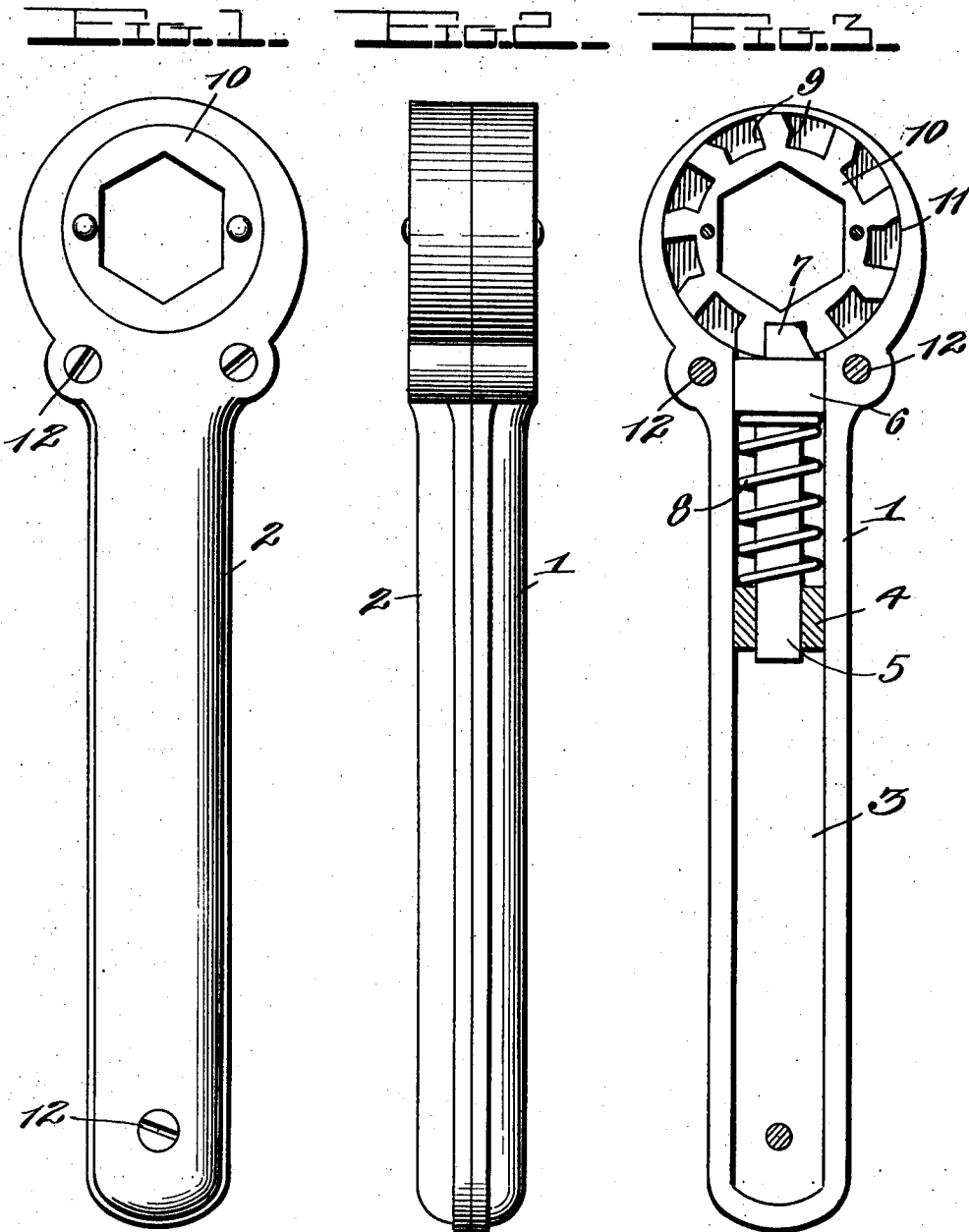


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WRENCH.
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WRENCH.

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To all whom it may concern:

Be it known that I, LOTHROP C. SHERMAN, a citizen of the United States, residing at Liberty, in the county of Liberty and State of Texas, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to tools and more particularly to that class of tools which are known as wrenches, and especially that class of wrenches which are provided with ratchets and are arranged to thread and unthread nuts from bolts and the like.

The object of this invention is to provide a wrench in which the ratchet is inclosed, so that none of its parts will be exposed to the action of dust.

Another object of this invention is to have the handle so arranged that it can be readily separated so that the interior mechanism of the wrench can be readily inspected.

A further object of this invention is to arrange the handle so that it can hold a relatively large amount of oil for the lubrication of the parts of the wrench.

