

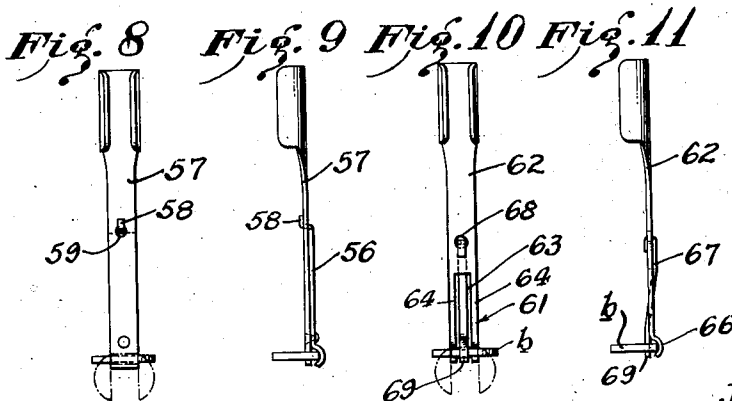
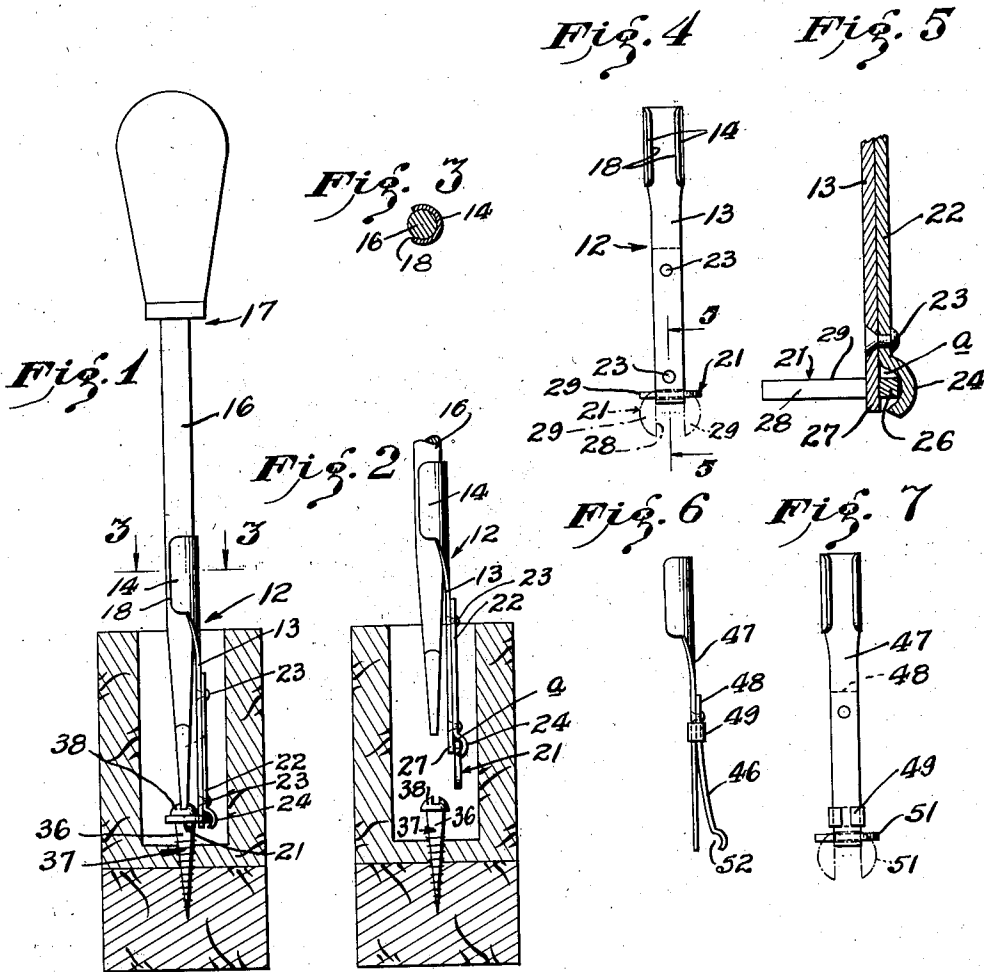
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ATTACHMENT FOR SCREW DRIVERS

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ATTACHMENT FOR SCREW DRIVERS

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11 Claims. (Cl. 145—52)

This invention relates to an attachment for screw drivers and which is adapted to hold a screw against the blade of a screw driver and in engagement within the kerf of the screw while the screw is being started in position by the associated screw driver.

