(No Model.)

J. SWAN.

SCREW DRIVER.

No. 260,135. Patented June 27, 1882.

Fig. 1.

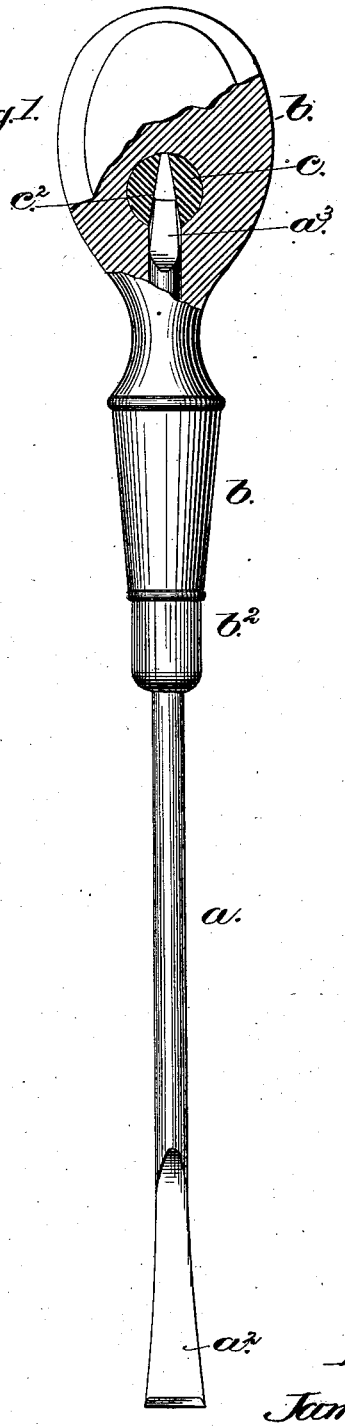
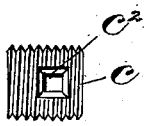


Fig. 2



Witnesses.
Thos. F. C. Brinkert
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UNITED STATES PATENT OFFICE.

JAMES SWAN, OF SEYMOUR, CONNECTICUT.

SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 260,135, dated June 27, 1882.

Application filed April 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES SWAN, of Seymour, county of New Haven, State of Connecticut, have invented an Improvement in Screw-Drivers, of which the following description, in connection with the accompanying drawings, is a specification.

Screw-drivers as now most commonly made have their shanks flattened, and the ferrules upon the handles are slotted to receive a flat part of the shank next the "tang," which is driven into the handle, the slotted ferrule preventing the tang of the shank from turning in the handle.

Some screw-drivers are made from round rods; but great difficulty has been experienced in so holding such rods that they cannot turn in the handles when power is being applied to the shank through the handle of the screw-driver to turn a screw. The round-rod screw-driver is preferable on account of strength and cheapness of manufacture; and the aim of my invention is to provide a novel means for holding the upper end of the shank and prevent the same from turning in the handle.

I am aware that it is old to construct a screw-driver with a handle having a removable hard-metal plug inserted transversely therein, and provided with a perforation having a key in one side and a blade with a tang having a longitudinal seat to engage said key in the perforated plug to hold the blade against turning in the handle.

My invention consists in a screw-driver composed of a handle provided with an exteriorly-screw-threaded socketed receiver inserted therein, and of a round shank having its upper end shaped to enter the socket of the receiver, the said socket being in the axial center of the handle, and intersecting the longitudinal axial passage in the handle for the reception of the shank, as will be hereinafter described.

Figure 1 represents in side elevation one of my improved screw-drivers, the handle being partially broken away to show the socketed receiver and the upper end of the screw-driver shank fitted therein; and Fig. 2 is a side view of the receiver of Fig. 1 removed from the handle.

The round rod-like shank *a* of the screw-driver has its lower end, a^2, flattened or shaped as usual to enter the nick in the head of a screw. The upper end of the shank is preferably squared and tapered for a short distance, as at a^3. The handle *b* has upon it a plain ferrule, b^2.

In the thickest or strongest part of the handle I have inserted the socketed receiver *c*. The receiver has a socket, c^2, of a shape corresponding with the shape of the end a^3 of the shank *a*, and when the receiver is inserted in the handle at right angles to its length, as shown, the socket c^2 is placed in the axial center of the handle, so that the upper end, a^3, of the screw-driver shank, when inserted in the central axial passage of the handle, beyond the ferrule b^2, enters the socket c^2, thus placing the upper end of the shank in a metal receiver, which is so firmly held in the handle that as the handle is turned by hand the shank is obliged to turn with the socket and handle, and there is no possibility of the handle being split. In this my plan the upper end of the shank is not driven permanently into the wood of the handle, as heretofore, to be held in such manner that the wood itself receives a strain equal to the power applied through the handle to the shank.

By my plan the axial opening in the handle up to the socketed receiver is enough larger than the diameter of the shank to permit the easy and free passage of the upper end of the shank into the socket c^2, and I am thereby enabled to employ any desired number of shanks with one handle, and to readily detach the handle from or apply it to the shank when desired.

The round rod, to adapt it for a screw-driver, has only to be shaped at its ends as shown.

The socketed receiver is shown as a round plug, exteriorly screw-threaded, whereby the receiver is adapted to be inserted in and removed from the handle by axial rotation, after the manner of operating a screw. By this construction the centering of the receiver with relation to the blade or rod is facilitated and rendered much more accurate.

I do not broadly claim a tool with its end squared to enter a metal socket by which the tool may be rotated; but I am not aware that a screw-driver handle has ever been provided with an exteriorly screw-threaded metallic receiver provided with a socket for the reception of the upper end of the shank, to thus obviate

splitting the handle and enable a round rod to be cheaply and efficiently employed for screw-drivers. By placing the socketed receiver in the large part of the handle the end a^3 of the shank is brought well into the hollow of the hand, so that greater power can be exerted thereon and be resisted by the largest part of the handle. The threads or corrugations on the receiver hold it firmly in place in the handle. It is obvious that the upper end of the shank may be of other shape than square in cross-section. All that is needed is that it should not be round in cross-section, and that the socket in the receiver be made to fit it.

I claim—

As an improved article of manufacture, a screw-driver composed of the shank a, the handle, and the exteriorly screw-threaded socketed receiver inserted through it and intersecting the longitudinal central passage in the handle, the socket of the receiver being placed in the line of the axial center of the handle to receive the end a^3 of the shank a, inserted therein, to operate all as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES SWAN.

Witnesses:
G. W. GREGORY,
BERNICE J. NOYES.