

(No Model.)

W. F. PATTERSON & H. B. STILLMAN.

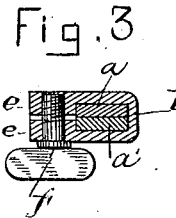
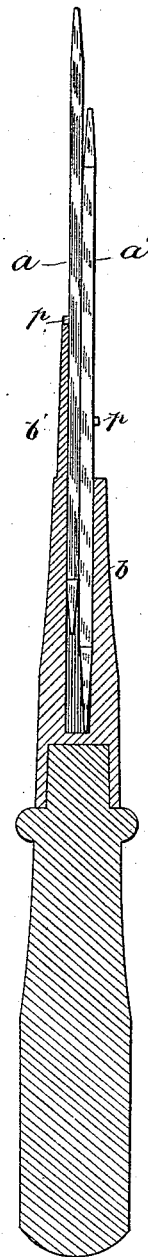
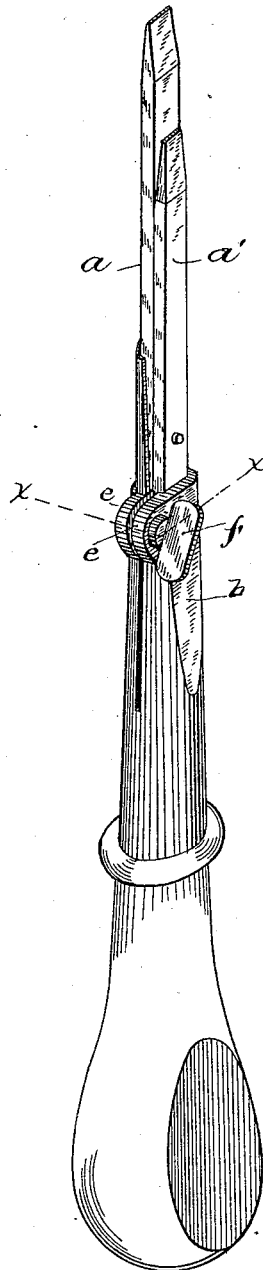
SCREW DRIVER.

No. 346,603.

Patented Aug. 3, 1886.

Fig. 1.

Fig. 2.



WITNESSES:

H. Brown.
H. M. Batchelder

INVENTORS:

W. F. Patterson
H. B. Stillman
by Wright & Brown Attys.

UNITED STATES PATENT OFFICE.

WILLIAM F. PATTERSON, OF BOSTON, MASSACHUSETTS, AND HENRY
B. STILLMAN, OF NEW YORK, N. Y.

SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 346,603, dated August 3, 1886.

Application filed October 23, 1885. Serial No. 180,732. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM F. PATTERSON, of Boston, county of Suffolk, State of Massachusetts, and HENRY B. STILLMAN, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Screw-Drivers, of which the following is a specification.

This invention relates to that class of screw-drivers in which two reversible blades are detachably secured to one and the same holder or socket, each blade having its ends differently shaped and each end having a different shape from the other ends, so that four different screw-drivers are combined in one.

The invention consists in the improved holder hereinafter described for the reversible and interchangeable blades.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of our improved screw-driver. Fig. 2 represents a longitudinal section of the same. Fig. 3 represents a transverse section on line *x x*, Fig. 1.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a a'* represent the two screw-driver blades, which, as heretofore in this class of screw-drivers, are double ended and differently shaped at each end, and are detachably held by a holder, *b*, so that each can be reversed to present either end as the operating end, the holder having a shoulder or extension, *c*, which supports a pin or dowel on the blade next to it, thus holding said blade in advance of the other, as hereinafter described, so that each blade is interchangeable with the other.

The holder *b*, to which the present improvement is confined, is composed of a socket having a slit at one side, as shown in Figs. 1 and 3, and provided with ears *e e* at opposite sides of the slit. In said ears is a thumb-screw, *f*, which when tightened compresses the portion of the socket in which the slit is formed against the blades *a a'*, thus securely holding said blades by a clamping pressure. To release said blades it is only necessary to loosen the screw, when the blades may be readily removed. The holder is provided at one side

with an extension, *b'*, which bears against the outer side of one of the blades, and preferably has lips or flanges at its edges projecting over the edges of the blade against which it bears. Each blade has a short pin, *p*, projecting outwardly from its outer side. The pin of the blade next to the extension *b'* bears against the outer end of said extension, said blade being thereby prevented from entering the socket as far as the other blade, and is thus held in working position.

The extension *b'* and the pins *p p* on the blades may be used as the means for holding one blade farther projected in connection with other means for clamping the blades—for example, the conical sleeve or nut shown in the patent granted to William F. Patterson, February 24, 1874, No. 147,785. We do not limit ourselves, however, to the extension *b'* and pins *p* as the means for holding one blade farther projected than the other, as, if desired, a shoulder may be formed within the socket at one side thereof, to arrest the inner end of one blade and prevent it from entering the socket so far as the other blade, as shown in the above-named Letters Patent to W. F. Patterson.

It will be seen that by our improvements we produce a simple, strong, and convenient screw-driver.

We claim—

1. The combination of the handle, provided with the split socket having an ear on each side of the slit of the split portion, and one of its sides extended and adapted to support and hold one of the blades farther projected than the other, a thumb-screw adapted to operate as a clamp in said ears, and the detachable blades provided with devices adapted to be engaged by said extended side, as set forth.

2. The combination of the handle, provided with the split socket having an ear on each side of the slit of the split portion, said socket having its blade-supports so constructed that one blade shall be held farther projected than the other, a thumb-screw adapted to operate as a clamp in said ears, and the detachable blades, as set forth.

3. The combination of the handle and its

socket, the latter provided with the extended
side *b'*, the blades *a a'*, each provided with an
outwardly-projecting pin, *p*, adapted to rest
upon the upper end of said extended side of
5 the socket, and means, as specified, for clamp-
ing said blades in the socket, as set forth.

In testimony whereof we have signed our
name to this specification, in the presence of

two subscribing witnesses, this 11th day of
August, 1885.

WILLIAM F. PATTERSON.
HENRY B. STILLMAN.

Witnesses:

C. F. BROWN,
H. BROWN.