H. Howe.

Cultivator.

No. 72297 Patented Dec. 17, 1867.

Fig. 1.

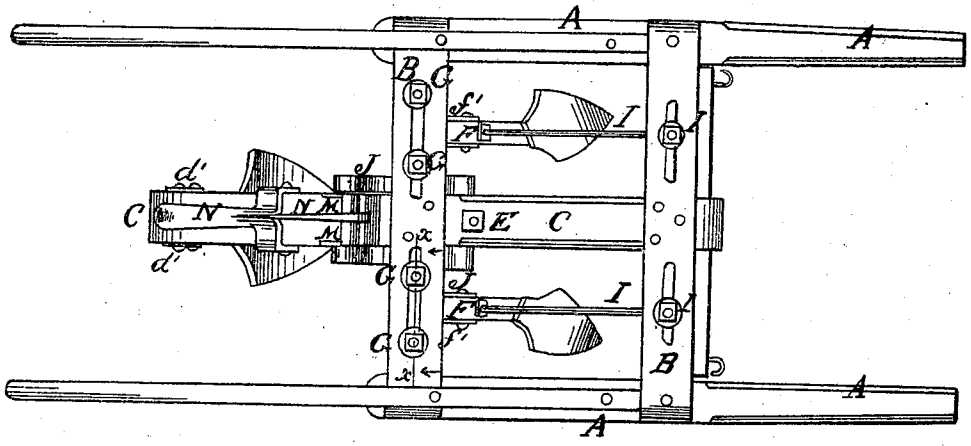


Fig. 3.

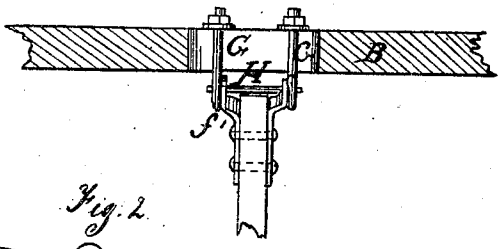
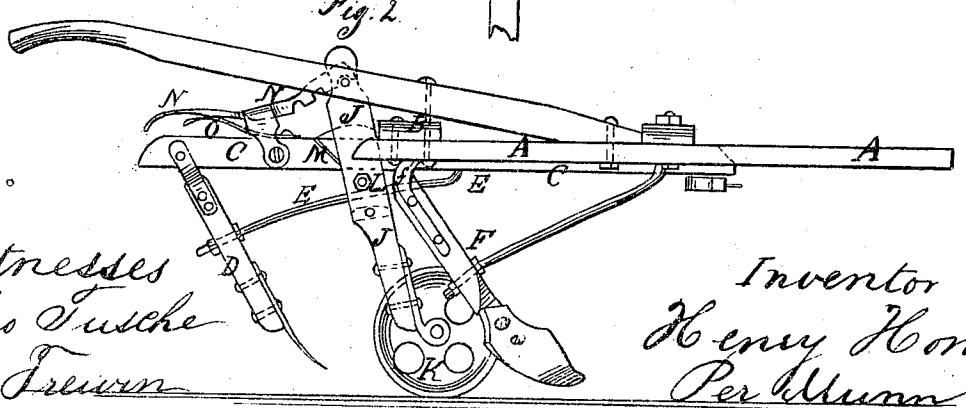


Fig. 2.



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HENRY HOWE, OF ONEONTA, NEW YORK.

Letters Patent No. 72,297, *dated December* 17, 1867.

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, HENRY HOWE, of Oneonta, in the county of Otsego, and State of New York, have invented a new and useful Improvement in Cultivators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top or plan view of my improved cultivator.

Figure 2 is a side view of the same.

Figure 3 is a detail sectional view of the same, taken through the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of cultivators, so as to make them more convenient in operation, and it consists in the construction, combination, and arrangement of the various parts, as hereinafter more fully described.

A are the thills, the rear parts of which form the side bars of the cultivator-frame, and to which the ends of the cross-bars B are securely attached. C is the central beam of the cultivator, which is securely attached to the cross-bars or beams B, and the rear end of which is extended back, for the attachment of the rear-plough standard D. The upper end of the rear plough standard D has ears or straps, *d'*, attached to it, by means of which it is pivoted to the beam C, by a bolt passing through said ears and through said beam, as shown in the drawings. The draught strain upon the standard D is supported by the rod E, the forward end of which is bent upward, passes through the beam C, and is secured by a nut. The rear end of the rod E has a screw-thread cut upon it, passes through the standard D, and is secured in place by two nuts, placed one upon each side of the standard D, so that the pitch or inclination of said standard may be easily adjusted as required. F are the side or forward-plough standards, to the upper ends of which are attached ears, *f'*, through which and through the eye-bolts G pass bolts H, pivoting the said standards to the said eye-bolts. The eye-bolts G pass up through slots formed in the rear cross-bar or beam B, and are secured in place by washers and nuts, so that the side ploughs may be easily adjusted to work closer together or further apart, as may be desired. The draught strain upon the plough-standards F is sustained by the rods I, the forward ends of which are bent upward, pass through slots in the forward cross-bar B, so that the rods I may be adjusted according to the adjustment of the standards F. The rear ends of the rods I pass through the standards F, have screw-threads cut upon them, and are secured in place by two nuts, placed the one before and the other behind said standards, so that the pitch or inclination of the standards may be adjusted at pleasure. J is the gauge-wheel frame, in bearings in the lower part of which, revolve the journals of the gauge-wheel K. The side bars of the frame J pass up upon each side of the beam C, and are secured and pivoted in place by a bolt, L, which passes through said side bars and through ears M, attached to the central beam C, or to some other suitable support in the central part of the cultivator-frame. N is a latch, which is pivoted to the rear part of the beam C, in such a position that its forward or notched end may take hold of the upper part of the frame J, and hold it securely in place. O is a spring, attached to the beam C, the free end of which rests against the under side of the rear end of the lever-latch N, holding its forward end down upon the frame J.

By this construction, by pressing down upon the rear end of the latch N, and raising the handles P, the gauge-wheel drops down into the position shown in fig. 2, so that the cultivator may be drawn from place to place, with its ploughs held away from the ground, the latch N holding it securely in place. By depressing the rear end of the lever-latch N, and bearing down upon the handles P, the lower end of the gauge-wheel frame will be raised, so that the ploughs may come in contact with and enter the ground. Several notches are formed in the under side of the forward end of the latch N, so that the frame J may be held in such a position as to allow the ploughs to enter the ground to any desired depth.

It should be observed that the ears *d'* and *f'*, by which the plough-standards D and F are pivoted or hinged to the cultivator-frame, are bent outward and upward, so as to act as braces, to enable the said plough-standards to resist any side strain or pressure, at the same time that they act as hinges or pivots to render said standards adjustable.

I claim as new, and desire to secure by Letters Patent-

1. Extending the rear end of the central beam C back, to receive and support the rear or central-plough standard D, substantially as herein shown and described.

2. The gauge-wheel frame J, constructed substantially as herein shown and described, and pivoted to the central beam C, or to some other support at the central part of the cultivator-frame, as and for the purpose herein set forth.

3. The combination of the lever-latch N with the beam C and gauge-wheel frame J, substantially as herein shown and described, and for the purpose set forth.

4. Pivoting or hinging the standards D and F to the cultivator-frame, by means of the brace-ears *d'* and *f'*, substantially in the manner herein shown and described, and for the purpose set forth.

HENRY HOWE.

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