P. Sprague.

Cultivator.

No. 89,801. Patented May 4, 1869.

Fig: 1.

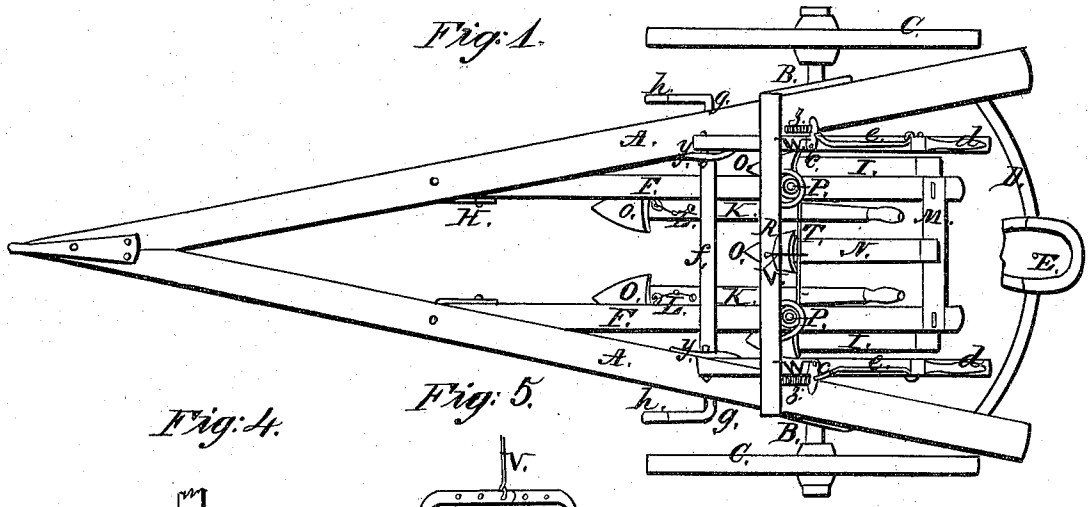


Fig: 4.

Fig: 5.

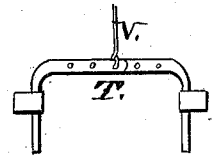
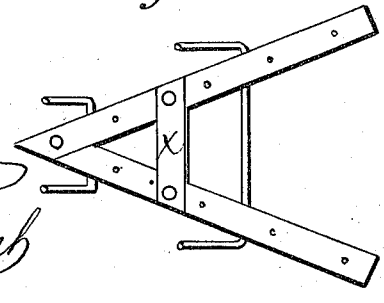


Fig: 2.

Fig: 3.



Witnesses.

Harry King.

Chas. L. Everett

Inventor.

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per Alexander & Mason

attys

United States Patent Office.

PHILANDER SPRAGUE, OF PECATONICA, ILLINOIS.

Letters Patent No. 89,801, *dated May* 4, 1869.

IMPROVEMENT IN CULTIVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, PHILANDER SPRAGUE, of Pecatonica, in the county of Winnebago, and in the State of Illinois, have invented certain new and useful Improvements in Cultivators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the construction and general arrangement of a cultivator, which will hereinafter be fully set forth.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a plan view;

Figure 2, a sectional side view;

Figure 3, a plan view of the harrow, to be attached to the cultivator;

Figure 4, a front view of the plowshares; and

Figure 5, side view of a brace used in the cultivator.

A A represent two beams, placed at suitable distance apart at the rear end, and joined together at the front end, forming the tongue to which the team is attached.

On the outer side of each of the beams A A, is secured a bent rod, B, which forms the axle for the wheel C.

The tongue being forked in this manner, and running the whole length of the machine, constitutes the frame of the same, and keeps the horses off the rows of corn, brings the draught nearer the team, and, in turning, requires less labor of the team.

Near the rear ends of the beams A A is a semicircular brace, D, on the centre of which the driver's seat E is placed, keeping the driver high up over the dust and dirt.

