J. R. HOOD.

HOES.

No. 187,228 Patented Feb. 13, 1877.

Fig. 1.

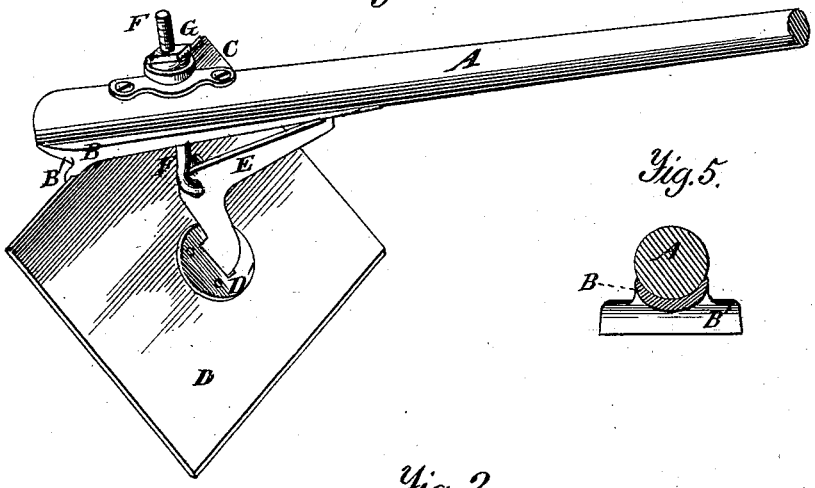


Fig. 5.

Fig. 2.

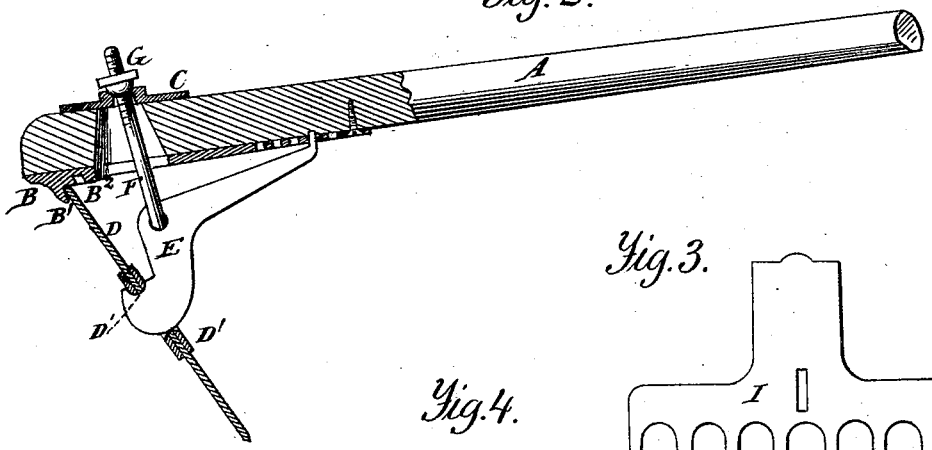
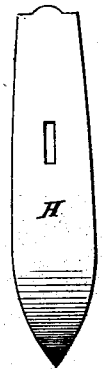


Fig. 3.

Fig. 4.



Witnesses:
A. Ruppert.
Wm. G. Cochrane

Joseph R. Hood
Inventor.
by
D. P. Holloway & Co
his Attys

UNITED STATES PATENT OFFICE.

JOSEPH R. HOOD, OF WEDOWEE, ALABAMA.

IMPROVEMENT IN HOES.

Specification forming part of Letters Patent No. **187,228**, dated February 13, 1877; application filed December 16, 1876.

To all whom it may concern:

Be it known that I, JOSEPH R. HOOD, of Wedowee, in the county of Randolph and State of Alabama, have invented a new and useful Improvement in Hoes, of which the following is a specification:

This invention relates to improvements made on the hoe patented by Luna J. Aderhold, No. 105,405, dated July 19, 1870, the character of which will be indicated in the following description and claims.

