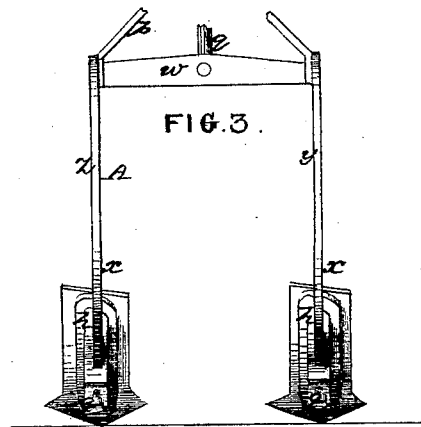
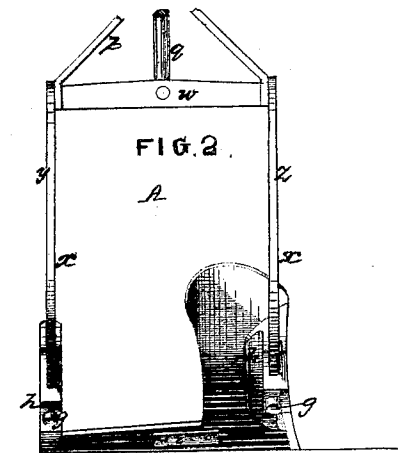
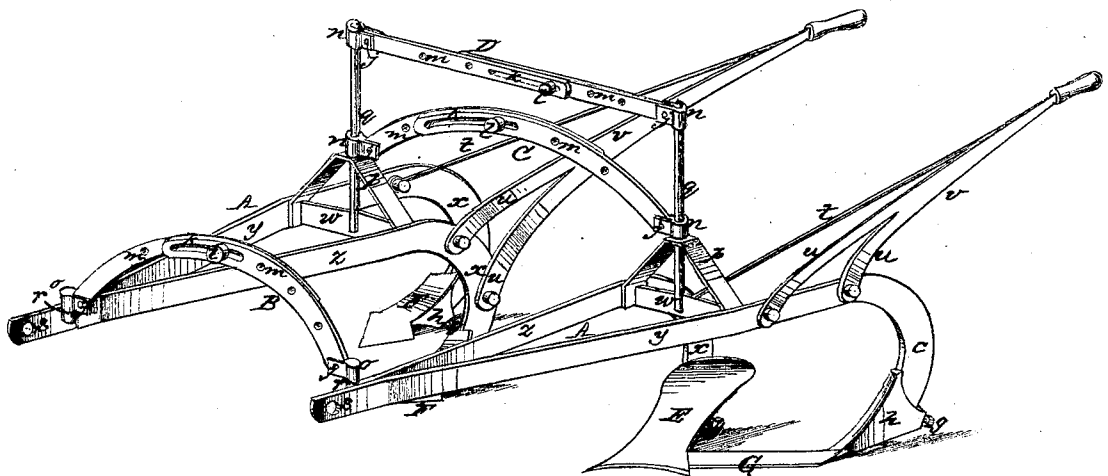


M. P. SIMPSON.
Improvement in Cultivators.

No. 114,483.

Patented May 2, 1871.

FIG. 1.



WITNESSES.

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UNITED STATES PATENT OFFICE.

MATTHEW P. SIMPSON, OF ROSEMOND, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **114,483**, dated May 2, 1871.

I, MATTHEW P. SIMPSON, of Rosemond, in the county of Christian and State of Illinois, have invented an Improved Cultivator, of which the following is a specification:

Nature and Objects of the Invention.

My improved implement, in its complete form, is of that class of drag-cultivators in which a pair of "double-shovel" frames, capable of independent use, is coupled together for joint operation.

The first part of my invention relates to said coupling devices; and consists in a peculiar construction, combination, and arrangement of the same, imparting to them, first, adaptation for easy and extended adjustment; second, strong and rigid pivotal attachments to the two single implements; and, third, adaptation to permit a free and extended vertical variation of the two implements, as for working on hill-sides, while they rigidly support the same at proper distance apart.

