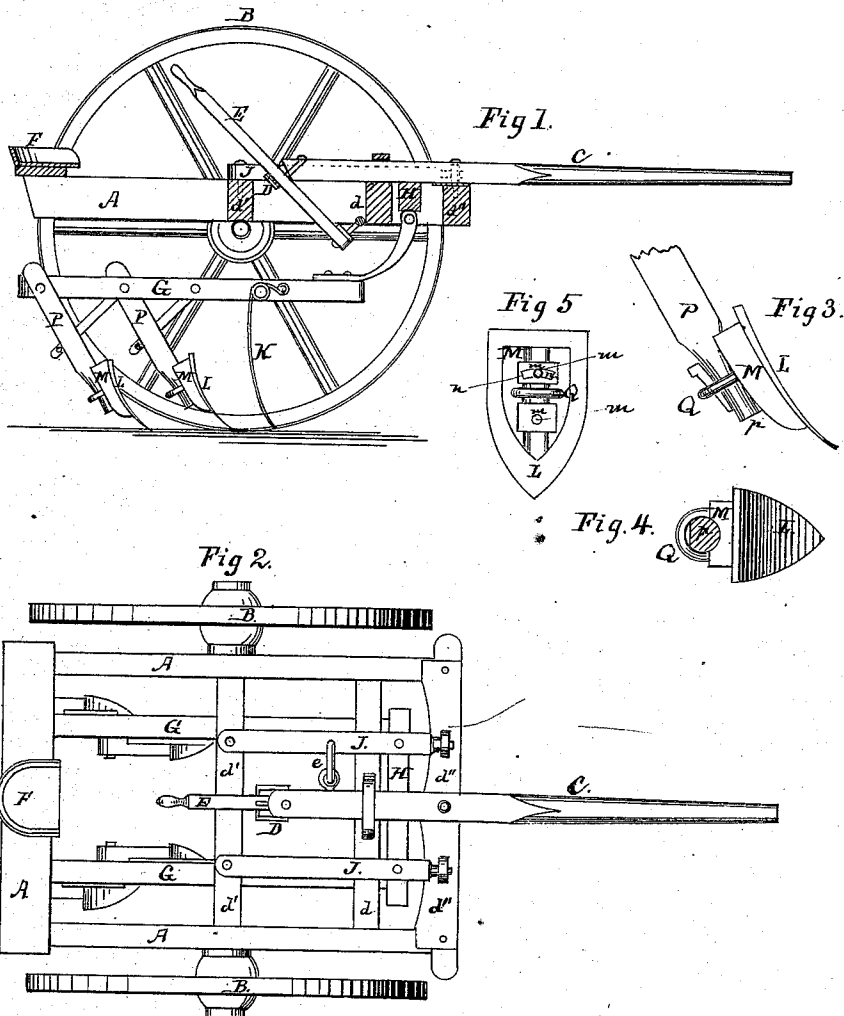


E. CHILDREN.
Cultivator.

No. 159,500.

Patented Feb. 9, 1875.



Witnesses:
Henry L. Smith
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UNITED STATES PATENT OFFICE.

EDWIN CHILDREN, OF DUNLEITH, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 159,560, dated February 9, 1875; application filed October 9, 1874.

CASE A.

To all whom it may concern:

Be it known that I, EDWIN CHILDREN, of Dunleith, in the county of Jo Daviess and State of Illinois, have invented certain Improvements in Cultivators, of which the following is a specification:

My invention relates to that class of cultivators known as sully-cultivators, and relates more particularly to a swing contrivance for varying momentarily the line of a pivoted draft-pole and the plow-beams, this part of my invention being an improved construction of a prior invention patented by me, the object of the present improvement being the lessening of the friction and the greater stability and durability of the parts, all of which will be hereinafter more fully explained.

