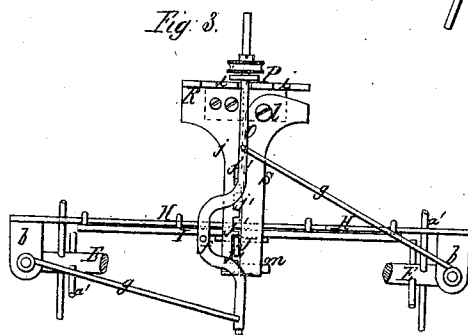
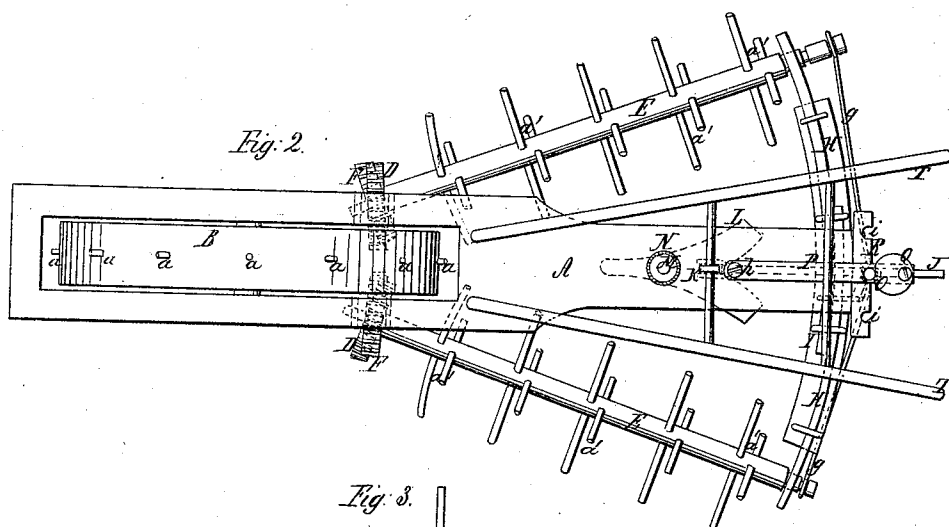
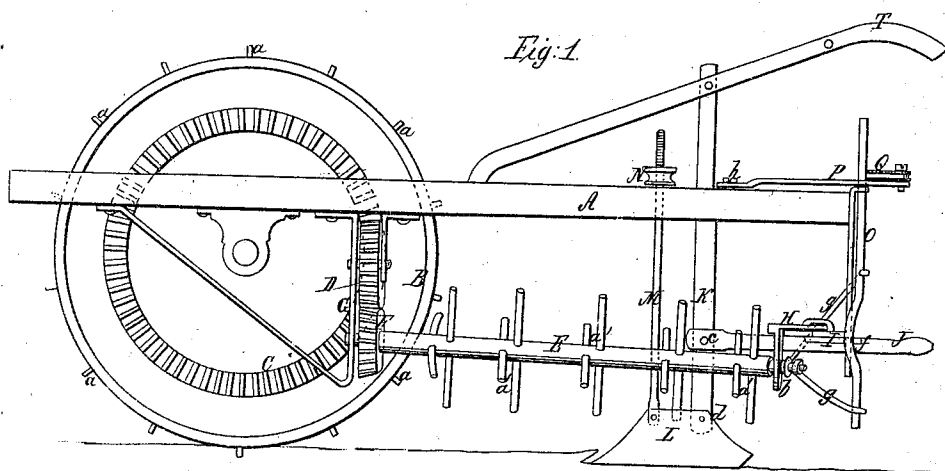


L. STEVENS.
CULTIVATOR.

No. 30,771.

Patented Nov. 27, 1860.



Witnesses;
J. W. Coombs
R. S. Shaw

Inventor;
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per Munn & Co
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UNITED STATES PATENT OFFICE.

L. STEVENS, OF DOVER, KENTUCKY.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 30,771, dated November 27, 1860.

To all whom it may concern:

Be it known that I, L. STEVENS, of Dover, in the county of Mason and State of Kentucky, have invented a new and Improved Cultivator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side elevation of my invention; Fig. 2, a plan or top view of the same; Fig. 3, a back sectional view of the same.

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

This invention consists in the employment or use of revolving toothed shafts and a share arranged in a novel way, so as to be adjustable, and applied to a frame provided with a driving-wheel, from which the toothed shafts are driven, all the parts being arranged substantially as hereinafter described, whereby all crops grown in hills or drills may be cultivated—that is to say, have the ground between them pulverized and weeds eradicated—in a thorough and efficient manner.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a horizontal bar or beam, in the front part of which a wheel, B, is placed, said wheel having a concentric gear, C, at each side of it, into which pinions D D at each side of the bar or beam A mesh. (See Fig. 2.) The periphery of the wheel B is provided with radial pins *a* to prevent its slipping.

E E are oblique shafts, which are provided with radial teeth *a'* and placed below the bar or beam A and one at each side of it. The front ends of the shaft E E are provided with pinions F F, which gear into the pinions D D, and the front ends of the shafts E have their bearings in supports G G, attached to the front part of the bar or beam A. The back parts of the shafts E E have their bearings *b* attached to the outer ends of slides H H. These slides are of curved form, and they are placed on a curved or segment bar, I, which is attached to a lever, J. The front end of the lever J is secured by a fulcrum-pin, *c*, to an upright, K, which is secured to and passes through the bar or beam A.

L is a double mold-board plow, the back end of which is attached by a pivot, *d*, to the lower end of the upright K. To the front part of the plow the lower end of a rod, M, is pivoted. This rod passes up through the bar or beam A,

has a screw, *e*, cut on its upper end, and a nut, N, fitted on it.

O is a lever, which is secured by a fulcrum-pin, *f*, to the back edge of the segment-bar I. The back ends of the shafts E E are connected by rods *g g* to the lever O, one rod *g* being attached to the lever O above its fulcrum *f* and the other attached below it. The upper part of the lever O passes through the back part of an arm, P, the front end of which is secured by a pivot, *h*, to the bar or beam A. On the back part of the arm P there is secured an eccentric, Q, which, by being turned, will press against the lever O and secure it in either of a series of notches, *i*, in the edge of a plate, R, at the back end of the bar or beam A. The plate R extends downward, and is narrow, forming a bar, *j*, which is notched at its right edge, as shown at *j'*. The lever J may be fitted in either of the notches and secured therein by a bar, S, the upper end of which is pivoted to the back end of the bar or beam A, as shown at *l*. The lower part of the bar S is secured in proper place by a catch, *m*. The bar or beam A is provided with handles T T, which may be the same as those used on ordinary plows.

The operation is as follows: As the implement is drawn along the shafts E are rotated from wheel B through the medium of the gearing C D F, and the teeth *a'* pulverize the earth and throw it toward the plant, while the plow L throws up the earth to the action of the teeth *a'*. The shafts E E may be adjusted nearer together or farther apart at their back ends by actuating lever O, which is retained in proper position by an eccentric, Q, and notched plate R, as previously described.

The shafts E may be raised or lowered by adjusting lever J in either of the notches *j'* of the bar *j*.

The plow L may have its point elevated or depressed to plow at a greater or less depth by adjusting rod M through the medium of the nut N.

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

The adjustable revolving toothed shafts E E, in connection with the adjustable plow L, all being arranged essentially as and for the purpose herein set forth.

L. STEVENS.

Witnesses:

JOHNSON PECK,
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