SCREW DRIVER AND METHOD OF MAKING THE SAME

Inventor

WILLIS F. HOBBS

By

Attorneys
This invention relates to a screw driver or similar tool, and has for an object to provide an improved construction and method of making the same in which no drilling operations are required, and therefore, metal may be used too hard and tough for convenient drilling, thus producing a tool which is very tough and will stand almost any use to which it is put.

It is also an object of the invention to provide a construction in which the handle and ferrule cannot be driven down the shank, but are always held in the proper position.

With the foregoing and other objects in view, I have devised the construction illustrated in the accompanying drawing forming a part of this specification. In this drawing, Fig. 1 is a side elevation of a screw driver involving my invention.

Fig. 2 is a longitudinal section of the handle substantially on line 2–2 of Fig. 1.

Fig. 3 is an end elevation of the handle looking from the left of Fig. 1, and Fig. 4 is a transverse section substantially on line 4–4 of Fig. 2.

The tool, in the present instance a screw driver blade, is shown at 10 and has a shank 11 in one piece with the blade and forged with a shoulder 12 on the shank. Placed on the shank and seated against this shoulder is a metal ferrule 13 having a socket 14 at its opposite end. A handle 15, preferably of wood, although it may be of other suitable material if desired, has a reduced end 16 seated tightly in the socket in the ferrule, and the shank 11 is of such a length as to extend through the handle to substantially its opposite end as shown in Fig. 2. The shank also preferably has one or more longitudinal ribs 17 embedded in the material of the handle to prevent turning of the shank in the handle, and the handle may be provided with longitudinal grooves 18 in its outer surface to provide a good grip. At the outer end of the handle is a metal head or cap 19 which is provided with a socket 20 to receive the end of the shank and this head or cap is permanently secured to the end of the shank so that it is substantially in one piece with the shank, and it is preferably secured by shrinking the head onto the shank.

In manufacturing, the tool and shank are in one piece and is forged with the outwardly extending shoulder 12. The ferrule 13 is placed on the shank with one end engaging this shoulder and then the handle 15 is placed on the shank with its reduced end seated tightly in the ferrule. The head or cap 19 is then applied and permanently secured to the shank, preferably by shrinking it onto the shank, and the head, therefore, holds the handle in the ferrule with the ferrule tightly against the shoulder making a substantially unitary structure. Thus if the user should hammer on the head the force of the blows would be transmitted directly to the shank and tool. The shoulder holds the ferrule so that there is no possibility of its sliding down the shank and the handle and ferrule are firmly secured between this shoulder and the head or cap. This structure renders it impossible to drive the ferrule down the shank, and the head or cap prevents the handle and ferrule from moving in the opposite direction. They are, therefore, always held in the proper position. It will be noted no drilling operations are required, and therefore, very hard tough steel may be used to withstand any uses to which the tool may be put.

Having thus set forth the nature of my invention, what I claim is:

1. A screw driver or similar tool comprising a tool and shank forged in one piece with a shoulder on the shank spaced from the end thereof, a metal ferrule having a bore closely fitting the shank and engaging said shoulder, said ferrule having a socket in its opposite end, a handle embracing the shank and seated tightly at one end in the ferrule socket, longitudinal ribs on the shank embedded in the handle to prevent turning of the shank in the handle, and a metal head covering the other end of the handle and having a socket closed at its inner end permanently attached to the end of the shank by being shrunk onto the end of the shank so that the head is substantially in one piece therewith.

2. A screw driver or similar tool comprising a tool and shank forged in one piece and
with a shoulder on the shank spaced from the end thereof, a ferrule on the shank engaging the shoulder at one end and having a socket in its opposite end, a handle embracing the shank and seated at one end in said socket, and a metal head at the opposite end of the handle and having an inward extension provided with a socket closed at its inner end and shrunk onto the end of the shank.

3. The method of making a screw driver or similar tool which comprises forging the tool and a shank in one piece with a shoulder on the shank spaced from the end thereof, placing a ferrule on the shank with one end engaging the shoulder, placing a handle on the shank with one end seated in the ferrule then shrinking a metal head having a socket closed at its inner end on the end of the shank at the opposite end of the handle to make this head substantially in one piece with the shank and to secure the handle and ferrule together with the ferrule against said shoulder.

In testimony whereof I affix my signature.

WILLIS F. HOBBS.