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S. N. HENCH.

CULTIVATOR.

No. 192,992. Patented July 10, 1877.

Fig. 1.

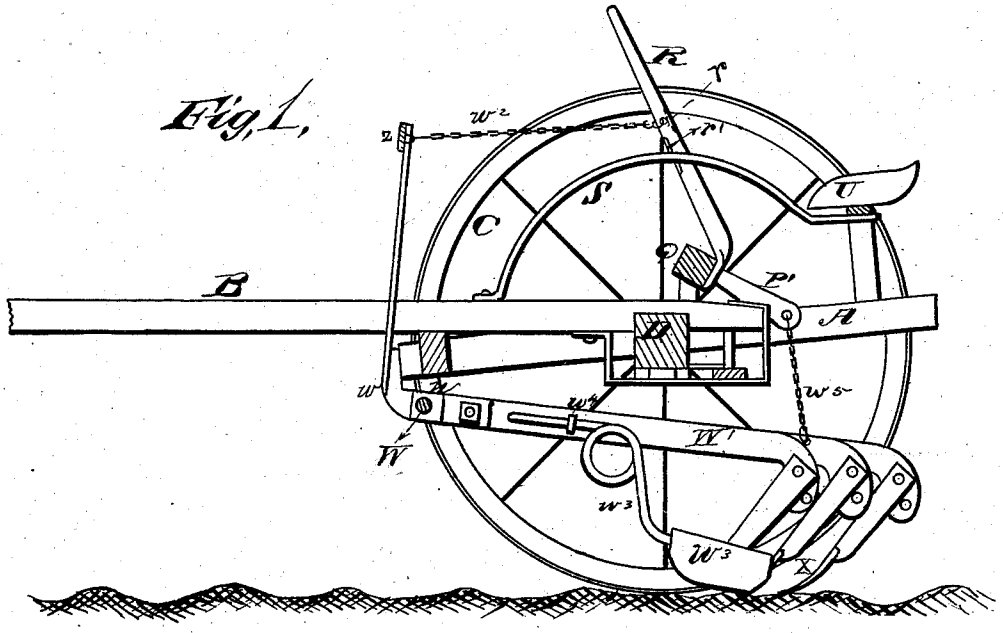


Fig. 2.

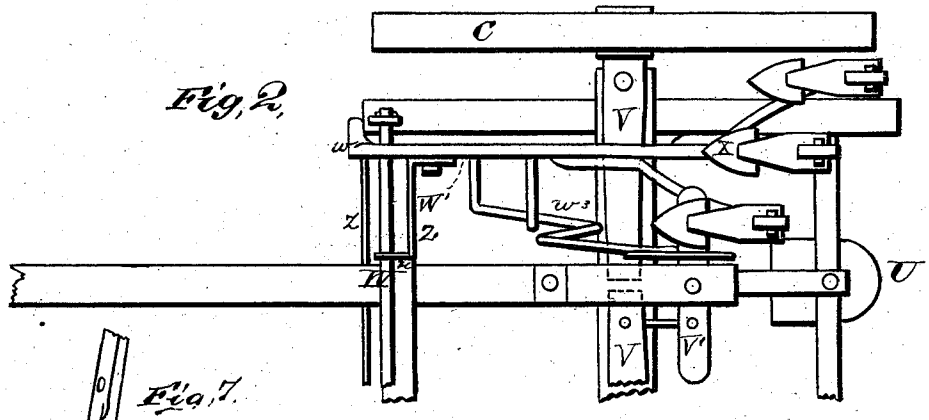


Fig. 7.

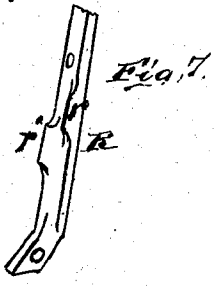
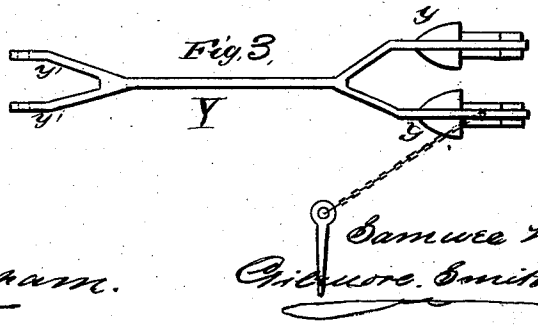


Fig. 3.



