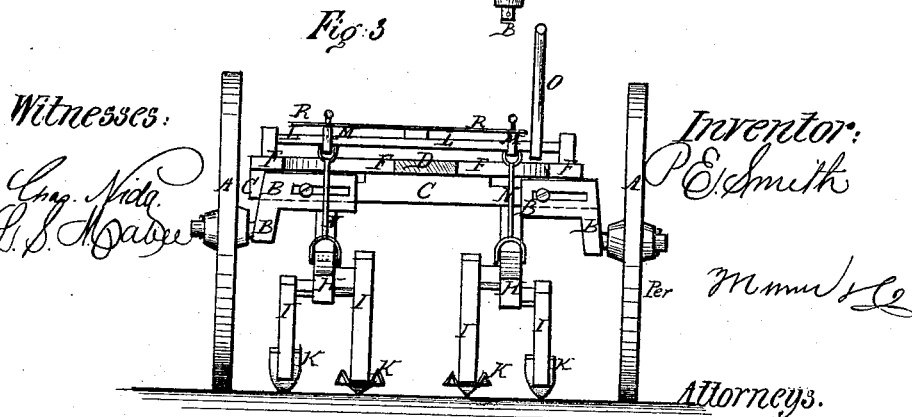
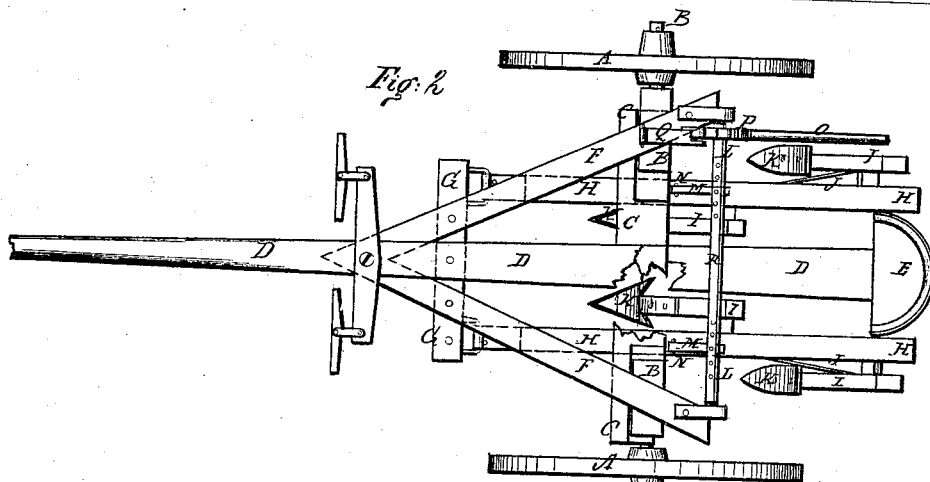
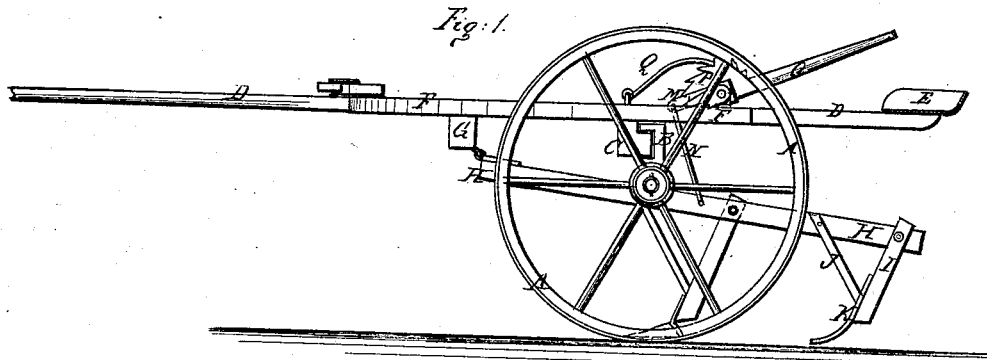


P. E. SMITH.
CULTIVATOR.

No. 110,302.

Patented Dec. 20, 1870.



Witnesses.

