

J. A. ADAMS.
CULTIVATOR.

No. 175,636.

Patented April 4, 1876.

Fig. 1.

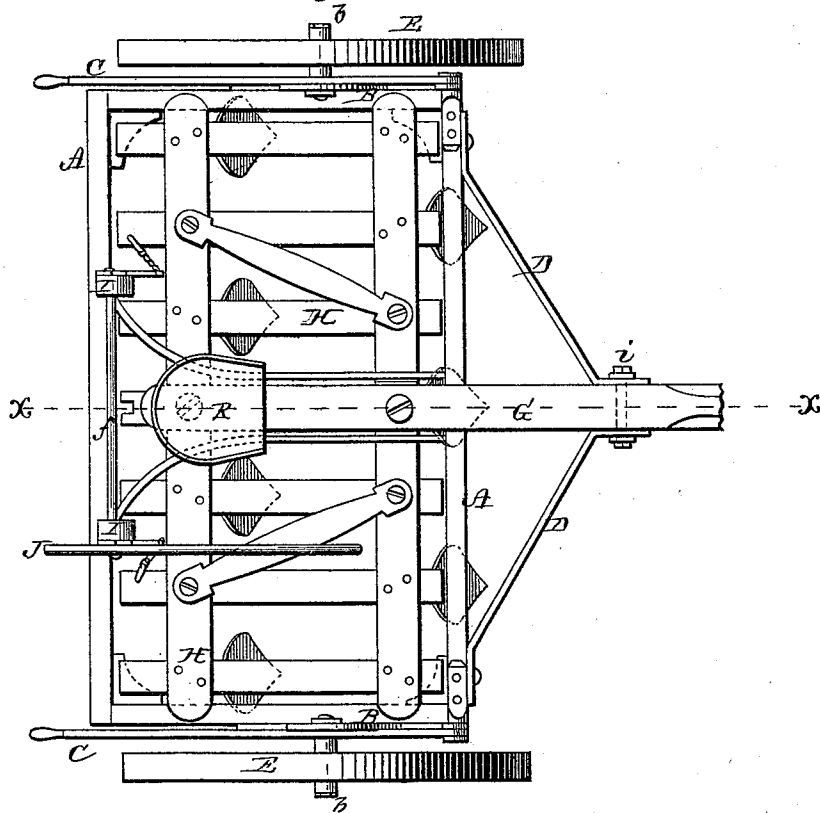
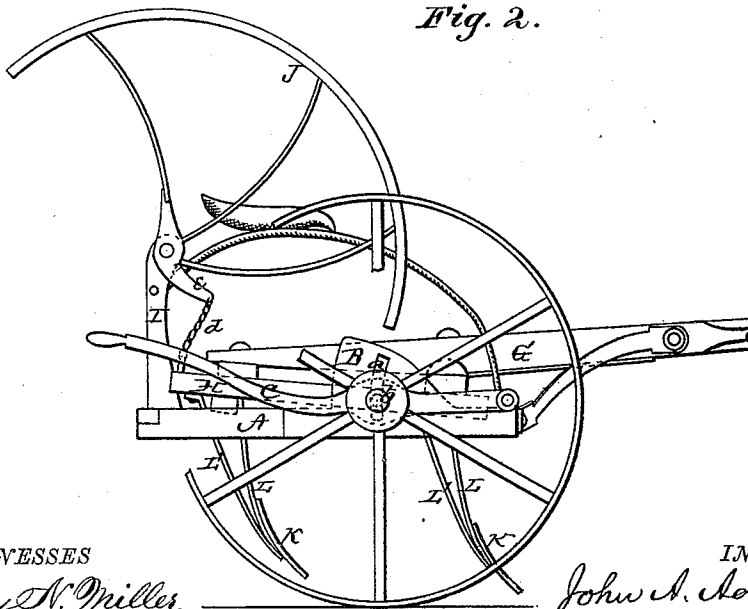


Fig. 2.



WITNESSES

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INVENTOR

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Fig. 3.