At a suitable distance in rear of the front ends of the beams A A, and on their under or lower side, are attached two plow-beams F F, by means of eye-bolts G G, on the beams A A, and bent bars H H, passed through the said eye-bolts, and secured to the beams F F, by pins, as seen in fig. 2.

Near the rear ends of the beams F F, plow-shins I I are secured, and they are further braced, as seen in fig. 2.

In front of the shins I I, on the beams F F, are pivoted the shins K K, the upper ends of which extend above the plow-beams, and form handles within reach of the driver's feet.

These shins are braced to the beams F F, by hinged braces L L. By this means the shovels can be moved forward, and cleared from the ground when desired.

Near the rear end of the beams F F is an adjustable cross-bar, M, to which is secured a shin, N, so as to allow a shovel in the centre, between the side-shovels.

The shovels O O are of the peculiar shape shown in fig. 4, suitable both for cultivating and corn-planting, thus saving considerable expense.

To the plow-beams F F are secured handles P P, which extend upward, and pass through rings or eyes on the rear side of a cross-bar, R, which is supported on the standards S S, said standards being secured to the beams A A. By this arrangement, it will be seen it is impossible for the plow-beams F F to tip over, but always remain with the plows downward.

The distance between the plow-beams F F is regulated by means of an adjustable brace, T. This brace is constructed, as shown in fig. 5, with loops, which are placed around the handles P P. They are then bent, and meet in the centre, where they are fastened together by a wire, V, which is suspended from the cross-bar R. It will be seen that, by contracting or extending the two parts of the brace T, the plow-beams F F are brought closer together, or further apart, as may be desired.

The plow-beams F F are raised or lowered at will, by means of cords *a a*, which are secured to the same; then pass around pulleys *b b*, on the under side of the cross-beam R, and the other ends secured to two levers, W W.

These levers are pivoted at their forward ends, in front of the standards S S, to ears Y Y, on the beams A A, and extend toward the rear, so as to be within reach of the driver on his seat E.

On the inner side of the standards S S are two segmental rack-bars, Z Z, and on the levers W W are pawls, or dogs *c c*, which catch on the notches on said rack-bars, and thus hold the levers, and, through the cords *a a*, also the plow-beams, at any desired height.

These pawls or dogs are moved out of the said notches by means of a small lever, *d*, pivoted near the rear end of the lever W, said small lever *d* being connected by a rod, *e*, to the pawl *c*.

By pressing down the lever *d*, the pawl is moved out of the notches; and as soon as the pressure is removed from the lever *d*, a small spring underneath throws the same up again, and consequently also the pawl *c* into the notches on the rack-bar Z.

On the inner side of the beams A A, at the point where the ears Y Y are placed, is a semicircular brace, *f*, which is so arranged that the ears Y Y may act as braces to it, so as to prevent it from moving either forward or backward.

To the centre of the brace *f* is a bent rod, *g*, pivoted, which rod or bar follows the curve of the brace underneath, and extends below the beams A A, then is bent outward, and then forward, at its forward ends forming the hooks *h h*, to which the double and single-trees will be attached.

By removing the cross-piece M, with the fifth shovel attached, I can easily attach the harrow X, fig. 3, and, if desired, I can easily remove the whole plow-arrangement, by removing the plow-beams F F, and substitute

the harrow, which will make it what is commonly called a sulky-harrow.

Having thus fully described my invention,

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

1. The arrangement of the forked tongue A, axles B B, wheels C C, semicircular braces D and *f*, seat E, and bent rod, or bar *g*, with its hooks *h h*, substantially as herein set forth.

2. The arrangement of the forked tongue A, plow-beams F F, handles P P, and adjustable brace T, all constructed and operating substantially as and for the purposes herein set forth.

3. The arrangement of the plow-beams F F, stationary shins I I, pivoted shins K K, and adjustable cross-bar M, to which a centre shin, N, is secured, substantially as herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 14th day of August, 1868.

Witnesses: PHILANDER SPRAGUE.

MAGGIE VAN DYKE,

A. S. VAN DYKE.