

Nov. 8, 1927.

1,648,798

T. L. CROOK

TOOL HANDLE

Filed Nov. 27, 1925

Fig 1

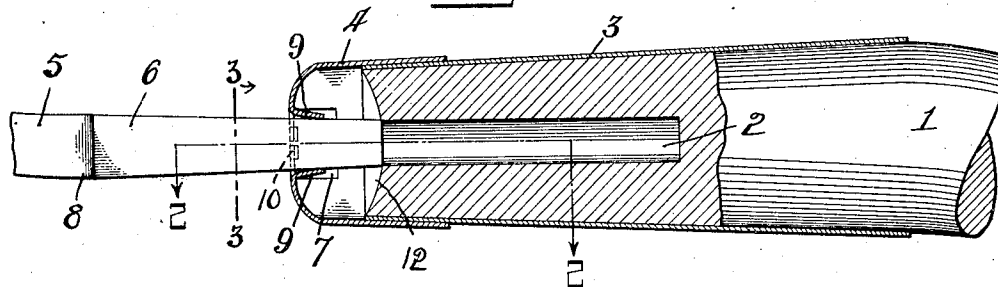


Fig 2

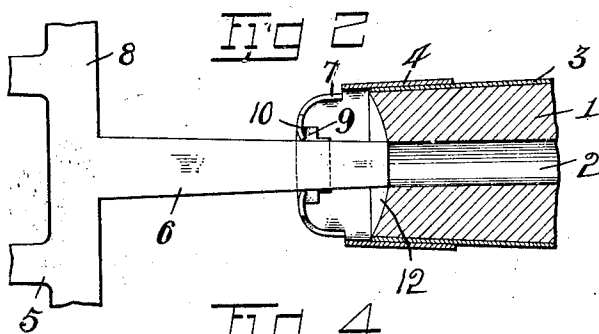


Fig 3

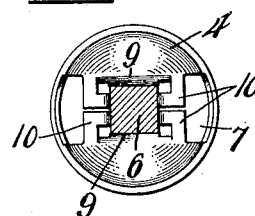


Fig 4

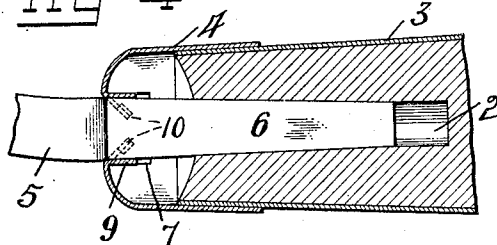


Fig 5

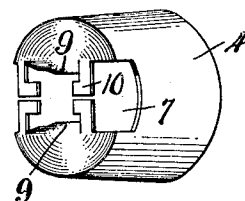


Fig 6

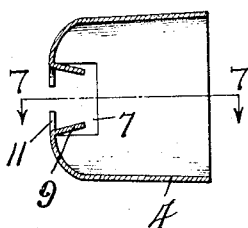


Fig 7

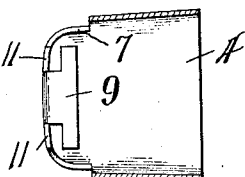
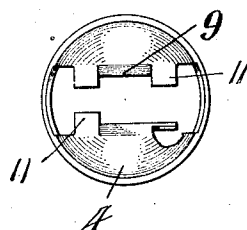


Fig 8



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TOOL HANDLE.

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This invention relates to handles for use in connection with forks, rakes, files or other tools or implements that may be provided with a shank or tang for insertion into a socket in the handle, and relates particularly to tools of this character, the handles of which are bent so that the tool must be positioned in a certain relation thereto in order to permit a proper balancing or hanging of the tool.

The object of the invention is the provision of simple and efficient means in connection with the socketed tang receiving end of a tool handle to initially hold and guide a tool tang in predetermined relation to the handle while being inserted and driven therein.

The invention is fully described in the following specification, and while in its broader aspect it is capable of embodiment in numerous forms, one embodiment thereof is illustrated in the accompanying drawings, in which,—

Figure 1 is a fragmentary view of a pitch fork and its handle with the latter partly in central longitudinal section and with the tang of the tool inserted into the cap member preparatory to being forced into the handle socket. Fig. 2 is a similar view with the parts turned a quarter way around from the position shown in Fig. 1 and with the section taken on the line 2—2 in Fig. 1. Fig. 3 is a cross-section taken on the line 3—3 in Fig. 1. Fig. 4 is a view similar to Fig. 1 with the tang inserted nearly to its full length within the handle socket. Fig. 5 is a perspective view of the cap embodying the invention, and Figs. 6, 7 and 8 are different views of the cap showing a modified form of the invention with the caps in the two former figures in central longitudinal section and with a portion of the cap in Fig. 8 broken away.

