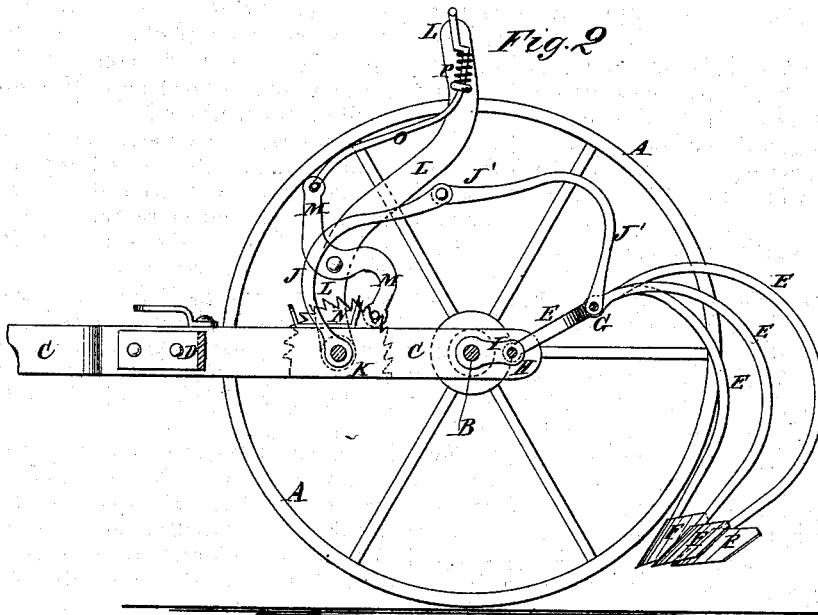
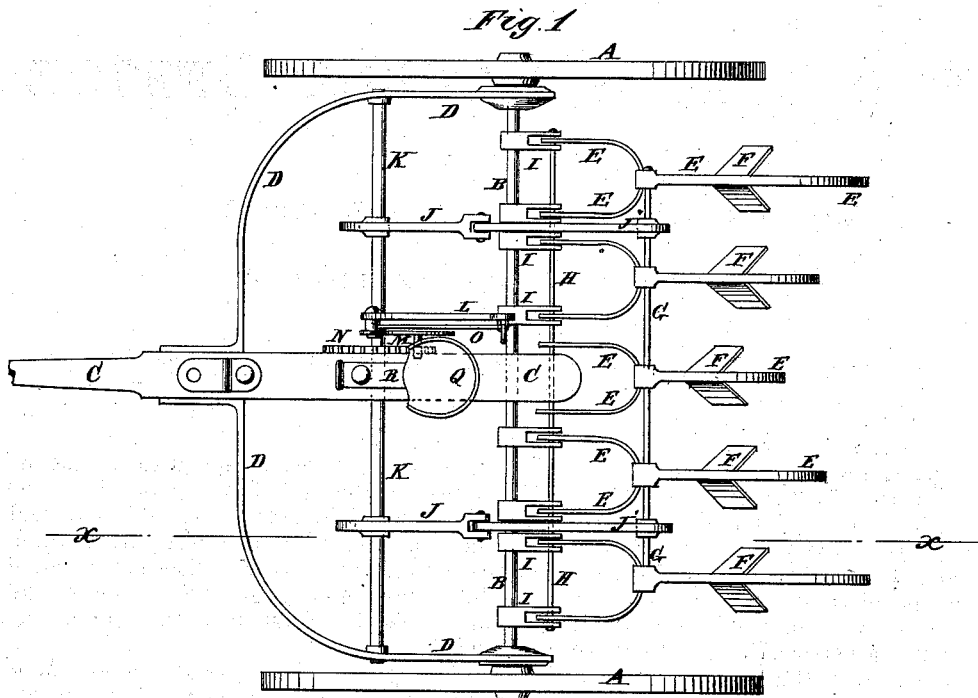


J. HIGGINS.  
Cultivators.

No. 198,616.

Patented Dec. 25, 1877.



WITNESSES:

*A. W. Almquist*  
*J. H. Scarborough.*

INVENTOR:

*J. Higgins.*  
BY  
*Munnell*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JAMES HIGGINS, OF WESTFIELD, NEW JERSEY.

## IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters-Patent No. **198,616**, dated December 25, 1877; application filed April 2, 1877.

*To all whom it may concern:*

Be it known that I, JAMES HIGGINS, of Westfield, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Cultivators, of which the following is a specification:

Figure 1 is a top view of my improved cultivator. Fig. 2 is a vertical longitudinal section of the same, taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved cultivator simple in construction, easily managed and controlled, and at the same time light, strong, and durable.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

A are the wheels, which revolve upon the journals of the axle B.

To the centre of the axle B is attached the rear end of the tongue C, which is strengthened against side strain by the curved hounds or braces D. The forward ends of the hounds or braces D are attached to the opposite sides of the tongue C, and their rear ends are attached to the axle B at the inner sides of the wheels A.

E are the plow-beams, the rear parts of which are curved downward, and have plows F attached to their ends. The forward ends of the beams E are forked, and are connected at the bases of said forks by a rod, G.

The ends of the forks of the beams E are pivoted by a long rod, H, to blocks or short arms I attached to the axle B.

J J' are curved and jointed arms, the rear ends of which are attached to the rod G, and

their forward ends are attached to the rod K. The ends of the rod K are pivoted to the hounds or braces D, and to said rod is attached the end of a lever, L, to the lower part of which is pivoted a lever-pawl, M. The lower end of the lever-pawl M engages with a segmental ratchet-wheel, N, attached to the side of the tongue C.

To the upper end of the lever-pawl M is pivoted the lower end of the rod O, the upper end of which passes through a guide-eye attached to the upper part of the lever L, and has a coiled spring, P, placed upon it, to hold the engaging end of the lever-pawl M pressed down upon the ratchet-wheel N.

By this construction, by pressing down upon the rod O and operating the lever L the plows F may be raised from the ground or forced down to enter the ground more deeply.

Q is the driver's seat, the standard R of which is attached to the tongue C.

With this construction the middle beam E, or any desired number of the beams E, may be detached, as circumstances may require.

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

The axle of a wheel-cultivator, provided with rigid arms I, to which are pivoted the forked drag-bars E, the pivot-rod H, stay-rod G, and pivoted link J', in combination with the rock-shaft K, having rigid arms J, lever L, and pawl and ratchet *m n*, substantially as described.

JAMES HIGGINS.

Witnesses:

GEO. GODFREY,  
PATRICK TRAYNOR.