My invention further consists in the combination, with a narrow mold-board plow-iron, of a wing or shoe extension, to operate as a weed-killer, the same being provided at its extremity with a shoe for attaching it to the rear standard.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of the implement in complete form. Figs. 2 and 3 are rear views of two frames, provided respectively with a "weed-killer" and shovels, as shown in Fig. 1.

Like marks of reference indicate corresponding parts in the different figures.

General Description.

In carrying out the several parts of my invention I employ a pair of double-shovel-frames, A A, which I make of metal, the same being each composed of two beams, *z y*, united at their front ends, and terminating at different points and at proper distances apart in curved standards *x*, a strut, *w*, supporting the said beams apart, and a single handle, *v*, applied to the left-hand side, inclined to the left and supported by vertical and lateral braces *u t*, the several parts being united by bolts, rivets, or welding, as may be preferred.

I make the inner beams, *z*, short and straight, or nearly so, giving all the inclination to the outer and longer beams, *y*, which are also behind the distending-struts *w*, bent into line of draft.

Perforations *s*, or their equivalent, at the front ends of the respective frames provide for the attachment of draft.

Near the front end of each frame I apply a staple or vertical socket, *r*, on the inner side, and at the strut *w*, near the rear end thereof, a shouldered standard, *q*, supported at its lower end by attachment to said strut, and at a point above by an inverted V-brace, *p*, for the attachment of coupling links or ties B C D. One of these ties, B, provided with pins *o*, engages with the said sockets *r*. The other two, C D, provided with collars *n* for the reception of the said standards *q*, are attached by said standards, the upper resting on the shoulders of said standards. The lower ties, B C, are arched, to pass over plants. The other, D, may be straight.

To provide for the lateral adjustment of the two frames, each of the ties B C D is made in two overlapping parts, each provided with a number of threaded perforations, *m*, for the reception of a set-screw, *l*, passing through the other, and with a slot, *k*, for the reception of a similar set-screw, *l*, engaging with such perforations *m* in the other.

By simply loosening said set-screws *l* a limited extension or shortening of the ties may be readily made by means of the slots *k*, and by applying the said set-screws in different ones of the perforations *m* this adjustment may be extended to any desired extent.

Horizontal pivots *j*, connecting the parts of the ties B C D to their attaching pins and sockets *o n*, allow the vertical variation of the frames without impairing the function of the support of the frames at proper distance apart.

I employ a form of plow-iron, E, with a narrow mold-board, and shovels F, of any approved form, preferring that shown.

In connection with such narrow mold-board plows F, I further employ for one or each frame a detachable wing, G, provided with a link, *i*, for its attachment to the plow by set-screws or any equivalent of such attachment, and at its other end with a shoe or bracket, *h*, traversed

by a clamping-screw, *g*, for attaching it to a standard, *x*, the whole being so constructed that the plow shall occupy an inner and front standard, and the wing or shoe extension project obliquely back to the outer and rear standard of the same frame.

The narrow mold-board facilitates, by its light draft, the employment of said wing or shoe extension.

Such wing or extension serves to cut the weeds from between the rows, the plow covering the weeds with the dry earth cut from the sides of the hills.

The plow detached operates in connection with another plow, or a shovel, in the usual manner.

The plows *E* and shovels *F* are attached to the standards *x*, like the wing *G*, by brackets *h*, having set-screws *g*, of suitably-modified form; and the said standards are made of uniform size—*i. e.*, without taper—to receive said brackets. The shovels and plows may consequently be adjusted, by means of the curve of said standards, to any desired angle,

being readily secured in any position by means of the said clamping-screws.

Claims.

I claim as my invention—

1. The coupling-ties *B C D*, each constructed with vertical and horizontal pivots, and with slots *k* and perforations *m*, to form a compound adjustment, and in connection the shouldered standards *q*, supported by the struts *w* and braces *p*, as shown and described, for the purposes set forth.

2. The combination, with a double-shovel frame, *A*, and a narrow mold-board plow, *E*, of a detachable wing or shoe extension, *G*, substantially as shown and described, for the purpose specified.

In testimony of which invention I have hereunto set my hand.

MATTHEW P. SIMPSON.

Witnesses:

G. P. COPELAND,
W. E. MCDIVITT.