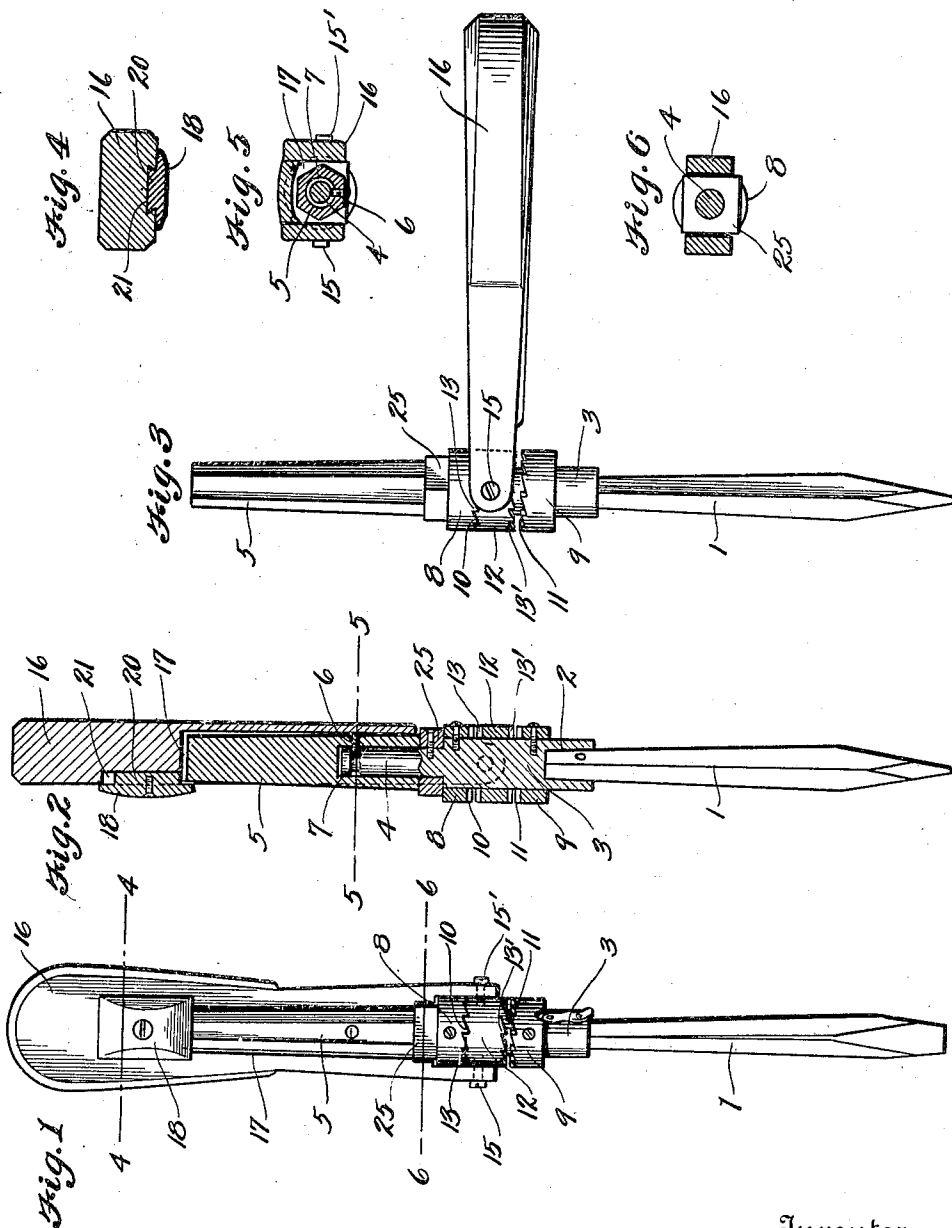


Dec. 26, 1922.

1,440,123

A. ANDERSON.
SCREW DRIVER.
FILED JULY 16, 1921.



Inventor
ANDREW ANDERSON
By *Richard J. Cook*
Attorney

UNITED STATES PATENT OFFICE.

ANDREW ANDERSON, OF TACOMA, WASHINGTON.

SCREW DRIVER.

Application filed July 16, 1921. Serial No. 485,181.

To all whom it may concern:

Be it known that I, ANDREW ANDERSON, a citizen of the United States, and a resident of the city of Tacoma, county of Pierce, State of Washington, have invented certain new and useful Improvements in Screw Drivers, of which the following is a specification.

