(No Model.)

E. H. SUBLETT.

HOE.

No. 386,040. Patented July 10, 1888.

Fig. I.

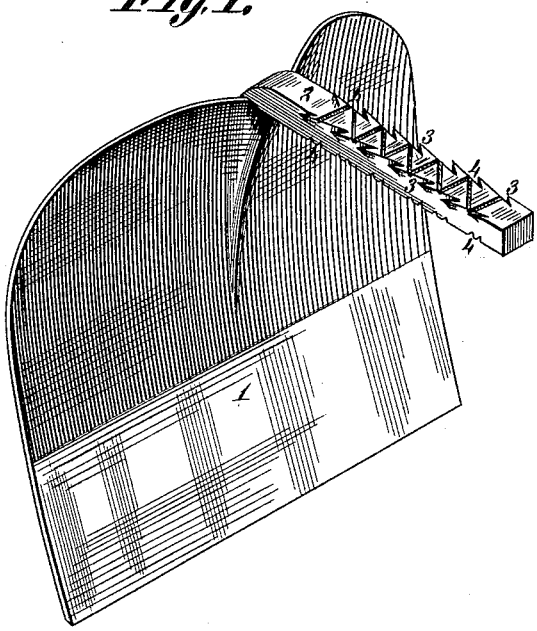


Fig. II.

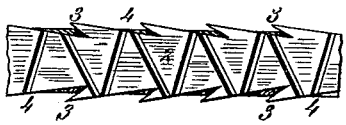
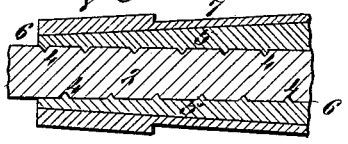


Fig. III.

Fig. IV.



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UNITED STATES PATENT OFFICE.

EDWIN H. SUBLETT, OF ST. LOUIS, MISSOURI.

HOE.

SPECIFICATION forming part of Letters Patent No. 386,040, dated July 10, 1888.

Application filed January 3, 1888. Serial No. 259,588. (No model.)

To all whom it may concern:

Be it known that I, EDWIN H. SUBLETT, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Hoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure I is a perspective view of the hoe, showing the barbs and cross-cuts or V-shaped oblique retention grooves or channels on its shank. Fig. II is an enlarged longitudinal detail of the shank, showing the barbs and cross-cuts or V-shaped channels on its stem to enforce the retention of the shank in the handle. Fig. III is a like view of a modification in which the V-shaped channels are used without barbs; and Fig. IV is a cross-section detail view showing the ferrule, the shank, and the point of the handle provided with the socket-bore for the seating of the shank.

This invention relates to devices for the retention of the shanks of hoes in their handles; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, in which similar figures of reference indicate like parts in all the views, 1 represents a hoe, to which my improved shank 2 is attached. 3 are the barbs on said shank; 4, the cross-cuts or V-shaped grooves; 5, the point of the handle; 6, the socket in said point in which the shank is seated; 7, the ferrule, and 8 the re-enforcing ring that strengthens the lower end of the ferrule.

Great inconvenience is often experienced from the withdrawal of the shank of the hoe from the socket within the ferrule on its handle. The force exerted on the hoe while at work has a direct tendency to cause said withdrawal, and unless the shank is very firmly fastened in its seat it is but a question of time how soon it will be worked out. To avoid this difficulty, it has become customary to insert a metal pin or key that passes through the ferrule handle and shank; but this has been objected to from the fact that it weakens all the parts through which it passes, and that at their most vulnerable points. To overcome these difficulties is the main object of this invention.

The shank of the hoe, although its neck may taper in thickness somewhat from the hoe-blade to the point of its insertion within its socket-seat, yet from that to near or quite its inner end it retains its uniform width and thickness, so as to have an even grasp of the socket in which it is seated all along its length.

The shank is cross-cut on its upper and lower sides, preferably in V-shaped grooves, although said grooves may be of an X or any other suitable form, so that they reach crosswise of the shank to grip the sides of the socket and prevent its withdrawal therefrom. The grooves are preferably given the V-shaped or other diagonal position to enable them to brace against the angling force of the blows as alternately each corner of the hoe is used, which is the most trying strain that it has to withstand, tacking alternately from side to side as a vessel sailing against the wind, so that the blows alternating from the one corner of the hoe to the other tack from side to side in their withdrawal with an injurious and loosening effect to the shank. To withstand said adverse effect, I provide a zigzag course of channel-grooves, preferably on the upper and lower sides of the shank; but they may be placed on its edges, also, or they may be placed on one side alone. These grooves being of a multiple V shape, it is evident that whichever corner of the hoe struck, and consequently at whichever angle the withdrawal force was applied to the shank, there would be found grooves in the reverse direction (in either case) to the line of said withdrawal, whose edges would work against the inner surface of the wooden socket, which grooves from their direct cross-action would most effectually bar its withdrawal. I also provide, or may provide, barbs, as stated, on the upper or any of the corners of the shank to increase the holding-power of the shank in its socket, and these barbs and grooves may be either cut, stamped, or otherwise formed from and in the shank itself. These barbs, being formed on the corners of the shank, would also brace

the shank in its withholding power to withstand the semi-lateral force of the withdrawing movement under the influence of the angling strokes made by the corners of the hoe.

I claim as my invention—

1. As a new article of manufacture, a hoe having a shank provided with diagonal cross-cuts, substantially as and for the purpose set forth.

2. A hoe having a shank provided with diagonal cross-cuts and barbs projecting from the corners of the shank, substantially as and for the purpose set forth.

EDWIN H. SUBLETT.

In presence of—
BENJN. A. KNIGHT,
SAML. KNIGHT.