M. S. TARKINGTON.

CULTIVATOR.

No. 174,320. Patented Feb. 29, 1876.

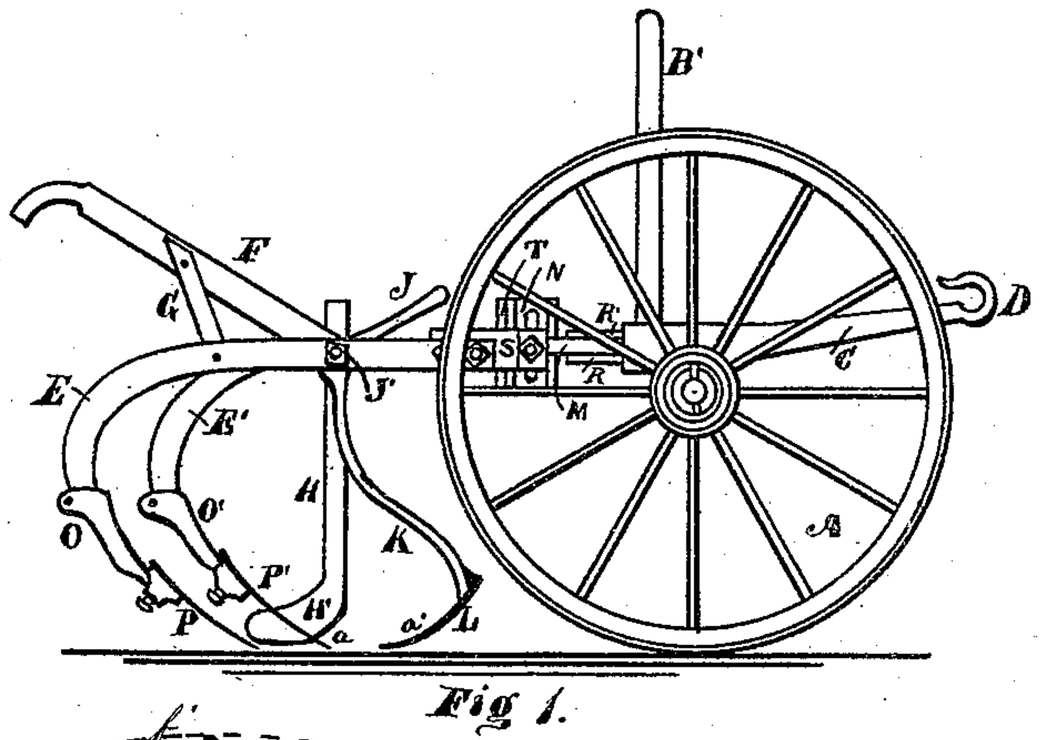

Fig 1.

