

W. B. LANE.
 SCREW DRIVER.
 APPLICATION FILED JULY 29, 1908.

981,202.

Patented Jan. 10, 1911.

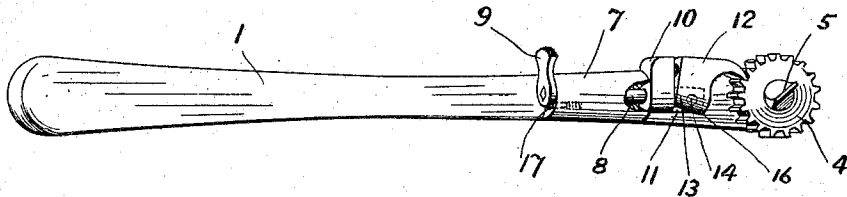


FIG. 1.

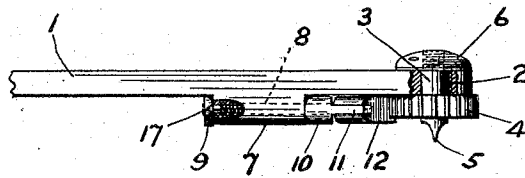


FIG. 2.

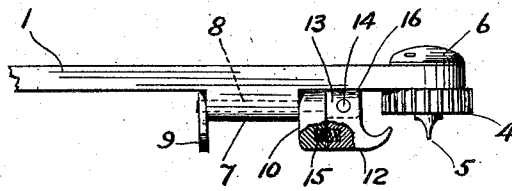


FIG. 3.

WITNESSES:

Robt. K. Licht
Jos. G. Wemyss jr.

INVENTOR

Wiley B. Lane

BY

Charles N. Butler

ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLEY B. LANE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO
J. C. McCARTY & CO., A CORPORATION OF NEW YORK.

SCREW-DRIVER.

981,202.

Specification of Letters Patent. Patented Jan. 10, 1911.

Application filed July 29, 1908. Serial No. 445,900.

To all whom it may concern:

Be it known that I, WILLEY B. LANE, a citizen of the United States, residing in the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a Screw-Driver.

This invention is an improved screw driver having a blade operated by a peculiar ratchet mechanism provided with a reversible pawl. In the preferred construction the blade is fixed to a ratchet wheel, with radial teeth, having a journaled connection with the handle and coacting with the ratch is a pawl having a revoluble connection with the handle whereby the action of the pawl can be reversed to reverse the action of the blade.

The characteristic features of the improvements will fully appear by reference to the following description and the accompanying drawings in illustration thereof.

In the drawings, Figure 1 is a perspective view of a screw driver embodying my improvements, Fig. 2 is an elevation at right angles to the view shown in Fig. 1, and Fig. 3 is an elevation showing the pawl turned out of engagement with the ratch.

The mechanism, as illustrated, comprises the handle 1 having the bearing 2 extending transversely through the head thereof, and revoluble in this bearing is the journal 3 of the radially toothed ratchet wheel 4 and the blade 5 fixed axially with relation thereto, the journal being held in the bearing by a button-nut 6.

A bearing 7, extending longitudinally of the handle, holds the journal 8, which is revoluble conveniently by means of the lug 9 fixed on the rear thereof. A transversely disposed head 10 is fixed to the forward end of the journal 8 and an extension 11 projects beyond the head. A pawl 12 is provided with the transversely disposed bifurcations 13 which are yoked on the extension 11 and connected in rocking engagement therewith by the pin 14; the pawl being thus adapted to oscillate by reason of its connection with the extension 11 as a fulcrum or bearing. The head 10 engages the heel of the pawl to limit its rearward movement; a spring 15, disposed between the head and the pawl, throws the latter forward to automatically engage it with

the ratch; and to draw and hold back the pawl in the operation of reversing so that it will drop into position to engage the ratchet teeth, the terminals of its bifurcations 13 are beveled so that projecting forward parts 16 thereof make contact with the adjacent surface of the lever.

A spring pressed catch 17 may be employed, if desired, to engage the part 9 and hold the pawl in its several positions.

It will be observed that my construction provides ready means for employing blades of different sizes, the ratch and blade with their journal being detachable by merely detaching the nut.

Having described my invention, I claim:

1. In a screw driver, a handle, a ratch having a revoluble connection with said handle, a journal having a revoluble connection with said handle, and a pawl pivotally connected with said journal and adapted to engage said ratch.

2. In a screw driver, a handle, a ratch having a journal revoluble in a bearing in said handle, a blade fixed axially in relation to said ratch, a head having a journal revoluble in a bearing on said handle, a pawl fulcrumed on a projection of said head, and a spring supported by said head for throwing said pawl into engagement with said ratch.

3. In a screw driver, a handle, a journaled ratch carried by said handle, a blade fixed to said ratch, a journaled device carried by said handle, a pawl having a laterally projecting part pivotally connected to said device, and a spring adapted for throwing said pawl into engagement with said ratch, said pawl having means whereby it is thrown back on revolving its bearing.

4. In a screw driver, a handle having a transversely extending bearing and a longitudinally extending bearing, a ratch having a journal revoluble in said transversely extending bearing, a journal revoluble in said longitudinally extending bearing, a pawl pivoted to said journal and means for effecting the engagement of said pawl with said ratch.

5. In a screw driver, a handle having a transversely extending bearing and a longitudinally extending bearing, a ratch having a journal revoluble in said transversely extending bearing, a head having a journal

revoluble in said longitudinal bearing and a bearing projecting oppositely from its said journal, a pawl having bifurcations pivotally connected to said last named bearing, and a lug on the journal of said head for reversing said pawl.

5

In witness whereof I have hereunto set

my name this 25th day of July, A. D. 1908, in the presence of the subscribing witnesses.

WILLEY B. LANE.

Witnesses:

ROBERT JAMES EARLEY,
JOS. G. DENNY, Jr.