A still further object of this invention is to make the main parts, or casing of the wrench of symmetrical form, so that the same can be more easily manufactured and provide an arrangement whereby these parts may be more readily interchanged or replaced.

Still another object is to arrange the wrench so that it can be used from either side of its casing, and so that it can be used to place nuts and the like on relatively long bolts.

Other objects of this invention will become apparent as it is more fully set forth.

The ordinary type of ratchet wrench has several disadvantages, which in general increase the force required to operate the same, for instance, the arrangement for lubricating the mechanism is such as to in most cases inadequately keep the same supplied with oil. This invention avoids this difficulty as, in the first place, it entirely incloses the ratchet mechanism of the wrench and in the second place provides a continuous stream of oil to the same. The amount of oil held by the device is such as to last a relatively long time so that no further care need be taken of this feature of the device after it has once been filled with oil. The amount of oil that the wrench is arranged to

hold will under ordinary circumstances supply the same for a month or so, so that it can be readily seen that it is normally self-lubricating and comparatively efficient because of the same. The ease with which the device in question can be inspected and repaired affords a very important advantage in this class of work, as it enables the owner to keep the device working efficiently all the time.

In the accompanying drawings, which illustrate by way of example an embodiment of this invention, Figure 1 is a view in elevation of a wrench embodying this invention; Fig. 2 is a side view of Fig. 1; and Fig. 3 is an interior view of the wrench.

Similar reference characters refer to similar parts throughout the drawings.

In the construction shown in the appended drawings, 1 and 2 represent portions of the casing which hold within their upper portions the ratchet mechanism to be described in detail in the latter part of the specification. These parts of the casing are symmetrical in shape and are provided in their inner and lower portions with a recessed part 3 arranged to hold a comparatively large quantity of oil when the pieces are clamped together. The upper portion of 3 has disposed rigidly within it a ring 4 disposed on a rod 5 and provided with a collar 6 upon the upper portion thereof which is provided with a tooth 7. A suitable spring 8 is disposed between the nut 4 and the collar 6 and is arranged to keep the collar up against the upper portion of the wrench so that the tooth 7 will engage in the grooves 9 provided in a ratchet piece 10 which has its inner portion arranged to receive a nut or the like. The particular shape of the upper portion of the wrench is preferably circular, and provided with a groove 11 arranged to receive the ratchet portion 10, so that the latter can rotate freely therein.

Suitable flat head screws 12 are provided for holding the casing and other parts of the device together. One of the screws serves for the purpose of holding the lower portion of the handle together, and also serves as a means for enabling the handle to be filled with oil whenever the same becomes necessary, as is clearly apparent from the drawings. This arrangement eliminates the necessity of taking the device apart in order to fill it with lubricant.

In operation a suitable ratchet means 10 is placed within the casings 1 and 2, that is the ratchet piece 10 is provided with its inner portion arranged to receive a nut to be actuated. After the ratchet piece and the other mechanism of the device are in position oil is placed within the recessed portion 3 and the means 12 are threaded into the casing so as to hold the same securely together. The oil disposed in the recessed portion 3 flows through the ring 4 and thence on to the rod 5 which it lubricates; thence by the collar 6 and into the groove 11 of the upper portion of the wrench, so that every portion of the mechanism within the wrench will be lubricated. As the amount of oil that the wrench can hold is relatively large it can be readily seen that the various parts will be lubricated for a considerable length of time by one filling of oil.

The peculiar construction of the device in general while giving several important advantages does not increase the cost of manufacture of the same but even enables the same to be more cheaply made, and much more cheaply repaired whenever the same is necessary.

This invention has every feature of accessibility desirable and the parts are such that they can be readily replaced by an ordinary mechanic.

Obviously while there is shown but one form of this invention in the drawings, it

is not desired to limit this invention to that particular construction in any way otherwise than necessitated by the prior art as many modifications in the construction of this invention may be made without departing from the principles thereof, and coming within the scope of the appended claim.

Having thus described the invention what is claimed is:—

A ratchet wrench comprising in combination a casing having one end portion of a circular shape, and the remaining end portion of a quasi-rectangular shape, lugs being provided between said portions and provided with holes therein, said casing comprising a pair of symmetrical pieces, a ratchet nut holder disposed in said circular portion, a pawl mechanism disposed within said rectangular portion and arranged to engage with said holder, said pawl mechanism being arranged to take up a relatively small amount of space in said handle and to control the flow of lubricant therefrom, flat head screws disposed in said lugs and in said rectangular portion for securely fastening said pieces together, the screw in said rectangular portion being adapted to form a closure for an oil hole in said casing.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

LOTHROP C. SHERMAN

PAUL F. SCHWANDT,
GEO. SCHWANDT.