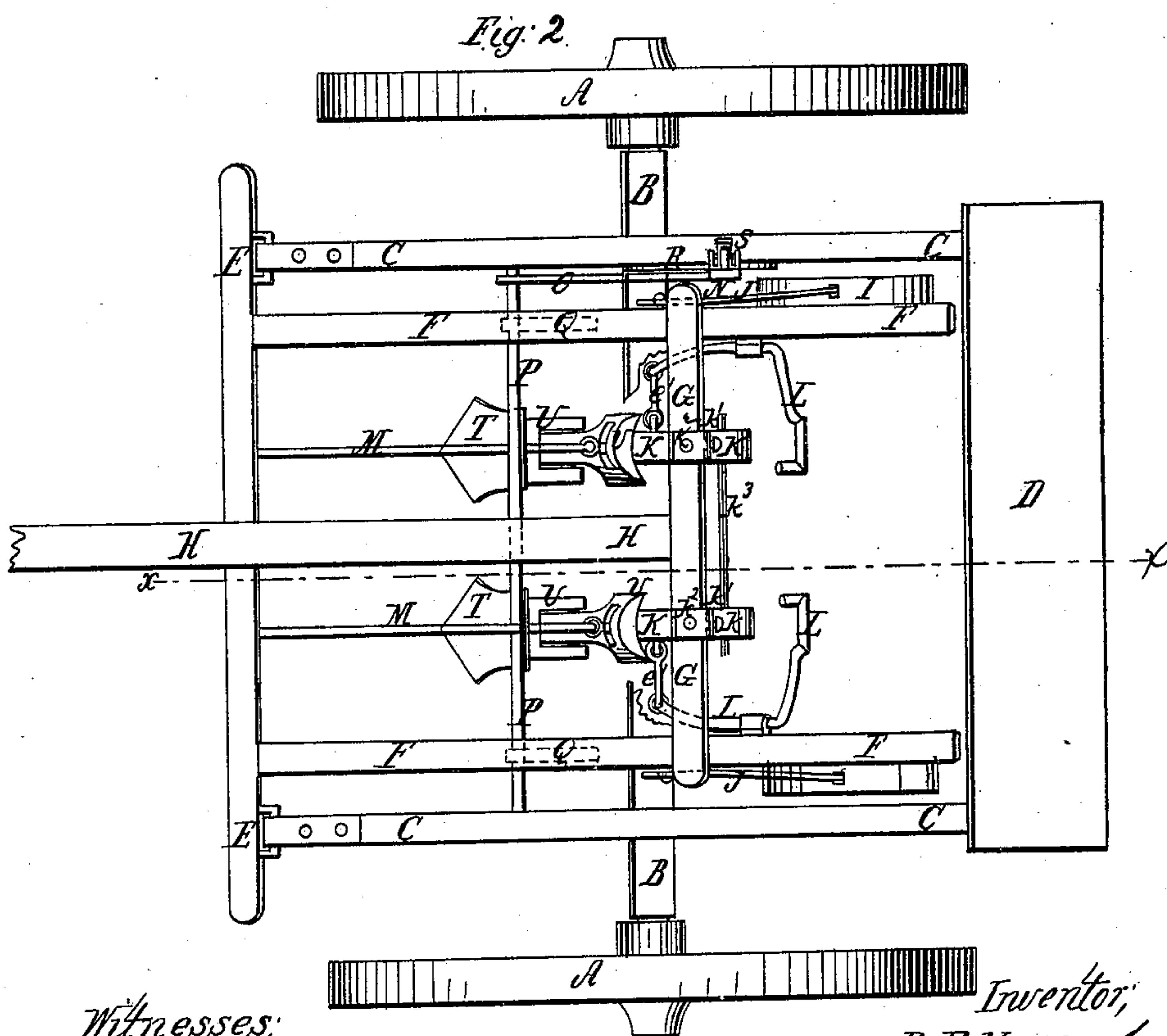
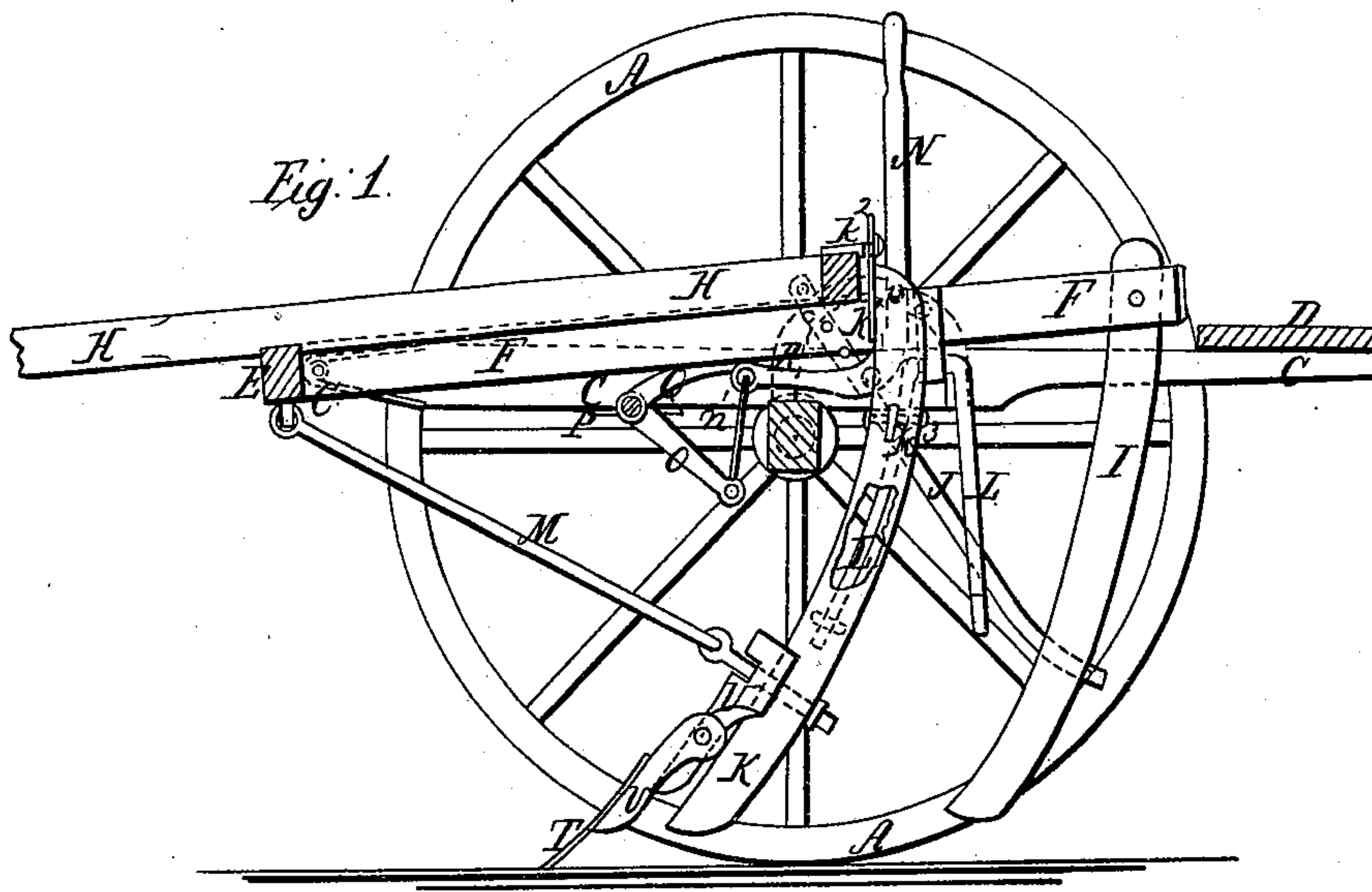


