Sept. 6, 1927. 1,641,307

R. J. VELEPEC

SCREW DRIVER

Filed April 14, 1926

Fig. 1

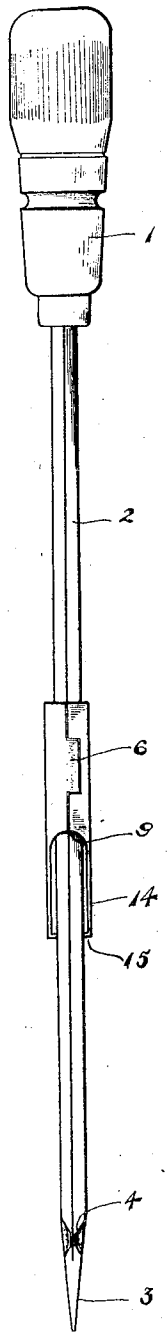


Fig. 3

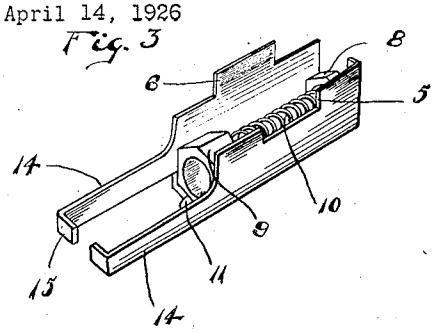


Fig. 4

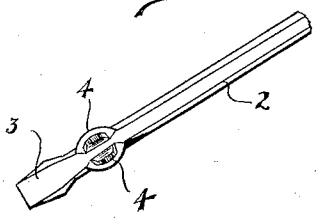
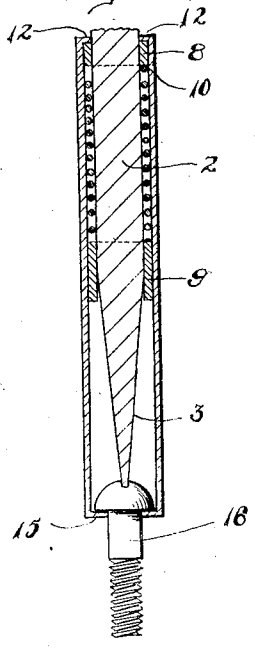


Fig. 2



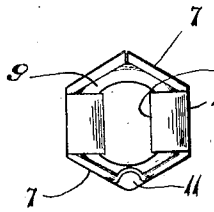


Fig. 5

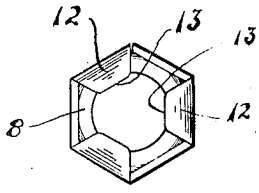


Fig. 6

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UNITED STATES PATENT OFFICE.

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SCREW DRIVER.

Application filed April 14, 1926. Serial No. 102,035.

The present invention relates to screw drivers and more particularly to the type provided with a holding means for holding the screw in cooperation with the screw engaging end of the screw driver. An object of this invention is to provide a construction in which the screw holding means is so mounted on the shank of the screw driver that it may be moved upwardly thereon, so as not to interfere with the user of the screw driver. Another object of the invention is to provide a construction in which the screw holding means will automatically project itself along the shank away from the screw engaging portion of the screw driver, when the screw is freed. Still another object of the invention is to provide a construction which will be simple in operation, inexpensive to manufacture and durable in use.

To these and other ends, the invention consists of certain parts and combinations of parts, all of which will be hereinafter described: the novel features being pointed out in the appended claims.

In the drawings:

Fig. 1 is a side view of a screw driver constructed in accordance with this invention;

Fig. 2 is an enlarged section through the screw holding means while the latter is engaged with the screw to hold the latter in cooperation with the screw driver, only a fragment of the screw driver being shown;

Fig. 3 is a perspective view of the screw holding means detached from the screw driver and having the casing opened up to illustrate the interior parts as well as the means for connecting together the meeting edges of the material forming the casing;

Fig. 4 is a fragmentary view of the screw driver;

Fig. 5 is a view of the outer end of the screw holding means; and

Fig. 6 is a view of the inner end of the screw holding means.

