



# UNITED STATES PATENT OFFICE.

W. S. GOSS, OF BALTIMORE, MARYLAND.

## IMPROVEMENT IN SCREW-DRIVERS.

Specification forming part of Letters Patent No. **80,622**, dated August 4, 1868.

*To all whom it may concern:*

Be it known that I, W. S. GOSS, of the city and county of Baltimore, and State of Maryland, have invented a new and Improved Screw-Driver; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view; Fig. 2, a cross-section through line *xx* of Fig. 3; Fig. 3, a longitudinal axial section.

In this invention the handle is made of three pieces, connected by clutches and stops in such a manner that its lower part can be turned continuously in either direction without releasing the hand from the upper part. In addition to this improvement, the blade is provided with an adjustable tool-holder, which can be employed for holding gimlets, augers, awls, &c., while inserting them into or removing them from the wood.

In the drawings, B is the blade, attached to which is a sliding tool-holder, A, through which the tapering lower end of the blade passes in the manner of a wedge. The holder is provided with a tool-socket, *a*, in which the tool is fixed and held by a set-screw, *b*. If it is desired to set the slide A down lower toward the end of the blade, a shaving or wedge may be inserted in it, so as to take up a portion of its width or breadth. The handle is composed of three parts—C, the lower part, firmly affixed to the blade; C', the upper part, connected with the lower part by a central pin, D, and C'' the central part, operating between the upper and lower part upon the pin D as a spindle, and engaging with the upper part when turned in one direction by means of a clutch, *e*, and with the upper part when turned in the opposite direction by means of a clutch, *e'*. The pin D is rigidly inserted into either the upper or lower part,

and in the opposite part slides up and down in a chamber, *e*, being provided with a head, *m*, to prevent its escaping, and being connected with a spiral spring, *s*, which draws the extremities of the handles together and keeps them both in contact with the clutch. The clutches working in opposite directions, it is evident that only one of them can engage at once. Were no provision made to counteract it, the other would still allow the parts of the handle to rotate independently of each other. I meet this difficulty, however, by means of a sliding bolt, *n*, provided with a thumb-piece, C'', in such a manner that when slid up its upper end will project into one of a series of holes, *r r r*, arranged around the axis of the upper part, and thus prevent the upper part and central part from rotating in any direction independently of each other, and, when slid down, will connect in the same way with the lower part of the handle. This either unites the central to the upper part, leaving the lower part free to be operated in one direction by the clutch, or it unites the central to the lower part, leaving the upper part free to be operated in the opposite direction by the other clutch, so that the tool answers equally well when turned in either direction, and can be used with equal facility either for inserting or removing screws, gimlets, &c.

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

The screw-driver handle composed of the parts C C' C'', provided with holes *r r*, the bolt D, spring *s*, and lock-bolt *n*, the whole being constructed to operate substantially as described.

W. S. GOSS.

Witnesses:

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D. ARDIN.