Nov. 26, 1968 L. CHMIELEWSKI 3,412,635

GOLF SHOE CALK WRENCH

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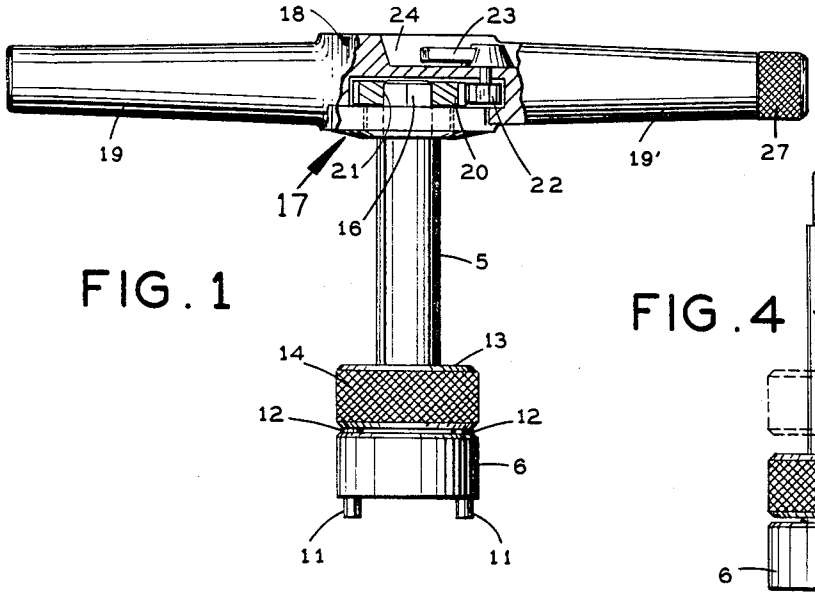


FIG. 1

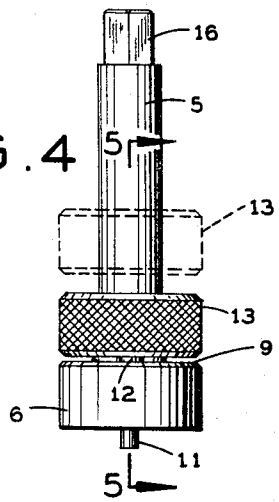


FIG. 4

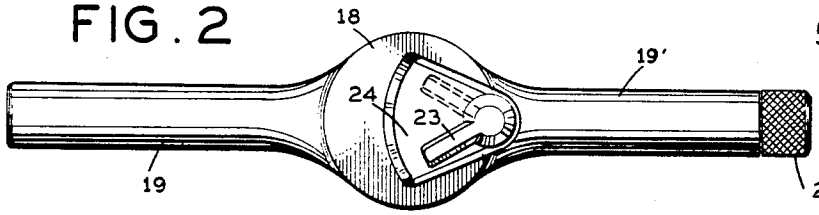


FIG. 2

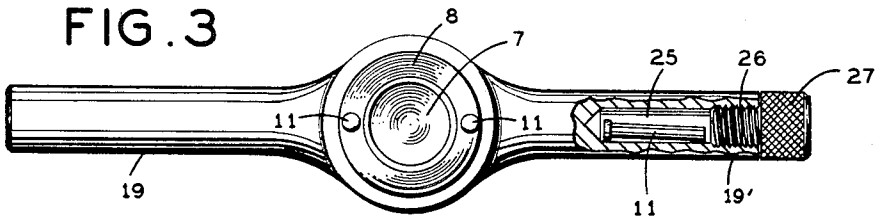


FIG. 3

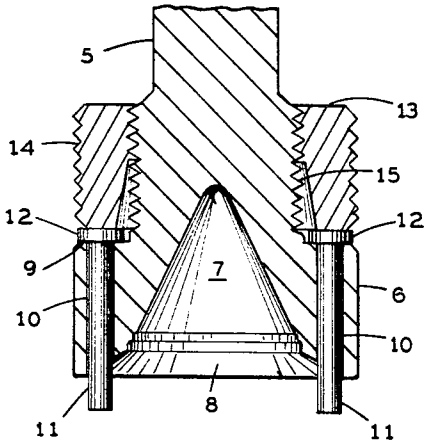


FIG. 5

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GOLF SHOE CALK WRENCH

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Substituted for abandoned application Ser. No. 239,667, Nov. 23, 1962. This application Sept. 27, 1967, Ser. No. 677,824

