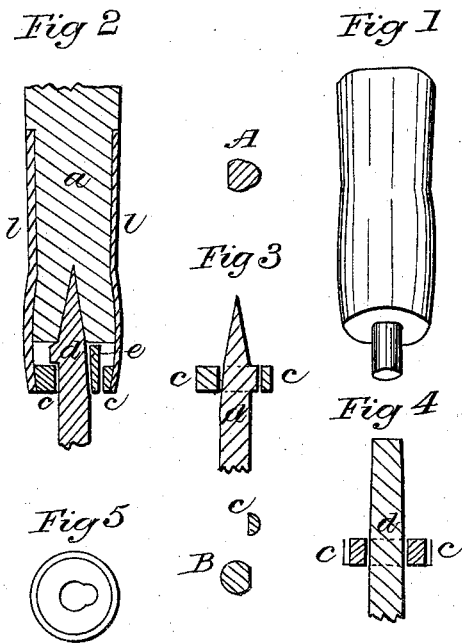


*Clark & Hillis,*  
*Tool Handle,*  
*N<sup>o</sup> 3,255,      Patented Sep. 9, 1843.*



# UNITED STATES PATENT OFFICE.

O. CLARK AND W. D. HILLIS, OF HUDSON, OHIO.

## ATTACHING HOES TO HANDLES.

Specification of Letters Patent No. 3,255, dated September 9, 1843.

*To all whom it may concern:*

Be it known that we, OLIVER CLARK and WILLIAM D. HILLIS, of Hudson, Summit county, State of Ohio, have invented a new and Improved Method of Fastening Forks, Hoes, &c., to the Ferrule and the Ferrule to the Handle; and we hereby declare that the following is a full, clear, and exact description of one of the ways by which the same may be accomplished, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 is a perspective view of the ferrule-cap and a portion of the shank. Fig. 2 shows a longitudinal section of a portion of the handle A, the ferrule B, cap C, shank D, wedge E, when put together. Fig. 3 is a longitudinal section of the shank D, and cap C, showing the manner of inserting the shank into the cap, the shoulder on the shank passing through an orifice in the which (after turning the shank half around with the shoulder behind the cap) the wedge is inserted. Fig. 4 is a longitudinal section of the ferrule cap C, shank D, at a right angle to Fig. 3. Fig. 5 is a transverse section of the ferrule cap.

A is a transverse section of the shank above the ferrule cap.

B is a transverse section of the shank at the ferrule cap. C is a section of the wedge.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

We construct our fork, hoe, &c., after any of the approved methods in common use, with the exception of that portion of the shank, which is inserted in the ferrule. This is made of sufficient size to have the strength required for the purpose to which it is applied and is made circular with one straight or flat side upon which the wedge is to rest and on the opposite side behind the cap is a raised head or shoulder (or can be an offset) above which the shank is drawn in the form of a wedge as seen in Figs. 2 and 3.

The ferrule may be made of sheet iron of sufficient strength or of malleable cast iron. It should be three or four inches long and large enough to admit sufficient timber to have the strength required. When made of

sheet iron the cap is to be cut out of bar iron (of sufficient width and thickness) by tools which are constructed for that purpose. In one side of the hole in the cap there is an aperture or notch which may be either semi-circular or angular, but must be deepest on the inner side. In putting the parts together the head or shoulder is to be passed through the notch in the cap. The shank is then turned around until the flat surface comes to the notch, when the wedge which has been formed for that purpose is inserted from the inner side and driven to its place. The wedge must be so constructed that it cannot be drawn through. This secures the fork, hoe, &c., firmly to the ferrule without any dependence upon the wood. The ferrule being concave just above the cap, as in Figs. 1 and 2, the handle being properly shaped and prepared is driven in, when the shank of the fork acting as a wedge splits it in the end, forcing the parts of the wood into the concavity of the ferrule, and this uniting them firmly together. Hence we call it the self fastening fork, hoe, &c. The wedge which secures the fork to the ferrule is also kept from being removed out of its place by the end of the handle which is driven against it or by driving the wedge far enough through to head it on the outer end of the ferrule.

What we claim as our invention and desire to secure by Letters Patent is—

The mode herein described of securing the fork, hoe, &c., to the ferrule by means of the shoulder or offset wedge and the mode of fastening the fork, hoe, &c., to the ferrule by means of the notch and wedge in combination with the mode of fastening the ferrule to the handle by means of driving it into the ferrule after the fork, hoe, &c., is secured to the ferrule and by the shank of the fork, hoe, &c., splitting the wood or handle or answering what might be termed the purpose of a witch wedge secures the handle to the ferrule.

OLIVER CLARK.  
W. D. HILLIS.

Witnesses:

H. WHEDON,  
H. PECK.