(No Model.)

# T. TROY.

## REVERSIBLE SCREW DRIVER.

No. 366,439. Patented July 12, 1887.

Fig. 1.

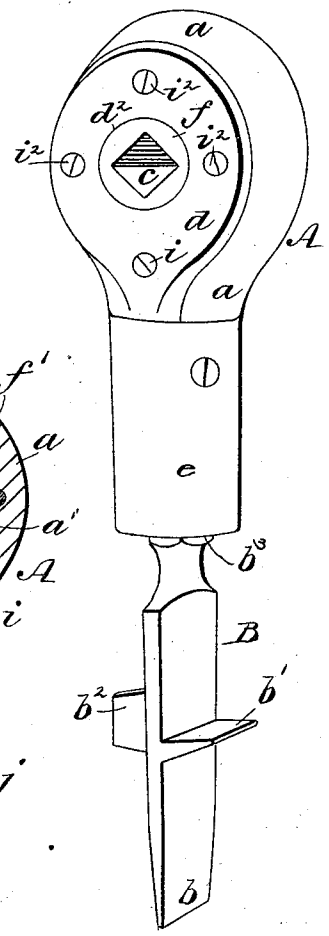



Fig. 2.

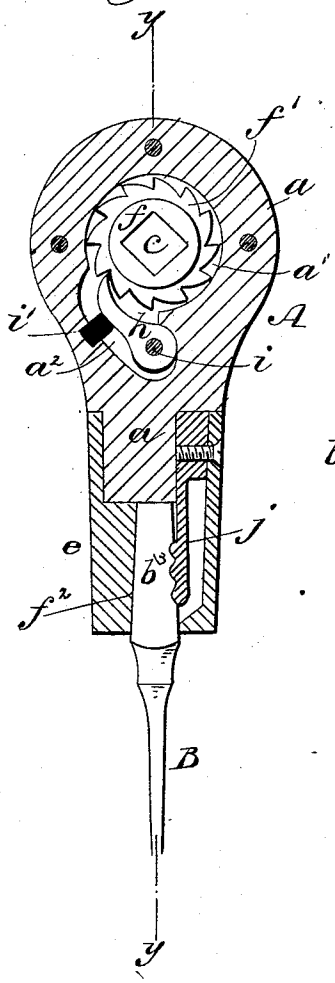
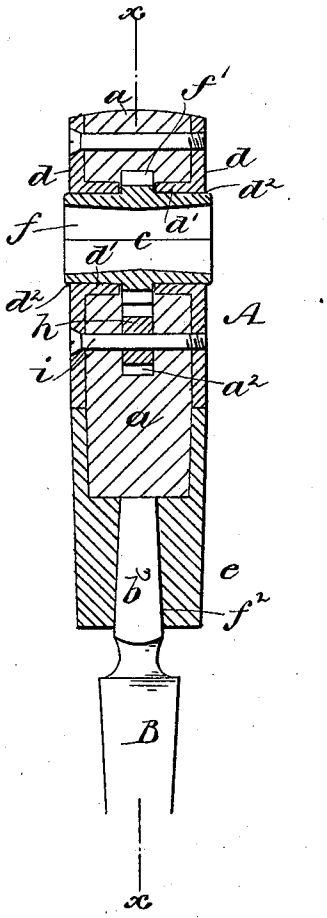



Fig. 3.




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# UNITED STATES PATENT OFFICE.

THEODORE TROY, OF THREE RIVERS, MICHIGAN.

## REVERSIBLE SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 366,439, dated July 12, 1887.

Application filed July 21, 1885. Serial No. 172,200. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE TROY, of Three Rivers, in the county of St. Joseph and State of Michigan, have invented a new and Improved Reversible Screw-Driver, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective of my invention. Fig. 2 is a sectional elevation of the same on the line *x x* of Fig. 3, and Fig. 3 is a transverse sectional elevation taken on the line *y y* of Fig. 2.

The invention will first be described in connection with the drawings and then pointed out in the claims.

A represents the handle; and B represents the bit, which is formed with the main blade *b* and side blades, *b' b²*, either or both of them, as shown in Fig. 1, adapting the bit to be used in various positions—that is, applied longitudinally or sidewise to the screw—as circumstances may require.

The handle A is formed with a transverse socket, *c*, adapting it to receive in practice a bar or lever for the manipulation of the handle when either of the blades *b'* and *b²* is used—*i. e.*, when the main blade is applied sidewise to the screw—and the handle is composed of the wooden portion *a*, cheek-pieces *d d*, and ferrule *e*, which latter is formed with the socket *f²* in line with the longitudinal axis of the handle to receive the shank *b³* of the screw-driver bit.

The cheek-pieces *d* are practically annular in form, having the circular openings *d²* formed in them, and they are each formed with an inwardly-projecting circular flange, *d'*, that form bearings for the circular casting *f*, in which the socket *c* is formed.

The casting *f* is formed with ratchet-teeth *f'* around the center of its outer surface, and the wooden portion *a* of the handle A is recessed, as shown at *a'*, Fig. 2, to receive the casting *f* and ratchet *f'*, and the said wooden portion is also recessed at *a²* to receive the pawl *h*, which is pivoted on the bolt *i* and caused to engage with the ratchet-teeth *f'* by a rubber spring, *i'*, placed in the recess *a²* back of the pawl.

The cheek-pieces *d* are held to the wooden portion *a* of the handle by the bolt *i*, above mentioned, and other bolts, *i²*, and in the ferrule *e* is placed the spring *j*, for holding the bit B in the socket *f²*, as shown clearly in Fig. 2.

I taper the socket *c* at both ends, as shown clearly in Fig. 3, so that it may form a double socket, one socket receiving the bar or lever when one side of the bit is presented to the head of the screw in order to apply or use the blade *b'*, while the other socket receives the bar or lever when the opposite side of the bit is presented to the head of the screw in order to apply or use the blade *b²*, according as circumstances may require.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The screw-driver provided with the ordinary blade, having the lateral blades with their bits disposed in planes at right angles to each other, substantially as and for the purpose set forth.

2. The screw-driver handle having the ordinary socket, *f²*, and the reversing-socket *c*, said sockets being disposed at opposite ends of the handle and ranging in planes at right angles to each other, substantially as and for the purpose set forth.

THEODORE TROY.

Witnesses:
F. P. L. BONNEY,
RALEIGH BREWER.