No. 881,298. PATENTED MAR. 10, 1908.

J. M. CHAPPEL.

SCREW DRIVER AND ATTACHMENT THEREFOR.

APPLICATION FILED APR. 16, 1906.

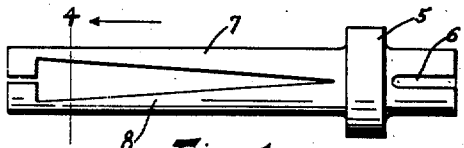

Fig. 1.

Fig. 4.

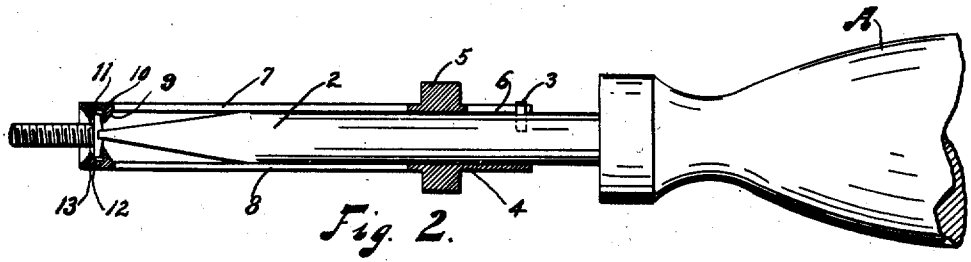

Fig. 2.

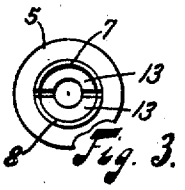

Fig. 3.

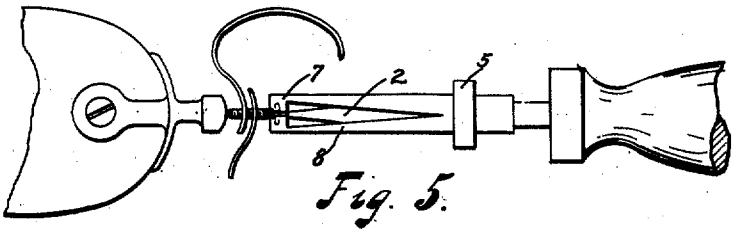

Fig. 5.

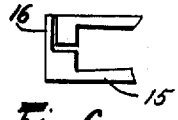

Fig. 6.

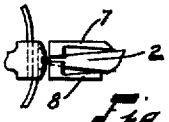

Fig. 7.

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UNITED STATES PATENT OFFICE.

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SCREW-DRIVER AND ATTACHMENT THEREFOR.

No. 881,298. Specification of Letters Patent. Patented March 10, 1908.

Application filed April 16, 1906. Serial No. 311,983.

To all whom it may concern:

Be it known that I, JAMES M. CHAPPEL, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Screw-Drivers and Attachments Therefor, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

In the assembling of spectacles and eyeglasses it is necessary for opticians to use very small screws which aside from being very awkward to handle of themselves, make the assembling very difficult on account of the number of parts which are required to be held during the setting up of parts by the small screws.

It is the object of this invention, therefore, to provide in connection with the blade of a screw driver, a device which may be slid down by the fingers over the head of the screw when it is partially unscrewed from the part or parts to which it is applied and hold the same firmly in a handy position for use in the assembling of the parts.

It it also a feature of this invention to arrange the screw holding device in such a manner that it will firmly grasp the head of the screw independently of the point of the screw driver, and in such a manner that when the screw driver is operated it is free to turn the screw.

The arrangement of the device is such that as the screw is being set up the holding device will automatically release itself from the head thereof and will not in any way interfere with the driving.

Referring to the drawings Figure 1, is a side elevation of my device, Fig. 2 is a side elevation of a screw driver with my device shown in longitudinal section, Fig. 3 is an end view of the clamping members, Fig. 4 is a section upon the line 4—4 of Fig. 1 looking to the left, Fig. 5 shows my device in use, Fig. 6 shows a modification, and Fig. 7 is another view showing the device in use.

Any preferred form and the construction of parts may be employed in the carrying out of my invention but I have shown one form in the drawing which very effectively meets the necessary requirements, and in such embodiment A, represents a screw driver having the ordinary blade 2, which is preferably round and substantially of uniform diameter throughout its length. This blade may be provided with a pin 3, for a purpose which will hereinafter appear.

