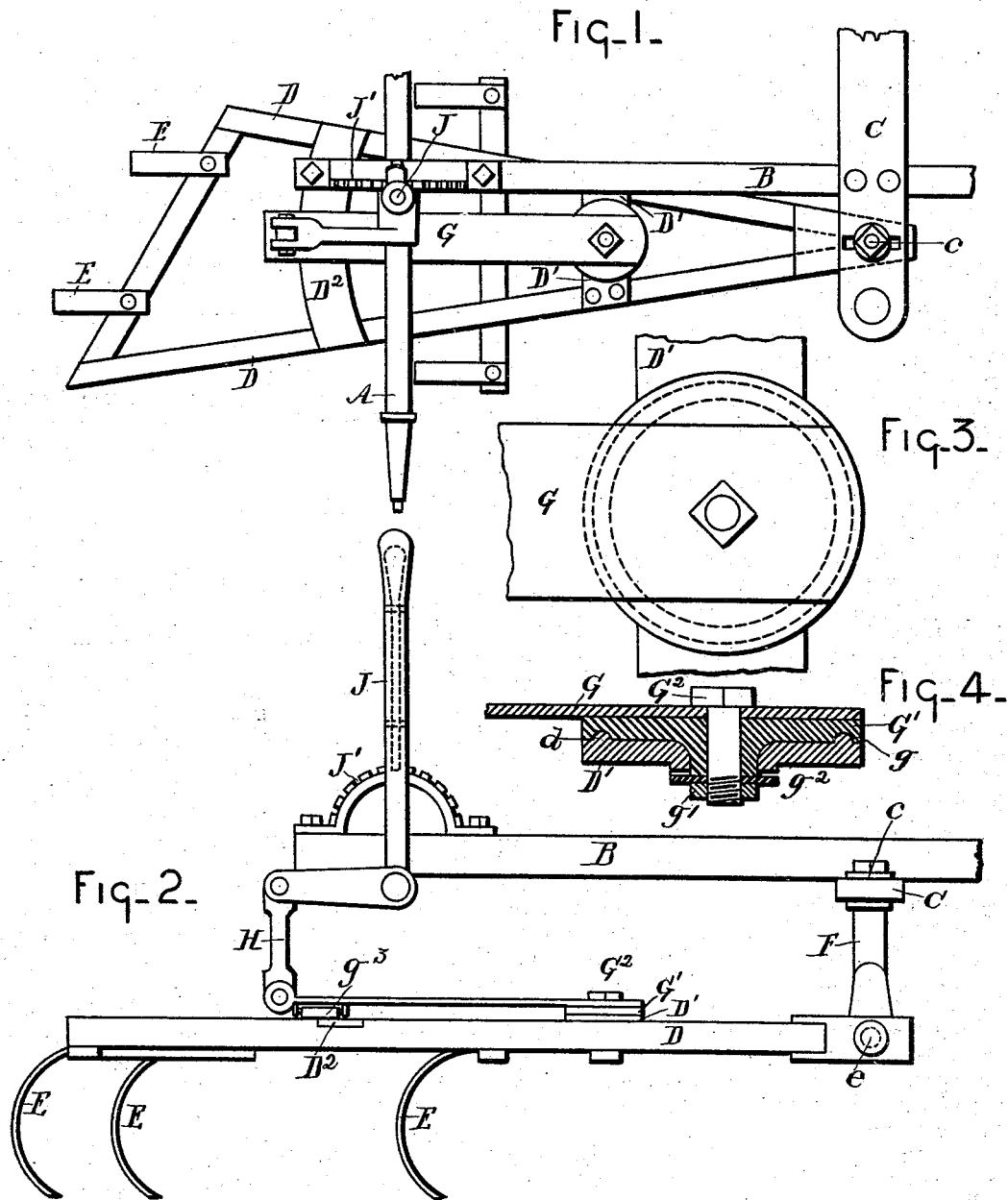


(No Model.)

P. F. WELLS.  
CULTIVATOR.

No. 455,372.

Patented July 7, 1891.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

PHILIP F. WELLS, OF MILFORD, MICHIGAN.

## CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 455,872, dated July 7, 1891.

Application filed November 6, 1890. Serial No. 370,503. (No model.)

