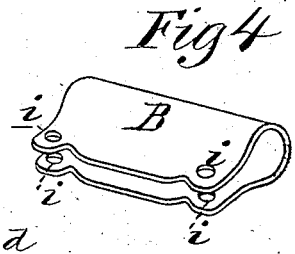
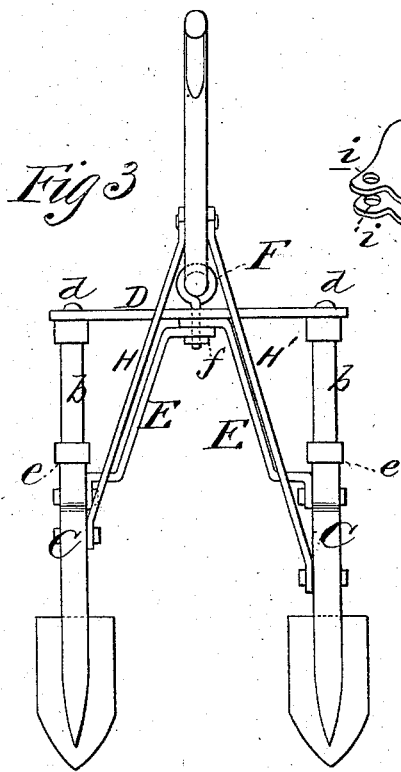
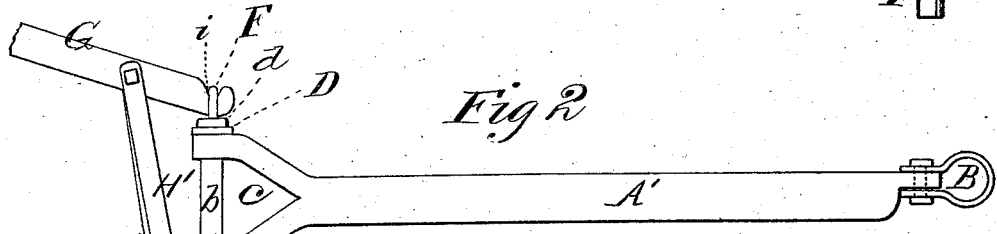
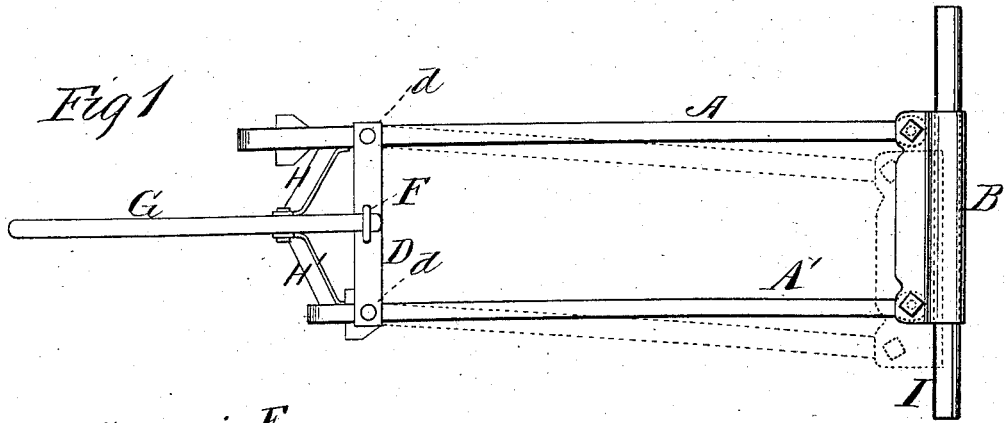


O. HUFFMAN.
WHEEL-CULTIVATORS.

No. 184,155.

Patented Nov. 7, 1876.



WITNESSES
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ORLANDO HUFFMAN, OF FRIEND, NEBRASKA, ASSIGNOR OF ONE-HALF HIS RIGHT TO BAILEY G. MCKINZIE, OF SAME PLACE.

IMPROVEMENT IN WHEEL-CULTIVATORS.

Specification forming part of Letters Patent No. **184,155**, dated November 7, 1876; application filed March 23, 1876.

To all whom it may concern:

Be it known that I, O. HUFFMAN, of Friend, in the county of Saline and State of Nebraska, have invented a new and valuable Improvement in Cultivators and Plows; 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 top view of my improved cultivator. Fig. 2 is a side view thereof. Fig. 3 is a rear view of the same, and Fig. 4 is a detail view of the sleeve.

This invention has relation to improvements in cultivators; and it consists in combining with the vibratory beams, pivoted at their front ends to the axle of two transporting-wheels, a handle, which is connected, by means of braces, to the shovel-standards, and is pivoted to the rear cross-bar connecting the beams, whereby the said shovels may be conveniently thrown to or from the corn, all as will be hereinafter more fully set forth.

In the annexed drawings, the letters A A' designate, preferably metallic, beams of suitable dimensions, the front ends of which are hinged to vibrate horizontally to a metallic sleeve, B, applied upon the axle I of two transporting-wheels, which sustain the front ends of the said beams. The rear ends of beams A A' are bifurcated, as shown at *c*, Fig. 2, and the ends of the forks are provided with eyes, through which are passed the spindles *b* of curved metallic shovel-standards C, having secured upon their lower ends cultivator-shovels *e*. Spindles *b* extend through the upper arm of bifurcations *c*, and a flat metallic bar, D, having perforations at each end, is applied thereon, the extreme upper ends of the said spindles being then provided with heads *d* for the purpose of holding the said bar in place. This bar being equal in length to the distance between the front ends of the beams A A', the latter will be parallel to each other at all times. Standards C are provided with shoulders *e*, which, abutting against the lower arm of forks *c*, will prevent them from

undue upward penetration through the same, and afford bearings upon which the said standards will vibrate.

E represents metallic braces, which are rigidly secured to standards C, below shoulders *e*, and, extending inward, are pivoted to bar D at the middle of its length by means of an eyebolt, F, passing through the said bar into and through registering perforations in the upper ends of braces E, and prevented from casual detachment therefrom by means of a head or nut, *f*, on its lower end. The eye of this bolt serves as a socket for the front end of a handle, G, which is provided with a notch, *i*, upon its upper end to receive the eye, and is connected with the standards C by means of metallic braces H H', pivoted both to the standards and handles. Handle G not only serves the usual purpose of guiding the implement, but also as a lever for throwing the shovels to or from the corn, which is accomplished by thrusting the lever-handle to the right or left, as the case may be, thus communicating, through the medium of rods H H', a vibratory motion in the corresponding direction and turning the shovels with their flat surfaces in the opposite directions, the effect of which is to give the shovels their full cut, whether thrown to or from the corn. The standard-spindles, having a double bearing in forks *c*, will be very rigid, and all danger of breaking or bending them is effectually prevented.

I claim—

1. In combination, the beams A A', having bifurcation *c* at their rear ends, the plow-standards C, having reduced spindles *b*, and the pivoted cross-bars D E, substantially as specified.

2. In combination with the beams A A', pivotal bar D, and vibrating standards C, the rotating eyebolt F, handle G, and pivotal rods H H', substantially as specified.

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

ORLANDO HUFFMAN.

Witnesses:

J. C. PANTER,
ROBT. CONNELL.