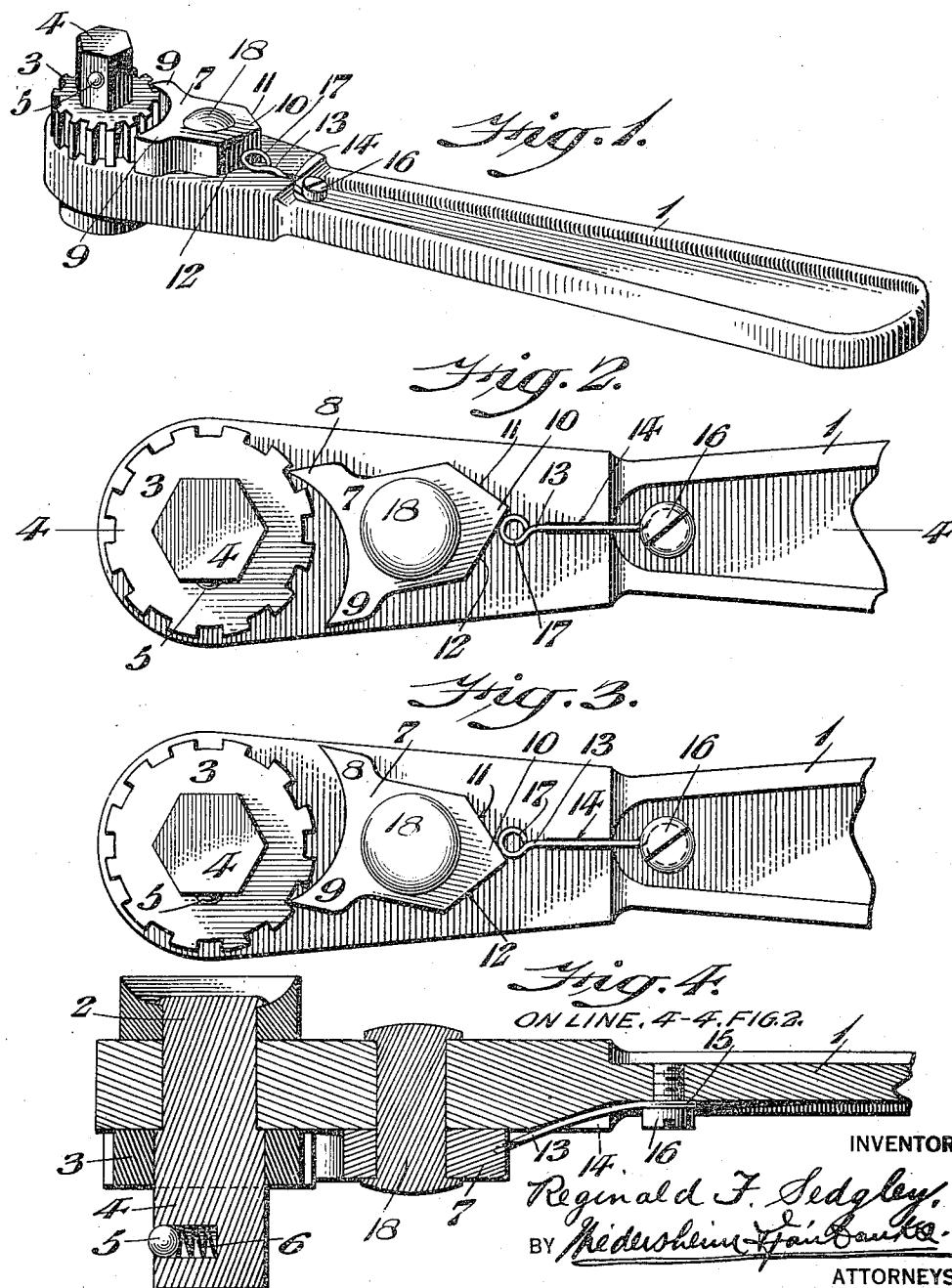


R. F. SEDGLEY,
RATCHET WRENCH,
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1,224,223.

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UNITED STATES PATENT OFFICE.

REGINALD F. SEDGLEY, OF PHILADELPHIA, PENNSYLVANIA.

RATCHET-WRENCH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, REGINALD F. SEDGLEY, a subject of the King of Great Britain, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Ratchet-Wrench, of which the following is a specification.

In a prior Patent No. 1,140,167, granted May 18th, 1915, wherein I am a joint inventor, there is shown, described and claimed a novel ratchet wrench embodying a combination socket and tool holder, having means for providing a reversible action and novel means for holding the first mentioned part in its different positions to accomplish the desired results.

In the patent aforesaid, the pawl employed is held in either of its extreme positions by means of a stop of the form of a ball or sphere having a portion projecting beyond the plane of the handle so as to be engaged by the inner face of said pawl.

My present invention relates more particularly to a novel device coacting with the pawl, said device comprising a resilient member having its body portion mounted in a suitable groove in the handle, one end thereof being fixedly secured to the handle, while the other end thereof has a terminal of the form of a circle or loop, which is adapted at all times to be in contact with one or the other of the inclined or converging walls of the pawl, whereby the latter is effectively held in either of its extreme positions, means being provided for enabling my novel pawl retaining member to be readily removed or replaced whenever desired, whereby the pawl is yieldingly held in either of its extreme operative positions which may be desired.

My invention further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawing, one form thereof which is at present preferred by me, since the same will be found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a perspective view of

a combination socket and tool holder, embodying my invention.