The screw holding device consists of a sleeve 4, having an opening within the same and nearly throughout the length thereof of substantially the size in bore of the diameter of the blade of the screw driver so that the blade is free to slide therein. The sleeve is further provided with a knurled flange 5 which may be used by the fingers for manipulating the device, and also with a slot 6, for engagement with the pin 3, on the blade of the screw driver. This slot renders it possible to contract the sleeve at the end for the purpose of producing a frictional engagement between it and the blade of the screw driver. At the other end of the sleeve there is a pair of clamping members 7 and 8, which are preferably spring actuated and may be formed directly from the sleeve in substantially the manner shown. Each of these clamping members is provided with an inwardly projecting half-round flange 9, which forms a stop for the head of the screw by reason of its having a flat face 10 against which the head of the screw abuts, whereby it is prevented from passing any further in between the clamping members. Both of the clamping members are provided with inwardly projecting flanges 11, which are preferably spaced from the flanges 9, a distance which is substantially equal to the head of a screw, and have inclined faces 12, and 13, as shown in section in Fig. 2, against the former of which the head of the screw is adapted to bear when it is being set up and through the medium of which the clamping members are opened and the screw is released. The other faces 13, are adapted to engage the head of the screw when it is partly withdrawn from the part to which it is applied, and force the clamping members apart and bring about the entrance of the head of the screw therebetween.

The inner edges of the flanges 9 and 11, are preferably made half round as shown in Fig. 4 for the purpose of conforming to the shank of the screw, and when the head thereof is inserted between the clamping members the blade of the screw driver is free to pass between them and engage in the slot of the head.

In using the device the operator slides it back until the point of the blade is exposed, then the head of the screw is engaged by this

point and withdrawn from the part in which it is fastened, until the head is at a slight distance therefrom, then the device is shoved down until the inclined faces 13, engage the head of the screw with the result that the clamping members are forced apart until the head passes into the recesses formed in such members by the flanges 9 and 11.

The head of the screw is prevented from passing beyond the flanges 9 by reason of the flat faces on the bottom thereof. The screw is then firmly held by the device and may be used in any desired manner. The operator in fact, may remove the device with the screw in it from the blade of the screw driver and use such instrument for other purposes.

In replacing the screw the device is placed upon the end of the blade of the screw driver and the screw is set up in the usual manner, since the blade of the driver is free to engage the slot in the head thereof. As the screw is being set up the ends of the clamping members engage the part to which the screw is applied and the further setting up of the screw moves the head thereof down the inclined faces 12, with the result that the clamping members are forced apart and the head is released therefrom.

In the modification shown in Fig. 6 one of the clamping members 15, is provided with a ring portion 16, extending across and conforming to the configuration of the other clamping member whereby when a screw is being set up, an unbroken face upon the end of the device will be presented to the part receiving the screw, whereby any catching of the ends of the clamping members is thereby avoided.

When the device is not needed it may be slid back from the point of the screw driver blade entirely out of operation. The device being quite small and conforming so nicely to the shape and size of the tool to which it is applied that it is not in the way for the independent use of the screw driver. If the device should be a hindrance to the operator then it may be slipped off. The pin 3, may be dispensed with, if desired without affecting the utility of the device in any way. This device may be used on any screw driver having a blade which is equal to the opening within the holder.

Having described my invention I claim:—

1. An attachment for a screw driver comprising a sleeve having a pair of clamping jaws provided on the interior with oppositely disposed flanges each having inclined or beveled inner and outer faces, and flanges adjacent said first named flanges, and adapted to form a stop for the heads of screws.

2. An attachment for a screw driver comprising a sleeve having a pair of spring clamping members provided on the interior with two pairs of oppositely disposed flanges forming a recess for the head of a screw, the outer flanges of said members having inclined or beveled faces for facilitating the entrance or withdrawal of the head of the screw and the inner flanges having flat faces forming a stop therefor.

3. In combination a screw driver, a sleeve slidably mounted thereon said sleeve having a pair of clamping members, each of said clamping members having a stop flange and a retaining flange for holding the head of the screw against said stop flange, said retaining flanges having inclined faces for facilitating the entrance and release of the head of the screw.

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

JAMES M. CHAPPEL.

Witnesses:
H. F. JORDAN,
B. W. BROCKETT