C. M. FLODIN.

SCREW DRIVER.

APPLICATION FILED SEPT. 1, 1921.

1,429,861. Patented Sept. 19, 1922.

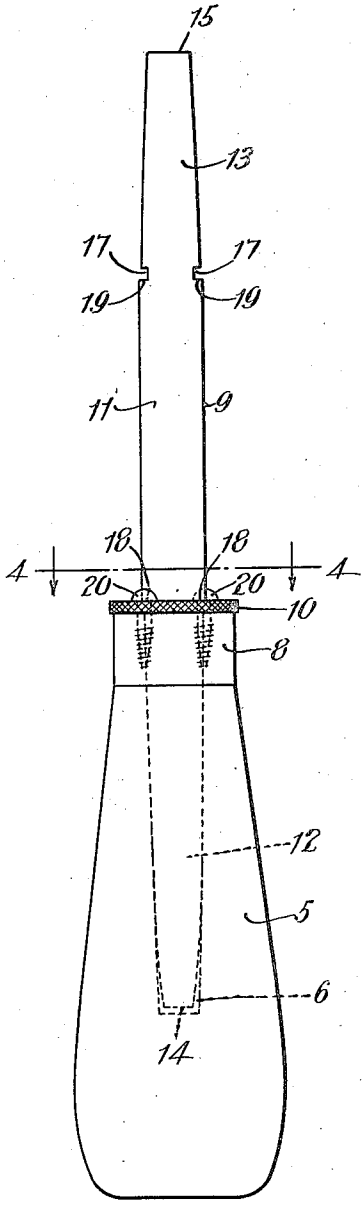


Fig. 1.

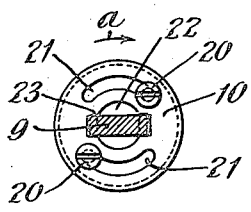


Fig. 3.

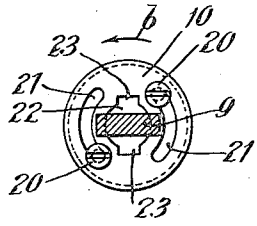


Fig. 4.

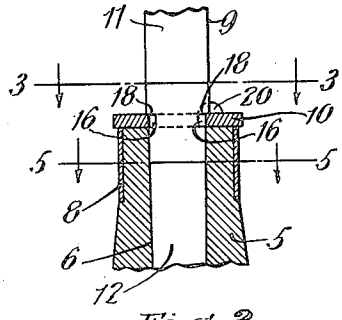


Fig. 2.

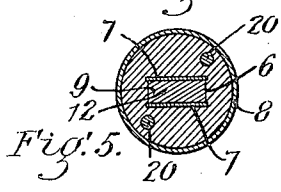


Fig. 5.

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UNITED STATES PATENT OFFICE.

CARL M. FLODIN, OF EAST BOSTON, MASSACHUSETTS.

SCREW DRIVER.

Application filed September 1, 1921. Serial No. 497,629.

To all whom it may concern:

Be it known that I, CARL M. FLODIN, a subject of the King of Sweden, residing at East Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Screw Drivers, of which the following is a specification.

This invention relates to a screw driver and has for its object to provide a tool of the character mentioned having a handle provided with a removable double-ended blade, one extremity of which is adaptable for use with small sizes of screws, and the other extremity for use with relatively larger sizes of screws.

Another object of the invention is to provide a simple and easily operated locking member for fastening the blade within the handle, said locking member also constituting a stop to position the blade when the latter is inserted within the handle.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings:

Figure 1 is a front elevation of a screw driver embodying my invention.

Fig. 2 is a longitudinal section partly in elevation illustrating the portion of the tool adjacent to the locking member, the latter being in the position it assumes when the blade is being inserted therethrough.

Fig. 3 is a transverse section taken on the line 3—3 of Fig. 2.

Fig. 4 is a transverse section taken on the line 4—4 of Fig. 1.

Fig. 5 is a transverse section taken on the line 5—5 of Fig. 2.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 represents a handle of any desired form and constructed of any suitable material, preferably wood. The handle 5 is provided with a centrally disposed longitudinal recess 6 extending inwardly from one end thereof, said recess being lined in any suitable manner as with metal plates 7. A ferrule 8 extends around the handle 5 at the end thereof from which the recess 6 extends and is provided for the purpose of reinforcing the handle at said end.

