To all whom it may concern:

Be it known that I, JAMES SWAN, a citizen of the United States, residing at Seymour, county of New Haven, State of Connecticut, have invented a new and useful Screw-Drivers or Similar Tool, of which the following is a specification.

My invention has for its object to produce a screw-driver or similar tool which shall have all the advantages appertaining to the type of screw-drivers in which the shank and blade are made from a single piece of metal and the shank extends entirely through the handle without any of their disadvantages at much less expense than this class of screw-drivers can be produced and at but slightly-increased cost over the ordinary type of screw-drivers in which a relatively short shank or tang is driven into a wooden handle, but extends only part way through it.

It is of course well understood that screw-drivers of the ordinary type are not adapted to receive heavy blows of a hammer at the upper end or tip of the handle, repeated blows tending to bruise and split the tip of the handle and the tendency being to drive the tang farther into the handle, which is apt to split it. As there is a demand for screw-drivers and similar tools that will permit blows upon the tip of the handle, as in setting a screw-driver into the head of an old screw or one having its slot filled with paint, screw-drivers and similar tools have been made having blade and shank made in a single piece, the shank extending entirely through the handle and being provided at the tip of the handle with a head to receive blows. Screw-drivers of this type have not fully met the requirements of the trade, for the reason that they are not as attractive in appearance as the old-style screw-drivers, are more expensive to produce, and must necessarily be sold at a higher price, and the additional reason that there are serious objections to hammering upon the metal.

In order to overcome the objections to screw-drivers having shanks extending through the handles and provide a screw-driver at a low cost which shall be adapted to stand the hardest kind of service and receive unlimited blows upon the tip of the handle without injury thereto or to the hammer, I have devised a screw-driver or similar tool in which I use a blade and tang of the ordinary inexpensive construction which is driven into the handle in the usual manner. In the tip of the handle I insert a yielding plug, and between the inner end of the tang and the plug I place a metallic disk and a rod, thus providing a continuous metallic connection between the plug at the tip of the handle, which receives blows and the blade.

In the accompanying drawings, forming part of this specification, Figure 1 is a view of a screw-driver, the blade, shank, tang, and rod being in elevation, and the handle, disk, and plug in section; Fig. 2, a perspective of the disk detached; and Fig. 3 is a perspective of the rod detached.

10 denotes the blade or operative part of the tool, 11 the shank, and 12 the tang as they are produced for ordinary low-priced screw-drivers.

13 denotes the handle, which is made of wood and provided with the usual ferrule. At the tip of the handle I form a recess, preferably circular, and extending inward from the recess far enough to receive the inner end of the tang is a hole.

17 denotes a metallic washer which I place in the bottom of the recess, and 18 a metallic rod which I place in the hole.

In assembling the tang is driven a predetermined distance into the handle. As shown in the drawings, the material of the handle through which the tang has been driven is compressed around the end of the shank by the ferrule. This is a familiar method of assembling a tool-shank having a tang of the form shown with the handle. The rod is then dropped into the hole, the rod being just long enough to extend to the bottom of the recesses and engage the inner end of the tang. The washer is then placed in the recess in engagement with the outer end of the rod, and the recess is filled by means of a yielding plug, driven tightly therein. This plug may be made of disks of leather cemented together or of vulcanized fiber or any suitable slightly-yielding mate-

blows upon the tip of the handle without injury thereto or to the hammer, I have devised a screw-driver or similar tool in which I use a blade and tang of the ordinary inexpensive construction which is driven into the handle in the usual manner. In the tip of the handle I insert a yielding plug, and between the inner end of the tang and the plug I place a metallic disk and a rod, thus providing a continuous metallic connection between the plug at the tip of the handle, which receives blows and the blade.

In the accompanying drawings, forming part of this specification, Figure 1 is a view of a screw-driver, the blade, shank, tang, and rod being in elevation, and the handle, disk, and plug in section; Fig. 2, a perspective of the disk detached, and Fig. 3 is a perspective of the rod detached.

10 denotes the blade or operative part of the tool, 11 the shank, and 12 the tang as they are produced for ordinary low-priced screw-drivers.

13 denotes the handle, which is made of wood and provided with the usual ferrule. At the tip of the handle I form a recess, preferably circular, and extending inward from the recess far enough to receive the inner end of the tang is a hole.

17 denotes a metallic washer which I place in the bottom of the recess, and 18 a metallic rod which I place in the hole.

In assembling the tang is driven a predetermined distance into the handle. As shown in the drawings, the material of the handle through which the tang has been driven is compressed around the end of the shank by the ferrule. This is a familiar method of assembling a tool-shank having a tang of the form shown with the handle. The rod is then dropped into the hole, the rod being just long enough to extend to the bottom of the recesses and engage the inner end of the tang. The washer is then placed in the recess in engagement with the outer end of the rod, and the recess is filled by means of a yielding plug, driven tightly therein. This plug may be made of disks of leather cemented together or of vulcanized fiber or any suitable slightly-yielding mate-
rial and may be cemented into the recess, the outer end of the plug being rounded to correspond with the contour of the tip of the handle. In use blows are received upon the yielding plug, which is adapted to receive any number of blows without injury, and the force of the blows is transmitted through the washer and rod directly to the tang and blade.

Having thus described my invention, I claim—

A screw-driver or similar tool comprising an operative part having a tang, a handle longer than the tang into which the tang is driven, the handle having a recess in its tip and a hole extending from the bottom of the recess to the inner end of the tang, a washer at the bottom of the recess, a rod in the hole engaging both the washer and the tang and a yielding plug filling the recess and adapted to receive blows, the force of which is transmitted through the washer and rod to the tang of the tool.

In testimony whereof I affix my signature in presence of witnesses.

JAMES SWAN.

Witnesses:
C. S. Boies,
R. R. Healey,
O. E. Hurlburt.