In the accompanying drawing, which forms a part of this specification, Figure 1 represents a sectional side elevation of my improved cultivator. Fig. 2 is a plan view of the same. Fig. 3 is a side view of the lower portion of one of the standards with the shovel attached. Fig. 4 is a plan view of same, the standard being taken in section just above the shovel. Fig. 5 is a rear view of the shovel and the casting, by means of which it is connected to the said standard. The three last-mentioned figures are upon a larger comparative scale than Figs. 1 and 2.

Like letters of reference made use of in the several figures indicate like parts wherever used.

In the said drawing, A represents a rectangular frame, which is mounted upon two wheels, B B, and has a draft-pole, C, secured to it by a pivot, *a*, as shown in Figs. 1 and 2. To the rear end of the draft-pole C there is secured a metal loop, D, through which an inclined lever, E, passes, the lower end of said lever being pivoted upon the cross-timber *d* of the frame A. F is the driver's seat upon the back of the frame, and G G are the two plow-beams, pivoted at their front ends to a sway-beam, H, which is supported by the parallel swing-arms J J, pivoted at their rear to the central cross-timber *d'* of the frame, and prolonged in front of the sway-beam H far enough so that the rollers *i i* upon the front ends may

rest upon the front transverse beam *d''* of the frame. A link, *e*, connects the draft-pole to one of the swing-arms J, so that the motion of said draft-pole imparted by the lever E is communicated to said arms and to both plow-beams, as will be readily understood. This construction, by placing the bearing-point well forward, increases the radius and diminishes the friction, and also strengthens the connections and relieves the draft-pole of the weight which it sustained back of its pivot in my former invention, making the whole contrivance easier to manage and move. To one of the plow-beams G G, in front of the foremost shovel, I attach a tooth, K, similar to an ordinary spring horse-rake tooth. The purpose of this tooth is to clear away the corn-stalks from the ground when they lie remaining from the last year's crop. In passing the cultivator over the field for the first time these stalks are dragged into line with the furrows in a direction parallel with the course of the cultivator; consequently, when the field is to be gone over the next time in a course at right angles to the first plowing, the stalks all lie squarely across the path and cause considerable annoyance and trouble. The tooth or clearer K now comes into play and gradually turns the stalks to the other direction and prevents them from gathering about the shovels. It is made elastic to avoid injury if entangled; otherwise it might be rigid. It has been found desirable generally hitherto to provide means for adjusting the cultivator-shovels in two directions, namely: vertically—that is to say, in or out of the ground—and laterally—that is to say, inclined away from or toward the corn. The former adjustment is usually accomplished by moving the entire standard into a new position, and the latter by turning the shovel around upon a rounded lower portion of the standard. In the present cultivator I provide a third adjustment to the shovel, as follows: The shovel L is secured to a back piece, M, by two bolts, *m m*, one of which passes through a simple circular aperture large enough to receive it, while the other passes through an arched slot, *n*. The standard P gives the first above-mentioned adjust-

ment, the rounded portion of said standard at *p* and the ring *Q* give the second, while the two bolts and the arc-slot give a third adjustment of the shovel upon its backing piece. This third adjustment enables me to use the adjustment afforded by the ring *Q*, and at the same time keep the point of the shovel in the line of the draft, causing the shovel to scour better. It will be understood that, when the shovel is turned upon the ring *Q*, the point being farthest from the axis will describe an arc of a circle, and, consequently, if before in the line, will be thrown out of the line of draft. Now, by tilting it upon the bolts *m*, the point may be brought back to the line of draft, while the other adjustment is undisturbed, thus producing a surface resembling the mold-board of a properly-shaped plow, and

insuring a good scouring action. This adjustment also enables me to turn the point away from the roots of the young corn without disturbing any previous adjustment of the shovel.

Having described my invention, what I claim as my new improvement in cultivators is—

The combination of the pivoted draft-pole *C* and lever *E* with the swing-arms *J J*, provided at their forward ends with rollers *i i*, resting upon the front timber *d''* of the cultivator-frame, the said swing-arms being pivoted at the center beam *d'* and to the plow-beam, supporting sway-beam *H*, and connected by a link, *e*, to the draft-pole, substantially as specified.

E. CHILDREN.

Witnesses:

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