(No Model.)

F. H. JOHNSON.

CULTIVATOR.

No. 272,701. Patented Feb. 20, 1883.

Fig. 1.

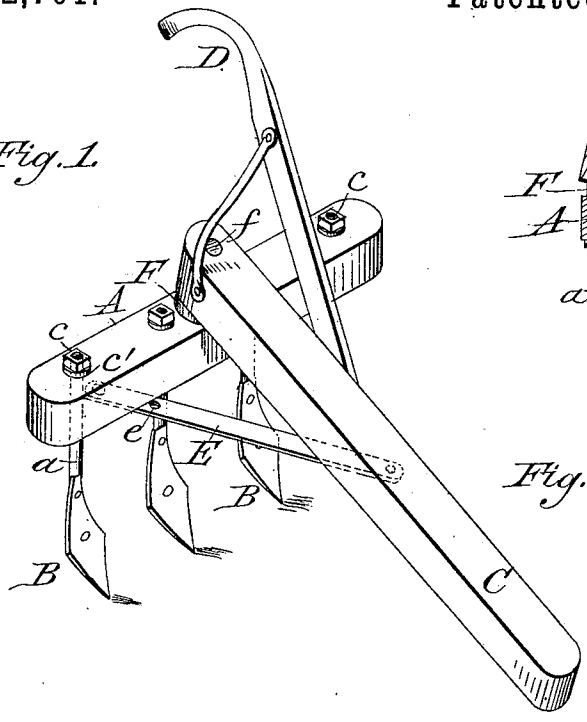


Fig. 3.

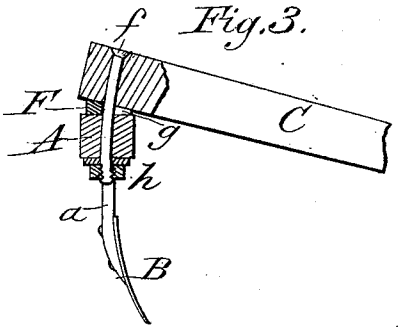


Fig. 4.

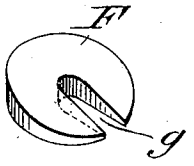


Fig. 2.

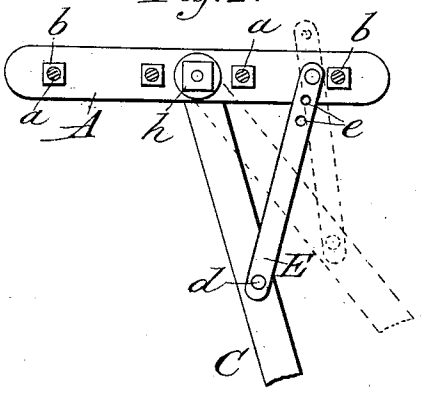


Fig. 5.

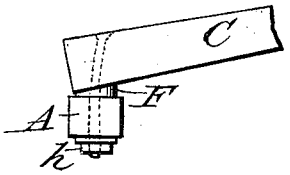
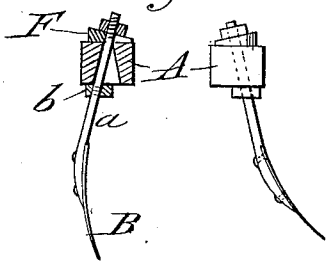


Fig. 6.



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atty

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

FRANK H. JOHNSON, OF BIGGSVILLE, ILLINOIS.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 272,701, dated February 20, 1883.

Application filed September 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. JOHNSON, a subject of the King of Sweden, and residing at Biggsville, in the county of Henderson and State of Illinois, U. S. A., have invented certain new and useful Improvements in Cultivators; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in cultivators; and it consists in the peculiar construction and arrangement of parts, as will be hereinafter more fully set forth.

In the annexed drawings, Figure 1 is a perspective view of one-half of the cultivator. Fig. 2 is a bottom plan view. Fig. 3 is a vertical central section. Fig. 4 shows a perspectiqe view of the wedge-shaped washer. Fig. 5 is a side view of the beams and washer in place, and Fig. 6 detail views.

A represents a beam, to which is attached a series of shovels or cultivator-teeth, B, of the form shown in the drawings or any other of the usual forms in use. These shovels are riveted or otherwise secured to the standards *a a*, which extend through the beam A. These standards *a* are secured to the beam A by means of the nuts *b*, screwed on the standards under the beam, and nuts *c* and washers *c'*, screwed on the standards on the upper side of the beam. By means of these nuts the shovels can be adjusted vertically.

To the center of the beam A, on its upper side, is bolted or pivoted a beam, C, which is connected at its forward end by means of a clevis, bolt, or other coupling to the main axle of any wheel-cultivator. When the beams are manufactured they are preferably made plain at the end, so that the user can apply any form of connection.

D is a handle securely attached to the beam C by means of a brace and bolts.

A brace-rod, E, is secured to the under sides of the beams A and C, and connects them. One end of said brace is pivoted to the under side of the beam C at *d*, (see Fig. 2,) some distance from the beam A. The other end is provided with a number of holes, *e*, by means of which and a bolt or rivet the brace is adjustably attached to the under side of the beam A, near one of its outer ends. (See Fig. 2.) By this means the angle of the beams with each other is varied, or, in other words, the cultivator is extended or narrowed. The beam C is pivoted to the beam A by a bolt, *f*, whose head is countersunk in the beam C, and its end projecting through the beam A is screw-threaded, and receives a washer and nut, *h*, by means of which the beams are tightened. Around this bolt *f*, and between the beams, is placed a wedge-shaped washer, F, (see Fig. 4,) which is provided with a radial slot or opening, *g*, by means of which the washer is placed around the bolt *f* and turned to give different angles to the beam C to suit the heights of the axles of different cultivators. (See Figs. 3 and 5, where the washer is shown turned at different angles.)

In order to vary the inclination of the shovels B, wedge-shaped washers F, similar in construction to the washer under the beam C, may be placed around the standards *a*, on top of the beam A and under the nuts *c*, as shown in Fig. 6. When the shovels are designed to remain at one angle only the plain washers (shown in Fig. 1) take the place of the wedge-shaped ones.

In Fig. 1 are shown the beams, handle, and shovels for one side only of a cultivator, the design being to have a similar arrangement for the other side.

It will be observed that by using proper teeth in the beam A the device may be converted into a harrow.

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

The combination of the beam C, bolt *f*, wedge-shaped washer F, provided with the radial slot or opening *g*, the beam A, and bar E, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK H. JOHNSON.

Witnesses:
A. W. LYNN,
J. W. JAMES.