1 Claim. (Cl. 81—90)

ABSTRACT OF THE DISCLOSURE

The calk wrench includes a stem having an integral cylindrical enlarged head at one end thereof and a threaded portion between the head and the shank of the stem. The other end of the stem is a non-round extension for engaging a handle. The bottom of the head is upwardly and inwardly recessed to form a conical surface serving as a guide, and the marginal edge of the conical surface is a concave face which conforms to an oval face of the calk so that the head seats on the calk. The top of the head is flat, and a pair of diametrically arranged apertures extend from the flat surface through the head and the concave surface. Pins extend through the apertures and project below the head, and the pins have flat head which engage the flat top of the stem's head. A clamping nut is screwed on the threaded stem portion into engagement with the pins to retain them, and the nut can be unscrewed to slide freely along the stem, thereby allowing replacement of the pins. A handle includes a ratchet having a non-round recess receiving the non-round extension of the stem and a pawl having a lever recessed into the handle for setting the direction of ratcheting. Another recess is provided for holding spare pins.

This application is a substitute for application Ser. No. 239,667, filed Nov. 23, 1962, by the same inventor and now abandoned.

This invention relates generally to a spanner wrench primarily for use in removing or replacing the conventional calks employed in golf shoes or the like, such calks embodying a screw that engages into the sole of the shoe and with the screw carrying a relatively wide flange to limit the movement of the screw into the sole and with the flange having an oval face that is axially provided with a prong and at least two diametrically opposite recesses for engagement by the tool and whereby to turn the calk when it is to be removed or replaced.

The present invention comprises a spanner wrench that carries a pair of replaceable pins for engagement into the recesses of the calk flange and with the wrench having a stem portion that has a relatively close engagement into a socket of a ratchet wrench and with the ratchet wrench having a socket mechanism so constructed that the operator may rotate the calk wrench by back and forth movement without requiring that the ratchet wrench be rotated throughout an arc of 360 degrees, such action greatly facilitating the use of the spanner.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

FIGURE 1 is a side elevation, partly in section, showing a calk wrench constructed in accordance with the invention.

FIGURE 2 is a top plan view thereof,

FIGURE 3 is a bottom plan view thereof, parts being broken away for purpose of illustration,

FIGURE 4 is a view at right angles to FIGURE 1 and with the ratchet handle being removed, and

FIGURE 5 is an enlarged section through the spanner wrench, taken on line 5—5 of FIGURE 4.

Referring specifically to the drawings there has been illustrated a cyindrical stem **5** that is provided with an enlarged cylindrical head **6**. The head **6** is axially conically recessed as shown at **7** and the recess terminates in an outwardly flared circumferential concave face **8**. The face **8** is adapted to substantially conform to the curvature of the oval flange of the well known calks, while the conical recess **7** receives the prong or pin projecting from the calk when the wrench is applied thereto. The head **6** has an annular flat top **9** and with the head **6** being provided with cylindrical apertures **10** that extend entirely through the head at diametrically opposite points upon the head and the apertures **10** extend from the flat face **9** through the beveled face **8**. The apertures are adapted to receive cylindrical pins **11**, having flat enlarged heads **12** that engage the top flat face **9** of the head. The pins, as clearly shown, project below the head **6** a distance capable of engaging the apertures of the calk. The conical shape of the recess **7** serves to guide the head **6** over the prong of the calk, and thus helps to center the wrench relative to the calk so that the pins **11** can be easily aligned with the apertures of the calk.

Means are provided to hold the pins in the apertures **10** for operative use and against displacement, comprising a nut **13**, having a knurled circumferential face **14**. The nut is threaded upon a threaded enlargement **15** of the stem **5** and whereby the nut may be unscrewed from the enlargement **15** to freely slide upon the stem **5** when the pins **11** are to be replaced. Since the threads at **15** are larger in diameter than the stem **5**, nut **13** will slide freely on stem **5** when the nut is unscrewed. The stem **5** at its upper end is provided with a reduced non-round extension **16**, for a purpose to be presently described. The portion of stem **5** between extension **16** and enlargement **15** comprises a cylindrical shank.