This invention is an improvement over my co-pending application Serial No. 451,324, filed May 10, 1930.

An object of this invention is to provide a novel attachment for screw drivers and which attachment may be conveniently and securely attached to and removed from the shank of screw drivers now on the market, and which may be used to hold the screw while being started in position and which may be detached from the screw in a minimum amount of space.

Another object is to provide an attachment for screw drivers whereby a screw is securely held in relation to a screw driver blade while the screw is being started in position, and which attachment may be fitted to a shank of screw drivers now on the market without requiring any modification thereof.

A further object is to provide a novel attachment for screw drivers having the characteristics above set forth and which may be easily and quickly changed to adapt itself to hold screws of various diameters.

Simplicity, cheapness, and ease of operation and assembly are other objects and advantages.

An advantage is that a bifurcated foot portion is pivotally associated with the shank or body portion of the attachment whereby the foot portion is swung at right angles to the body portion so as to steady a screw when it is started in the material to which it is to be applied and after the same has been inserted in the material a sufficient distance to steady the screw, the foot portion may then be swung about its pivot so as to release the screw from engagement therewith without requiring any side motion of the attachment, thus permitting the starting of screws with my attachment and the removal of the attachment therefrom in places having a minimum amount of space therearound.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detail description and the appended claims.

The accompanying drawing illustrates the invention in some of the forms I at present deem preferable.

Figure 1 is a side elevation of a screw driver having my attachment associated therewith and

illustrating the use of the invention in a part having a bore of small diameter and which part is shown in section for purposes of clearness.

Fig. 2 is a view analogous to Fig. 1 but showing the screw driver and associated attachment partially withdrawn so as to disengage the attachment from the screw. Parts of the figure have been broken away to contract the view.

Fig. 3 is a transverse sectional view taken upon line 3—3 Fig. 1, looking in the direction of the arrows.

Fig. 4 is a front elevational view of the device shown in Figs. 1-3 and being detached from the screw driver blade. Dot and dash lines indicate the position of the foot portion as shown in Fig. 2.

Fig. 5 is a fragmental enlarged vertical sectional view taken upon line 5—5 Fig. 4, looking in the direction of the arrows.

Fig. 6 is a side elevational view showing a modified form of my invention with the foot portion removed.

Fig. 7 is a front elevational view of the device illustrated in Fig. 6 by showing the foot member in position and the foot member clamping means in a foot holding position.

Dot and dash lines indicate the foot portion when swung to screw releasing position.

Fig. 8 is a view analogous to Fig. 4 but showing a modified form of construction for securing the foot portion to the body portion of the device.

Fig. 9 is a side elevational view of the modified form illustrated in Fig. 8.

Fig. 10 is a view analogous to Figs. 4 and 8 but showing a modified form of construction for securing the foot portion to the body portion of the device.

Fig. 11 is a side elevational view of the modified form illustrated in Fig. 10.

Referring in detail to the drawing and first describing the form of the invention shown in Figs. 1-5, the attachment is indicated in its entirety at 12 and consists of a shank or body portion 13, having on the upper end thereof suitable securing means in the form of a pair of co-operating resilient arms 14 adapted to clamp between them the shank 16 of a screw driver 17 whereby the attachment 12 may be secured in operative position upon the screw driver 17.

The arms 14 are preferably curved toward each other and have their outer edges 18 spaced apart, a distance considerably less than the diameter of the shank 16 of the screw driver 17 so that when they are associated with the screw driver shank they will be firmly and snugly

associated therewith, thus preventing accidental displacement of the attachment from the screw driver during use, and permitting the resilient securing means to slidably and frictionally secure said attachment to the shank 16 of the screw driver 17 in any position to which it is slid therealong.

A foot or screw engaging member 21 is pivotally carried at the lower end of the body 13 to permit it to swing about an axis normal to the major axis of the body 13, thereby allowing the foot 21 to assume either the position indicated in full lines in Fig. 1 or the position indicated in full lines in Fig. 2. The foot 21 is pivotally connected to the body portion 13, preferably by means of a spring member 22 that extends along the body 13 and is connected thereto by any suitable means as by rivets 23. The lower end 24 of spring 22 is provided with a recess *a* to receive the cross-bar or end portion 26 of foot 21. The lower end 27 of body 13 together with lower end 24 of spring 22 provide a resilient and frictional connection between the attachment body portion and the foot portion.

