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FLEXIBLE STRIP JAR CAP WRENCH

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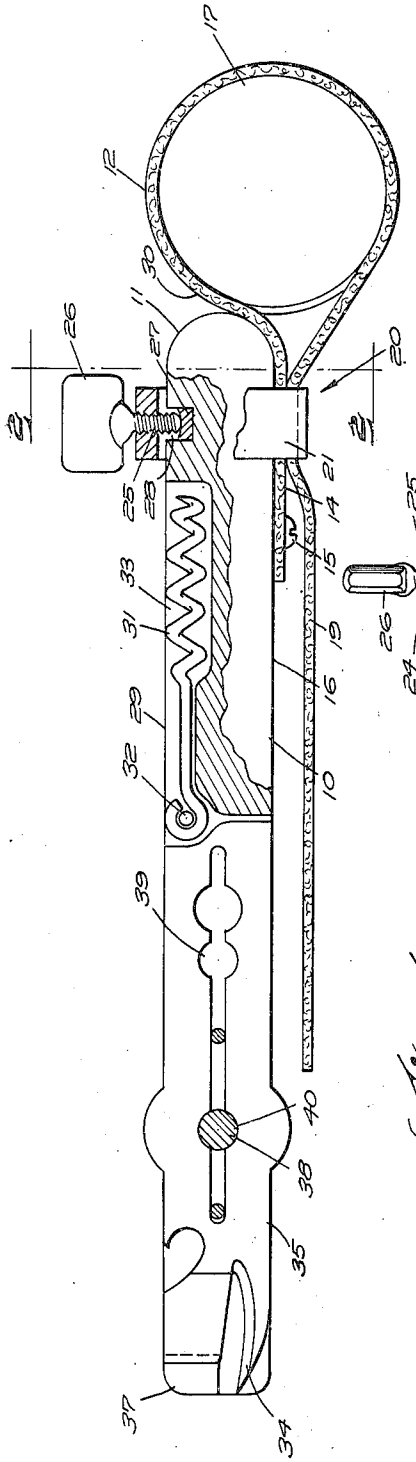


Fig. 2



Fig. 4

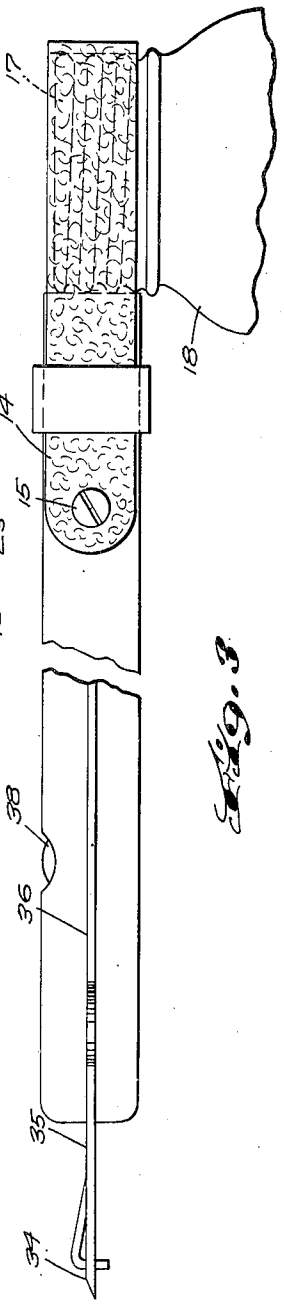


Fig. 3

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FLEXIBLE STRIP JAR CAP WRENCH

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1 Claim. (Cl. 81—3.43)

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This invention relates to a device for applying torque to various objects, usually objects which are circular in shape, such for instance as a pipe, jar top, or the like.

To turn an object which is circular in shape for tightening or loosening threaded connection with the same is often difficult because of lack of chance to get a good grip upon the same.

One of the objects of this invention is to provide a simple tool which may be easily and quickly adjusted in size and one which will firmly grip a circular object for turning the same with a considerable torque.

Another object of this invention is to provide a device which as turning movement is applied will more tightly grip the object which is worked upon.

Another object of this invention is to provide a torque applying device which will securely grip objects of a widely varying diameter or size without adjustment.

