A. HILTON.

SCREW DRIVER ATTACHMENT.

APPLICATION FILED JUNE 18, 1921.

1,417,995. Patented May 30, 1922.

Fig. 1. Fig. 2.

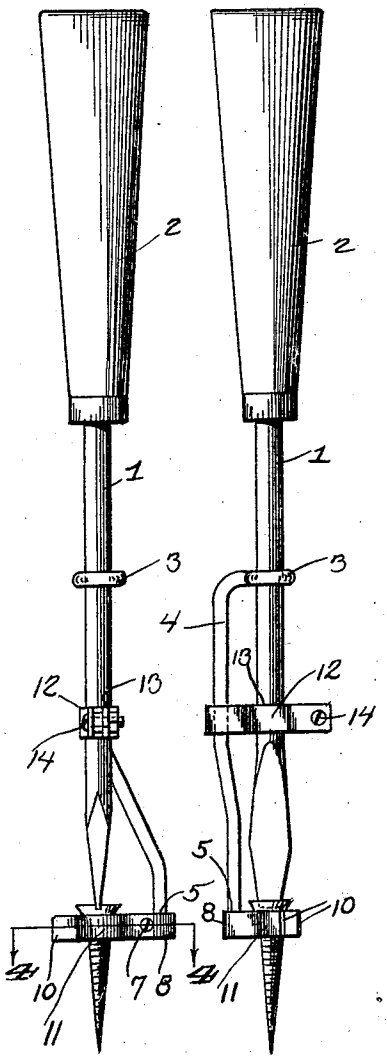


Fig. 4.

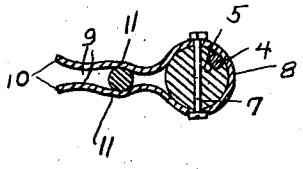


Fig. 5.

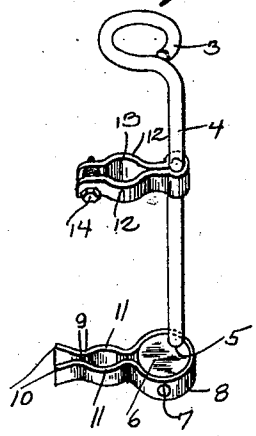


Fig. 6.

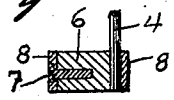


Fig. 7.

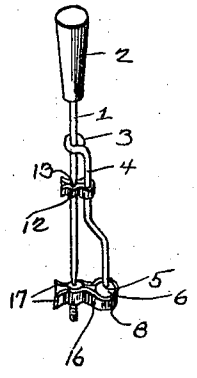
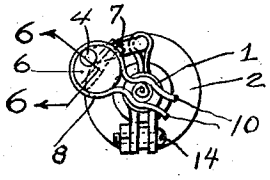


Fig. 3.



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UNITED STATES PATENT OFFICE.

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SCREW-DRIVER ATTACHMENT.

1,417,995. Specification of Letters Patent. Patented May 30, 1922.

Application filed June 18, 1921. Serial No. 478,707.

To all whom it may concern:

Be it known that I, ANDREW HILTON, a citizen of the United States, residing at Byesville, in the county of Guernsey and State of Ohio, have invented certain new and useful Improvements in Screw-Driver Attachments, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to screw-driver attachments and more particularly to screw-holding attachments which enable the operator to place the screw in driving position without using both hands.

All mechanics are well aware of the fact that screws are placed in wood and metal work in such positions that it is almost a total impossibility to hold the screw in starting position and at the same time turn the same with a screw-driver, and it is the object of this invention to provide a simple and durable attachment which may be placed upon any screw-driver and which will hold the screw effectively so that it can be started in inconvenient places where the operator cannot use his other hand to hold the screw. The attachment also makes it convenient to place screws single-handed above the operator's head and in narrow and restricted places otherwise inaccessible.

Other objects of the invention will appear as the full specification is read in connection with the accompanying drawings which form a part of this application and in which

Figure 1 is an elevation of the device attached to a screw-driver and with a screw held in position in the clamp;

Figure 2 is an elevation taken at right angles to Figure 1;

Figure 3 is a top plan view;

Figure 4 is a section on the line 4—4 of Figure 1;

Figure 5 is a perspective view of the attachment removed.

Figure 6 is a section taken on the line 6—6 of Figure 3;

Figure 7 is a perspective view showing one embodiment of the device attached to a jeweller's screw-driver.

Referring more particularly to the drawings, 1 represents the shank of an ordinary screw-driver, and 2 the handle of the same.

The attachment shown in Figures 1 to 6 comprises a body portion or shank 4 formed of any suitable material, in this instance shown to be constructed of heavy wire bent at its upper terminal to form a shank engaging loop 3 which surrounds the shank of the screw-driver so as to be movable thereon around the shank and lengthwise of the same.

The shank 4 is substantially offset at its intermediate portion, and then extended vertically parallel to the lower portion thereof where it is entered into an opening 5 formed eccentrically in a disk 6. The opening 5 passes vertically through the disk and is open at one side for a purpose to be hereinafter described.

