H. INGRAHAM.

Cultivator-Teeth.

No. 51,055. Patented Nov. 21, 1865.

Fig. 2

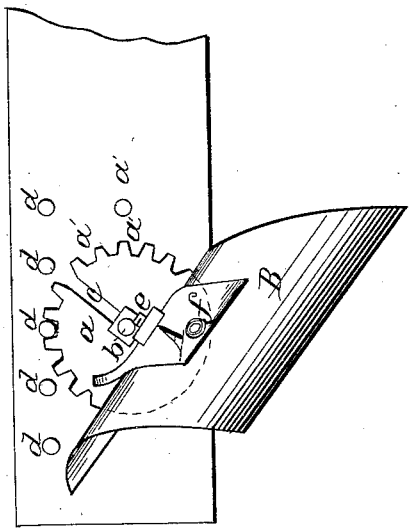
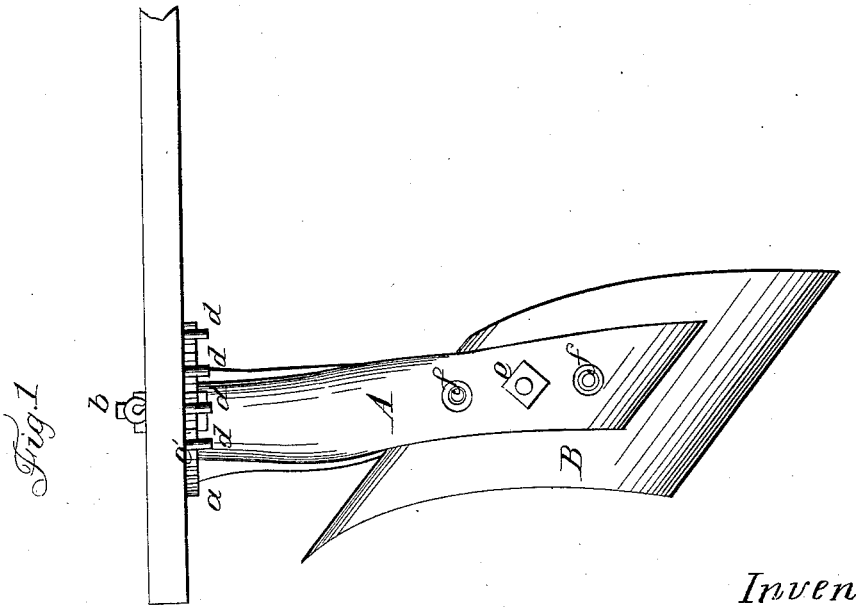


Fig. 1



Witnesses.

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HANFORD INGRAHAM, OF NAPLES, NEW YORK.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **51,055**, dated November 21, 1865.

To all whom it may concern:

Be it known that I, HANFORD INGRAHAM, of Naples, in the county of Ontario and State of New York, have invented a certain new and useful Improvement in Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a back or rear view of a cultivating-tooth; Fig. 2, a bottom view of same.

Like letters in both figures of the drawings indicate like parts.

The nature of my invention relates to the manner of adjusting the teeth to any angle desired and their adjustment laterally to suit width of rows to be cultivated, and also to the manner of reversing the teeth or shares when the same become dull from usage.

My improvement is intended as an additional improvement to those heretofore patented by me in cultivators.

To enable any one skilled in the art to make and use my invention I will proceed to describe its construction and operation.

I construct the shank A, to which the share or tooth B is attached, with a circular or curved form of plate *a* either cast with it or properly attached thereto. On the outer edges and partially in the rear of the plate are a series of notches or teeth, *a'*.

The plate is attached to the beam of the machine, about the center of it, or at a suitable point, by a bolt, *b*, with a screw-nut on the upper side. Extending from the bolt to the outer edge of the plate is a slot, *c*. (See Fig. 2.)

In a line with the notches or cuts in the plate, and parallel with the rear edge of the beam, are a series of stationary pins, *d*, placed at a suitable distance apart from one another. Directly opposite to these pins and corresponding with the distances between them are a series of holes, *d'*.

When it is desired to adjust the teeth or shares angularly the bolt is first unloosened and the plate slipped a little back, so as to clear the notches or cuts from coming in contact with them when the shank is being turned, the slot in the plate giving ample room for the bolt, it being made for that purpose. The point of the share or tooth is then inclined either in or out, as occasion may require, in regulating the pressing of the soil toward the rows when turned up in the furrowing, and the plate is pushed back to its former place, one of the pins catching into one of the cuts or notches and thus holding it fast, after which the bolt is tightened.

If it is desired to adjust the teeth laterally to suit the width of row to be cultivated it is done by removing the bolt and shifting the plate to the proper hole, when the bolt is replaced. Whichever hole the bolt may be placed in a pin will be found directly opposite to it to catch into one of the cuts or notches of the plate, which holds it fast, it being immaterial as to what direction it may be moved, either laterally, angularly, or otherwise, the securing of the plate by the pins will be the same.

I do not confine myself to the pins being stationary. One movable pin will answer the purpose probably as well by having a number of holes in the beam to receive it when changing the plate. By this method a slot in the plate is not required, the pin being slipped out when the plate is turned.

When the point of the share or tooth becomes dull from usage it is reversed, it being so constructed that it is immaterial whichever point is presented to the soil. It is secured to the shank by one bolt, *e*, only. To prevent its slipping to either side one indentation or impression, *f*, of a circular form is made on each side of the bolt in the shank to receive a knob-like projection or share, which fits into them, and thus holds them securely.

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

The shank A, with circular or curved plate *a*, having a series of notches or cuts, *a'*, and slot *c*, whereby the same may be adjusted either laterally, angularly, or otherwise by means of stationary pins *d* or movable pin, their equivalent, either with or without a slot in the plate, as may be desired, substantially in the manner and for the purpose herein set forth.

HANFORD INGRAHAM.

Witnesses:

R. C. SANFORD,

V. O. HART.