March 7, 1933. J. DUDULETZ 1,900,169

BREAST WRENCH

Original Filed Feb. 24, 1930

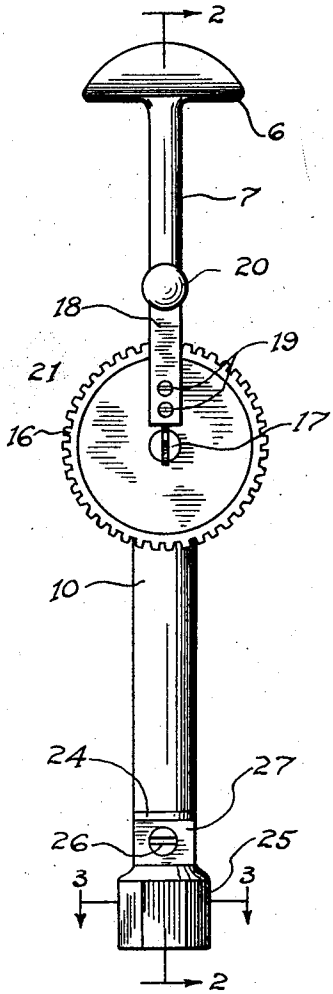


Fig. 1

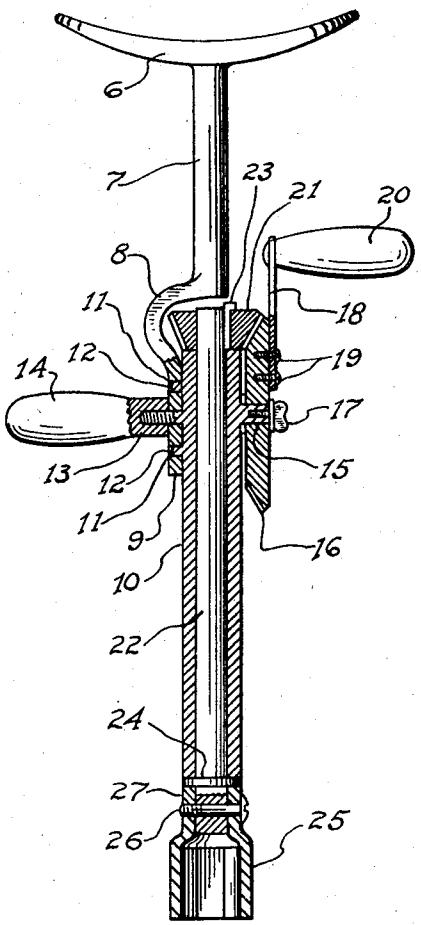


Fig. 2

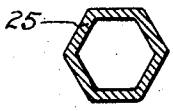


Fig. 3

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UNITED STATES PATENT OFFICE

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BREAST WRENCH

Application filed February 24, 1930, Serial No. 430,761. Renewed May 20, 1932.

This present invention relates to certain new and useful improvements in a breast wrench and has for its primary object the provision of a wrench of this character which serves as a socket wrench held against the breast or body and operated efficiently.

Another object of the invention resides in the provision of a wrench of the character stated which is of extremely simple and inexpensive construction as well as highly efficient in use and formed in such a manner that it may be employed in restricted spaces which are difficult to reach with the ordinary wrench or types of wrenches.

A further object of the invention resides in the provision of a wrench of the character stated which includes a stationary tube supporting the hand grip as well as the breast engaging member and the operating gear for rotating the shaft supported in the stationary tube.

A still further object of the invention resides in the provision of a wrench of the character stated in which the supporting stem for the breast engaging member is extended in alignment with the rotatable shaft carrying the socket work engaging member, so that the wrench may be readily inserted in a narrow space and held firmly while being operated.

The invention has for a still further object the provision of a wrench of the character stated which is constructed in such a manner that the complete wrench may be manufactured at small cost, thus making the proposition a very attractive commercial one as well as providing a compact wrench which is highly efficient in use.

To the accomplishment of these and related objects as shall become apparent, as the description proceeds, my invention resides in the construction, combination and arrangement of parts as shall be hereinafter more fully described, illustrated in the accompanying drawing, and pointed out in the claims hereunto appended.

The invention will be best understood and can be more clearly described when reference is had to the drawing, forming a part of this disclosure, wherein like characters indicate like parts throughout the several views.

