(No Model.)

J. S. WORKS.

SCREW DRIVER.

No. 302,308. Patented July 22, 1884.

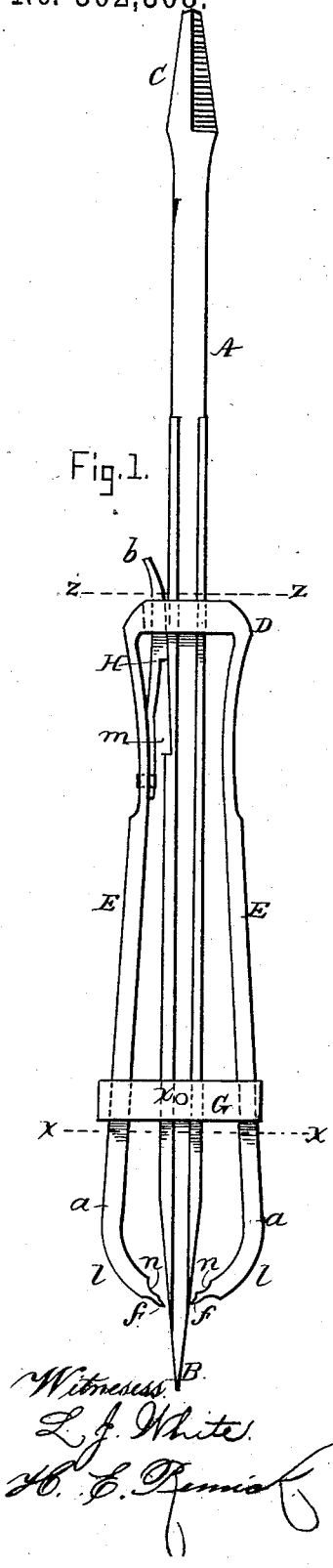

Fig. 1.

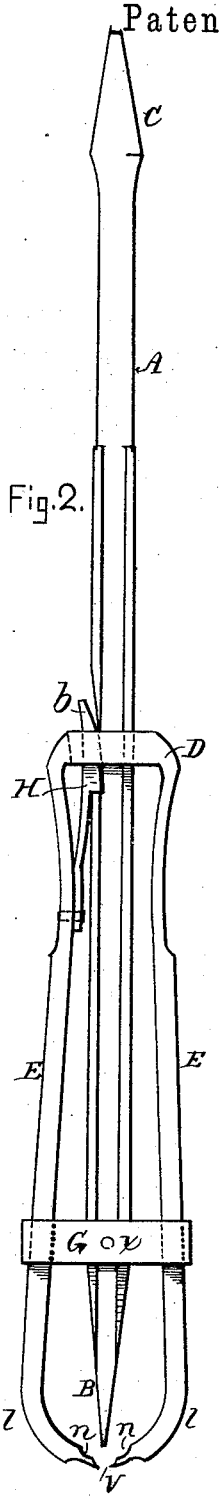

Fig. 2.

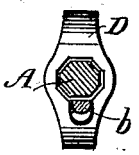

Fig. 3.

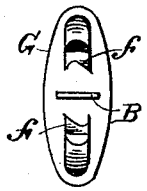

Fig. 4.

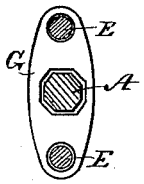

Fig. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

JOTHAM S. WORKS, OF ABBOT, MAINE, ASSIGNOR TO CHARLES ALBERT SHAW, OF BOSTON, MASSACHUSETTS.

SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 302,308, dated July 22, 1884.

Application filed October 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOTHAM S. WORKS, of Abbot, in the county of Piscataquis, State of Maine, have invented a certain new and useful Improvement in Screw-Drivers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation representing the countersink raised; Fig. 2, a like view representing it depressed; Fig. 3, a vertical transverse section taken on the dotted line *z z;* Fig. 4, an end view, and Fig. 5 a transverse section, taken on the dotted line *x x.*

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to a screw-driver provided with means for countersinking or cutting out a hole for the reception of the screw-head; and it consists in a novel contruction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more effective device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation, its extreme simplicity rendering an elaborate description unnecessary.

In the drawings, A represents the body of the screw-driver; B, the point, and C the shank, which is of the usual construction, and adapted to fit an ordinary bit stock or handle.

Fitted to slide longitudinally on the body A there is a cross-bar, D, provided at its outer ends with the spring-arms E. These arms are arranged nearly in parallelism with the body A, and pass loosely through the outer ends of a bar, G, which is rigidly attached to the body by the bolt *x*. The bar G is somewhat longer than the bar D, so that the arms E flare slightly, or are separated to a greater extent at *a*, near their lower or free ends, than they are where they join the bar D.

A notch, *m*, is formed in the body A, and attached to the inner side of one of the arms there is a spring-catch, H, adapted to engage this notch, the upper or free end of the catch passing through the bar D and being bent outwardly to form the thumb-piece *b*.

The lower or free ends of the arms E are bent inwardly, as shown at *l*, and provided with bits or cutting-edges *f*, adapted to bore or cut away the wood for the reception of the head of the screw.

In the use of my improvement the bar D is pushed forward on the body A until the catch H engages the notch *m*, the bits *f* being then advanced beyond the point B, as shown in Fig. 2. The screw is then inserted in the driver, with its head above the bits or cutters *f*, its body passing through the space *v* between the same. The point B is then passed into the slot in the head of the screw, and the handle or bit-stock operated to turn the driver. When the screw has been turned down or in sufficiently to bring the bits *f* into contact with the wood, the wood will be countersunk or cut away in advance of the head of the screw, and when the countersink or hole for the reception of the screw has been properly formed the bar D is slipped upwardly on the body A, bringing the bits *f* into the position shown in Fig. 1, after which the screw may be fully turned down in a manner which will be readily obvious without a more explicit description. The inner faces or sides of the bits are cut out or curved, as shown at *n*, to prevent them from interfering with the head of the screw, their lower or outer faces being also curved to correspond with the contour or shape of the hole or countersink to be formed for the reception of the screw-head.

The bar D being shorter than the bar G, it will be obvious that when the bar D is slipped down or forward on the body A the arms E will be thrown apart, causing the bits *f* to separate and permitting them to pass over the body of the screw.

Having thus explained my invention, what I claim is—

The combination, substantially as set forth, of a screw-driver provided with a recess, a bar adapted to slide thereon, arms depending from said bar, having inwardly-bent ends provided with countersinking cutting-blades, a yoke for holding said arms, and a catch attached to one of said arms and adapted to lock into the recess of the screw-driver, substantially as described.

JOTHAM S. WORKS.

Witnesses:
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WM. WEYMOUTH.