A screw driver blade 9 is removably mounted in the handle 5, one end thereof being located in the recess 6 in which it is held by a locking member 10 fast to said handle. The blade 9 is formed with an intermediate portion 11 and end portions 12 and 13 of different lengths and having extremities 14 and 15 respectively of different widths and especially adapted to engage screws of different sizes, the extremity 14 being constructed for use with small screws having heads provided with short narrow slots, while the extremity 15 is constructed for use with relatively larger screws provided with longer and wider slots. Two sets of oppositely disposed grooves 16 and 17 are provided formed in the opposite edges of the blade 9 and with the width of the intermediate portion 11 of the blade 9 upon the inner side of each set of grooves is greater than the width of that portion of the blade upon the outer side of said grooves. This condition results in forming shoulders 18 and 19 upon the blade 9 which abut against the locking member 10 when the blade is inserted therethrough as illustrated in Figures 2 and 3, and the locking member therefore constitutes a stop to position the blade when the latter is being inserted within the recess 6 of the handle.

The locking member 10 is rotatably mounted upon the handle 5 and is attached thereto by screws 20 which pass through segmental shaped slots 21 provided in said locking member, said slots being of sufficient length to allow said locking member to be rotated through an arc of 90°. A central opening 22 is provided in the locking member 10 and from the opposite sides of said opening extend grooves 23 which cooperate with the opening 22 to provide a passage through which the blade 9 may be inserted as illustrated in Figs. 2 and 3 after which said locking member 10 is rotated in the direction of the arrow *a*, Fig. 3, to the position illustrated in Fig. 4, at which time the locking member enters the grooves 16 or 17 as the case may be, and the blade 9 is securely held within the handle 5.

If it is desired to utilize the tool in connection with a large sized screw the blade 9 is positioned in the handle 5 as illustrated in Fig. 1. If, however, the device is to be used in connection with small sizes of screws, the locking member 10 is rotated in the direction of the arrow *b*, Fig. 4 until the grooves 23 align with the blade 9 as illustrated in Fig. 3. The blade 9 is then removed from the handle and reversed, the

end portion 13 thereof being inserted within the handle until the shoulders 19 engage the upper surface of the locking member, after which said locking member is rotated in the direction of the arrow *a*, Fig. 3, until it reaches the position illustrated in Fig. 4.

While I have chosen to illustrate and describe my invention in connection with a screw driver, it is evident that other tools having double-ended blades may be constructed and the end portions of the blades thereof may be provided with other forms of work engaging extremities without departing from the spirit of this invention and which fall within the scope of the appended claims.

I claim:

1. A tool having, in combination, a handle provided with a longitudinal recess therein, a blade located within said recess and projecting outwardly therefrom, said blade being provided with a groove formed therein an edge of said blade at one side of said groove projecting beyond said edge at the other side of said groove and thereby forming a projecting shoulder and a locking member fast to said handle and adapted to project into said groove and thereby fasten said blade within said handle, said locking member engaging said shoulder when said blade is inserted within said handle and thereby limiting the extent to which said blade may be inserted therein.

2. A tool having, in combination, a handle provided with a longitudinal recess therein, a blade located within said recess and projecting outwardly therefrom, said blade having a work engaging tip at each extremity and being provided with a plurality of sets of oppositely disposed grooves formed in the opposite edges thereof, a disc constituting a locking member rotatably mounted upon the end surface of said handle surrounding said blade and adapted to be rotated into the grooves of said blade to fasten said blade within said handle, said locking member being provided with a plurality of segmental slots formed therein and means extending through said slots into said handle adapted to fasten said locking member to said handle and limit the rotary movement of said locking member thereon.

3. A tool having, in combination, a handle provided with a longitudinal recess therein, a blade located within said recess and projecting outwardly therefrom, said blade having a work engaging tip at each extremity and being provided with a plurality of sets of oppositely disposed grooves formed in the opposite edges thereof and having an enlarged intermediate portion between said sets of grooves thereby forming projecting shoulders adjacent to said grooves, a locking member rotatably mounted upon said handle surrounding said blade and adapted to be rotated into the grooves of said blade to fasten said blade within said handle, said locking member being provided with a plurality of segmental slots formed therein and means extending through said slots into said handle adapted to fasten said locking member to said handle and limit the rotary movement of said locking member thereon, said locking member also constituting a stop to engage said shoulders and thereby limit the extent to which each end of said blade may be inserted within said handle.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CARL M. FLODIN.

Witnesses:
FRANKLIN E. LOW,
HAZEL F. LA MUDGE.