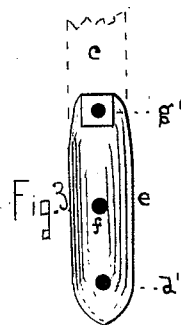
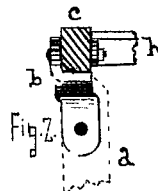
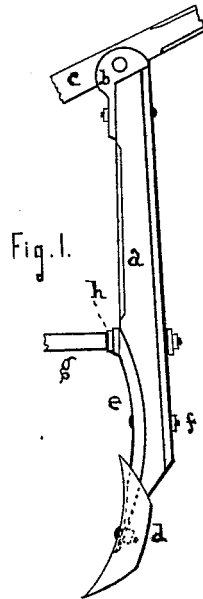


H. D. GREEN.  
CULTIVATORS.

No. 180,999.

Patented Aug. 15, 1876.



*J. V. Sanders.*  
*Geo. C. Mowry.* Witnesses.

*H. D. Green.*  
Inventor.

# UNITED STATES PATENT OFFICE.

HERMAN D. GREEN, OF ITHACA, NEW YORK.

## IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **180,999**, dated August 15, 1876; application filed April 15, 1876.

*To all whom it may concern :*

Be it known that I, HERMAN D. GREEN, of Ithaca, Tompkins county, New York, have invented an Improved Corn Hoe or Cultivator, of which the following is a specification, reference being had to the accompanying drawings, and to the letters thereupon.

My invention relates to the rear standards of a corn-cultivator; and is somewhat supplementary to a patent granted to me, dated November 30, 1875; and the nature of my invention will be apparent as I describe it.

Figure 1 is a side elevation of a rear standard having my improvements. Fig. 2 is a detached rear view of the top joint-piece; and Fig. 3, a detached front view of the metallic hoe-piece, joining the hoes and braces at its top, and the cross-bars.

In the figures, *a* is the wood portion of the standards, having on their upper ends the metallic pieces *b*, by which they are made fast to the hand-handles *c*.

By reference to the drawings of the patent granted to me November 30, 1875, it will be seen that the rear standards are there attached at their tops to the cross-bar connecting the handles. This is the mode in common use, and has the objection that it makes the standards set obliquely, being nearer together at their upper ends than at their bases, which causes obliquity in the steel ovals, or hoes, or mold-boards used on their ends.

To obviate this, and to make a better joint, I put my standards just beneath the handles; and, as it is desirable not to mortise or cut away any part of the handles, I have constructed the joint-piece *b*, which enables me to make a neat and durable junction here without weakening the handles.

This metallic joint-piece is composed of cast-iron, preferably, and has a part which extends on one or more sides of the standards, (preferably the front,) and is fast, as is seen, by a bolt to the standard. On the outside of the handles is a flange, with a bolt through the flange and handle. It is also desirable that this metallic piece have a flange of metal between the handle and the top of the standard.

By this piece I secure a wider spreading of

the tops of the standards, a direct junction or vertical position of the standards beneath the handles, and a serviceable joint; a position and structure which gives a firmness, stability, and easy feel and handling to the whole cultivator or corn-hoe, which has been the design I have sought and accomplished by the cast-iron beam and its rear extensions described in the patent alluded to, as well as in the devices set forth in this specification.

Next, it will be observed that the hoe *d* is not fast to the wood of the standard, but to the lower part of the metallic plate or piece *e*, which piece is fast at its middle to the wood by the bolt *f*, and extends upward above this to the united joint of the braces *b b'* and cross-bar or bars *h h'* on each side of the lower arm *g*, as stated in my patent of November 30, 1875, and of the hoe-piece *e* of this specification, thus by a single connection securing the whole at one point or place by the connection made by passing the end of the brace *g*, Fig. 1, this specification, through the upper extremity of the piece *e*, and the cross-bar *h*, and the wood of the standard, an enlargement of the brace, or an angle in it on the front side, and a burr or nut on the rear side, as shown, serving to hold all together.

By this arrangement the following advantages are had: First, the long piece *e* strengthens the lower end of the standard, and prevents the battering of the wood by use; second, it connects the strain of the tooth or hoe *d* directly to the brace *g*, and to the cross-bar *h*; third, it raises the braces higher on the standards than usual, thus making them less liable to be clogged by weeds or other articles, giving more room below them; and, fourth, in the manufacture of the corn-hoe it saves the making of right and left hand braces, as now both are alike, and fit either the right or left hand sides without any change. The pieces *e* are made preferably hollowed next to the standard, which concave form stiffens them.

The further advantages, uses, and construction of my invention are apparent to those skilled in the art to which it appertains.

I claim—

1. The metallic top piece *b* between the standards *a* and handles *c*, and having cast as

part of, and extending from it, wings or flanges, to which the handles are bolted, and the standards pivoted laterally directly underneath the handles, substantially as set forth.

2. The hoe-piece *e*, fitted to the base of the standards *a*, and held fast to it by the brace-rod *g* and bolt *f*, and having hoes *d* adjustable to it by bolts, substantially as set forth.

3. The hoe-piece *e*, cross-bar *h*, and standard *a*, held together about the rear end of the brace *g*, substantially as set forth.

4. The top joint-piece *b*, and hoe-piece *e*, made as described, in combination with the standards *a*, handles *c*, braces *g h*, and hoes *d*, as set forth.

HERMAN D. GREEN.

Witnesses:

S. J. PARKER,  
GEO. C. MOWRY.