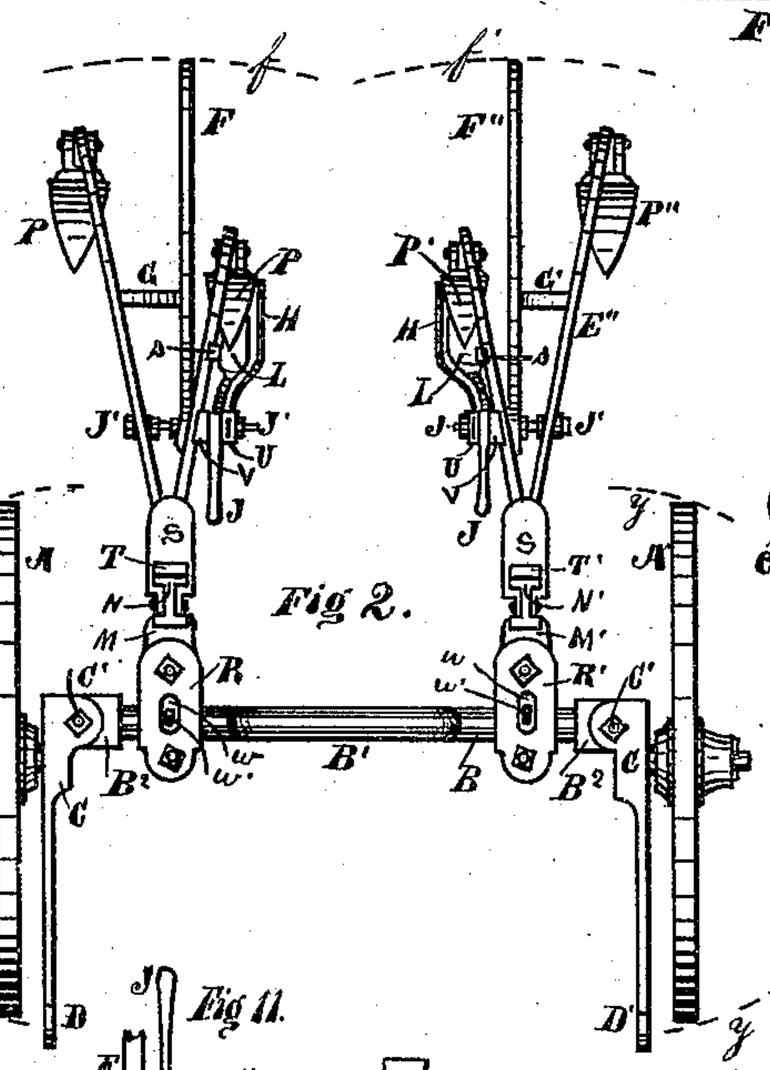

Fig 2.

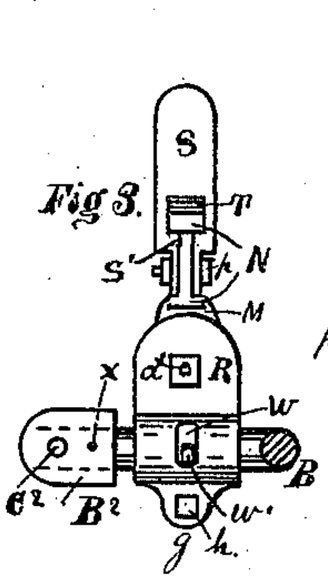

Fig 3.

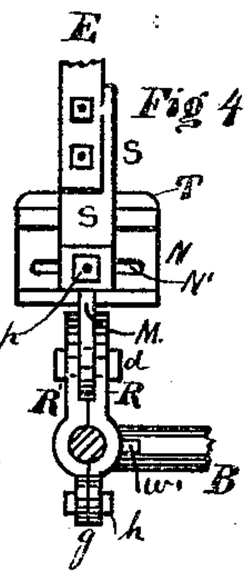

Fig 4

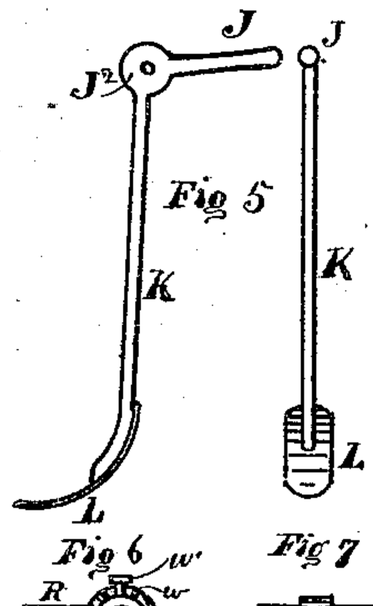

Fig 5

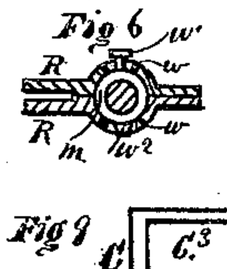

Fig 6

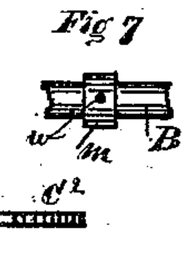

Fig 7

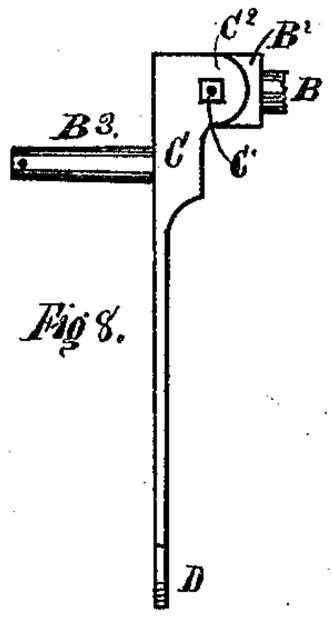

Fig 8.