This invention relates to improvements in screw drivers, or the like, and has for its principal object to provide a screw driver having a ratchet driving handle that may be moved to a certain position, which permits operation of the screw driver in the usual manner or to another position which permits it to be used for the purpose of driving through the ratchet mechanism.

Other objects of the invention reside in certain details of construction of the device, which permits pressure to be applied to the driver while the ratchet mechanism is in use, and the locking mechanism for holding the handle against rotation and in position while being used in the ordinary manner.

In accomplishing these and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Fig. 1 is a side view of a screw driver constructed according to the present invention.

Fig. 2 is a longitudinal, sectional view of the same.

Fig. 3 is a side view, showing the handle member moved to position for actuating the driver by means of the ratchet mechanism.

Fig. 4 is a transverse section, taken on the line 4—4 in Fig. 1, illustrating the manner of mounting the handle retaining latch.

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

Fig. 6 is a section on the line 6—6 in Fig. 1, showing the locking means whereby the driver is prevented from rotating within the handle.

Referring more in detail to the drawings—

1 designates a screw driving bit that is removably fitted within a squared socket 2 within the lower end of a bit stock 3; the latter being provided, at its upper end, with a centrally extending shank 4 whereon a handle member 5 is rotatably mounted and held by means of a set screw 6 which ex-

tends through the handle and into an annular groove 7 about the shank.

Fixed on the stock 3, in spaced apart relation, are collars 8 and 9 provided on their adjacent edges with oppositely facing ratchet teeth 10 and 11. Also mounted to rotate on the stock, between the collars 8 and 9, is a collar 12 having teeth 13—13' at its opposite edges that may be moved, by shifting the collar longitudinally on the stock, into contact with the teeth of either of the collars 8 or 9.

Pivotally fixed to the opposite sides of the collar 12, by means of screws, or pins, 15—15', are the opposite side portions of a handle 16. This is provided with a longitudinal pocket 17 along one side, wherein the handle member 5 is normally disposed, and slidably mounted on the handle, adjacent its upper end, is a latch block 18 that may be moved so that its lower end will overlie the end of the pocket 17 and upper end of the handle 5 to prevent the handle 16 from folding outwardly. The block 18 is provided on its under side, with a rib that is dove-tailed within a slot 21 formed within the handle and which holds the block to the handle.

Fixed on the extension 4 of the stock 3, adjacent the collar 8, is a squared head which is adapted, when the handle 16 is in position as shown in Fig. 1, to fit between the opposite side members of the handle, so that the stock 3 will be held thereby against rotation within the handle 16 when the latter is turned.

Assuming that the different parts of the device are so constructed and assembled, in using the same in the manner in which screw drivers are ordinarily used, the handle 16 is positioned to enclose the handle member 5 and the latch 18 is adjusted to hold the parts in this position. Now since the squared head 25 that is fixed to the shank 4, fits tightly between the opposite side members of the handle 16, it will be seen that rotation of the handle drives the bit 1 through this connection and strain is relieved from the ratchet connection and the connection of the handle with the collar 12.

If it is desired to drive the device by means of the ratchet mechanism, the latch block 18 is moved upwardly so that the handle 16 will be released and can be moved to a position perpendicular to the bit 1, as

shown in Fig. 3. The handle 5 may then be grasped and through it pressure may be applied to hold the bit 1 in position while it is rotated in either direction by operating the handle 16. The direction of rotation depends on the position of the collar 12 with respect to the collars 8 and 9.

It is apparent that such a device could be put to many uses and that other tools could be used interchangeably with the bit 1.

It is also apparent that various changes could be made without departing from the spirit of the invention and, for this reason, I do not wish to be limited only to the details illustrated.

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent, is:

A device of the class described comprising a bit stock having a socket at one end and a shank extended from its opposite end and having a bit applied to said socket and a handle member rotatably fixed on the shank,

collars fixed in spaced relation on the stock having oppositely facing ratchet teeth on their adjacent edges, a collar rotatable on the stock between the first-named collars and having teeth at its opposite edges separately engageable with the teeth of the latter, a laterally directed handle pivotally fixed to the said rotatable collar whereby the latter may be actuated to engage the fixed collars and having a pocket in the side thereof adapted to receive the first-named handle therein when the said laterally extending handle is moved to extend in the direction of the first-named handle, a latch block mounted slidably upon the ratchet operating handle movable to lock the first-named handle within the pocket and a head fixed on the shank to engage the ratchet operating handle to lock the stock against rotation thereon.

Signed at Seattle, Washington, this 9th day of July 1921.

ANDREW ANDERSON.