

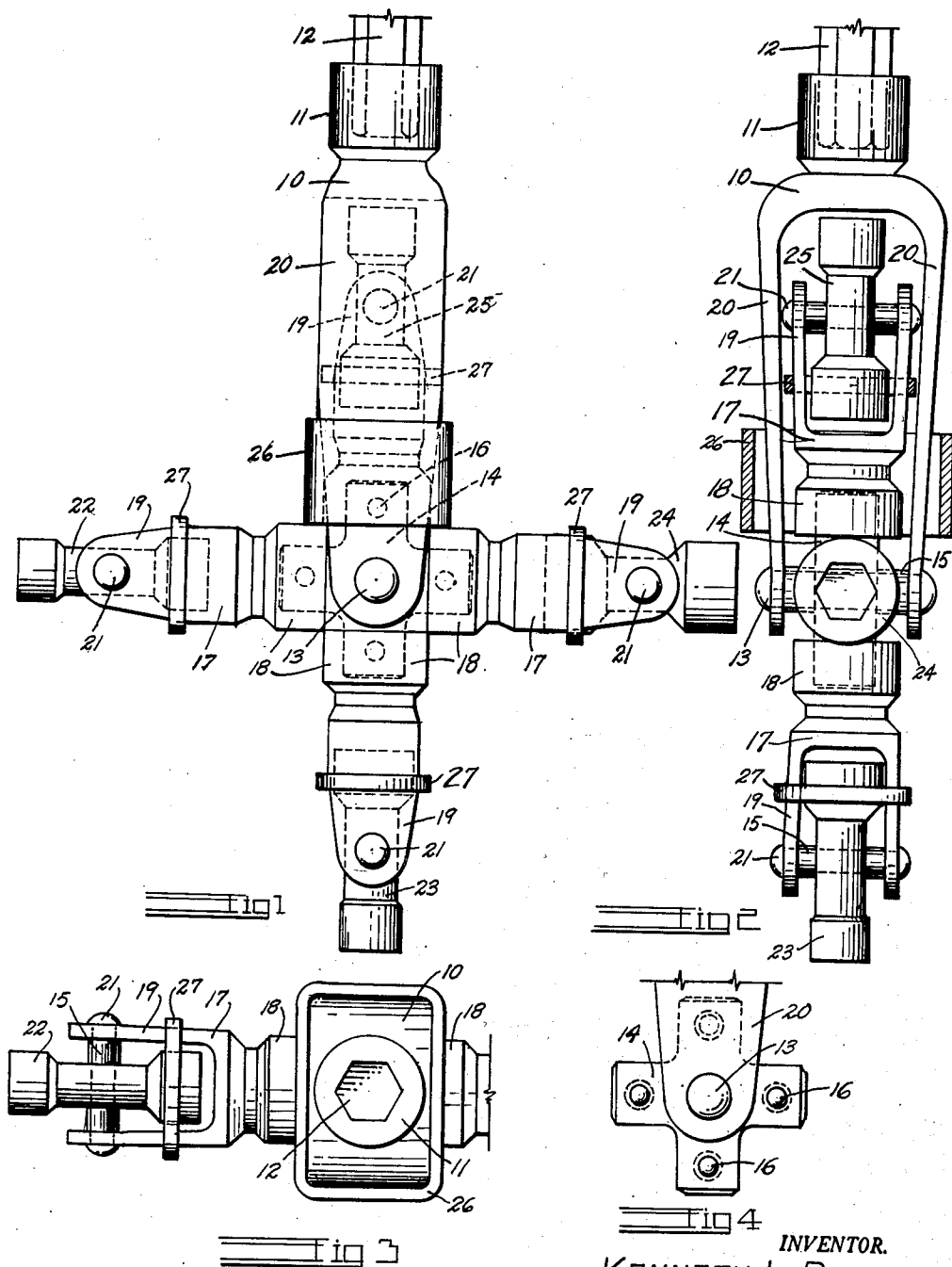
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ANGULARLY ADJUSTABLE, MULTIPLE-SOCKET WRENCH

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ANGULARLY ADJUSTABLE, MULTIPLE-SOCKET WRENCH

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This invention relates to an angularly adjustable, multiple socket wrench, and has for its principal object the provision of a socket wrench assembly which will provide a plurality of different sized sockets which can be quickly and easily interchanged for use on various sizes of bolts and nuts.

Another object of the invention is to so construct the device that the plurality of sockets will be contained within a single assembly unit so that only a single tool will be required for a plurality of different sizes of work.

A further object is to so construct the assembly of sockets that they can be quickly and easily interchanged to provide the desired socket; so that the tool can be used with a conventional hex wrench; and so that any desired socket may be locked in position for use to provide a sturdy, usable tool structure.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

Fig. 1 is a side view of the improved multiple socket wrench;

Fig. 2 is an edge view thereof partially in section;

Fig. 3 is a top view thereof; and

Fig. 4 is a detail view illustrating a cross-frame member employed in the improved wrench.

