

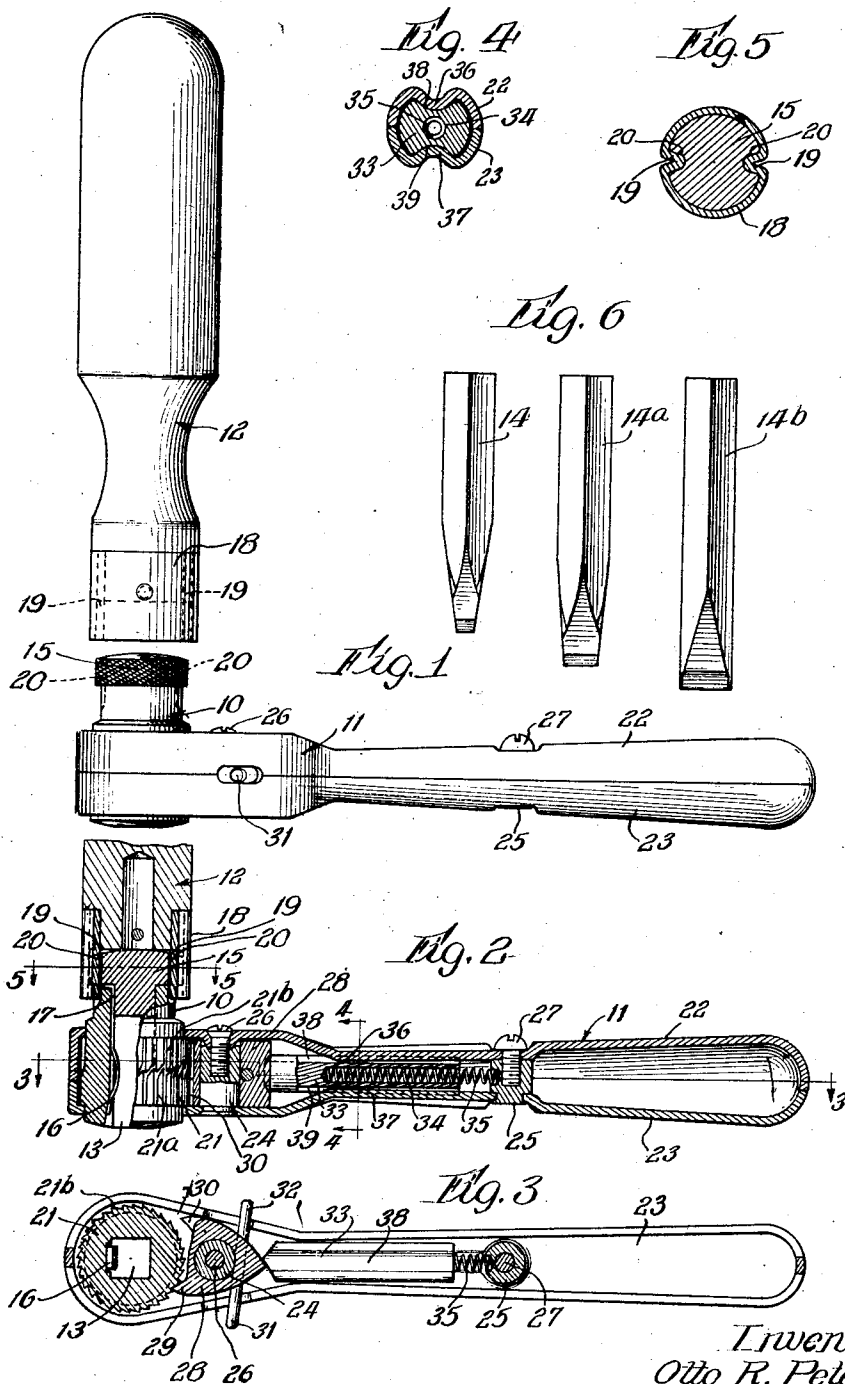
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RATCHET WRENCH

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RATCHET WRENCH.

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This invention relates to ratchet tools and more particularly to receptacles provided with a ratchet and adapted to interchangeably receive a variety of types or sizes of tool members, such as wrenches and screw-drivers.

One object of this invention is to provide an improved tool holder or receptacle provided with a handle for effecting rotation of the tool about a vertical axis and also provided with a second handle which may be detachable and which is for the purpose of exerting vertical pressure upon the tool during its rotation.

A further object of this invention is to provide a tool receptacle member of a simple construction provided with means therein for a quick-detachable engagement with the tool member and also provided with means for quick-detachable engagement of a handle for applying vertical pressure thereto.

Another aim of this invention is to provide for a tool receptacle member of the above-indicated character a simple form of a hollow two-part handle interiorly provided with the ratchet turning mechanism.

Another object of my invention is to provide a tool device of the general character hereinbefore described which may be readily adapted for use in restricted spaces and which will be very durable and effective in operation and of inexpensive construction.

Other objects of my invention will be apparent from the following description and the attached drawing forming a part of this specification to which reference may now be had.