Surrounding the disk and held in engagement therewith by a bolt 7 passing therethrough and through the disk, is a spring friction loop 8 which is provided with substantially parallel spring fingers 9 having diverging outer ends 10 and offset intermediate portions 11 to retain the screw in position; the diverging outer ends facilitate the insertion of the screw into the offset portions which form a socket for the retention of the same.

Secured to the shank immediately below the offset is a resilient member 12 constructed preferably of spring steel and embodying a looped member having substantially parallel legs with centrally offset portions forming a socket 13 which receives the shank of the screw-driver 1. The outer terminals of the legs are connected together by a bolt 14 having a lump nut thereon by which the legs may be adjusted so as to frictionally engage the shank of the screw-driver, as will be readily understood.

It will be seen that the shank 4, where it projects through the disk 6 is engaged by the spring loop 8 whose tension upon the disk and the shank 4 is regulated by the bolt 7, thereby insuring proper frictional engagement and retention of the screw-clamp in correct position so that the screw may be properly operated upon by the screw-driver.

In Figure 7 the construction is substantially similar to that shown in Figures 1 to 6, with the exception that the shank clamping fingers 16 are not provided with any adjusting bolt, this being unnecessary in view of the small amount of friction required to maintain the light attachment in position. The spring fingers 17 which hold the screw are formed around the disk 6 in a similar manner to that shown in Figure 3, but no bolt is employed and the figures are permanently secured to the disk through which

the shank 4 extends. In this instance, as with the larger attachment, the shank 4 is eccentrically positioned in the disk 6 so that a small, radial movement of the screw-holding clamp moves it completely out of position so that the clamp can be removed from the screw and the screw-driver again engaged therewith to seat the same.

In the operation of the device a screw is inserted between the clamping jaws 9 or fingers 9, and the disk rotated so as to bring the kerf in the screw in position to be engaged by the bit of the screw-driver. The frictional engagement of the member 12 retains the screw-driver in this position until the screw has been started, after which the screw-driver can be pulled rearwardly to release it from the kerf in the screw and the screw-holding clamp pulled laterally to disengage the same from the shank of the screw, as will be readily understood. The screw-driver can then be engaged with the kerf of the screw and the same forced to its seat.

What I claim is:

1. In an attachment for screw-drivers, a screw-clamp support, means for adjustably holding the same upon the screw-driver shank whereby it is rotatably and longitudinally movable thereon, a screw-holding clamp rotatably mounted upon the support, and means for frictionally holding the clamp in set position upon the support, said support extending along side of the shank of the screw-driver whereby rotation of the screw clamp will result in movement thereof out of obstructing relation to the bit of the screw-driver.

2. In a screw-holding attachment for screw-drivers, a screw-clamp support, means for frictionally holding said support on the shank of a screw-driver but permitting rotation and longitudinal movement of the support, a spring screw-holding clamp rotatably mounted upon the outer end of the support, and means for frictionally holding the screw-clamp against turning upon the support, said support extending along side of the shank of the screw-driver whereby rotation of the screw clamp will result in movement thereof out of obstructing relation to the bit of the screw-driver.

3. In an attachment for screw-drivers, a screw-clamp support having a loop surrounding the shank of the screw-driver, means carried by the support and engaging the shank of the screw-driver for holding the support in set position but permitting longitudinal and rotary movement of the support, a laterally extending spring screw-clamp rotatably mounted upon the end of the support, and means for holding the clamp in set position embodying a part of the spring-clamp, said support extending along side of the shank of the screw-driver whereby rotation of the screw clamp will result in movement thereof out of obstructing relation to the bit of the screw-driver.

4. In a screw-holding attachment for screw-drivers, of a support having a loop surrounding the shank of the screw-driver, a spring-clamp rigidly carried by the support and surrounding the shank of the screw-driver, said clamp permitting longitudinal movement of the support with relation to the shank and rotary movement of the support around the shank, a disk journaled eccentrically on the end of the support and a spring-clamp surrounding the disk and presenting clamping fingers for the screw.

5. In a screw-holding attachment for screw-drivers comprising a support, a connection on the support surrounding the shank of the screw-driver and permitting free rotary and longitudinal movement of the support on the shank, a clamp rigidly secured to the support and surrounding the shank of the screw-driver, means for adjusting the tension of the clamp on the shank, and a laterally extending screw-clamp carried by the end of the support together with means for normally preventing movement of the screw-clamp, said support extending along side of the shank of the screw-driver whereby rotation of the screw clamp will result in movement thereof out of obstructing relation to the bit of the screw-driver.

6. In a screw-holding attachment for screw-drivers, a support comprising a longitudinal member having a loop at one end to surround the shank of the screw-driver and to be freely movable thereon, a clamp secured to the support and surrounding the shank of the screw-driver, manually operated means for adjusting the tension of the clamp on the shank, an offset in the support, a disk eccentrically journaled on the offset portion of the support, a spring-clamp surrounding the disk and engaging the support, and laterally extending spring fingers adapted to hold a screw in position to be engaged by the bit of the screw-driver.

In testimony whereof I hereunto affix my signature.

ANDREW HILTON.