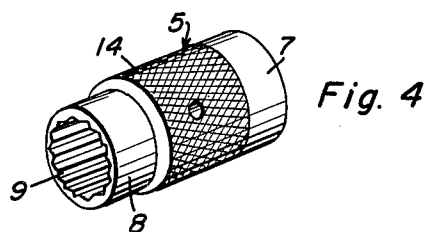
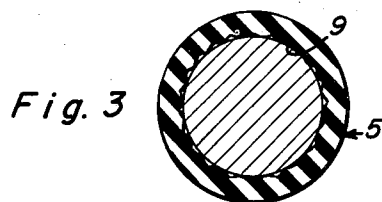
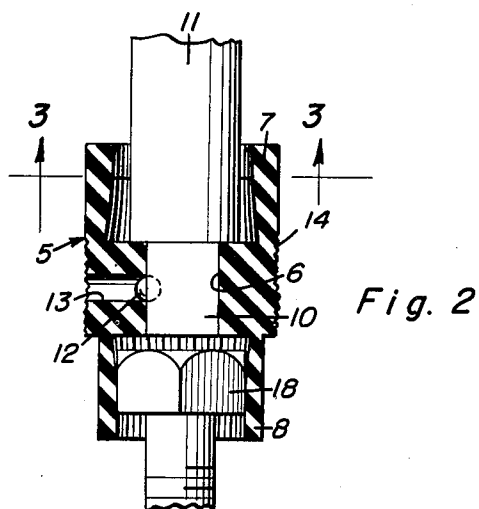
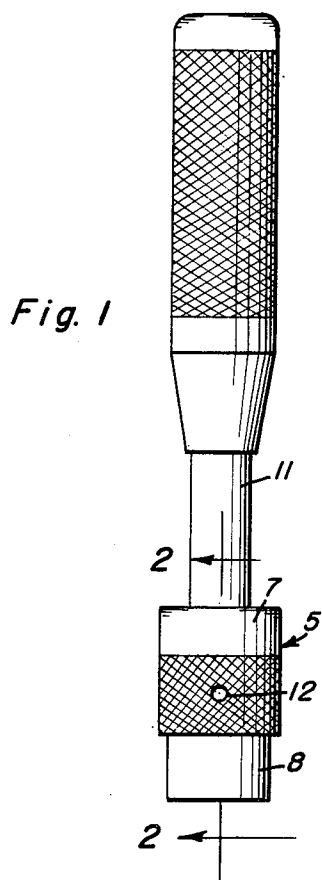
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J. P. ROSS

2,701,491

INTERCHANGEABLE WRENCH SOCKET

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2,701,491

INTERCHANGEABLE WRENCH SOCKET

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2 Claims. (Cl. 81—64)

This invention relates to a readily applicable and removable socket type attachment for the shank of a socket driver, wherein said attachment is constructed to serve as a holder and starter for a bolt or nut.

An important object of the invention is to provide a resilient socket for self-adjustment within a limited range to effectively grip either the head of a bolt or a nut, as the case may be, without damage thereto.

Another object is to provide a tool of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purpose for which the same is intended.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view showing a double-ended socket attached to a handle;

Figure 2 is an enlarged fragmentary longitudinal sectional view taken on a line 2—2 of Figure 1;

Figure 3 is a transverse sectional view taken on a line 3—3 of Figure 2;

Figure 4 is a perspective view;

Figure 5 illustrates a modification shown in longitudinal section; and,

Figure 6 is a perspective view thereof.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of my invention, the numeral 5 designates a substantially cylindrical-shaped body of rubber or other resilient material having a square-shaped bore 6 at its central portion and cylindrical sockets 7 and 8 at its end portions which are internally fluted, as shown at 9, and internally tapered toward the outer ends of the sockets. The sockets 7 and 8 are of different diameters to fit bolts or nuts of different sizes and the central bore 6 is of a width substantially less than the diameters of the sockets 7 and 8 to increase and strengthen the walls of the body in the region of the bore and the bore is adapted to receive the squared end 10 of a wrench handle 11. The end 10 is provided at one side with a ball 12 rotatably or other-

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wise suitably held recessed in the end portion 10 and the ball partially protrudes from end 10 to enter a lateral opening or recess 13 in body 5 to lock the handle therein with a snapping action. The central portion of the body 5 may be reinforced (not shown) or otherwise suitably stiffened to provide the necessary rigidity for stresses subjected thereto by the handle.

The socket 8 of lesser internal diameter is also constructed of reduced external diameter to retain the desired resiliency in the walls thereof.

The outer surface of the body is knurled, as shown at 14, to provide an effective finger grip.

In Figures 5 and 6, the body 15 is formed with a tapered cylindrical socket portion 16 at one end only for use with smaller size bolts or nuts where the width of the bolt or nut is equal to or less than the width of the bore 17 for the wrench handle.

In the use of the invention, the body 5 is attached at either end to the wrench handle 11 and the outermost socket may then receive a bolt or nut 18 of predetermined size to cause an expansion of the socket when the bolt or nut is inserted to effectively grip the bolt or nut.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. An interchangeable socket wrench comprising a substantially cylindrical body of resilient material, at least one end of said cylindrical body having a coaxial and expandible work-engaging socket, and said body having a non-circular handle-engaging bore communicating with an inner end of said expandible work-engaging socket, the cross sectional area of said socket adjacent its inner end being greater than the cross sectional area adjacent its outer end, whereby the interior wall of said socket between its inner and outer ends slopes toward the axis of the cylindrical body.

2. The structure defined in claim 1 and wherein the wall of said socket is internally fluted.

References Cited in the file of this patent

UNITED STATES PATENTS

50	1,360,500	Coll	Nov. 30, 1920
	1,478,736	Gadberry	Dec. 25, 1923
	1,660,989	Carpenter	Feb. 28, 1928
	1,954,422	McIntyre	Apr. 10, 1934
	1,960,531	Driscoll	May 29, 1934
55	2,491,089	Cowden	Dec. 13, 1949
	2,554,410	Horton	May 22, 1951
	2,558,479	Miller	June 26, 1951