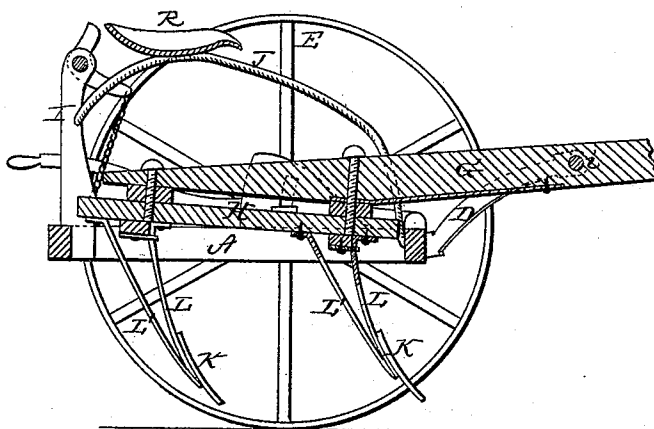
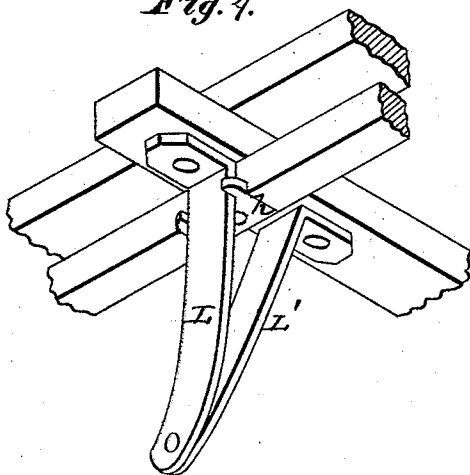


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN A. ADAMS, OF BATTLE CREEK, MICHIGAN.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **175,636**, dated April 4, 1876; application filed December 23, 1875.

To all whom it may concern:

Be it known that I, JOHN A. ADAMS, of Battle Creek, in the county of Calhoun and in the State of Michigan, have invented certain new and useful Improvements in Cultivators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a cultivator, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a plan view of my cultivator. Fig. 2 is a side elevation, and Fig. 3 is a section of the same through the line *x x*, Fig. 1. Fig. 4 is an enlarged perspective view, showing the construction of the cultivator-teeth.

A represents the main frame of my cultivator, provided at each end with a plate or casting, B, extending from the front rearward for a suitable distance, and extended upward at its rear end, which extended portion is formed with a curved slot, *a*.

On each end of the frame at the front of the casting B is pivoted a lever, C, which carries the spindle *b*, for the wheel E placed thereon. The inner end of this spindle passes through the slot *a* in the casting B, and has a head or its equivalent on its end on the inner side of said casting, to hold the same thereto.

By means of these side levers C C, the frame A may be regulated at varying distances from the ground, as required, for making the cultivator-teeth run deep or shallow, the levers being held by ordinary ratchet devices.

On the front side of the frame A, near each end, is secured a brace, D, which extends forward and inward, and is arched as shown in Fig. 2. The front ends of these braces are fastened to the sides of the tongue G by a single bolt passing through them, so as to pivot the tongue between them.

The tongue G extends rearward over the

main frame A, and has a frame, H, secured to its under side, to which latter frame the cultivator-teeth are attached. The rear portion of the frame H is, by chains *d d*, connected with arms *e e* projecting from a shaft, *f*, which has its bearings in standards I I on the rear portion of the main frame A. On one end of the shaft *f* is a semicircular lever, J, for raising and lowering the frame H, which lever may be operated either from the driver's seat R or from the rear of the machine, if the driver is walking behind.

It will thus be seen that the cultivator-frames are attached to the tongue far forward by the single bolt *i*, on which latter it is free to play as a pivot or hinge in such a manner that the frames may have free play up or down or laterally, oscillating, so to speak, in order to allow the cultivator-teeth to raise over or pass around stones or other obstructions without unnecessary strain upon the team or the different parts of the cultivator, thus obviating a very serious cause of breakage thereof. Either end of the plow-frame is free to lift up without lifting the plows on its opposite end out of the ground, and they work or move laterally when meeting with such obstructions.

K K represent the cultivator-teeth or plows, each of which is fastened to the lower connected ends of two bars, L and L', forming the plow foot or shank.

The upper end of the front bar L is bent forward and fastened to the under side of one of the cross-bars of the frame H, with the angle against the front side of one of the longitudinal bars of said frame. On this longitudinal bar is secured a plate or casting, *h*, the front of which is slotted or grooved to straddle the bar L from behind and hold it firm, free from any lateral or side motion. The upper end of the bar L' is bent rearward and fastened to the same cross-bar of the frame H.

By these means greater strength and efficiency are secured to the whole machine, preventing splitting of the plow-frame.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the stationary main

frame A, braces D D, tongue G, pivot-bolt *i*, and movable cultivator-frame H, all substantially as and for the purposes herein set forth.

2. The notched guide-plate *h* attached to the under side of the frame H, in combination with the bars L and L', as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of November, 1875.

JOHN A. ADAMS.

Witnesses:

JOHN MEACHEM,

WILLIAM A. BRIGGS.