Dec. 19, 1922. 1,439,593.

F. C. WILSON.

SCREW HOLDING ATTACHMENT FOR SCREW DRIVERS.

FILED MAR. 31, 1922.

Fig. 1.

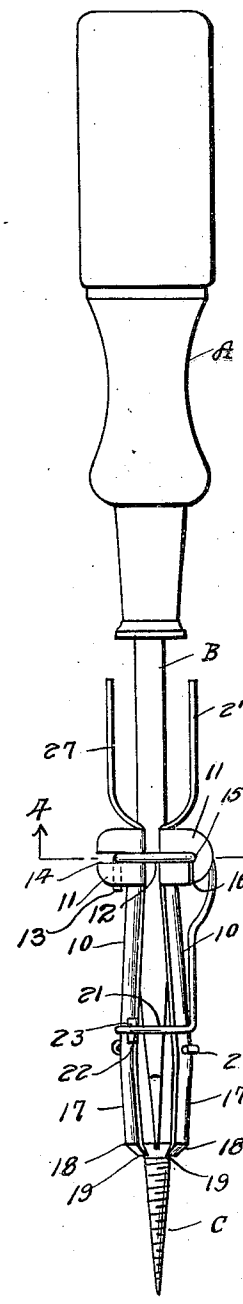


Fig. 3.

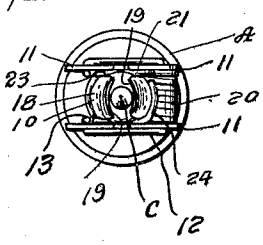


Fig. 4.

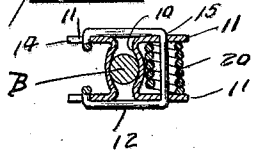


Fig. 5.

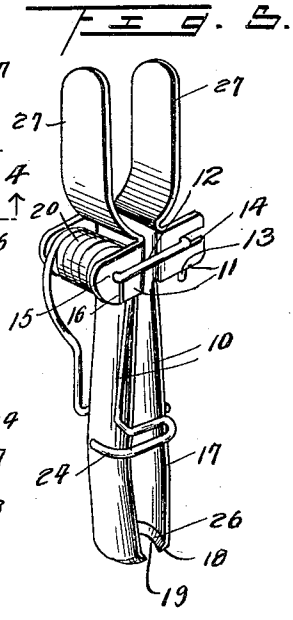
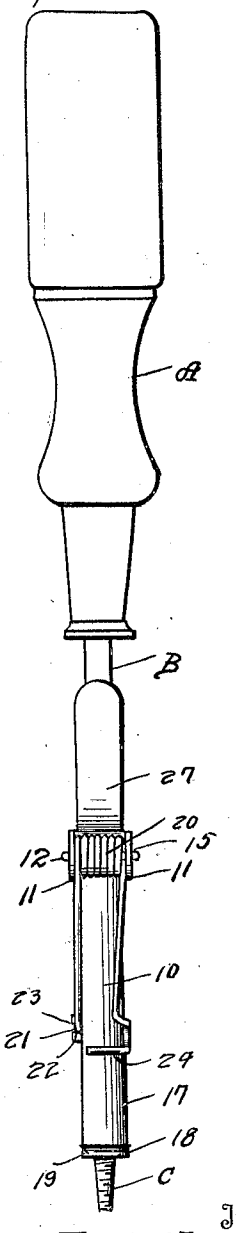


Fig. 2.



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UNITED STATES PATENT OFFICE.

FOSTER C. WILSON, OF JOHNSTOWN, PENNSYLVANIA.

SCREW-HOLDING ATTACHMENT FOR SCREW DRIVERS.

Application filed March 31, 1922. Serial No. 548,355.

To all whom it may concern:

Be it known that I, FOSTER C. WILSON, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in a Screw-Holding Attachment for Screw Drivers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a screw holding attachment for screw drivers.

The invention aims to provide a simple, improved and inexpensive means for holding a screw in operative relation to a screw drivers in order to facilitate starting and placing thereof, one which is capable of use as an attachment on screw drivers of different sizes, one having a loop and screw-gripping levers pivoted and slip-connected thereon, and one having a novel spring to urge said levers into screw-gripping position, and a construction which will cause the gripping levers to release the screw as the latter is driven.

Additional objects and advantages will become apparent from a consideration of the description following taken in connection with the accompanying drawings illustrating one practical embodiment.

In said drawings:—

Figure 1 is a view in front elevation showing a screw driver having my improved attachment in place thereon and holding a screw to be driven;

Figure 2 is a side elevation of the parts of Figure 1 taken at a right angle thereto;

Figure 3 is an inverted plan view;

Figure 4 is a cross sectional view on the line 4—4 of Figure 1, taken on the plane of the fulcrum of the gripping levers, and

Figure 5 is an enlarged perspective view of the attachment alone.

Like reference characters designate like or similar parts in the different views.

