

D. M. JOHNSON.
Cotton-Cultivators.

No. 156,164.

Patented Oct. 20, 1874.

Fig. 1.

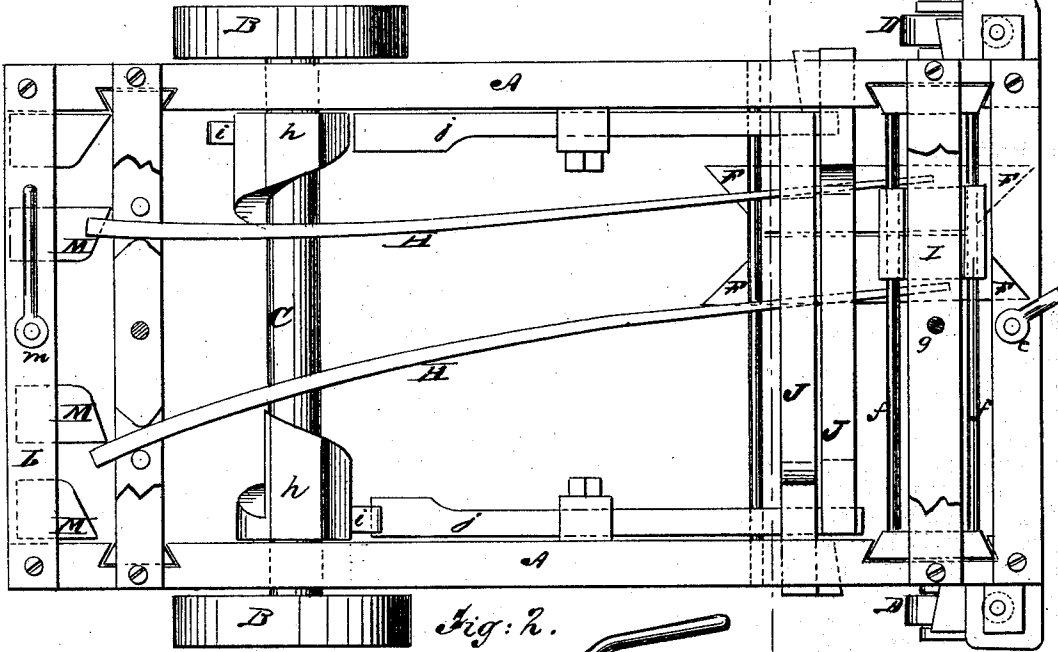


Fig. 2.

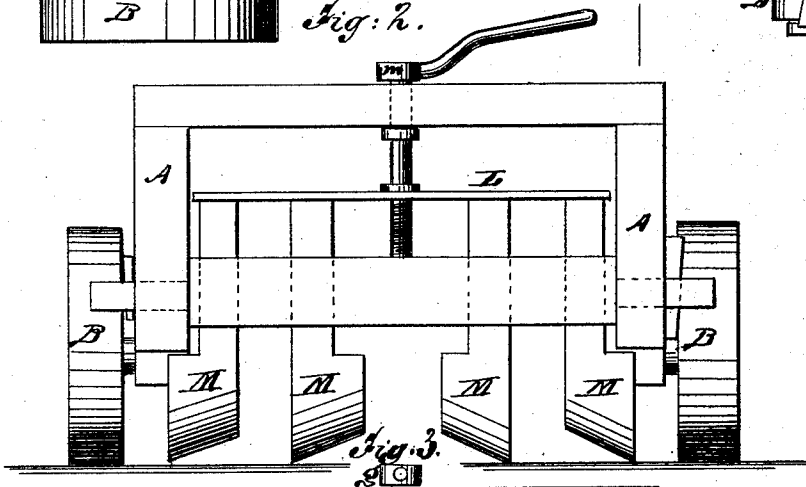
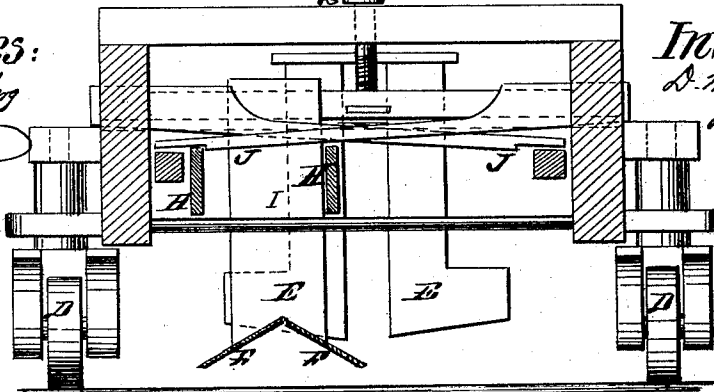


Fig. 3.