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Fig. 4.

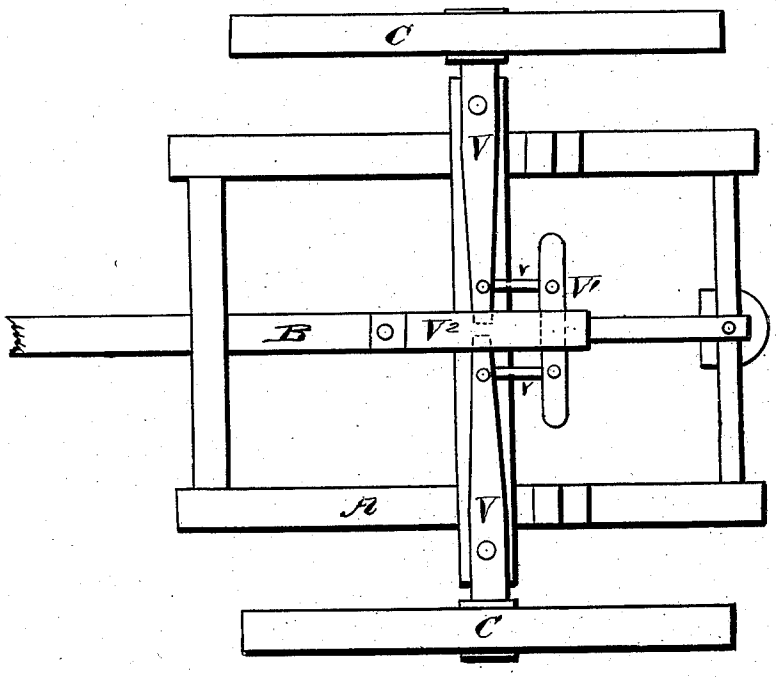
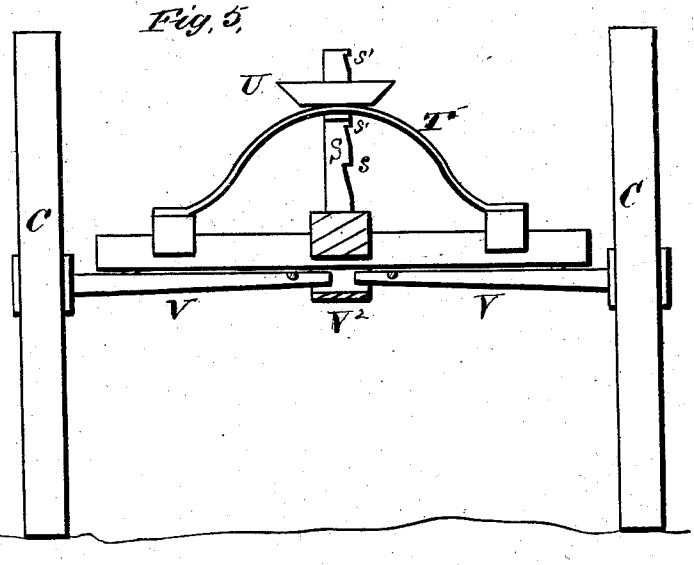


Fig. 5.



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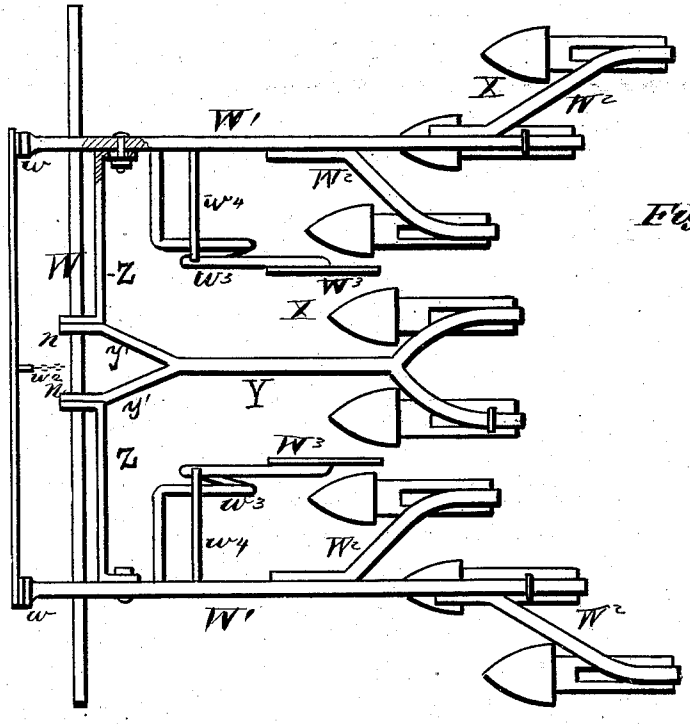


Fig. 6.

