

(No Model.)

F. REIMERS.  
CULTIVATOR OR PLOW.

2 Sheets—Sheet 1.

No. 572,829.

Patented Dec. 8, 1896.

Fig. 1.

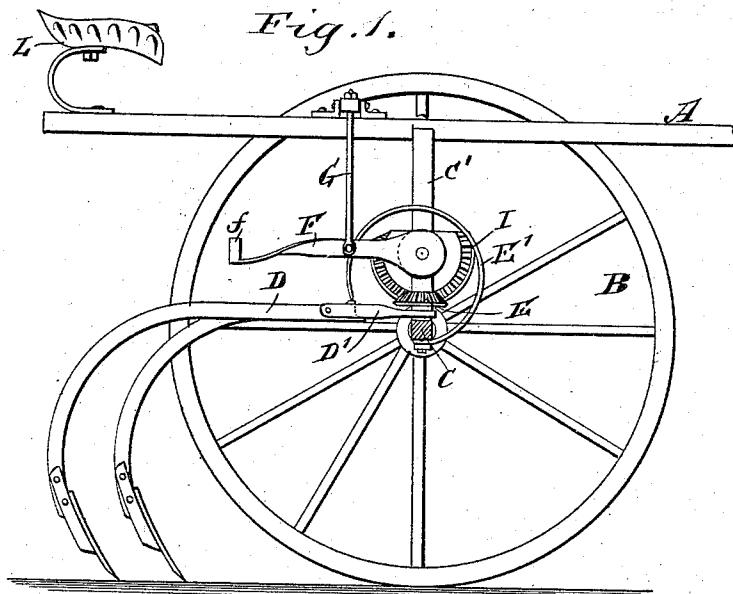
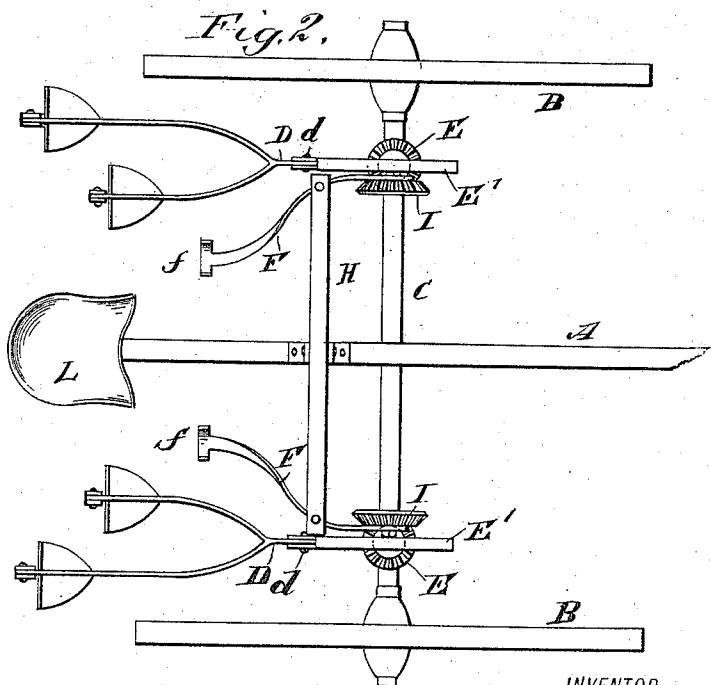


Fig. 2.



WITNESSES:

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INVENTOR

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(No Model.)

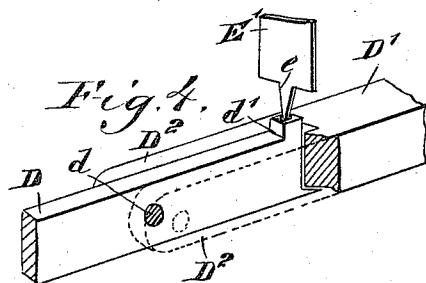
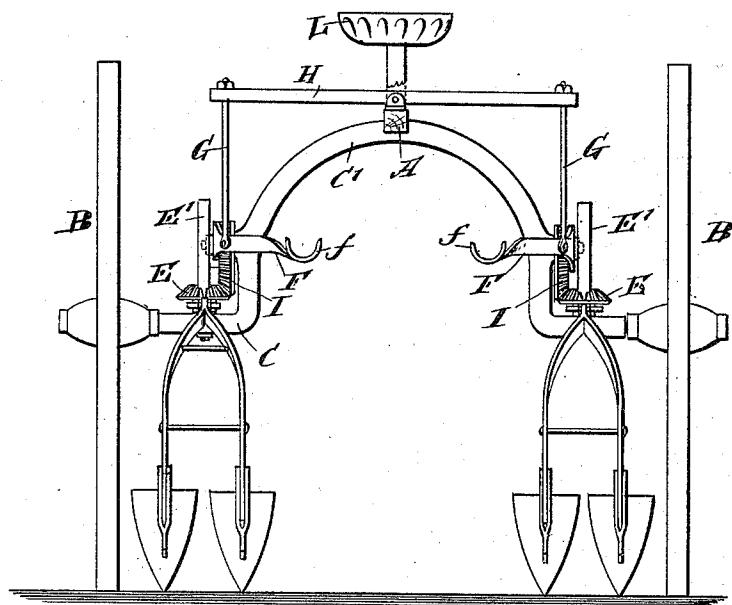
F. REIMERS.  
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Fig. 3.