*To all whom it may concern:*

Be it known that I, PHILIP F. WELLS, a citizen of the United States, residing at Milford, county of Oakland, State of Michigan, have invented a certain new and useful Improvement in Adjustments for Cultivators; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

It is the object of my invention to produce a novel cultivator, more particularly a wheel or riding cultivator, in which the gangs carrying the teeth are movable laterally, the invention relating more particularly to improved means whereby each gang is always held down to its work—that is, the teeth held in the ground, even when the gang is slid laterally to pass by an obstruction, such as a stone, stump, or the like. To accomplish this object my invention involves the features of construction, the combination or arrangement of devices, and the principles of operation hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a plan view of one gang of a cultivator, showing the parts constituting my invention. Fig. 2 is a side elevation of the same. Fig. 3 is an enlarged plan view of the turn-table. Fig. 4 is a vertical section through the turn-table.

In carrying out the invention, A represents the axle, B a portion of the main frame of the cultivator, and C a cross-piece connecting the corresponding piece B on the opposite side of the machine.

D is the frame which directly supports the teeth, said frame forming one of the gangs.

E represents the teeth. The gang-frame D has its forward end pivoted, as at *e*, to the standard F, said standard being pivoted to the cross-piece C, as at *c*, so that the gang may have a horizontal motion working about the pivot *c*, and the rear end may have a vertical motion working about the pivot *e*.

D' is a cross-piece in the gang-frame extending from side to side of the same at a

point a short distance back of the forward end.

G' is a plate of metal engaged to the cross-piece D' by what may be termed a "turn-table"—that is, the piece D' is provided with a bead or circular ridge *d* on its surface, as shown in Fig. 4. Engaged to the under side of the piece G is the plate G', provided on its under surface with a groove *g*, corresponding with the bead *d*. The plate G' is also provided with the projection *g'*, which extends through the cross-piece D', and a bolt G<sup>2</sup>, passed through the piece G, the plate G', and a washer *g*<sup>2</sup>, beneath the piece D', screws all the parts together. It will thus be seen that the piece G and plate G' may revolve horizontally about the bolt, and yet all of the parts are held snugly together. The piece G extends back a distance and is engaged by the pitman H to the operating-lever J. A segment J' on the frame and the usual engaging-pawl (indicated by dotted lines in Fig. 2) on the lever J enable the latter to be set in any position desired and held there. Thus by throwing the lever forward the gang is raised; but when the lever J is thrown backward and secured the gang-frame is held rigidly down and cannot rise, since the cross-piece D<sup>2</sup> of the gang-frame will come to a bearing against the piece G. A friction-roller *g*<sup>3</sup> relieves enough of the binding of the parts to enable the gang to be easily shifted horizontally with the foot of the operator. It will thus be seen that by my construction the teeth are held always down to their work, even when they are being shifted laterally to throw them out of the way of any obstruction, such as a stone, stump, or the like. If desired, the piece G may be of spring metal, so that the operator may, if he desires, by his foot force the teeth down into the ground farther than the gage at which his lever is set, and while I would prefer to use spring metal at this point I would be understood as in no wise limiting myself to its use.

What I claim is—

1. The combination, in a cultivator, of a main frame, a toothed frame having a swiveled connection at its front end with the main frame, a plate pivoted at its front end

to the toothed frame at a point in rear of the swiveled connection thereof with the main frame, and means engaging the rear end of the plate for holding the same upon the toothed frame to rigidly hold the latter against upward motion while permitting its horizontal movement, substantially as described.

2. The combination, in a cultivator, of a main frame, a toothed frame having a swiveled connection at its front end with the main frame, a plate pivoted at its front end to the toothed frame at a point in rear of the swiveled connection thereof with the main frame, and a lever connected with the rear end of the said plate for the purpose of raising and lowering the toothed frame and holding the latter rigidly down while permitting its horizontal movement, substantially as described.

3. In a cultivator, the combination, with the gang-frame pivoted at its forward end and provided with the cross-piece  $D^2$ , of the strip G, pivoted at its forward end to the gang-frame and engaged at its rear end to the main

frame, said strip provided on its rear end with a friction-roller, against which the cross-piece  $D^2$  may bear, substantially as described.

4. The combination, in a cultivator, of a main frame, a toothed frame pivotally connected at its front end with the main frame, an elastic plate G, pivoted at its front end to the toothed frame at a point in rear of the pivotal connection thereof with the main frame, and a lever connected with the rear end of the elastic plate for raising and lowering the toothed frame, holding it rigidly down while permitting its horizontal swinging movement, and enabling the attendant to further depress the toothed frame by placing his foot thereupon after the lever has been adjusted to hold the toothed frame against rising movement, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

PHILIP F. WELLS.

Witnesses:

ALMON D. WEBB,

SOLON H. WILHELM.