Referring to the drawings, 1 designates a tool handle, customarily of wood, and having the axially disposed tool tang receiving socket 2 in its inner end, 3 the usual reinforcing ferrule that is fitted on the inner socketed end of the handle, and 4 a cap member in which the present invention particularly resides and which is fitted over the outer end of the ferrule 3.

The tool 5, in the present instance, is represented as a pitch fork provided with the usual tang 6 that is squared in cross-section for insertion into the round socket or tang receiving hole 2 of the handle and is slightly longitudinally tapered so that it gradually

increases in cross-sectional area from its free end toward the tool proper. It will be understood that when the tang 6 is forced into the handle socket 2, the corner edges of the tang cut into the wall of the socket and resist a withdrawal of the tang therefrom.

The cap 4 is provided crosswise of its outer or closed end with the usual slot 7 for receiving the cross-bar portion 8 of the tool when the tang is driven home into the handle and in order that the tool may be properly positioned in an angular relation with respect to the handle so that the tool will hang properly should the handle be of the bent type, as in the case of a pitch fork, the cap is frictionally positioned on the ferrule 3 of the handle with its cross slot 7 in right angular relation to the plane of bend of the handle, or it may have any other predetermined relation to the handle suitable to the handle bend or the tool to which applied.

When the handles are sold for extra handles or for replacement purposes, they are usually furnished by the factory with the ferrules 3 and caps 4 attached. The cap, however, is not ordinarily so securely attached to the ferrule but what it may be easily knocked off, if desired.

The side edge walls of the cap slot 7, in carrying out the feature of my invention, are provided with inturned integral lips 9, which are preferably of greater width lengthwise of the slot 7 than the width of the tool tang 6 and are adapted to coact with the opposite sides of the tang to frictionally grip the same and act as guides for holding the tang in aligned relation to the handle socket 2. The lips 9 are inclined inwardly toward each other so that the width of the space between the outer edges thereof is at least as great as the width of the tang end to be inserted therein, while the space between the inner or free ends of the lips is less than the width of the tang end or at least of the broader portion of the tang so that the lips will be slightly spread apart by the tang as it is forced inwardly therebetween. The metal of the cap has sufficient spring to cause the lips to have a yieldingly frictional engagement with the tang as it is forced therebetween through the cap slot.

If the handle is of the straight type, so that it is important to secure the tool to the handle in any particular angular relation thereto, the lips 9 engage the tang of the tool and assist in guiding and holding it

in centered relation to the handle socket 2 while being forced therein. Should the tool be of a character requiring a bent handle, the tang of the tool may be initially inserted between the lips 9 and held there-
 5 by while the person doing the fitting balances the handle and tool or sights along the handle to see if it is in proper angular relation thereto before forcing the tang in-
 10 to the handle socket. If the handle does not bear the proper relation, the tool is removed from between the lips 9 and the grip 4, then loosened on the ferrule 3 and turned thereon to obtain the proper relation of the
 15 cap slot with respect to the handle. This being done, the tool tang is again inserted between the holding lips 9 and held thereby while the workman is determining if the tool is in proper relation to the handle.
 20 When the proper relationship of the handle and tool has been obtained, the tool tang is forced into the socket 2 in the usual or any suitable manner, and during such operation, or at least the initial portion thereof,
 25 the lips 9 serve as a guiding means for the tang.

In order to prevent the tang from tipping one way or the other lengthwise in the cap slot 7 when inserted therein between the lips
 30 9, a finger 10 is provided in the slot 7 at each side of the tang 6 when disposed in central position therein and it is preferable to provide two of these fingers at each side
 35 of the tang with such fingers projecting toward each other from the opposed edge walls of the slot, as shown best in Figs. 3 and 5. It is apparent that these fingers co-
 40 operate with the side walls of the slot, or with the lips 9 when such lips are provided, so as to provide a tang receiving opening that is properly centered or positioned with
 45 respect to the handle socket 2, so that a tool tang is not only held in proper angular relation to the handle but is also supported
 against tipping in any direction with respect to the handle axis when being attached to the handle.