To illustrate the application of my improvements, a screw driver is conventionally shown having a handle at A and a driving blade or shank as at B to enter or engage as usual the kerf or slot or a screw as suggested at C.

A plurality of screw-gripping members are shown in the form of levers at 10. Intermediate their ends, said levers have integral outwardly extending spaced ears or lugs 11 through which a link or loop 12, which surrounds the shank B, passes and on which said levers are pivoted. Said loop 12 is resilient and its terminals at 13 are angularly disposed in contact with the inner surfaces of the ears of one of said levers. The slots through which said link or loop 12 passes in the ears 11 of one of the levers which are designated 14, are open or elongated in a plane transversely of the shank B to permit relative lateral movement of the levers to fit screw drivers having shanks differing in size. Loop 12 is mounted in slots 15 of the other ears 11 and said ears may be slit at 16 to facilitate entrance thereinto.

Below the ears 11, the levers 10 have screw-gripping portions 17 provided with inwardly extending lugs 18 to directly engage the screw below the head thereof and which are curved or recessed at 19 to receive the shank of the screw and thus more snugly fit it.

Surrounding the loop or link 12 intermediate two of the ears 11 is a coil spring 20, one terminal of which at 21 crosses the levers and bears against one of the levers 10 and removably fits in a notch 22 of a lug 23 integral therewith to prevent relative longitudinal displacing movement thereof. The other terminal thereof as at 24 bears and exerts pressure against the other lever 10, having a guard crook or offset at 25. Terminal 21 and offset 25 supplement the loop 12 in preventing lateral movement of the attachment on the shank B. The spring 20 is contractile so as to urge the lugs 18 toward each other.

Particular attention is called to the fact that the lugs 18 adjacent the recesses 19 are inclined as at 26 to form cams so that as the screw enters the work, and the lugs 18 come in contact with the work, the head of the screw will force the levers outwardly through engagement with said inclined or cam surfaces 26, thus causing the levers to automatically disengage the screw.

The portions of the lever 10 above the ears 11 are deflected away from the shank B to form manipulating portions 27.

In use, the gripping portions 27 are engaged by the fingers and moved toward each other so as to separate lugs 18 for engagement with a screw as at C directly below its head. After the screw has been thus en-

gaged, the attachment may be moved slidably along the shank B to cause the driving end of the shank to enter the kerf of the screw. The spring 20 effectively maintains the screw in gripped relation to the shank. The screw driver is turned in the usual manner to drive the screw and when it is driven to a sufficient extent, the lugs 18 engage the work so that the inclined under surface of the screw head in cooperation with the cam surfaces at 26 forces the levers outwardly, thus releasing the screw and enabling the screw driver to complete the driving of the screw. As loop 12 is tensioned through movement of the levers, it yields sufficiently to enable the levers to fulcrum.

It will be realized that the elongated slots in one pair of the ears enables the two levers to receive between them driving blades or shanks C of different sizes and shapes and that regardless of the size and shape, the spring 20 will maintain the levers in effective engagement therewith.

As merely one practical embodiment has been illustrated and described, it is to be understood that changes in the details may be resorted to provided they fall within the spirit and scope of the invention.

I claim as my invention:—

1. A screw holding attachment consisting of a link to surround the shank of a screw driver, a screw-gripping lever pivoted on said link, a second screw-gripping lever, said second lever having an enlarged slot through which said link extends whereby the second lever is movable laterally relatively to the first lever to accommodate attachment to screw drivers of different sizes, and spring means to maintain said levers in contact with the shank of a screw driver and in screw-gripping relation.

2. A screw holding attachment consisting of a link to surround the shank of a screw driver, screw-gripping levers, said levers having ears, said ears having slots through which said link extends, the slot of one of said ears being enlarged, a spring on said link intermediate a pair of said ears, one terminal of said spring bearing against one of said levers, and the other terminal of said spring bearing against the other lever.

3. A screw holding attachment consisting of a link to surround the shank of a screw driver, screw-gripping levers, said levers having ears, said ears having slots through which said link extends, a spring on said link intermediate a pair of said ears, one terminal of said spring bearing against one of said levers, the other terminal of said spring bearing against the other lever, and means on one of the levers engaged by one of said terminals to prevent relative longitudinal displacing movement of said levers.

4. A screw holding attachment consisting of a link to surround the shank of a screw driver, screw-gripping levers, said levers having ears, said ears having slots through which said link extends, a spring on said link intermediate a pair of said ears, one terminal of said spring bearing against one of said levers, and the other terminal of said spring bearing against the other lever, and means on one of the levers engaged by one of said terminals to prevent relative longitudinal displacing movement of said levers, and both of said terminals having guard portions disposed at the open sides of the levers.

In testimony whereof I affix my signature in presence of two witnesses.

FOSTER C. WILSON.

Witnesses:
JOHN W. FRUDHOFF,
ALBERT A. COLE.