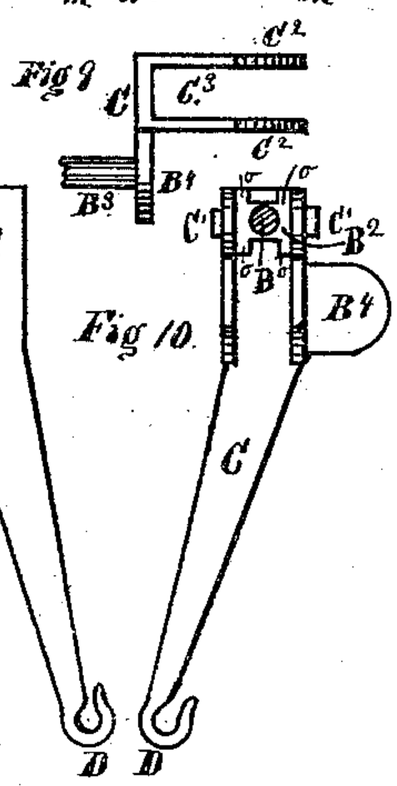

Fig 10.

Fig 9

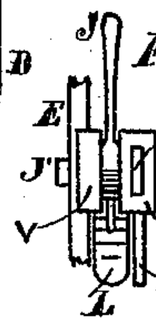

Fig 11.

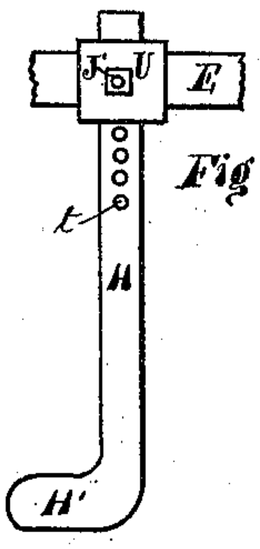

Fig 12.

WITNESSES;

Erastus F. Russell

S. O. Hamilk

INVENTOR.

Matthew S. Tarkington,

Per. E. O. Hamilk

Atty.

UNITED STATES PATENT OFFICE.

MATTHEW S. TARKINGTON, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **174,320**, dated February 29, 1876; application filed December 4, 1875.

To all whom it may concern:

Be it known that I, MATTHEW S. TARKINGTON, of Indianapolis, county of Marion, State of Indiana, have invented certain Improvements in Cultivators or Corn-Plows, of which the following is a description, reference being had to the accompanying drawings:

My invention consists, first, of the arrangement and combination of parts whereby the arch of a corn plow or cultivator is supported independently by each plow; second, the construction and arrangement of parts whereby the plow-shovels can be adjusted to any desired depth in the ground; third, in the construction and arrangement of the draw-bars whereby the spindles of the wheels are in front and below the arched axle.

Figure 1 represents a side elevation of my improved cultivator. Fig. 2 is a plan view of the same, showing the arrangement of parts more fully. Fig. 3 is an enlarged plan view of the connections of the plow-beams with the independent arch-supporting boxes. Fig. 4 is a side view of Fig. 3, showing the arrangement of parts for the adjustment of the plow-shovels in the ground. Fig. 5 represents a front and side view of the adjustable sled-runner or plow-point support. Fig. 6 is a sectional view of the independent arch-supporting boxes, showing the arrangement of the collar and top and bottom studs, that operate in slots formed in the top and bottom halves of the supporting-boxes. Fig. 7 shows the collar on the arched axle. Fig. 8 represents a top view of the draw-bar and wheel-spindle. Fig. 9 is an end view of Fig. 8. Fig. 10 shows two side views of Fig. 8. Fig. 11 represents the manner of attaching the sled-runners or plow-point supports and fender to the plow-beams. Fig. 12 is a side view of the fender and clamp.

A A represent the wheels of the cultivator, which are mounted on the spindles B^3, that are secured to the projection B^4 of the draw-bar C. (Shown more fully in Figs. 8, 9, and 10.) The draw-bar C is also formed with a hook, D, at the front end. The other end is provided with two projecting flanges, C^2 C^2, which form jaws, that fit over and under the flanged end pieces B^2 of the arched axle B B^1, and is pivoted thereto by the bolt C^1. The end piece B^2 has flanges *o o* above and below, so as to present a wide bearing on the inside of the jaws C^2 C^2, and the end of the arched shaft or axle is inserted in the piece B^2, and secured therein by the pin *x*. (Shown in Fig. 3.)