In Figs. 1 to 5 the fingers 10 are shown as being of L-form and stripped from the
 50 end edges of the lips 9 with the terminal ends of the fingers projecting inwardly with respect to the tang guiding opening. The free ends of the fingers 10 are preferably
 55 curved slightly inwardly toward the handle end so that when a tang 6 is forced into the cap the tapering or gradually increasing size of the tang will cause a continuing
 60 of such bend in the finger ends to allow for the increase in size of the tang. If the finger ends are not given this initial bend there is a tendency that the tang when being
 forced therein, will cause an inward bending of the right finger instead of merely
 65 the end of the finger. When the bar 8 of the tool is forced home within the slot 7

of the cap the bar engages the fingers 10, which stand in its path of movement, and bends them down bodily out of obstructing
 relation thereto or shears them off. It is im-
 70 material what happens to the fingers 10 after they have performed the function for which they were intended, namely, of as-
 sisting in guiding the tang into the handle socket and properly positioning it with re-
 75 spect thereto. In Fig. 4 the fingers 10 are shown as partly bent down by the engage-
 ment of the cross-bar 8 of the tool therewith.

In Figs. 6, 7 and 8, the guide fingers 11 are shown as being merely short straight
 80 spurs that are struck from the ends of the lips 9 and do not project as closely to-
 gether at their ends as the fingers 10 in the other figures. The function of these fingers is the same, however, as those above de-
 85 scribed.

The cap enclosing end of the handle 1 is shown, in the present instance, as provided
 90 with a counter-sink 12 in coaxial relation to the socket 2, so that when the tang is inserted between the lips 9 and in engage-
 ment with the end of the handle, it may be easily and quickly centered with relation to
 the handle, as is apparent.

It is apparent that the provision of the
 95 lips 9 on the cap, in addition to serving as a guide for the tool tang, also reinforces
 the cap at the sides of its slot or opening 7 so as to prevent denting or other injury from
 rough usage. It frequently occurs that a
 100 person in handling the handles 1 with the caps 4 attached will drop the cap enclosed
 end onto a pavement or cement floor or will attempt to drive the cap onto the end of
 the handle by striking it against a hard
 105 object. Such usage will dent in the cap. It is found that the provision of the lips
 9 materially reinforces the cap and tends to prevent injury from such usage.

I wish it understood that my invention
 110 is not limited to any specific construction, arrangement or form of the parts, as it is
 capable of numerous modifications and changes without departing from the spirit
 of the claims.

Having thus described my invention, what
 115 I claim as new and desire to secure by Let-
 ters Patent is:

1. A tool handle having a tool tang re-
 120 ceiving socket in its end and a cap mounted on the socketed end of the handle with its
 outer end spaced from the handle end, the cap having a transverse slot in its outer
 closed end and having integral members pro-
 125 jecting transversely of the slot in spaced re-
 lation lengthwise thereof for guiding the
 entrance of a tool tang through the slot and
 preventing movements thereof lengthwise of
 the slot from centered position therein.

2. A tool handle cap having a diametrical-
 130 ly extending opening in its closed end and

provided with integral portions which project from the side edge walls of the opening for centering a tool tang with respect to the opening and guiding its entrance therein, 5 some of said portions projecting axially of the cap and others projecting transversely of the cap slot at an angle to the axially projecting portions, said several portions cooperating to engage a tool tang and prevent lateral movements in any direction in 10 the slot when positioned therein.

3. A tool handle cap having a transversely extending opening in its closed end, tang guiding lips projecting rearwardly into the 15 cap from opposite side edge walls of the opening, and tang guiding fingers project-

ing into the opening transversely of the cap and adjacent to the side edges of the lips.

4. A tool handle cap having a transversely extending opening in its closed end and provided with integral portions which project 20 from the side edge walls of the opening for centering a tool tang with respect to the opening and guiding its entrance therein, some of said portions projecting axially of 25 the cap and others projecting transversely thereof, the transversely projected portions being struck from side edges of the axially projected portions.

In testimony whereof I have hereunto 30 signed my name to this specification.

THOMAS L. CROOK.