The improved multiple socket tool employs an inverted, U-shaped main yoke member 10 having two leg portions 20 and provided with a tubular wrench-receiving sleeve 11 having a hexagonal eccentric socket for receiving the extremity of a conventional hexagonal wrench bar 12. The legs 20 of the U-shaped yoke 10 extend downwardly and support a main pivot bolt or rivet 13.

A cross-frame member 14 is rotatably mounted on the main rivet 13 and is maintained in centrally spaced relation with the legs of the yoke 10 by means of suitable spacing sleeves 15. The member 14 is formed with four, preferably square, socket-receiving studs which extend radially outward from the axis of the rivet 13 at 90° from each other. Each of the studs of the cross-frame member may be provided with a spring-urged socket retaining ball 16 similar to that usually provided for retaining sockets on socket wrenches.

A secondary yoke member 17, provided with a stud-receiving sleeve 18, is mounted on each of the studs of the cross-frame member 14. The sleeves 18 of the secondary yoke members 17 are pressed over the studs of the cross-member and are frictionally retained thereon by means of the retaining balls 16. The secondary yoke members 17 are also U-shaped in structure to provide two spaced-apart leg portions 19. The leg portions of each secondary yoke member 17 support secondary pivot

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pins or rivets 21. All of the secondary yoke members 17 are similar. Each, however, is provided with a different double-ended socket member, such as illustrated at 22, 23, 24, and 25, each of which terminates at each of its extremities in a bolt or nut-receiving socket.

The sockets at each extremity of each socket member differ in size from each other and also differ in size from the sockets on the remaining socket members to provide eight different-sized work-receiving sockets. For instance, in one form of the tool the sockets in the socket member 22 will receive either a 1/4" or a 5/16" nut; the sockets in the socket member 23 will receive either a 3/8" or a 7/16" nut; the sockets in the socket member 24 will receive either a 1/2" or a 9/16" nut; and the sockets in the socket member 25 will receive either a 5/8" or a 3/4" nut.

The secondary yoke members 17 can be locked against rotation about the pivot rivet 13, when desired, by means of a locking sleeve 26 which slidably surrounds the legs 20 of the main yoke 10 and the uppermost secondary yoke 17, as shown in Fig. 1, to prevent rotation of the entire assembly. The assembly can be freed for rotation to any desired 90° position by simply lifting the sliding sleeve 26 out of engagement with the uppermost secondary yoke 17.

Each of the secondary socket members 22 through 24 can be locked against rotation in its secondary yoke 17 by means of a slide ring 27. Any one of the secondary socket members 23 can be freed for rotation around its secondary rivet 21 by simply sliding its slide ring 27 toward the axis of the main rivet 13. The leg portions 19 of the secondary yokes 17 are flared outwardly from each other, as shown in Fig. 2, so that the locking rings 27 can be forced radially outward over the flared legs to wedge and frictionally retain the locking rings in place.

It is believed that the use of the improved multiple socket wrench will be apparent from the above description of the construction thereof. It can be seen that any one of the secondary socket members 22, 23, 24, or 25 can be rotated about its rivet 21 to place the desired nut-receiving socket outwardly by simply sliding its locking ring inwardly toward the axis of the main rivet 13. The selected socket can then be placed at any desired circumferential position about the main pivot rivet 13 by simply lifting the locking sleeve 26 and rotating the entire assembly about the main rivet 13.

While a specific form of the improvement has been described and illustrated herein, it is to be understood that the same may be varied, within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:

1. A multiple socket wrench tool comprising: an inverted U-shaped main yoke; a transversely-extending pivot member supported between the legs of said main yoke; wrench-receiving means mounted on said main yoke for rotating the latter; a cross frame member rotatably mounted on said pivot member so as to rotate in the plane of the axis of said yoke, said cross frame member having oppositely projecting radial studs; a secondary U-shaped yoke supported upon each of said studs; and a double-ended, work-receiving, socket wrench member rotatably supported in each secondary yoke.

2. A multiple socket wrench tool as described in claim 1 having means for preventing rotation of said cross frame member about said pivot member when desired.

3. A multiple socket wrench tool as described in claim 2 having locking means on each secondary yoke member for preventing rotation of the double-ended socket wrench member therein when desired.

4. A multiple socket wrench tool as described in

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claim 3 in which there are four of said studs projecting from said cross frame member in a common plane and at 90° from each other and four of said secondary yokes each provided with a stud receiving collar slidably engaging a stud of said cross frame member.

5 5. A multiple socket wrench tool as described in claim 4 in which the means for locking said cross frame member in said main yoke comprises a slidable sleeve member enclosing the legs of said main yoke to retain a secondary yoke member therebetween.

10 6. A multiple socket wrench tool as described in claim 5 in which the means for locking the double-ended socket wrench members in the secondary yokes comprises a movable ring surrounding the legs of each secondary yoke member and enclosing one extremity of the double-ended socket member therein.

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7. A multiple socket wrench tool as described in claim 6 in which the legs of the secondary yokes are flared from each other so as to act to wedge the rings in place thereon.

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