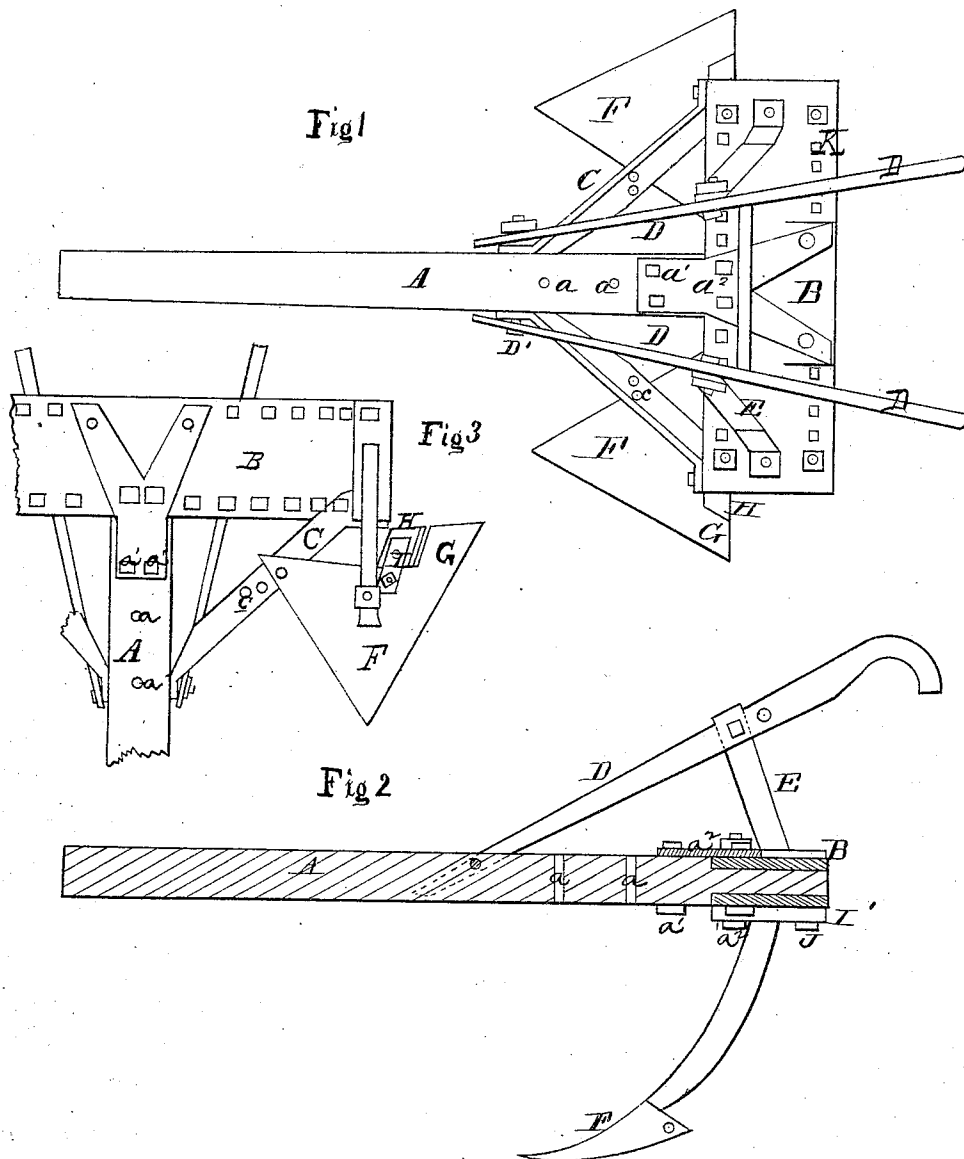


Z. B. SIMS.

Cultivators.

No. 135,165.

Patented Jan. 21, 1873.



Witnesses
 Phil. C. Hosi.
 George E. Upham.

Inventor
 Z. B. Sims,
 Chipman & Son, & Co.
 Attys

UNITED STATES PATENT OFFICE.

ZACHARIAH B. SIMS, OF BONHAM, TEXAS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 135,165, dated January 21, 1873.

To all whom it may concern:

Be it known that I, ZACHARIAH B. SIMS, of Bonham, in the county of Fannin and State of Texas, have invented a new and valuable Improvement in Corn and Cotton Cultivators; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a top view of my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detail view of the same.

This invention has relation to corn and cotton cultivators; and it consists in the construction and novel arrangement of the perforated cultivator-frame, perforated braces, and of the adjustable and reversible mold-boards or shovels, all substantially as and for the purpose hereinafter described.

In the accompanying drawing, A designates the draft-beam of a cultivator having a series of holes, *a*, to allow the shank of a mold-board or shovel to be attached at various points of adjustment when the use of a mold-board or shovel in such a position is desirable. The beam A is tenoned at its rear end, and secured rigidly to a transverse mortised cross-head, B, by means of bolts *a*¹ and irons *a*², the latter being bifurcated at their rear ends, so that the bolts passing through need not touch the tenoned end of the draft-beam. The beam or cross-head is braced at the ends by means of the diagonal L-shaped irons C bolted to the sides of the draft-beam, split at their rear ends, and secured to the front and under side of the cross-head. The handles D are secured to the sides of the beam A by the bolt D' passing through the ends of the handles. Toward their rear ends the handles are supported by means of inclined standards E secured to the beam B, and pierced at several places near their upper end to admit of adjustment. F designates the cultivator-shovels or "cotton-sweeps," having the form somewhat similar to the ordinary cultivator-shovel, but provided each with a wing, G, which may be a part of the shovel-plate, or be bolted thereto. H designates diamond-shaped blocks riveted to flanges or plates

I, which are secured to the shovels by means of bolts. To receive said bolt each mold-board or shovel is pierced near its wing G and at its opposite angle, so that the blocks may be adjusted.

In straddling a row of cotton when very low, the blocks H may be removed and the shovels used with the wings toward the sides of the cultivator, or the blocks may be attached to the sides of the shovels from which project the wings G. Thus the dirt will then be thrown toward the center of the row, covering up whatever grass is left without being dug up. For straddling the row when the cotton or corn is high, the shovels are reversed or interchanged, bringing the wings and blocks toward the middle of the cultivator.

For some purposes the blocks, which are beveled or sharpened on one edge to correspond to the edge of the shovel, are transferred from their proximity to the wings to the other edges or sides of the shovels, the blocks being interchanged, thus providing each side with a wing. The shovel thus arranged is appropriate for use singly when attached to the draft-beam. The shanks of the shovels are provided with cross-heads I' at their upper ends, and are secured to the cross-head B by means of bolts J, two of which pass through each of the cross-heads I'. The beam B is perforated, as shown at K, so that the shovel-beams may be adjusted as close together or as far apart as may be required.

The lower flanges of the braces C are pierced, as shown at *c*, to allow the forward end of one of the cross-heads I' to be attached thereto when it is desired to render the implement available as a gang-plow.

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

The combination of the angular-shaped iron braces C provided with the perforations *c*, the perforated beam A, the perforated cross-head B, and reversible shovel F, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ZACHARIAH B. SIMS.

Witnesses:

RICHARD WHITE,
HENRY E. TAYLOR.