G. B. ELY.

HOES.

No. 193,645. Patented July 31, 1877.

Fig. 1.

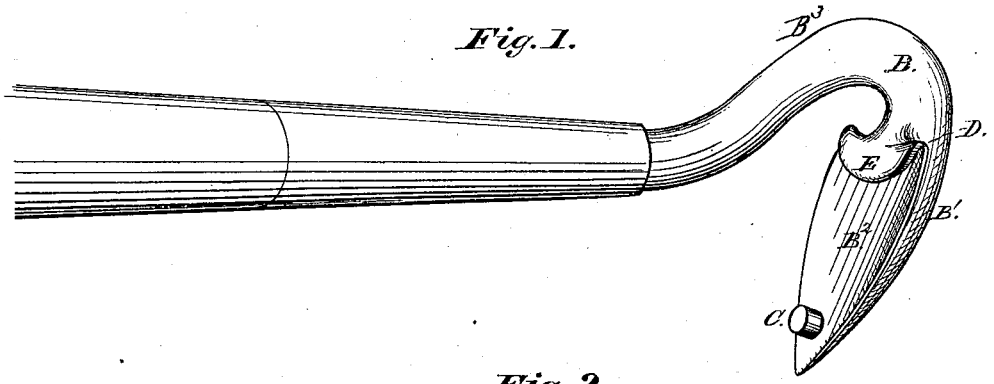


Fig. 2.

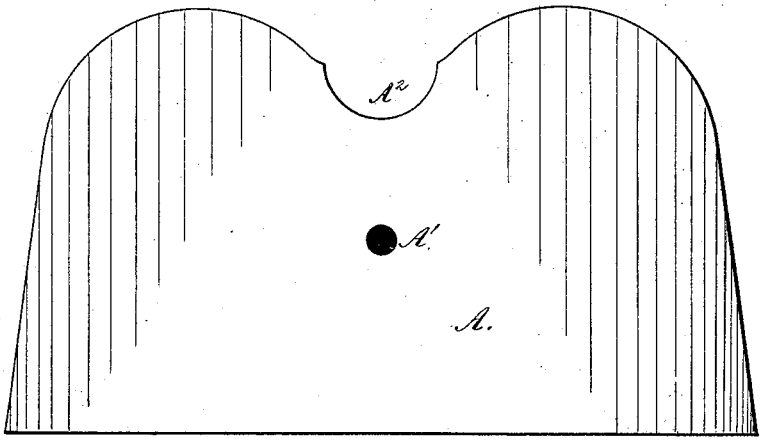


Fig. 3.

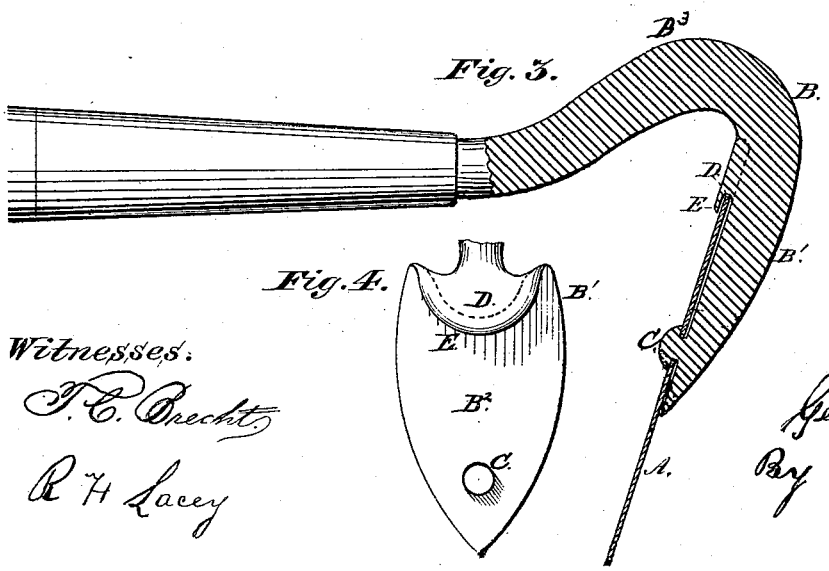


Fig. 4.




Witnesses:

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# UNITED STATES PATENT OFFICE.

GEORGE B. ELY, OF ST. JOHNSBURY, VERMONT.

## IMPROVEMENT IN HOES.

Specification forming part of Letters Patent No. 193,645, dated July 31, 1877; application filed May 7, 1877.

*To all whom it may concern:*

Be it known that I, GEORGE B. ELY, of St. Johnsbury, in the county of Caledonia and State of Vermont, have invented certain new and useful Improvements in Hoes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in that class of hoes which are connected to the handle by a tang instead of by an eye, and has for its object to provide a means of fastening whereby the blade may be rigidly connected with the pad of the hoe-head by a single rivet.

It consists in constructing the hoe-blade with a recess in its upper edge adapted to receive or snugly fit a projecting shoulder on the pad of the hoe-head, and in constructing the pad of the hoe-head with a projecting shoulder and overlapping flange or collar, all of which will be hereinafter fully explained, reference being made to the accompanying drawings.

In the drawings, Figures 1 and 2 are views of the hoe-head and blade detached. Fig. 3 is a longitudinal section of the blade and head united; and Fig. 4 is a front view of the pad.

A is the hoe-blade, through which is formed the single rivet-hole $A^1$, and which has formed at the center of its upper edge a recess, $A^2$, adapted to fit the shoulder on the pad, hereinafter described.

B is the tang formed with the goose-neck turn $B^3$, and is provided on its outer end with the pad $B^1$, which is constructed with a flat face, $B^2$, against which the blade A is supported.

The pad is not pierced by a hole or holes for rivets, as is done in ordinary hoes, but it is made solid, and has formed on its flat supporting-face $B^2$, and near its lower end, the projecting pin or stud C, arranged and adapted to go through the hole $A^1$ in the blade A and be riveted, as shown in Fig. 3.

On the upper end of the face $B^2$, and below the point of union between the tang B and its pad $B^1$, is a projecting shoulder, D, formed with a depth equal to the thickness and so as to extend over the upper edge of the blade, and fit snugly within the recess $A^2$. This shoulder is indicated by dotted lines in Fig. 4.

E is a flange or lip, which is formed on the outer end of the shoulder D, and extends downward parallel with the face $B^2$, and is adapted to fit snugly against the face and embrace the upper edge of the blade A.

It will be seen that the blade, when it is attached to the pad, as shown in Fig. 3, will be held rigidly to the tang. The outside of the pad $B^1$ is polished, and is free from the projecting and ragged edges of rivet-heads, which catch dirt. The hoe-blade, being made with but a single rivet-hole, is much stronger and more durable than the ordinary hoe-blade, which is pierced by two or more holes. It will be understood that the blade may be secured by having the rivet C pass through the pad $B^1$. I prefer, however, to construct the rivet as above described.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

A hoe, embodying in its construction a tang, B, a pad, $B^1$, constructed on the outer end of the tang and provided with a flat supporting-face, $B^2$, on the upper end of which, and below the point of union between the pad and tang, is formed a projection, D, provided with an overlapping flange or lip, E, and having a stud or rivet, C, and a blade, A, formed with a recess, $A^2$, and hole $A^1$, the whole being constructed substantially as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE B. ELY.

Witnesses:
WILLIAM S. STREETER,
HENRY G. ELY.