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# UNITED STATES PATENT OFFICE.

FERDINAND REIMERS, OF DAVENPORT, IOWA.

## CULTIVATOR OR PLOW.

SPECIFICATION forming part of Letters Patent No. 572,829, dated December 8, 1896.

Application filed September 2, 1896. Serial No. 604,634. (No model.)

*To all whom it may concern:*

Be it known that I, FERDINAND REIMERS, of Davenport, in the county of Scott and State of Iowa, have invented a new and Improved 5 Cultivator or Plow, of which the following is a full, clear, and exact description.

My invention relates to improvements in cultivators or plows; and it consists of certain mechanism by which the horizontal or 10 lateral adjustment of the plows may be readily accomplished while riding upon the machine. These features will be more particularly pointed out in the following specification.

Reference is to be had to the accompanying 15 drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the device. Fig. 2 is a plan view. Fig. 3 is a rear elevation, and Fig. 4 is a perspective detail view 20 of the hinge or pivot in the plow-beam.

The object of my invention is to produce a device for handling the shovels of a riding plow or cultivator which will be operated by 25 the feet of the user and which will have sufficient power to enable him to handle the same quickly and easily.

The wheels B, tongue A, and axle C are similar in their construction to the same parts 30 ordinarily used in cultivators. The plow-beam D is pivoted to the axle by a vertical pivot which will permit the beam to swing horizontally only, and surrounding this pivot and attached to the beam is a small bevel-wheel E. This need be but a small segment 35 of a bevel-gear, although I have herein shown the entire gear.

The forward portion of the beam D, which is pivoted upon the axle, is split at its rear 40 end, thus forming two lugs or ears D<sup>2</sup>, which at their outer end have a horizontal pivot which passes through the beam D at a short distance from the end thereof.

A spring E', composed of flat steel, is fixed 45 at one end to the axle and is curved over so that the other end will engage the end d' of the beam D. The point of engagement of the spring and the beam is forward of the pivot d. The spring E' is so bent that it will press down 50 upon the end of the beam D, and will thus prevent the shovels on the other end from

dropping too low. The end of the spring E' is narrowed at the free end, and a point e is formed thereon. This point engages the beam and is narrow enough so that it will pass between the two ears D<sup>2</sup> of the forward section 55 of the beam, but the end of the broad portion of the spring will engage the lugs D<sup>2</sup> and prevent its going any farther.

Pivoted to the side of the upward rise or 60 curve C' of the axle C are two shifting levers F. These levers at their outer ends have curved stirrups f formed thereon, which are made to receive the feet of the rider. The rear end of the lever is also bent so that it 65 extends toward the center and near to the operator. At a point intermediate the two ends of the lever is pivoted a link G, which is connected at its upper end with a bar H, pivoted at its center upon the tongue A. If 70 one of the levers F be depressed by the foot of the rider, the corresponding end of the lever H will be depressed and the other lever F will be raised by reason of its connection with the bar H.

To the side of the arch C' of the axle and upon the same pivot which carries the lever F is fixed a bevel-gear I, which may be an entire gear, as shown in Fig. 2, or a portion 80 only, as shown in Fig. 1. This gear turns with the lever F. If one of the levers F be depressed, the other will be correspondingly raised and the bevel-gear connections between this lever and the plow-beams will cause the plow-beams to be swung upon their 85 horizontal pivot in one direction. If the other lever F be depressed, the plow-beams will be swung in the opposite direction. The horizontal position of the plows is therefore directly and immediately under the control of 90 the rider, while at the same time his hands are free for guiding the team or any other purpose desired. The seat to be occupied by the rider is shown at L.

It will be readily seen that some other form 95 of connection than the bevel-gear shown may be used to connect the levers F with the plow-beams, as, for instance, by making both the lever F and the plow-beam a bell-crank and connecting the two together. I do not therefore wish to be limited to the use of gears for 100 this connection. Any other form of connec-

tion which is essentially an equivalent of the two mentioned may be substituted without departing from the spirit of my invention.

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

1. In a cultivator or plow, the combination of the plow-beams pivoted to swing horizontally, a shifting lever upon each side of the cultivator, pivoted to swing vertically, and connections between said shifting levers, whereby their movements will alternate, and bevel-gears upon said shifting levers and plow-beams, substantially as shown and described.

2. In a cultivator or plow, the combination of plow-beams pivoted to swing horizontally, a shifting lever upon each side of the cultivator, pivoted to swing vertically, a pivoted equalizing-lever, links connecting the same

with the shifting levers, and a bevel-gear connection between the shifting levers and the plow-beams, substantially as shown and described.

3. In a cultivator or plow, the combination of a beam having a stub pivoted to the axle to swing horizontally only, the outer beam portion being pivoted thereto to swing vertically, and a spring consisting of a flat bar attached to the axle and curved over the same to engage the vertically-swinging portion of the beam and prevent its dropping below a certain point, substantially as shown and described.

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Witnesses:

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