

W. M. BENZING & H. GIMBER.
SCREW DRIVER.

APPLICATION FILED MAY 6, 1903.

NO MODEL

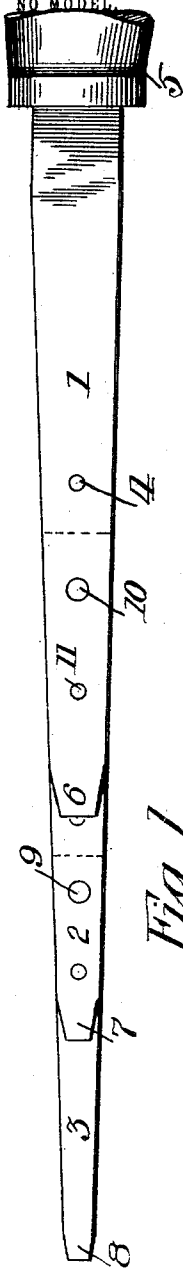


Fig. 1.

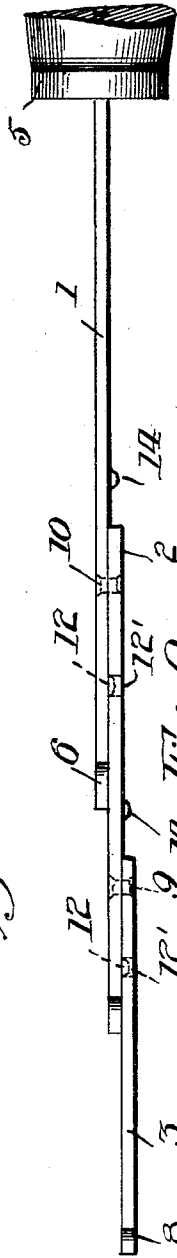


Fig. 2.

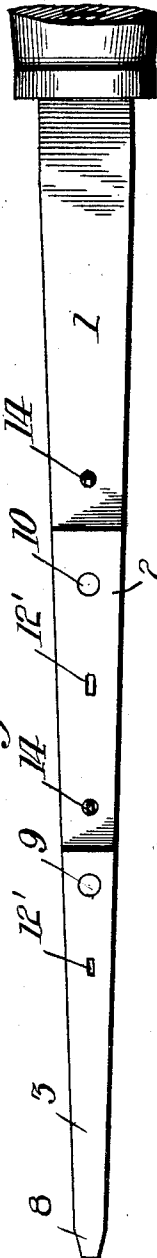


Fig. 3.

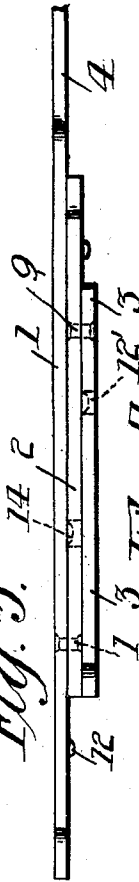


Fig. 4.

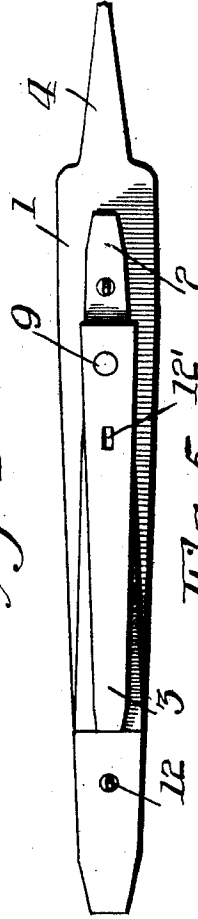


Fig. 5.



Fig. 6.

Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM M. BENZING AND HARRY GIMBER, OF PITTSBURG,
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SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 737,897, dated September 1, 1903.

Application filed May 6, 1903. Serial No. 155,836. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM M. BENZING and HARRY GIMBER, citizens of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Screw-Drivers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in screw-drivers; and the primary object of the invention is to provide a plurality of different-sized blades all pivotally connected together, whereby the driver may be altered or made of varying length for use under different conditions and for use on different-sized screws.

To this end the invention consists of a plurality of members pivotally attached together and adapted to be extended or folded into alinement with each other. Means is provided for holding the members in the extended position, and means may also be used for holding the members in the folded position, provided it be necessary. To the major or master member a suitable handle is attached.

In describing the invention in detail reference will be had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference indicate similar parts throughout the different views of the drawings, in which—

Figure 1 is a plan view of our improved screw-driver with the members in the extended position, showing the handle partly broken away. Fig. 2 is a side elevation of the same. Fig. 3 is an underneath plan view thereof. Fig. 4 is a side elevation with the handle removed, showing the members in the folded position. Fig. 5 is an underneath plan view thereof, and Fig. 6 is a detached enlarged detail perspective view of one of the securing-studs.

To put our invention into practice we provide two or more members, the present illustration showing three members, and designated herein as 1, 2, and 3. The major or master member 1 is provided on its rear end with a suitable tang 4 to engage in a suitable handle 5. These members are of different di-

mensions and are made with successively-decreasing driving-points 6, 7, and 8, respectively. The member 2 is pivotally attached to the member 3 by a pivot-pin or rivet 9 and also to the member 1 by a pivot-pin or rivet 10. It will thus be seen that the member 3 may be folded into alinement with the members 2 and 1, and the member 2 will then be in position for use, or when both members 2 and 3 are extended, as shown in Figs. 1, 2, and 3, the member 3 may be used. If it is desired to have a shorter driver, then both members 2 and 3 may be folded into alinement with member 1 and the latter will be in position for use. It is preferable to construct the driver-points varying in size whereby the device may be used on different-sized screws.

In order to hold the members extended and prevent the joints "breaking" when the screw-driver is being used, we provide bosses on the different members to engage in sockets on the different members. Where the members are made of thin steel which can be stamped, the bosses may be formed by stamping one member so as to produce a boss on the underneath face thereof, which engages in a socket provided therefor in the member pivoted thereto. However, where the members are formed of steel of too great a thickness to permit of such stamping of these bosses and sockets we may employ a stud 11, which is countersunk in the member and is provided on its outer face with a boss 12 to engage with a socket 12' in the members. One of these bosses will be carried by the member 2 to engage in a socket provided therefor in the member 3 and a boss will be carried by the member 1 to engage in a socket provided therefor in the member 2. It may be desired to provide means for also holding the members in the folded position, and to this end we may provide bosses 14 on the members 1 and 2 to engage in the sockets carried in the members 3 and 2, respectively. Where, however, the members are made of tool-steel and neatly fitted together, it has been found that the means for holding the members in the folded position is not absolutely necessary, as the pivot may be made tight enough to normally hold the members in the folded

position unless lateral pressure is applied thereto to extend them out into position for use.

5 By such construction it will be observed that we provide a driver readily altered to different lengths, so as to be used under different conditions, and while we have herein shown and described the invention in detail as it is practiced by us yet it will be evident
10 that various changes may be made in the details of construction without departing from the general spirit of our invention.

15 Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In combination with the handle of the stationary member, a plurality of members projecting one beyond the other, and each having its rear end pivotally secured to the forward end of the member lying adjacent thereto, and means for holding said members in their adjusted positions.

In testimony whereof we affix our signatures in the presence of two witnesses.

WILLIAM M. BENZING.
HARRY GIMBER.

Witnesses:

H. C. EVERT,
E. E. POTTER.