Witnesses:

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DAVID M. JOHNSON, OF TRINITY COLLEGE, NORTH CAROLINA.

IMPROVEMENT IN COTTON-CULTIVATORS.

Specification forming part of Letters Patent No. **156,164**, dated October 20, 1874; application filed August 17, 1874.

To all whom it may concern:

Be it known that I, DAVID M. JOHNSON, of Trinity College, in the county of Randolph and State of North Carolina, have invented a new and useful Cotton-Cultivator; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention is in the nature of an implement for cultivating cotton; and the invention consists in a cotton-cultivator constructed with a reciprocating cutter, combined with springs, scrapers, and cultivator-teeth, substantially as hereinafter fully described.

In cultivating cotton it is desirable to thin out the rows into which the cotton has spread, and at the same time free the rows from grass and weeds, and to turn up the surface of the soil. In other words, to perform all the necessary work of hoeing, since hoeing the cotton requires a large force of hands; besides, it is oftentimes carelessly performed. To accomplish all the advantages of hoeing, but at a very much less cost, is the chief object of this invention.

In the accompanying sheet of drawings, Figure 1 is a plan view of my invention; Fig. 2, a rear-end view of same, and Fig. 3 a front-end view of same.

Similar letters of reference indicate like parts in the several figures.

A represents the frame-work of my cotton-cultivator, to which are affixed wheels B B, secured to an axle, C, and to its front side pilot or guide wheels D D. To the front of the frame A are secured two projecting shovels or weeders, E E. These weeders are constructed so as to be raised or lowered more or less by the action of the screw *e*. Immediately in the rear of the weeders E are placed cutters F F. These cutters are constructed so as to have a reciprocating motion from side to side of the frame A, and their edges are sharpened, they being guided in this motion by the guide-rods *f f*. These cutters may likewise be raised and lowered by the screw *g*. To the axle C are affixed cams *h h* and pins *i i*. Secured in any desirable manner to the inner sides of the frame A are two springs, H H. These springs

extend forward until they come in contact, one on each side of the carrier I of the cutters F. Pivoted to the inner sides of the frame A are two releasing-bars, *j j*, and fixed to the inner sides of said frame are two spring-catches, J J. Secured to the rear cross-bar L are cultivator shoes or teeth M M. These teeth are constructed so as to be raised and lowered by the action of the screw *m*. To the front end of the frame A, as before stated, are affixed guide-wheels D D. These guide-wheels are arranged so as to turn in the same manner as do casters.

My cotton-cultivator being constructed substantially as above described, its operation is as follows: One or more horses being attached to the cultivator at its front end, (that is the end having the guide-wheels D secured thereto,) it is drawn between a row of cotton-plants, and as it progresses the weeders E dig up the grass and weeds; and as the wheels B revolve the cams *h* come in contact, alternately, with the springs H H, the ends of the springs being caught by the spring-catches J, as shown in Fig. 1, the cams bending the springs until the pins *i* come in contact with the rear ends of the releasing-bars *j j*, which causes the front ends of said bars to trip up the spring-catches J; and as the springs H H are released in this way they alternately come in contact with the sides of the carrier I, and force it from one side of the cultivator to the other, by which operation the cutters F cut the rows of cotton, leaving the row in hills, free from obstruction; and as the cultivator proceeds the cultivator shoes or teeth M dig up the surface of the soil, rendering it soft and in good condition.

From the foregoing description of the construction and operation of my cultivator it will be seen that by one simple operation the rows of cotton are thinned, weeded, and the soil thoroughly loosened, and in a very expeditious manner, and far more uniformly and thoroughly than could be done by the ordinary hoeing process.

It is obvious that the reciprocating motion of the cutters and the mechanical construction of the several parts of the machine may be somewhat modified without departing from my invention.

When transporting the cultivator from place

to place, the cutters, weeders, and cultivator-teeth may all be raised from the surface of the ground by the operations of the screws *e*, *g*, and *m*, and on arrival at the field they may be lowered by the same means.

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

1. In a cultivator, the combination of the horizontally-reciprocating cutters *F* with springs

H H and their operating-cams, substantially as shown and described.

2. The combination, in a cultivator, of springs *H H*, cams *h*, and releasing devices *J j* with the cutters, substantially as shown, for the purpose described.

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