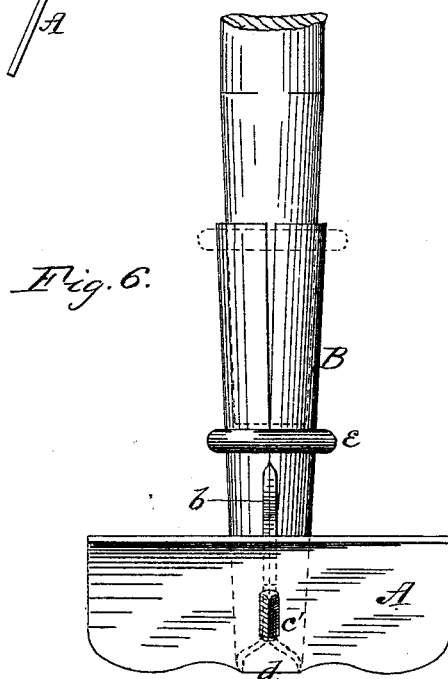
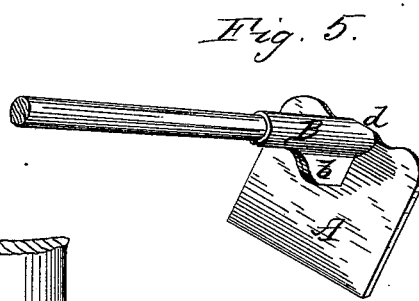
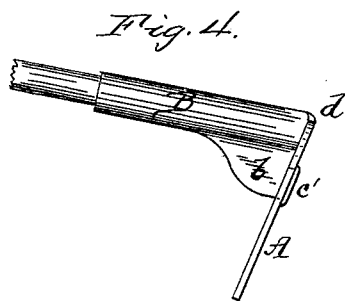
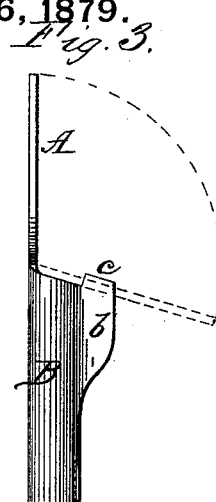
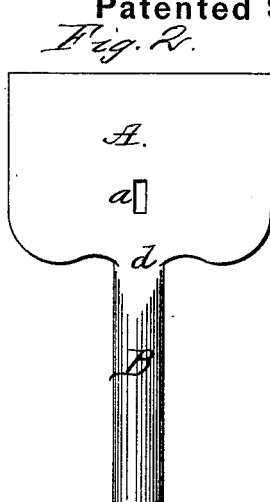
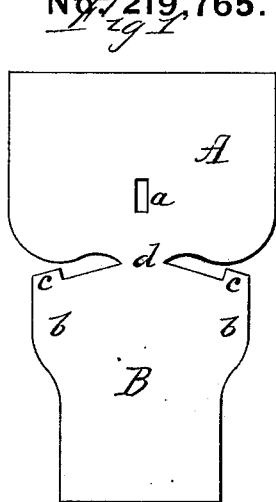


A. REESE.
Manufacture of Hoes.

No. 219,765.

Patented Sept. 16, 1879.



Witnesses
John M. Patterson
J. J. DuFoye

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Attorneys.

UNITED STATES PATENT OFFICE.

ABRAM REESE, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN THE MANUFACTURE OF HOES.

Specification forming part of Letters Patent No. **219,765**, dated September 16, 1879; application filed July 21, 1879.

To all whom it may concern:

Be it known that I, ABRAM REESE, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Hoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it; reference being had to the accompanying drawings, which form part of this specification, in which—

Figures 1, 2, 3, and 4 are views showing the different stages of manufacture. Fig. 5 is a perspective of the hoe. Fig. 6 is a bottom view of a modification.

This invention relates to the manufacture of hoes; and consists in the blank hereinafter described, and the manner of forming the hoe therefrom by bending the blank and riveting the parts; also, in the hoe thus constructed, all substantially as herein fully set forth.

In the drawings, Fig. 1 represents the blank, which is cut from a sheet of steel. The portion A forms the blade, and has the hole *a* cut in it, as shown. The remaining portion, B, forms the socket for the handle, and has the enlargements or webs *b*, and the projections *c*, as shown. The parts A and B are connected by the neck *d*, and from the neck *d* the edges of the part B incline downwardly to the projections *c*.

With the blank thus cut I proceed as follows: I bend the part B on a suitable mandrel, so that its central portion forms the socket B, and the webs *b* I then pinch together till they meet, as shown in Figs. 3, 5, and 6. As Fig. 3 shows, the front end of the socket thus formed has an inclined front. The blade is next bent back till the projections *c* pass through opening *a* in the blade, after which the said projections are headed up, as shown by *c'* in Figs. 4 and 6.

Thus made, the hoe is very cheap, requiring no special form of rolled steel, no expensive machinery to upset and punch the eye or to bevel down the blade; nor is skilled labor required to produce it. It is strong and durable. The webs *b*, abutting against the rear of

the blade, support it, and the rivet-heads on the outside will resist any force that will in use be applied upon the handle.

The handle may be simply driven into the socket, or may be fastened with a cross-pin or two, or may be fitted as in Fig. 6, the socket being tapered, the handle likewise, and the requisite pressure obtained by means of a sliding ring, *e*, as shown.

Instead of the projections *c* being placed side by side in the one hole in the blade, they may be formed at such points as to require different holes. In this case the webs *b* may be dispensed with, and the hoe thus formed will be strong enough for garden purposes.

By beveling the under edge of the webs *b* a useful clod-breaker is formed behind the blade.

I claim as my invention—

1. The herein-described hoe-blank, consisting of the parts A B, united by the neck *d*, the blade A having one or more holes, *a*, and the socket B having two or more projections, *c*, substantially as described.

2. The improvement in the manufacture of hoes, consisting in forming a blank substantially as shown in Fig. 1, bending the part B to form the socket, bending the socket, and securing the same to the blade by passing the projections *c* through the hole or holes prepared for them in the blade, and heading them up, substantially as described.

3. A hoe having a sheet-metal socket and blade formed in one piece, bent, and held in position by projections on the socket headed up against the blade, substantially as described.

4. A hoe having a blade and socket made out of a single piece of sheet metal, the socket having enlarged ears or webs, which, when the hoe is finished, form a stiffening-brace against the blade, as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of July, 1879.

ABRAM REESE.

Witnesses:

T. J. MCTIGHE,
THOS. CONNOLLY.