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UNITED STATES PATENT OFFICE.

SAMUEL N. HENCH, OF ICKESBURG, ASSIGNOR OF ONE-HALF HIS RIGHT TO WALKER A. DROMGOLD, OF PATTERSON, PENNSYLVANIA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **192,992**, dated July 10, 1877; application filed March 10, 1877.

To all whom it may concern:

Be it known that I, SAMUEL N. HENCH, of Ickesburg, in the county of Perry and State of Pennsylvania, have invented a new and valuable Improvement in Cultivators; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a central section of my cultivator. Fig. 2 is a bottom view thereof, and Fig. 3 a detail. Fig. 4 is a bottom view of the cultivator-frame, and Fig. 5 is an end view of the same. Fig. 6 is a plan view of the cultivator. Fig. 7 is a detached perspective view of the adjusting-lever, by means of which the cultivator-teeth are raised and lowered.

This invention relates to cultivators; and it consists in the construction and arrangements hereinafter set forth.

In the accompanying drawings, A designates the frame of my vehicle, B the draft-tongue attached thereto, C the two transporting-wheels, and D the axle.

In place of said axle I substitute two small axles or spindles, V, to each of which one of the wheels is suitably attached, turning thereon. The inner ends of said axles V are connected by link-bars *v v* to the ends of a yoke or double treadle, V^1, which is operated by the driver's feet so as to guide the vehicle. A guide plate or strap, V^2, is secured to the under side of draft-tongue B, at the rear thereof, and regulates the movements of said axles. The machine then appears as shown in Figs. 4 and 5. I next attach thereto the cultivator attachment shown in Fig. 1, by passing the ends of its pivot-rod W through lugs *n n*. On this rod are pivoted the front parts of the drag-bars W^1 of the cultivator, the front ends *w* of said bars being bent vertically upward and connected at their tops by a cross-bar, *z*. From the middle of said cross-bar a chain, w^2, extends backward to a hook on adjusting-lever R. This lever is provided with a lip, *r'*, similar to *r*, (see Fig. 1,) but inclined in a diagonally-opposite direction, which lip is adapted to engage with any one of a series of reversed notches, *s'*, in plate S, near the back part thereof. By shifting said lever from one of said notches to another the inclination and depth of the cultivator-teeth X can be regulated. These teeth or plows are attached to the rear ends of said drag-bars W^1, or to short rigid arms W^2, connected thereto. On the inside of the inner lines of said cultivator-teeth are two guard-plates or runners, W^3, which are secured to said drag-bars by springs w^3, braced by bars or stops w^4. These guards or runners prevent the earth from being thrown over the young plants while the machine is straddling a row of corn, and measurably protect the cultivator-teeth from injury by stones, &c. The rear ends of said drag-bars are hung by chains w^5 to arms P' on rock-shaft Q.

Y designates a supplemental middle drag-bar, provided with two additional teeth or plows, *y y*, which is placed between the drag-bars, previously described, upon pivot-rod W. Its front end, whereby it is pivoted, is bifurcated at *y' y'*, as shown in Figs. 3 and 6, and it is held in proper position by the pressure of spring-plates Z against said diverging front end *y' y'*. Said spring-plates are slotted at their attachment to drag-bars W W^1, so as to allow a certain amount of play. When the devices are arranged as last described they are adapted to be used as a harrow for wheat and other grain.

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

1. The combination of pivoted adjusting-lever R, having diagonally-opposite lips *r r'*, with locking-plate S, having notch *s* and reversed notches *s'*, whereby said lever is adapted to raise the cultivator-teeth out of engagement with the ground, or to adjust them to any depth required, substantially as and for the purpose set forth.

2. The combination of drag-bars W^1 with pivot-rod W, supplemental drag-bar Y, and spring-plates Z Z, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SAMUEL N. HENCH.

Witnesses:

J. B. LOOMIS,

EUGENE W. JOHNSON.