Referring more particularly to the illustrated embodiment of the invention, 1 indicates the handle of the screw driver and 2 the shank which has a non-circular cross section, in this instance in the form of a hexagon. At the end of this shank is a screw engaging portion 3 while adjacent the end are two stops or shoulders 4, the purpose of which will be hereinafter set forth. The shoulders 4 are formed by widening the blade and are located at the upper edge thereof and constitute the only projecting portion of the shank for forming the stop.

The screw holding means embodies, in this instance, a casing formed preferably from a single piece of sheet metal bent into tubular form, one edge of this piece of sheet metal having a notch 5 while the opposite edge has a projection 6 received in said notch. In this instance, the casing is of hexagonal cross section so as to provide flat sides 7. Within the casing are two abutment members 8 and 9 arranged at opposite ends of the casing and having situated between them a helical spring 10. These abutment members have central openings so that they may surround the shank 2 and operate thereon between the handle 1 and the shoulders 4. The abutment member 9 is held in the tubular casing by a lip 11 while the abutment member 8 is held in the tubular casing by lips 12, the lips 11 and 12 being bent from the sheet metal from which the casing is formed. It will thus be seen that the spring 10 holds the two abutments 8 and 9 away from each other. As the abutment 9 cooperates with the stops 4, the spring 10 permits the yielding of said abutment so that the latter may be termed a movable abutment for the spring 10. The other abutment 8 may be termed the fixed abutment as it does not move in the action of the device. The lugs or lips 12 which limit the movement of the abutment 8 are provided with flat end portions 13 which cooperate with the sides of the shank 2 in order to hold the screw holding means against turning on the shank. Projecting from the casing are two arms 14 which are resilient in action and have inwardly turned ends 15.

These arms operate on opposite sides of the flat faces of the screw engaging portion 3 of the screw driver and are adapted to be projected beyond the end of the screw engaging portion as shown in Fig. 2 for engagement with the screw 16. In this position the abutment member 9 will engage the stops 4 and compress the spring 10 so that the inwardly turned screw engaging portions 15 engage beneath the head of the screw 16 and hold said head toward the screw engaging

portion 3 of the screw driver. This holding engagement is such that it permits the screw to be driven into any suitable material and after the screw has been anchored, the holding means may be disengaged from the screw by tilting the screw driver sidewise which will throw one of the lugs 15 so that it may be passed over the end of the screw after which the spring 10 will act in a manner to project the screw holding means along the shank 2, thus automatically throwing the screw holding means away from the screw so that the screw driver may be finally utilized for driving the screw home without any interference by the screw holding means.

What I claim as my invention and desire to secure by Letters Patent is:

1. The combination with a screw driver having a shank widened to form a screw engaging blade, the upper end of which widened portion acts as a stop and constitutes the only projection on the shank, of a casing slidable on the shank to arrange it at either end thereof and provided at its inner end with a rear abutment, said casing being also provided at its front end with screw holding arms, and a coiled spring disposed on the shank of the screw driver and arranged within the casing and seated against the rear abutment, and a relatively slidable front abutment member arranged within the casing and engaged by the front end of the coiled spring and bearing against the stop of the screw driver shank and slidable therefrom with the casing when the latter is moved to the other end of the shank.

2. The combination of a screw driver having a polygonal shank widened to form a screw engaging blade, the upper end of which widened portion acts as a stop and constitutes the only projection on the shank, a casing slidable along the shank and provided at its inner end with a rear abutment conforming to the configuration of the polygonal portion of the shank and holding the casing against relative rotary movement on the shank, said casing being also provided at its front end with screw holding arms having inwardly extending terminals, a coiled spring disposed on the shank of the screw driver and arranged within the casing and seated against the rear abutment, and a relatively slidable front abutment member arranged within the casing and engaged by the front end of the coiled spring and bearing against the stop of the screw driver shank and slidable therefrom with the casing when the latter is moved to the other end of the shank.

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