Fig. 2 represents on an enlarged scale a plan view of Fig. 1, showing the pawl in one of its extreme positions.

Fig. 3 represents a plan view, similar to Fig. 2, showing the pawl and its retaining device in an opposite position from that shown in Fig. 2.

Fig. 4 represents a longitudinal, sectional view on the line 4—4, Fig. 2.

Similar numerals of reference indicate corresponding parts.

Referring to the drawings:

1 designates the handle of my novel socket wrench, which may be of any suitable form and is provided at one end with an opening in which is rotatably seated, the holder or hub 2 for receiving the socket or tool, and which holder is held in suitable rotatable relation with respect to the handle 1, in any suitable or desired manner.

The hub 2 is provided with a ratchet 3 and with an angular or polygonal portion 4 for receiving the socket or tool. Suitably carried by said angular or polygonal portion 4 is an engaging member 5, which in the present instance is shown as a ball having a spring 6 bearing thereagainst, said ball being suitably held against improper outward movement, as for example by upsetting the metal. The ball 5 forms a frictional bearing against or in engagement with the tool or socket when the latter is placed upon the holder so as to prevent accidental displacement thereof, and by reason of the projection of the member 5 being curved, or having a crown, the socket or tool when being placed upon the holder, automatically forces in the member 5 so as to permit the proper seating of the socket or tool on the polygonal portion 4, after which the ball bears against the socket and serves to hold the socket in position.

7 designates a pawl pivotally mounted on the handle and provided with the two dogs 8 and 9, which are so positioned with respect to the ratchet 3 that one or the other thereof may be actuated to suitably engage with the teeth of said ratchet. On the opposite side of the pivotal point of said pawl 7 from the dogs 8 and 9, is a tail 10 extending from each side of which are the oppositely oblique or converging walls or abutments 11 and 12.

13 designates a resilient stop, spring or

member, which is seated in the longitudinally extending recess 14 and has one end, as 15, provided with an eye through which passes the screw or other fastening device 16, 5 whereby one end of said stop or spring is held in fixed position, the opposite end thereof being preferably provided with an eye or loop, as indicated at 17, which is adapted to engage one or the other of the oblique 10 walls 11 or 12. By locating the body of the resilient stop, spring or member 13 in the recess or seat 14, it will be apparent that the free end of the same will always be properly positioned with respect to the walls 15 or abutments 11 and 12, and that the pawl 7 can be readily moved into either of the extreme positions seen in Figs. 2 and 3, wherein the desired dogs 8 and 9 can be interlocked in engagement with the desired 20 ratchet teeth, according to conditions or requirements, so that the ratchet wrench is capable of being used as either right or left-handed, at the will of the operator.

By the employment of the resilient stop, 25 spring or member 13 collocated as described with respect to the pawl 7 and the handle 1, it will be apparent that I am enabled to readily replace the same upon removal of the screw or other fastening device 16, so 30 that the life of the wrench will be indefinitely prolonged, the removal and replacement of said stop, spring or member 13 being readily effected upon the application of a screw driver to the fastening device 35 16, so that the life of the wrench is indefinitely prolonged, as will be apparent to those skilled in the art.

It will be apparent that while I have shown the resilient stop, spring or member 40 13 as provided with the oppositely located eyes 15 and 17, this construction can be varied and the eye 17 dispensed with, as it will be apparent that the device will be readily operative if merely the free straight 45 end of said stop 13 is contiguous to the converging walls 11 and 12.

It will be further understood that the pawl 7 can be pivotally or movably mounted upon the handle 1 in any suitable manner, but I preferably employ the construction best seen in Fig. 4, where a simple construction of rivet 18 is employed.

In many of the devices of the prior art, they are likely to become inoperative due 55 to the accumulation of dirt or foreign material and they cannot be cleaned or parts renewed by an unskilled operator. In accordance with my present invention, the spring can be readily and quickly renewed 60 by an unskilled operator whenever neces-

sary. The spring cannot become inoperative due to the presence of foreign material and it has a self-cleaning action in its slot in the handle.

It will now be apparent that I have devised a novel and useful ratchet-wrench which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a typical embodiment of it which will give in practice satisfactory and reliable results, it is to be understood that the typical embodiment is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new and desire to secure 80 by Letters Patent, is:—

1. In a ratchet wrench, the combination with a handle having a slot opening through its face, of a hub rotatably carried by the handle, a ratchet on said hub, a double pawl on said handle and coöperating with said ratchet to rotate the hub in one direction or the other, said pawl having its tail forming converging abutments, and a spring having one end fixed to said handle and 85 extending upwardly through said slot and having its free end bearing against an abutment, whereby when said pawl is turned to actuate said ratchet in a reverse direction, said spring will be raised and 90 lowered in said slot to effect the removal of foreign material collected in said slot.

2. In a ratchet wrench, the combination with a handle having a longitudinally extending slot opening through its face, of a hub rotatably carried by the handle, a ratchet on said hub, a double pawl on said handle and coöperating with said ratchet to rotate the hub in one direction or the other, said pawl having its tail forming 100 converging abutments, and a spring having one end fixed to said handle and extending through said slot in an upward direction and having its free end deflected to bear against an abutment, whereby when 105 said pawl is turned to actuate said ratchet in a reverse direction, said spring will be raised and lowered in said slot to effect the removal of any foreign material collected in said slot.

REGINALD F. SEDGLEY.

Witnesses:

H. S. FAIRBANKS,
C. D. McVAY.