Means are provided to rotate the head **6** and the pins **11** for removing or replacing worn calks that comprise a ratchet handle, indicated as a whole by the numeral **17**. The handle **17** has a cylindrical hub **18** and a pair of slightly tapered round arms **19** and **19'**. The handle **17** includes a ratchet **20**, having a non-round socket **21**, dimensioned to receive the extension **16** of the stem **5**. The ratchet **20** is actuated by a double ended pawl **22**, shiftable by a latch arm **23**, that is fixed to the pawl **22** and with the latch being disposed within a recess **24** of the hub **18** whereby the latch will be disposed below the upper surface of the hub to avoid contact with the hand of the operator. The ratchet **20**, double ended pawl **22** and a biasing spring (not shown) may be constructed as described and shown in U.S. Patent No. 1,970,409 to provide a double ratcheting action. Latch arm **23** is shiftable to change the end of pawl **22** which is in engagement with ratchet **20** to thereby change the direction of ratcheting. The arm **19'** is recessed axially as at **25** for receiving spare pins **11**. The recess **25** is normally closed by a threaded screw **26**, that has threaded engagement into the recess **25** and the screw **26** is provided with a knurled head **27**.

In the use of the device, the stem **5** is engaged with the handle **17** by inserting the non-round extension **16** into the socket **21** of the ratchet. The ratchet socket may or may not be provided with a detent for snapping engagement into a socket that may be formed upon the extension **16**. With the parts assembled and with the pins **11** firmly held into the head **6** by the nut **13**, the latch **23** may be shifted laterally to engage either end of the pawl

22, depending upon the desired rotation of the tool for either the removal or replacing of the calks, and with the pins **11** engaged into the recesses of the calks, it only requires that the operator move the handle **17** back and forth a number of times to cause the calk to be disengaged from the sole of the shoe or to be firmly screwed into place when the latch is moved to the opposite position.

It will be apparent from the foregoing that there has been provided a very novel type of calk wrench that permits the operator to firmly hold the pins **11** into engagement with the calk throughout the movement of the device. In other calk wrenches, it is difficult to hold calk pins or spanner wrenches into the calk since the pressure upon the wrench would be varied during the rotation of the device. In this particular invention, the operator can firmly hold the wrench in engagement with the calk at all times without danger of the pins slipping from the recesses of the calk. The device is formed of suitable metal having a high degree of resistance to corrosion and the pins **11** when worn at their free ends can be easily replaced. The device is strong, durable, cheap to manufacture and provides a very desirable and novel form of wrench for the removal or replacement of calks.

It is to be understood that the invention is not limited to the precise construction shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claim.

I claim:

1. A calk wrench including in combination a metal stem having a shank portion of predetermined diameter, a cylindrical head portion at one end of said stem larger in diameter than said shank portion, a threaded portion between said shank portion and said head portion larger in diameter than said shank portion but smaller in diameter than said head portion, and a non-round portion at the other end of said stem, the bottom of said head portion having a recess therein defined by a substantially conical surface which serves as a guide for contact with a prong of a calk to center said wrench relative to said calk, and the marginal edge of said conical surface terminating into a plurality of flared curved faces conforming to a corresponding oval face of a calk to allow seating of said wrench on said calk, the top of said head having a flat surface and said head having a pair of diametrically opposed apertures extending through the same from said flat surface to said concave face, said apertures being wholly within and surrounded by material of said head, pins in said apertures having heads engaging the flat top surface of the stem head and projecting beyond the bottom of said stem head for engagement with spaced recesses of the calks, a nut screwed onto said threaded portion of said stem terminating entirely above said stem head and engaging said pin heads to clamp said pins to said stem head, said nut being freely slidable along said shank portion of said stem when unscrewed from said threaded portion thereof to allow replacement of said pins, and being removable from said stem at said non-round end portion thereof, and an elongated ratcheting handle detachably engaging said stem at said other end thereof having a central hub portion generally perpendicular to said stem, said hub portion having a ratchet therein including a non-round recess receiving said non-round end of said stem, a double-ended pawl enclosed in said hub portion engaging said ratchet at one end thereof, and a lever recessed into said hub portion on the outside top surface thereof and connected by a pin to said pawl, said lever being protected within the recess receiving the same and shiftable to change the end of said pawl in engagement with said ratchet and thereby change the direction of ratcheting.

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