2 Sheets—Sheet 1.

# G. BRADLEY.

## CORN-CULTIVATOR.

No. 180,987. Patented Aug. 15, 1876.

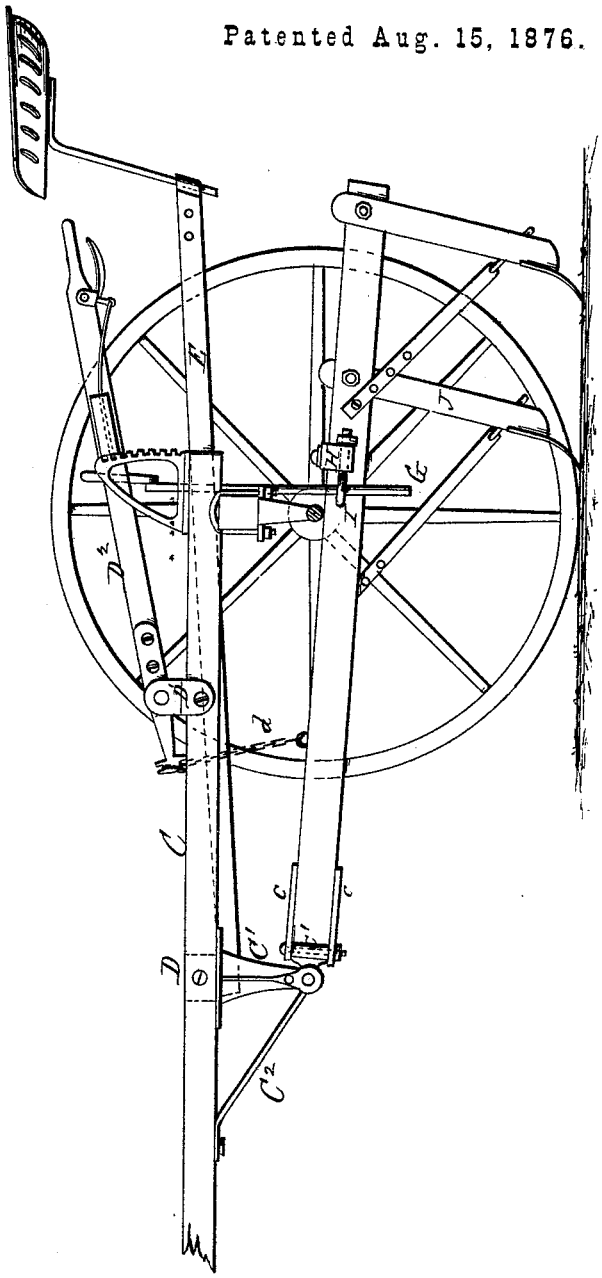


Fig. 1.

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2 Sheets—Sheet 2.

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## CORN-CULTIVATOR.

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Fig. 3.

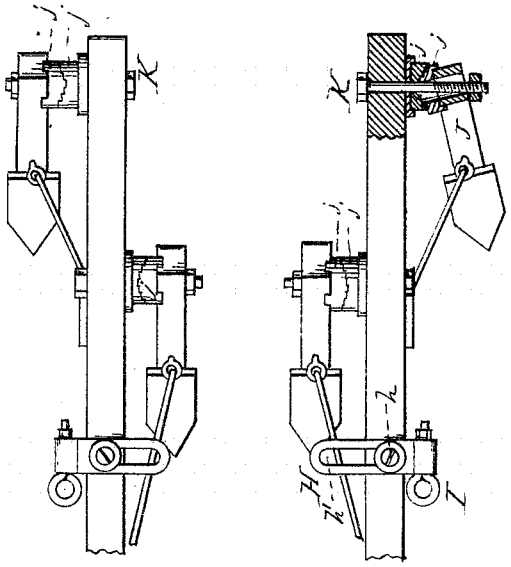
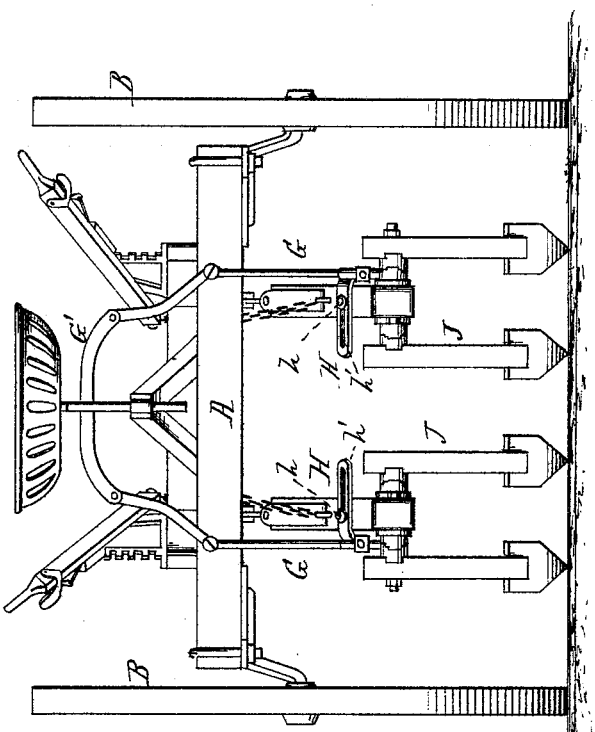



Fig. 2.

