J. POETZ.
CULTIVATORS.

No. 194,108. Patented Aug. 14, 1877.

Fig. 1.

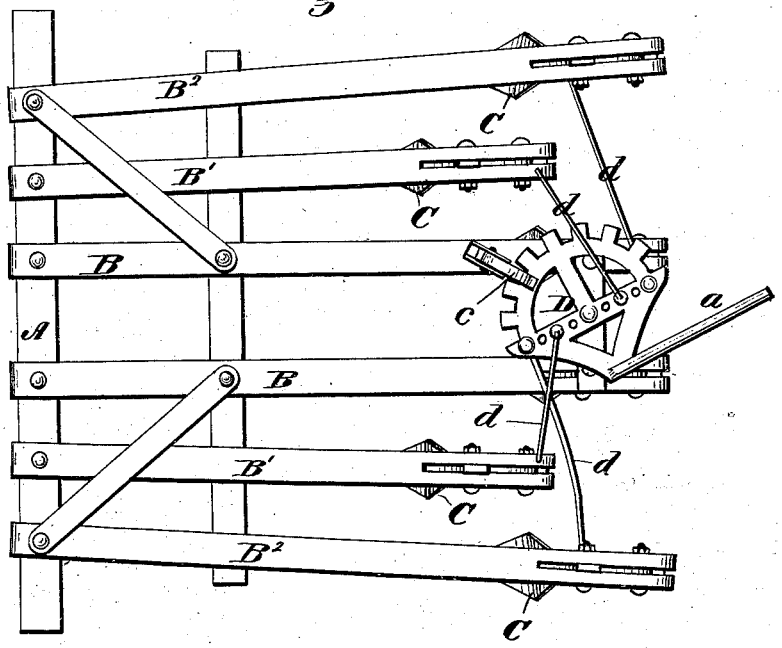
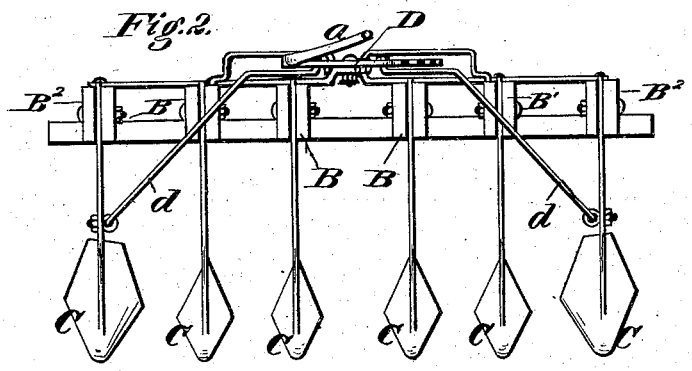


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN POETZ, OF SHAKOPEE, MINNESOTA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **194,108**, dated August 14, 1877; application filed April 16, 1877.

To all whom it may concern:

Be it known that I, JOHN POETZ, of Shakopee, in the county of Scott and State of Minnesota, have invented certain Improvements in Cultivators, of which the following is a specification:

My invention relates to that class of machines in which the hoes or shovels are attached to a series of laterally-adjustable beams; and its object is to secure at all times a uniform distance between the shovels, and to provide for their ready and instantaneous adjustment.

The invention consists in mounting on the central immovable beams of the series a pivoted head provided with arms, attached at different distances from the center, and extending thence to the beams, in such manner as to move the beams different distances, as hereinafter more fully explained, so that, while the spaces between the different shovels may be increased or diminished at will, they remain uniform or equal to each other.

Figure 1 represents a top-plan view of my improved machine; Fig. 2, a rear elevation of the same.

A represents a front cross-bar, and B B^1 B^2 a series of beams or drag-bars pivoted thereto, and provided at their rear ends with hoes or shovels C, as shown. The two central beams B B are connected rigidly with each other and prevented from moving laterally; but the other beams are free to swing laterally in order to vary the distance between their hoes or shovels, as occasion may require.

On a cross-piece connecting the rear ends of the beams B, I pivot a flat head or plate, D, having a handle, *a*, by which to turn it, and a circular notched edge to receive a pivoted locking-dog, *c*, mounted on the machine, as shown.

To the head or plate D, on opposite sides of its center, I pivot a series of arms, *d*, the outer ends of which are pivoted to the beams, as shown, so that as the head is turned in one direction or the other it will cause the arms to increase or diminish the distance between the beams and shovels.

It will be observed that the arms *d*, which connect with the outside beams B^2, are pivoted to the head at a greater distance from its center than are the arms which connect with the inside beams B^1, so that when the head is turned the arms give a greater movement to the outside than to the inside beams.

The parts are so proportioned and arranged that the difference in the movement of the different beams secures equal distances between the different shovels. By moving the head the distance between the shovels may be increased or diminished, as desired; but the distance between the inner and the middle shovels is always the same as that between the middle and outer shovels.

Although the drawing represents a machine with two movable beams only on each side, it is obvious that the number may be increased to any desired extent and their actuating arms arranged on the same plan as those shown.

When the shovels require to be separated or brought together the attendant unlocks the pivoted dog, and, by moving the handle *a*, effects the adjustment of all the beams and shovels instantaneously, after which he turns the dog down again and locks the parts all in place.

What I claim is—

The combination, in a cultivator, of one or more stationary central beams, a plurality of laterally-swinging beams on each side of said central beams, a plate or arm pivoted upon the central beams, and a series of independent arms extending from the individual beams inward to the opposite sides of the plate, and pivoted thereto at different distances from its center, in the manner shown and described, whereby the beams are moved different distances and uniform spaces maintained between them at all times.

JOHN POETZ.

Witnesses:
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