Chas. F. Vail
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United States Patent Office.

PETER E. SMITH, OF SCOTLAND NECK, NORTH CAROLINA.

Letters Patent No. 110,302, dated December 20, 1870.

IMPROVEMENT IN CULTIVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, PETER E. SMITH, of Scotland Neck, in the county of Halifax and State of North Carolina, have invented a new and useful Improvement in Cultivators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side view of my improved cultivator.

Figure 2 is a top view of the same, part being broken away to show the construction.

Figure 3 is a rear view of the same, the seat being removed.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish a simple, convenient, and effective cultivator, which shall be so constructed that the wheels may be readily moved closer together or farther apart, to adjust the machine to the different widths of cotton and corn rows, that the plows may be readily moved closer together or farther apart, to adjust the machine to work closer to or farther from the rows of plants, and that the plows may be readily raised from the ground, and held as long as may be desired; and

It consists in the construction and combination of various parts of the machine, as hereinafter more fully described.

A are the wheels, which are placed upon and secured to the journals of the axles B in the ordinary manner.

The axles B are bent twice at right angles, and their upper horizontal parts are grooved longitudinally, to receive the tongues or feathers formed upon the rear side of the end parts of the axletree C, where the said axles B are secured in place by bolts and nuts attached to said axletree C, and passing through slots in the said axles B.

By this construction the wheels A may be conveniently moved closer together or farther apart by simply moving the axles B toward or from each other upon the axletree C, to adapt the cultivator for use in cultivating both cotton and corn, the rows of which are usually planted at different distances apart.

D is the tongue, which is securely attached to the central part of the axletree C, and the rear end of which projects in the rear of the said axletree C, to receive the driver's seat E.

The tongue D is strengthened against side strain by the inclined brace-bars F, the forward ends of

which are securely attached to the sides of the tongue D, and the rear parts of which are attached to the end parts of the axle-tree C.

To the tongue D, and to the forward parts of the braces F, is securely attached a short cross-bar, G, to the rear side of the end parts of which are pivoted or hinged the forward ends of the beams H, to which are attached the upper ends of the plow-standards I.

The draft-strain upon the plow-standards I is sustained by the brace-rod J in the ordinary manner, and to the lower ends of said standards are attached the plows K, which may be of any desired kind, according to the particular work to be done.

L is a square rock-shaft, the ends or journals of which work in bearings in the projecting rear ends of the brace-bars F, or in blocks attached to said brace-bars.

M are arms, in the rear ends of which are formed square holes, to fit upon the square shaft L, so that the said arms may be moved toward and from each other by sliding them upon the said shaft L.

R is a perforated spring bar, the middle part of which is attached to the middle part of the rock-shaft L, and the end parts of which rest upon the rear ends of the arms M, so that the said arms M may be secured in place, when adjusted, by pins passing through the holes in the said bar, and connected with the said arms.

To the outer ends of the arms M are attached the ends of the short chains or rods N, the lower ends of which are attached to the plow-beams H, so that the said plow-beams may be raised and lowered by operating the said shaft L.

The shaft L is operated to raise and lower the plows by the lever O, rigidly attached to or connected with the said shaft L, and the rear end of which extends back into such a position that it may be conveniently reached and operated by the driver from his seat.

To the lever O or shaft L is attached, or upon one or the other of said parts is formed a segmental ratchet-wheel P, upon the teeth of which the engaging end of the pawl Q takes hold, to hold the plows securely in any position into which they may have been raised.

The pawl Q may be made with a rearwardly-projecting handle, to enable it to be conveniently thrown out of gear by the driver, when he wishes to lower the plows into a working position.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The lifting-arms M, sliding upon an inde-

pendent shaft; L, combined with the adjustable axle B C, to enable the distance between the cultivators to be graduated without detaching any of the parts.

2. The perforated spring bar R, applied, as described, to an independent rock-shaft, L, and arms M, for the purpose of enabling said arms and shaft to be secured at any desired point of adjustment.

The above specification of my invention signed by me this 6th day of July, 1870.

PETER E. SMITH.

Witnesses:

GEO. W. MABEE,
JAMES T. GRAHAM.