In the drawing:—

Figure 1 is an elevation of the improved wrench;

Figure 2 is an elevation at right angles to Figure 1, with several parts of the structure shown in section, the view being taken substantially on the plane of line 2—2 of Figure 1, looking in the direction indicated by the arrows; and

Figure 3 is a detail transverse section taken substantially on the plane of line 3—3 of Figure 1, looking in the direction indicated by the arrows.

Referring more in detail to the drawing, it is to be noted that the wrench structure includes an arcuate breast engaging member 6 supported on the upper end of the stem 7, having its opposite end 8 turned and then continued in a flat extension 9 extending parallel with the main portion of the stem 7 and offset outwardly therefrom. The extension 9 is engaged against the outer face of the stationary tube 10 and provided with openings 11 receiving radially extending lugs 12 carried by the stationary tube 10, near the upper end thereof. A threaded stud 13 is also extended radially from the stationary tube 10, intermediate the lugs 12 and the hand grip 14 is threaded on the threaded extension 13, with the inner end of the hand grip 14 pressing against the outer face of the stem extension, thus retaining said stem extension 9 in firm engagement with the stationary tube 10. It is also to be noted that the stem extension 9 may have its inner face shaped to firmly contact with the outer face of the stationary tube 10.

A second stud 15 is arranged diametrically opposite to the threaded stud 13 and directed radially from the stationary tube 10, to support the operating gear 16 which is retained on the stud 15 by a set screw 17 threaded in the stud 15 and having an enlarged head which prevents the operating gear 16 from moving off of the stud 15. An arm 18 is secured on the outer face of the operating gear 16 by appropriate attaching members 19 and extended radially from the operating gear 16

to the support operating handle 20 which extends at a right angle to and outwardly from the arm 18. The operating gear 16 meshes with and rotates a driven gear 21 which is keyed to the rotating shaft 22 of the wrench at the extended upper end of the latter, by a key 23 or other appropriate means, the driven gear 21 being located between the upper or outer end of the stationary tube 10 and the main portion of the stem 7, with the curved portion 8 of the latter extending around the side of the driven gear 21. On the lower end of the shaft 22 is an annular flange 24 which loosely engages the remaining or lower end of the stationary tube 10 and thus prevents the shaft 22 from moving longitudinally therein after the driven gear 21 has been secured in position on the shaft 22. A work engaging socket 25 is carried on the extended end of the shaft 22 below the flange 24, by a fastening member 26, such as a screw or bolt extension through the reduced and flattened inner or upper end 27 of the work engaging socket 25 and through the correspondingly flattened extended end 28 of the shaft 22.

As the construction of the device has thus been described in detail, brief reference is now had to its use and modus operandi: The work engaging socket 25 is engaged with the work to be operated upon and the breast engaging member 6 is engaged against the breast or some other portion of the body. The hand grip 14 is also grasped by one hand to assist in holding the wrench firmly on the work. The operating handle 20 then may be rotated to cause the driving gear or operating gear 16 to rotate the gear 21 and thus cause rotation of the shaft 22 in the proper direction, thus governing the direction of rotation of the work engaging socket 25. Owing to the compact construction and arrangement of the parts of the wrench, presenting a long structure which has only the hand grip 14 extended from one side and the operating handle 20 extended from the opposite side, the wrench may be readily employed in restricted or narrow spaces and operated efficiently upon the work. It is also to be understood that the work engaging socket 25 may be readily replaced by another of different size or character, according to the work with which the wrench is to be engaged.

From the foregoing description, taken in connection with the accompanying drawing, it will be manifest that a breast wrench is provided that will fulfill all the necessary requirements of such a device, but as many changes could be made in the above description, and many apparently widely different embodiments of my invention may be constructed within the scope of the appended claims without departing from the spirit or scope thereof, it is intended that all matters contained in the said accompanying specification and drawing, shall be interpreted as illustrative and not in a limited sense.

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

As a new product of manufacture, a breast wrench, including a tube having a pair of diametrically opposed studs extending radially therefrom; a stem carrying an arcuate breast engaging member on one end and having its opposite end curved outwardly and then continued in a parallel plane to the main portion of said stem and mounted on one of said studs; a handgrip secured on said last mentioned stud; auxiliary lugs extended from said tube and into said continued offset end of said stem to prevent turning and twisting of the same on said tube; a driving gear rotatably mounted on the other of said studs; an actuating handle for said driving gear; a shaft rotatable in said tube and having a gear keyed on its upper end within the curved portion of said stem and engaged with said driving gear to be driven by the latter; and a socket member carried on the projecting opposite end of said shaft.

In testimony whereof I hereunto affix my signature.

JOHN DUDULETZ. [L. S.]