

J. F. KINGWILL.
SCREW-DRIVER.

No. 177,724.

Patented May 23, 1876.

Fig. 1

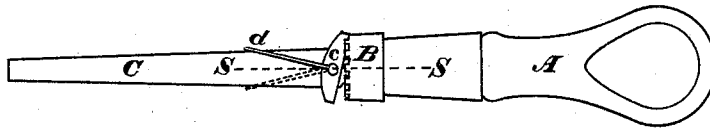


Fig. 2

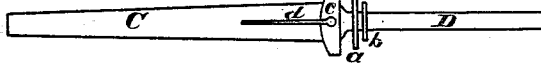
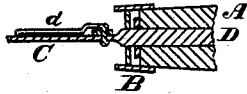


Fig. 3



Witnesses:

R. D. Ingersoll.
W. P. Noe

Inventor:

John F. Kingwill
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Atty.

UNITED STATES PATENT OFFICE.

JOHN F. KINGWILL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SCREW-DRIVERS.

Specification forming part of Letters Patent No. **177,724**, dated May 23, 1876; application filed March 15, 1876.

To all whom it may concern:

Be it known that I, JOHN F. KINGWILL, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Screw-Drivers; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention relates to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a front view; Fig. 2, view of driver without handle; Fig. 3, horizontal section of Fig. 1 from S to S.

My invention relates to screw-drivers; and consists in providing the handle with a ratchet-ferrule, and also in providing the blade with a pawl carrying a spring that is adjustable to either edge of the blade, to reverse the motion of the same in forcing the screw in or out of position, allowing the handle to remain stationary in the hand.

In the accompanying drawing, A represents the handle, of suitable material; B, ferrule, generally placed upon the lower end of the handle, to prevent the same from splitting, while in this instance teeth are cut upon or in the lower edge, that receive the pawl *c*, thus serving as an ordinary ferrule, and also as a ratchet. C is the blade, the upper end made round the distance it is to enter the handle, as represented by D; *a*, washer, fitting loosely on the rounded portion of the blade; *b*, stationary washer, secured to the rounded portion, forming a shoulder; *d*, spring, the desired length, one end of which is secured to the pawl *c*, and the opposite end bent at a right angle far enough to catch upon the edge of the blade.

In the construction of my screw-driver, I generally place the washer *a* in position first, and then secure the stationary washer *b*; the end D is then inserted in the handle; the ferrule B is then placed over the blade and forced upon the handle. The lower end, being smaller

than the top, engages firmly the washer *a*, carrying it back against the end of the handle, and holds the same firmly in position. The shoulder *b*, coming in contact with the washer, prevents the blade from disengaging the handle, but allows it to turn in either direction when required. The pawl *c* is then secured to the blade, by riveting or other suitable means, and the spring *d* attached to the pawl.

When a person desires to force a screw into position, the lower end of the spring assumes the position represented in Fig. 1. This operation causes the end of the pawl to engage the teeth upon the ferrule. The hand is then turned as far as convenient, and retains its hold upon the handle, turning the same to the point of starting; the pawl rides over the teeth, and when the hand again moves in the opposite direction, the pawl again engages the teeth, and when a screw is to be withdrawn the lower end of the spring is carried over to the opposite side. (Indicated by dotted lines, shown in Fig. 1.) This operation disengages the pawl upon that side, and causes it to engage the teeth upon the opposite side, when the operation is the same as above.

It will be observed that the strain in driving the screw or drawing it is upon the ferrule, and if the inner surface was smooth it would be liable to turn. To prevent this I cast one or more projections on the inside, that force their way into the wood where the ferrule is pressed on.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the handle A and toothed ferrule B with the blade C, pawl *c*, and shifting-spring *d*, constructed and operating substantially as described.

Signed this 28th day of February, 1876.

JOHN F. KINGWILL.

Witnesses:

R. D. INGERSOLL,
ED. M. TURNER.