B. L. BUDD.

SCREW-DRIVER.

No. 190,119. Patented May 1, 1877.

Fig. 1.

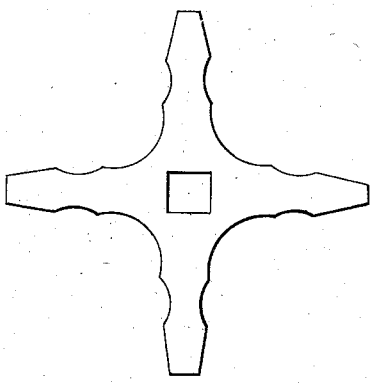


Fig. 3.

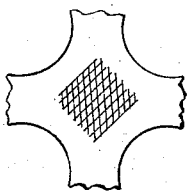
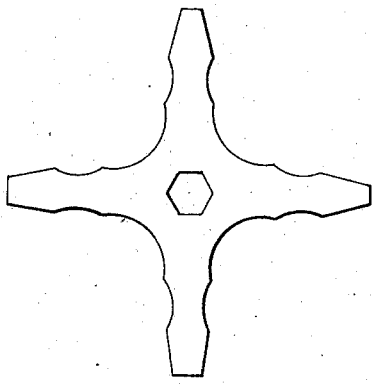


Fig. 2.



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UNITED STATES PATENT OFFICE.

BERN L. BUDD, OF FAIRFIELD, CONNECTICUT.

IMPROVEMENT IN SCREW-DRIVERS.

Specification forming part of Letters Patent No. **190,119**, dated May 1, 1877; application filed March 17, 1877.

To all whom it may concern:

Be it known that I, BERN L. BUDD, of the town and county of Fairfield, in the State of Connecticut, have invented a new and useful Improvement in Screw-Drivers, which improvement is fully set forth in the annexed specification, reference being had to the accompanying drawings.

The object of my invention is to furnish a screw-driver, more particularly for sportsmen to carry on their persons, in the belt, vest-pocket, or game-sack, with which, in case it becomes necessary to take a gun apart, to remove a lock, or to tighten or loosen a troublesome screw, he can do so in the field, or wherever he may be, without being obliged to return to headquarters, where his kit of gun-cleaning implements is kept.

To this end it is important, first, that the screw-driver should be neither large nor bulky, but at the same time strong, powerful, and easily stowed away without occupying too much space. It should also be adapted to different sizes of screws, so that the one implement may answer for every screw in the gun.

In working up the invention, I have found that a slight modification of the tool makes it a very desirable instrument to accompany sewing or knitting machines, or other small pieces of mechanism where screws and nuts of various sizes are used in their construction.

I have found that sheet-steel of about eight one-hundreths of an inch in thickness, of excellent quality, is the best material from which the screw-driver should be made. This offers advantages in the manufacture over other forms of material. I take a first-rate quality of sheet-steel, and cut it into strips of such width as will allow of the screw-drivers being cut out of it with the smallest amount of waste. I then remove the scale from these strips, by grinding on both sides. These strips are then taken to a powerful press, and with a suitable cutting-die and punch, they are cut out from the strip, in form, very near what the finished screw-driver presents. These blanks are then finished upon suitable-shaped emery-wheels upon their edges and surfaces, and the hole so essential, as we shall presently see, to the successful operation of the implement, is formed in the center.

After this the implement is hardened and tempered by any of the well-known processes, and, finally, polished, and, if considered desirable, may be plated.

I have found that the blades of the tool may be advantageously three, or preferably four, in number, and of such size that it can be contained in a circle of 2.75 inches in diameter.

I desire particularly now to call attention to the hole in the center of the screw-driver. Where it is used as a gun screw-driver, it may as well be round as of any other shape; but where it is to accompany a sewing-machine, the central hole may be of a shape and size to make it fit any nut upon the machine, and thus form a wrench.

Figure 1 is a plan view of my improved screw-driver, and Figs. 2 and 3 modifications of the same.

Now, if this screw-driver is taken into the hand, and held as one would naturally grasp it to loosen a stubbornly-fast screw, it will be observed that first this central hole forms a firm bearing for the thumb, that the forefinger presses firmly upon the one, and the middle finger upon the other of the lateral blades, and the remaining idle blade opposite to the one in use, reaches toward the palm of the hand, and serves to steady the instrument.

It will be at once noticed that a tremendous amount of force can be exerted with a comparatively small implement. The hole in the center of the screw-driver then becomes of importance, and adds materially to the successful working of the instrument.

I am aware that screw-drivers with more than one blade are not new, and such I do not claim; but

What I claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, a screw-driver consisting of a flat piece of metal provided with three or more uniformly-diverging blades of different sizes, and having an enlarged central portion, and a perforation in said central part adapted to serve as a wrench, constructed to operate as shown and described, and for the purpose set forth.

BERN L. BUDD.

Witnesses:

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