Another object of this invention is to provide a device which will grip such objects without marring the same.

Another object of this invention is to provide a frictional grip circularly about the object through a large portion of the extent of the object being gripped.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings:

Fig. 1 is a top view partially in central section illustrating my torque applying device.

Fig. 2 is a section on line 2—2 of Fig. 1.

Fig. 3 is a side elevation of the structure shown in Fig. 1 and illustrating a jar top as being gripped with the jar broken away at the lower portion.

In proceeding with this invention I have provided a rigid handle member and fixedly secured thereto one end of a flexible member and adjustably secured thereto the other end of a flexible member which may slide through such adjustment to vary the size of the loop which is formed. The end of the rigid member is curved so as to roll along the outer surface of the strap and varying the point of application of pressure while providing a pivot with relation to which the other end of the strap portion may be moved to more firmly engage the object to be gripped.

With reference to the drawings, 10 designates a rigid handle member which may be of metal, wood, or plastic and which is provided with an arcuate or curved end 11.

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A flexible strap 12, which may be of woven or braided textile fabric suitably treated to increase its co-efficient of friction, or plastic or leather which may have been treated, has one end 14 secured by screw 15 along one side surface 16 of the member 10. A sufficient part of the strap 12 extends beyond the rounded end 11 to provide the size of loop required for gripping the jar top or work 17 as shown in Fig. 1 which closes the jar 18. The other end portion 19 of the strap is then passed through a clamp designated generally 20 and extends in face-to-face contact along the strap portion 14. This portion 19 may be slid through the clamp 20 as to vary the size of the loop 12 which protrudes beyond the end 11 of the rigid member 10.

The clamp consists of a yoke having side walls 21 and 22 and an end wall 23 which will engage the strap part 19 to draw it snugly against the strap part 14. The opposite end 24 of the yoke is threaded for the reception of a screw 25 having a handle 26 so that the shank 25 of this screw may be moved inwardly against the shoe 27 which is set into a recess 28 in the side wall 29 of the handle member 10. The end of the screw 25 which engages this shoe 27 is rounded so that turning may more easily occur for pulling the yoke firmly into engagement to bind the strap parts in place.

The handle 10 will be usually positioned on the jar top or circular object upon which it is to operate, so that the handle will extend substantially in the position shown in Fig. 1 or in a position moved counterclockwise somewhat to that there shown. Assuming that the strap ends are bound in position as shown in Fig. 1, the handle may then be swung clockwise so that its rounded end 11 will roll along the outer surface 30 of the strap 12 and press against this outer surface to force the strap inwardly at such location. The strap portion 19 being gripped by the clamp 21 will be drawn more tightly about the work or jar top 17 as such action occurs and rotation of the jar top will take place upon the jar to tighten the same on the jar in the showing in Fig. 1 of the drawing. By turning the device over the loosening of the jar top may be had by movement of the handle in a counterclockwise direction. When the device is utilized for loosening the localized point of pressure caused by the curved end 11 being forced inwardly by this action will press the strap and in turn the jar top inwardly so as to tend to spring it in this location to assist in loosening the same should it adhere to the jar.

The handle 10 may be utilized for mounting a cork screw 31 pivoted as at 32 to be moved out of recess 33, or for mounting a can opener 34 at one end of a bar 35 which may slide in a slot 36 in the handle 10 to and from a recess 37 in the end of the handle. This shank 35 may be held in different adjusted positions by thumb spring button 38 which may lodge in openings 39 or 40 in the shank 35 of this can opener to hold it in different adjusted positions.

I claim:

A torque applying device comprising a rigid handle member having a rounded end, a flexible strap providing a loop with its end portions extending one along the other and with one end portion secured to said member adjacent said rounded end, a clamp having walls completely encircling said member and both end portions and in contact with the outer of said end portions, a thumb screw through one portion of said clamp, said handle member having a recess in its surface in a position to receive the inner end of said thumb screw, and a shoe of hard material in said recess against which said screw engages to act as an abutment to draw said clamp against said

strap portions, whereby said rounded end upon movement of the handle member in one direction will roll along the outer surface of said secured strap end portion and draw the other strap end portion in greater tension about the work within the loop.

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