The foot 21 is provided with a recess 28 which is of sufficient depth and width to receive the screw shank 36 and to permit the head 38 of a screw 37, when positioned therein, to come into contact with the arms or side members 29 of foot 21 and which arms are joined or connected to each other at their ends by cross-bar 26 which is preferably provided on its face adjacent recess 28 with a flat surface which is engaged by the face of the end 27 of body 13 so that when the foot member 21 is extended at a normal to the longitudinal axis of the body portion, the same will be held in such extended position. The cross-bar 26 may be square in cross-section as shown in Fig. 5, thereby providing means to hold the foot member 21 in the position shown in Fig. 2, when the foot 21 is swung downwardly to release it from engagement with the shank of a screw, after the same has been started in the material to which it is to be applied. Foot 21 is thereby maintained in either of two positions, to-wit: in a plane substantially normal to the longitudinal axis of body 13, as shown in Fig. 1, and in full lines in Figs. 4 and 5, or in the position extending away from body 13 in alignment therewith, as shown in Fig. 2 and in dot and dash lines in Fig. 4.

In the use of the attachment the arms 18 are slipped onto the screw driver shank 16 from the free end thereof and toward the handle of the screw driver and the attachment then slid upwards on the shank and the arms 18 frictionally engage the shank so as to retain the attachment at the position thereon to which it may be slid. With the foot member 21 extended at right angles to the body member 13 a screw is inserted so that its shank is received between the arms 29, after which the attachment is slid along the screw driver shank until the head 38 of the screw is pressed against the arms 29 with the blade of the screw driver in the kerf of the screw head and the screw will then be maintained in extended position from the end of the screw driver blade, as shown in Fig. 1.

After the screw has been started in the material, to which it is to be applied, a sufficient distance so that the threads of the screw will maintain the screw in upright position, the screw driver may be withdrawn from the screw by merely pulling the screw driver away from it and during such operation the foot 21 will move about

its pivot so that it lies in a plane substantially parallel with and extended from body 13 as shown in Fig. 2, thereby permitting the attachment to be disengaged from a screw without requiring any other operation or sidewise movement of the screw driver and associated attachment. The foregoing construction enables my attachment to be used in places whereby the screw driver and associated screw held by the attachment may be inserted, but which places will not permit any lateral or sidewise movement of the screw driver.

Figs. 6 and 7 show a slightly modified form of attachment for screw drivers wherein the relief spring 46 is riveted or otherwise firmly attached at one end 48 to the body 47 and a link or clasp 49 surrounds the spring 46 and body 47 and is slidable therealong, so that when the clasp 49 is moved to the position shown in Fig. 7 the spring 46 and the lower end of the body 47 will secure a foot member 51 in the recess 52, formed at the free end of spring 46. When the clasp 49 is slid upwardly on body 47 and to the position shown in Fig. 6, the foot 51 may be removed and other screw shank receiving members of various sizes may be associated therewith. The free end of spring 46 being formed, as shown, to provide the recess 52 prevents accidental disengagement or removal of clasp 49 from the assembly. The use, operation and advantages of this construction in addition to those above set forth, are the same as hereinabove described with respect to the construction shown in Figs. 1-5.

Figs. 8 and 9 show a further modified form of attaching the spring member 56 to the body member 57, and in this construction the upper end of spring 56 is provided with a tongue 58, that is inserted through a recess 59 in body 57, after which the tongue member 58 is bent over so as to securely connect the upper end of spring 56 to body 57. The lower end of spring 56 is riveted to the body member 57, and the remaining construction is the same as that shown in Figs. 1-5.

Figs. 10 and 11 show a still further modified form of pivotally connecting the foot member to the body member and in this construction the lower end 61 of body member 62 is provided with a slot 63 that bifurcates the body 62 and forms the two forks or arms 64 which are provided with a recess at their free end 66 to receive the foot member *b*. The spring member 67 is disposed between the fork or arm 64 and is connected at its upper end to the body 62 by extending the same through a hole 68, and then bending the end of the spring, thus extended through the hole 68 against the body member as shown. The spring 67 preferably extends from the rear face of body 62 through the slot 63, so that its free end 69 overlies the flattened surface on foot member *b* so as to maintain the foot member in extending screw shank engaging position.

The foot members hereinabove referred to may preferably be made from stampings so that the arms and cross-bar are integral, and so that the inner surface of the cross-bar will have a flat surface adapted to be engaged by an associated flat surface which is slightly yieldable but still of sufficient rigidity relative to the cross-bar and its flat surface so as to maintain the foot member at right angles to the body portion of the attachment.