In Figs. 1, 2, and 8 it will be seen that the spindle B^3 is located below and in front of the arched axle B B^1, and is free to move in any direction on the pivot-bolt C^1, as indicated by the dotted lines *y y*, Fig. 2, and allow the wheel A to follow the horse independent of the other wheel, with the draft below the arched axle B B^1, which will allow the wheels to pass over obstacles with little or no strain on the arched axle.

On the arched axle B B^1, between the arch B^1 and end pieces B^2, are secured the collars *m*, Fig. 7, with a stud, w^1, above, and w^2 below, Fig. 6. Over and under these collars w^1 w^2, and encircling the shaft B, are the independent arch-supporting boxes R R′, Figs. 2, 3, and 6. Each of these boxes are perforated with a slot, *w*, above and below, through each of which the studs w^1 and w^2 project, the design of which is to support the arch in a perpendicular position, and prevent it from turning down either in front or rear.

The two halves of the independent arch-supporting boxes R R′ are secured together by bolts *h h* in the lugs *g g* in front, and by the bolts *d* at the rear. The bolt *d* acts as a pivot to the attachments M N on the end of the plow-beams, so as to allow the plows P to be moved laterally either way, as indicated by the dotted lines *f f′*, Fig. 2.

The plow-beams are curved downward at their rear ends, and are provided with shovels P, attached in the ordinary manner. The front ends of the beams E E′ are securely bolted to the sides of the gib-slide S. (Shown more fully in Figs. 3 and 4.) The front end of the piece S is formed with a gib, S′, that fits on both sides of the upright slide N, and is secured at any desired height by the bolt *p* passing through the slot N′, which will allow the plows to be adjusted to any desired depth. At the rear of the slide N, and cast on the top and bottom of the gib-piece S, are lugs or brace-guides T, that help support the beams against the slide N. On the front side of the slide N is cast the pivoted connection M, that

is pivoted to the independent arch-supporting boxes R R′ by the pivot-bolt *d*, before described.

The two plow-beams E E′, on each side of the arch B¹, are formed with the inner beam shorter than the outside beam, and the handle F is secured by the bolt J¹ and brace G, as shown in Figs. 1 and 2. On the inside of the short beams E′, and attached thereto by the bolt J, is the washer V, with the sled-runner or plow-shovel-supporting arm K, pivoted on the bolt, between the washer V and the fender-clamp U. (Shown more fully in Fig. 11.)

The sled-runner or shovel-support is shown fully in Figs. 1, 2, and 5, and is constructed with an arm, K, at the bottom of which is the slide or runner L. The upper end is provided with a handle, J, and a hole, J², for the pivot-bolt J¹ to work in.

This device is designed to be used in such a manner as to support the shovels by being swung under them, and prevent the shovels from entering the ground while moving the machine from one place to another. When not in use they are raised up by means of the handle J, which is fastened in the catches *s s*, Fig. 2.

The fender H′ is a flat piece of iron, with a bar, H, extending above, which is perforated with a number of holes, *t*, for the purpose of adjustment. The upper end of the bar H is inserted in a cored hole in the fender-clamp U, and secured at any desired height by the bolt J¹, as shown in Figs. 1, 2, 11, and 12, and is designed to operate in connection with the shovels P, and prevent large clods of dirt from falling on the corn while being plowed.

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

1. The independent arch-supporting boxes R R′, arranged with a grooved recess in each half of the box, so as to clasp a collar, *m*, attached to the wrought-iron axle B¹, and also provided with openings *w w* above and below the collars *m*, in which operate the studs *w*¹ *w*² to form an independent support of the arch B¹, as shown and described.

2. The coupling-boxes R, constructed to support the upright arch B¹, in combination with the flanged plates N, having vertical slots, and with gib-slides S, provided with the brace-lugs T, substantially as described and shown, for the purposes set forth.

3. The horizontally-pivoted draft-bars C, having the projecting lugs B⁴ and wheel-spindles B³, rigidly attached thereto below and in front of the axle, and the ears C¹, in combination with the arched axle B, having the flanged blocks B², horizontally pivoted to said draft-bars, substantially as shown and described.

4. The fender-clamps U, provided with flanges, to clasp the plow-beam, a neck, upon which the shoe-arm K rotates, and a cored aperture, to receive the fender-bar H, as shown and described.

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

MATTHEW S. TARKINGTON.

Witnesses:
E. O. FRINK,
S. C. FRINK.