Figure 1 is an elevational view of the assembled device embodying my invention;

Fig. 2 is a substantially vertical sectional view through the device;

Fig. 3 is a horizontal sectional view taken upon the line 3—3 of Fig. 2;

Figs. 4 and 5 are sectional views taken upon the lines 4—4 and 5—5, respectively, of Fig. 2; and

Fig. 6 illustrates several of the interchangeable tools which may be used in the device shown in Fig. 1.

In a general way the device, as shown in Fig. 1, may comprise a tool receptacle member 10 embraced by a two-part hollow ratchet handle member 11 and surmounted by a pressure handle member 12.

The receptacle member 10, as shown, is provided with a centrally disposed opening 13 which is preferably square and serves to receive and retain the interchangeable tool members such as 14, 14^a and 14^b. It will be understood that the tool members here shown are merely illustrative and that tools of other types and sizes may also be used in connection with the same receptacle member.

A plug or cap member 15 is provided at the upper end of the receptacle 10 and is preferably knurled at its upper periphery, as shown, to permit the receptacle to be turned directly by hand when desired. A leaf spring 16 may be provided longitudinally of the opening 13 and serves as a frictional means for engaging the shank of the interchangeable tools. The upper end of the spring 16 may be conveniently fixed as at 17 by its extension beneath the plug and cap member 15.

The handle 12 may be formed of wood or similar material provided with a recessed lower end surrounded by a metallic ferrule 18. The ferrule 18 may be provided with indented portions, as at 19, for engaging corresponding slotted portions, as at 20, formed in the cap member 15. The handle 12 may, therefore, be quickly attached or detached simply by a sliding motion in respect to the cap member 15.

A double ratchet wheel member 21 may be integrally formed centrally of the receptacle member 10 around the periphery thereof. This ratchet wheel is embraced by the cooperating halves 22 and 23 of the two-part handle 11. The halves 22 and 23 may be conveniently retained in register with each other through the medium of a pair of posts 24 and 25 fixed, as by riveting, within the half 23. Screws 26 and 27, passing through the half 22, serve to retain this half upon the posts 24 and 25.

The post 24 also serves an additional purpose of providing a pivoting means for an adjustable double pawl member 28 which is provided with two separate pawls 29 and 30 for engagement with the two oppositely directed ratchet wheels 21^a and 21^b, respectively. The desired pawl may be shifted into engagement with its corresponding ratchet wheel by means of the small levers 31 and 32 which are fixed within the pawl member 28. The levers 31 and 32 may extend at the line of separation of the two-

part handle to the exterior thereof. When the pawl member 28 is adjusted to either of its actuating positions it may be retained in place by the spring-pressed and slidable pawl locking pin 33 which is provided with a central opening 34 for receiving the spiral spring 35 which acts against the post 25. The halves 22 and 23 have at oppositely disposed positions in respect to the pin 33 a pair of inwardly depressed ribs 36 and 37 which comprise a guide-way for the pin 33. The pin 33 may be provided with channels 38 and 39 for receiving the ribs 36 and 37, respectively.

While only one modification of the device comprising my invention is here shown and described, it will be understood that many changes and substitutions may be made therein, and it is accordingly my desire to limit my protection only in so far as necessitated by the prior art and as stated in the following claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the U. S. is:—

1. In combination, a receptacle for interchangeable tools, a two-part hollow handle embracing said receptacle, ratchet means housed within said handle for operatively associating said handle and said receptacle for turning movement of the latter, said ratchet means comprising a pawl, and a post member for pivotally mounting said pawl and for retaining together the two parts of the handle and means for adjusting said pawl extending at the line of separation of the two-part handle to the exterior thereof.

2. In combination, a receptacle for interchangeable tools, a two-part hollow handle embracing said receptacle, ratchet means housed within said handle for operatively associating said handle and said receptacle for turning movement of the latter, said

ratchet means comprising an adjustable double pawl for turning said receptacle in either direction, and a pawl locking pin slidable longitudinally of said handle, said handle being formed with inwardly depressed ribs comprising a guide-way for said pin.

3. A receptacle for interchangeable tools formed with a centrally disposed tool receiving opening extending through the center thereof, friction means comprising a spring in said opening for quick-detachable engagement of the tool, a plug and cap member at the upper end of said opening, the upper end of said spring being retained beneath said member, and means at the periphery of said member for effecting rotation of the receptacle.

4. A ratchet wrench comprising a casing having a handle portion and a head portion formed of two similar sections provided with abutting lateral flanges to form a housing, a ratchet member trunnioned in the head portion, a rivet member passing through the head portion for binding the sections together, a pawl cooperating with the ratchet pivoted on said rivet member and having a nose projecting into the handle portion, a slidable plunger mounted in the handle portion and bearing against the said nose, a second rivet member binding the handle portion of the sections together, a coil spring having one extremity abutting the last named rivet member and its opposite extremity bearing against the end of the plunger for urging the plunger into contact with the nose, the cross-sectional dimension of the plunger corresponding substantially to that of the handle portion whereby the casing not only houses but serves as a guide therefor.

In witness whereof, I have hereunto subscribed my name.

OTTO R. PETERSON.