

S. R. KNEELAND.
Screw-Drivers.

No. 145,506.

Patented Dec. 16, 1873.

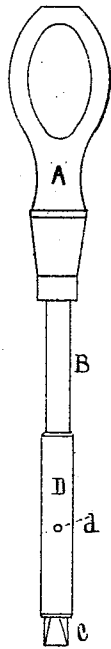


Fig. 1.

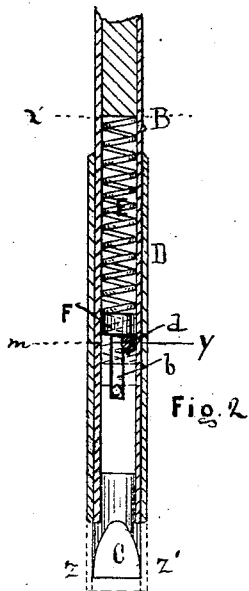


Fig. 2.

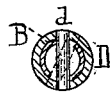


Fig. 3.

Witnesses

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SYLVANUS R. KNEELAND, OF CHARLESTOWN, MASSACHUSETTS.

IMPROVEMENT IN SCREW-DRIVERS.

Specification forming part of Letters Patent No. **145,506**, dated December 16, 1873; application filed November 11, 1873.

To all whom it may concern:

Be it known that I, SYLVANUS R. KNEELAND, of Charlestown, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Screw-Drivers; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming a part of this specification, in which—

Figure 1 is a side elevation of my improved screw-driver, with the casing or thimble raised. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a transverse sectional view taken at the dotted line *m*, Fig. 2.

It is well known that in the use of the ordinary screw-driver it frequently happens that it slips from the slot in the head of the screw, and does great injury to the article into which the screw is being driven. Sometimes this injury cannot be repaired without great cost and trouble, especially in fine car-work, piano-work, sewing-machine work, cabinet-work, &c. The object of my invention is to prevent accidents of this nature; and consists in providing a casing or loose thimble, so constructed and arranged that when in use it is pushed forward or downward by a spring over or beyond the point of the screw-driver, thus forming a socket, into which the head of the screw is inserted, whereby the driver is prevented from slipping from the slot in the screw-head while the screw is being driven, said casing being so arranged as to be raised and locked, as hereinafter described.

In Fig. 2, B is the body or shank of the screw-driver, which is constructed hollow, or has a hole drilled longitudinally through its center, to a point represented by the dotted line X. In this hole a coiled spring, E, is inserted, and also a loose pin or follower, F, which follower is pressed downward by the expansive action of the spring against the cross pin or bar *d*, which works in the longitudinal slot *b*, through the body of the shank, and is attached at each end to the thimble or casing D. At *y* there is a lateral slot cut at right angles to the slot *b* and on the other side of the slot *b*, and at the opposite side of the shank B, there is a corresponding lateral slot, both of these lateral slots radiating, as it were, from the center of

the shank, in such relation to each other and to the bar as to permit the thimble D to be rotated laterally to a certain extent when said bar is opposite of said slots, the expansive action of the spring pushing or pressing the bar into slight depressions or notches in the surface of the lower shelf of the same, in such a manner as to form a bayonet or lantern lock for the thimble. The point or blade C of the driver is fixed in the lower end of the shank, as shown in Fig. 2.

From the foregoing, and by reference to the drawings, it will be readily seen and understood, by those conversant with such matters, that the thimble or guard, when in position on the shank, as shown, will be pressed downward by the action of the spring on the follower until the guard assumes the position shown by the dotted lines *z z'*, in which position, if the screw-driver is used, the thimble will encircle the head of the screw, and prevent the blade or point of the driver from slipping from the slot in the screw-head while the screw is being driven.

Whenever it is desirable not to use the guard D it can be raised or pushed upwardly on the shank until the cross bar or pin arrives at the lateral slots *y*, when, by turning the thimble laterally, the bar *d* will pass from its direct path in the slot *b*, at a right angle, into the lateral slots *y*, thus keeping the thimble or guard suspended and locked on the shank, and exposing the point C, to be used in the ordinary manner, as also shown in Fig. 2.

I sometimes construct my improved screw-driver with a casing or thimble, as shown; but instead of having a spring, E, located in the interior of the shank B, I coil it around the same above the thimble, and cut a longitudinal and lateral slot through the casing, in which a pin projecting from the shank works to form an ordinary lantern or bayonet lock. I prefer, however, the method shown and described in the accompanying drawings and this specification, for the reason that when the spring-follower and cross-bar are arranged to work within the body of the driver, they are protected from injury, and are not in a position when the driver is in use to inflict injury upon the hand.

The follower, which fits loosely in the hole in the shank, but nearly fills the same, prevents

the spring from cramping or binding, as it is liable to do where the follower is not used, and the spring is allowed to act directly on the cross-bar.

Like letters refer to like parts in the different figures of the drawings.

I am aware that a patent was granted to one Martyn, February 15, 1870, for an improvement in screw-drivers, in which a screw-driver is described which has a cylinder or thimble sliding on the body of the driver; but in his device there is no lateral slot or other provision for holding or "locking" the thimble at a given point, when desired, as in mine; nei-

ther are the parts of his device in other important respects constructed or arranged like mine. I therefore do not herein claim anything whatsoever shown or described in said patent, when in and of itself considered; but

What I do claim is—

The screw-driver described, consisting of the various instrumentalities shown, constructed, arranged, and used substantially as and for the purpose set forth and specified.

SYLVANUS R. KNEELAND.

Witnesses:

E. P. BOARDMAN,

CHAS. LETTS.