In the annexed drawings, making part of this specification, Figure 1 is a perspective view. Fig. 2 is a longitudinal section. Fig. 3 is a rake, which may be attached. Fig. 4 is another form of hoe-blade; and Fig. 5 is a transverse section, showing the extended bearing for the hoe-blade.

The same letters are employed in all the figures in the designation of identical parts.

A is the handle, on the under side of which is a plate, B, having a series of holes near the inner end, and near the outer end a single flange, having a slight inward inclination, corresponding, approximately, to that of the hoe-blade.

In the hoes of this class heretofore known two projections, forming a notch with oppositely-inclined sides, have been employed. The outward inclination of the outer flange prevented its holding the hoe-blade securely, as its edge would ride up on the flange under the strain of the screw-rod. This defect I remedy by the described form of flange; and, besides this, when narrow-headed blades, such as shown in Figs. 3 and 4, are used, they are secured by the point in the head, entering a recess in the plate B, which, as I have no inner flange, may be placed just inside the hoe-blade, as clearly shown in Fig. 2. Again, the outer end of the plate B extends beyond the flange B^1, with a strong stiff shoulder, which extends to the end of the handle.

In former hoes the flange or bearing for the edge of the blade is at the extreme end of the plate, and the tendency of the draft of the screw and strain of the blade is to bend the plate outwardly at the point where the screw-rod passes through it, thus giving a still greater inclination to the flange, and causing the blade to slip over it. By extending the plate beyond the flange, I transfer the strain to that part of the plate which is made staunch enough to resist it.

C is a plate on the upper side of the handle, having a hole for the passage of the screw-rod, and a cup with a spherical concavity to receive the semi-spherical base of the nut G, thus forming a bearing for it at any inclination of the rod F.

D is the blade of the hoe, made with two or four cutting-edges. It is held in place against the flange B^1 and plate B, which is widened at the bearing-point considerably beyond the diameter of the handle, so as to form a broad bearing. It is found that if this bearing is narrow, it either dulls the edge of the blade, if soft, or breaks it, if hard. E is an arm, which engages the plate. It is formed substantially as heretofore known, except that the head is curved and shaped as shown in Fig. 2, so that when in place it shall completely fill the slot in the blade, thereby preventing the catching of trash in the slot, which is one of the practical defects found in working the rakes heretofore made. Another defect is the wearing of the ends of the slot by the pressure and friction of the arm when it engages the blade. To relieve this I apply a double re-enforce, D′, on said side of the blade, so as to give the full effect when either edge of the blade is attached.

The point of arm E enters one of a series of holes in plate B, and so determines the inclination of the hoe-blade. The screw-rod F and nut G confine the blade rigidly against its bearing, and at any preferred angle. By rounding the re-enforce, as shown, at the end of the slot, I make a more perfect hinge than is attainable with former devices; this the thickness of the plate and double re-enforce at that point enable me to do. In consequence, I have an equally perfect bearing at that point, whatever may be the inclination of the blades.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the handle and adjustable and reversible hoe-blade, the plate B,

having a single inwardly-inclined flange, B^1, and straight bearing for the blade, extending laterally on each side of the handle, so as to afford a broad bearing-surface, substantially as set forth.

2. In combination with the handle and arm E, the slotted hoe-blade D, having a double re-enforce, D′, with rounded ends to the slot, substantially as set forth.

3. In combination with the handle and reversible slotted blade D, the arm E, having a head shaped substantially as shown, filling the slot when the parts are in place.

4. In combination with the handle and reversible blade, the arm E, screw-rod F, semi-spherical nut G, and concave cup, for forming a universal bearing, substantially as set forth.

5. In combination with the handle, the plate B, constructed with a bearing and projection, B^1, adapted to receive the blade of a hoe, and also with a recess, B^2, adapted to receive the head of a rake, whereby the implement may be made convertible, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH R. HOOD.

Witnesses:

D. P. HOLLOWAY,

A. RUPPERT.