I claim:

1. A screw holding attachment for screw drivers, comprising a body portion, securing means

at one end of said body portion adapted to slidably and frictionally secure said attachment to the shank of a screw driver in any position to which it is moved along said screw driver shank; and a bifurcated foot portion pivotally connected to the other end of said body portion and adapted to straddle the shank of a screw to be operated upon, and to swing into substantial alinement with said body portion.

2. An attachment for screw drivers, comprising a body portion; means at one end of said body portion adapted to slidably and frictionally secure said attachment to the shank of a screw driver; a bifurcated foot portion extending from and pivotally connected to the other end of said body portion and adapted to straddle the shank of a screw to be operated upon; and cooperating surfaces on said foot portion and said body portion to maintain said foot portion at substantially right angles to said body portion when said foot portion is straddling the shank of a screw.

3. An attachment for screw drivers, comprising a body portion; a resilient means on said body portion adapted to slidably and frictionally secure said attachment to the shank of a screw driver; a slotted foot portion pivotally connected to and extending from the other end of said body portion and adapted to receive the shank of a screw in its slot; and means adapted to hold said foot portion at substantially right angles to said body portion when a screw shank is received in the slot of said foot portion.

4. An attachment for screw drivers, comprising a body portion; resilient means at one end of said body portion adapted to slidably and frictionally secure said attachment to the shank of a screw driver; a foot portion pivotally connected to the other end of said body portion and provided with a recess to receive the shank of a screw to be operated upon; and means for holding said foot portion at substantially right angles to said body portion, said last mentioned means being releasable to permit said foot portion to swing into substantial alinement with said body portion.

5. An attachment for screw drivers, comprising a body portion; means at one end of said body portion adapted to slidably and frictionally secure said attachment to the shank of a screw driver; a member in fixed relation to said body portion and having a recess; a bifurcated foot portion having a cross-arm mounted in said recess and adapted to be engaged by said body portion; and cooperating surfaces on said cross-arm and said body member whereby said foot portion may be held at substantially right angles to said body portion.

6. An attachment for screw drivers, comprising a body portion; means on one end of said body portion adapted to slidably and frictionally secure said attachment to the shank of a screw driver; and a removable slotted foot portion pivotally connected to and extending from the other end of said body portion and being adapted to receive a shank of a screw in its slot,

and adapted to be moved into substantial alinement with said body portion.

7. An attachment for screw drivers comprising a body portion; means adapted to slidably and frictionally secure said body portion to the shank of a screw driver; a foot portion pivotally mounted upon said body portion and adapted to straddle the shank of a screw to be operated upon; and means adapted to frictionally hold said foot portion at substantially right angles to said body portion and to permit said foot portion to be moved into substantial alinement with said body portion.

8. An attachment for screw drivers, comprising a body portion; means at one end of said body portion adapted to secure said attachment to the shank of a screw driver; a foot portion pivotally connected to the other end of said body portion and provided with a recess to receive the shank of a screw to be operated upon; and means for holding said foot portion at substantially right angles to said body portion, said last mentioned means being releasable to permit said foot portion to swing into substantial alinement with said body portion.

9. An attachment for screw drivers comprising a body portion; means adapted to secure said body portion to the shank of a screw driver; a foot portion pivotally mounted upon said body portion and adapted to straddle the shank of a screw to be operated upon; and means adapted to frictionally hold said foot portion at substantially a right angle to said body portion and to permit said foot portion to be moved into substantial alinement with said body portion.

10. An attachment for screw drivers, comprising a body portion; means to secure said attachment to the shank of a screw driver; a member fixed to said body portion and having a recess; a bifurcated foot portion having a cross-arm mounted in said recess, the free ends of said member and said body portion being yieldable relative to each other; and cooperating surfaces on said cross-arm and said body member whereby said foot portion may be held in substantially a right angle to said body portion in one position and in substantial alinement with said body member in another position.

11. An attachment for screw drivers comprising a body portion; means on one end of said body portion to secure said attachment to the shank of a screw driver; a member attached at one end to said body portion and having its other end adjacent the end of said body portion opposite said securing means; there being a recess in the free end of said member, a member slidable along said body portion and said member to hold the free end of said body portion and the free end of said member in close proximity to each other; and a removable slotted foot portion having a cross-arm mounted in said recess and being adapted to receive a shank of a screw in its slot and to extend at substantially a right angle to, and in alinement with, said body portion.

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