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# UNITED STATES PATENT OFFICE.

GEORGE BRADLEY, OF ROCKFORD, ILLINOIS, ASSIGNOR TO CHARLES R. CHANDLER, OF SAME PLACE.

## IMPROVEMENT IN CORN-CULTIVATORS.

Specification forming part of Letters Patent No. **180,987**, dated August 15, 1876; application filed February 14, 1876.

*To all whom it may concern:*

Be it known that I, GEORGE BRADLEY, of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Corn-Cultivators; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a side elevation of my improved cultivator. Fig. 2 is a rear elevation of the same; and Fig. 3 is a top view of the rear portions of the hoe or shovel beams, showing the device by which the angle of the shovel-standards is adjusted in section.

The invention relates more particularly to a novel manner of controlling the cultivator beams, whereby the driver, in his seat on the machine, is enabled to raise and lower, and also to vary the angle of, the shovels, as will be hereinafter explained. It further relates to the manner of connecting the shovel-standards to the beams, whereby the angle at which the hoes or shovels are presented to the ground can be adjusted and securely held in such adjusted position, as hereinafter explained.

In the accompanying drawing, A represents the axle-bar, and B B the wheels, mounted upon the ordinary stub-axles connected to the main axles A. C are the frame-bars, connected at their rear ends to the axle A, and at their forward ends with each other, by means of a bar or brace, D. E is the seat support or frame, which is composed of two bars, connected at their forward ends to the bar or brace D, and, passing over the axle A, are connected together at their rear ends, said rear ends being provided with any convenient device for attaching the seat. The shovel-beams are connected at their forward ends to brackets $C^1$, suspended from the frame-bars C, said brackets being braced against the backward strain of the shovels by means of a rod, $C^2$, connected to their lower ends and to the frame-bar C. The shovel-beams have bolted to them plates *c*, one above and the other below, which extends forward to form bearings for a swivel-block, *c'*, the other end of said block being connected to the bracket $C^1$ by a pivotal connection. To the frame-bar C, about midway between the main axle A and the brackets $C^1$, are mounted uprights $D^1$, to which the lifting-levers $D^2$, for raising the shovel-beams, are connected, the forward ends of these levers extending forward of the fulcrum, and having chains *d* connected to them, which chains, in turn, are connected to the shovel-beams near their forward ends. The handles or rear ends of these levers extend back to within convenient reach of the driver in his seat on the machine, and are connected to the usual construction of rack and pawl, for holding them at any desired position. To the rear of the axle-bar, and on a line with the outer faces of the shovel-beams, are pivoted two rods or bars, G G, the upper ends of which extend a short distance above the axle, and are connected at said upper ends by a yoke or strap, G', pivoted to said rods or bars.

H are bars or angle-irons, one of which is connected to the upper face of each of the shovel-beams by means of a bolt. One end of these bars or angle-irons, or that portion by which it is secured to the beam, is longer than the portion upon the side of said beam, and is provided with an elongated slot, *h'*, through which the bolt *h*, by which it is secured to the beam, passes, for permitting the shovel-beams to be adjusted nearer to or farther from each other. The other end of this bar has connected to it a swiveling eye-bolt, I, through which the lower end of one of the bars G passes, the chains by which the shovel-beams are raised and lowered being of such length as to prevent said beams from dropping below the ends of the bars G. By this manner of connecting the plow-beams the operation of raising and lowering as well as of moving the beams from one side to the other of the machine, for preventing the hoes from striking any plants which were irregularly planted, is greatly facilitated.

The manner of connecting the hoe or shovel standards J to the beams, for permitting the adjustment of the angle at which the shovels are presented to the ground, is as follows: *j* are plates, one of which is rigidly secured to the plow-beam, and the other to the standard,

the outer face of the one which is secured to the plow-beam being provided with a concave toothed or ribbed face, while the one which is secured to the standard is provided with a convex face, also toothed or ribbed, these two faces matching each other.

K is a bolt which secures the beam and standard together. The shovel-standard, as well as the plate connected to it, is provided with elongated slots, which permit the plate attached to the shovel-standard to be secured at any desired angle to the beam without bending or otherwise interfering with the bolt which connects the shovel standards and beams together.

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

1. The rods or bars G G, yoke G′, pivoted to each other and to the axle A, as described, in combination with the loop H and shovel-beams, for controlling said shovel and permitting their free lateral movement, substantially as described.

2. The concave and convex ribbed plates *j*, in combination with the shovel beams and standards, for adjusting the angle of the shovels, substantially as described.

This specification signed and witnessed this 25th day of January, 1876.

GEORGE BRADLEY.

Witnesses:
G. W. FORD,
CHARLES S. FORD.