*B. F. Young.*  
*Cultivator.*

*N<sup>o</sup> 87,019.*

*Patented Feb. 16, 1869.*



*Witnesses;*  
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# United States Patent Office.

B. F. YOUNG, OF TOULON, ILLINOIS.

Letters Patent No. 87,019, dated February 16, 1869.

## 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, B. F. YOUNG, of Toulon, in the county of Stark, and State of Illinois, have invented a new and improved Cultivator; 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 drawings, forming part of this specification, in which—

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

Figure 2 is a top or plan view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved cultivator, simple in construction, effective and satisfactory in operation, and which shall, at the same time, be easily adjusted and controlled when in operation; and

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

A are the wheels, which are attached to and work freely upon the axle B, in the ordinary manner.

To the axle B, near its ends, are securely attached the middle parts of the side-bar C, which, with the seat D, attached to their rear ends, form the outside frame of the cultivator.

To the forward ends of the side-bars C, are pivoted or hinged the ends of the front cross-bar E of the inner frame, the side-bars F of which extend back, and are connected in the rear of their middle parts by the rear cross-bar G.

H is the tongue, which is securely attached to the cross-bar E and G of the inner frame.

I are the rear plow-standards, the upper ends of which are pivoted to the rear ends of the side-bars F, and to the lower ends of which the plows are attached.

The draught-strain upon the standards I, is sustained by the brace-bars J, the lower ends of which are secured to the lower parts of the said standards, and the upper ends of which are adjustably secured to the side-bars F, by bolts passing through the said side-bars, and through one or the other of the holes through the said upper ends of the said draught or brace-bars J, so that the plows may be conveniently adjusted to run at any desired depth in the ground.

K are the forward plow-standards, to the forward side of the upper ends of which are attached plates  $k^1$ , by bolts passing through the said standards, and through slots in the said plates, so that the standards K may be conveniently raised and lowered, to adjust the plows to run at the desired depth in the ground.

The plates  $k^1$  have holes formed through their upper parts to receive the pivots of the plates  $k^2$ , attached to the rear cross-bar G of the inner frame of the cultivator.

The standards K are made to move together, and parallel with each other, by the connecting-bar  $k^3$ , the ends of which are adjustably connected with the said standards, so that they may be adjusted to run at any desired distance apart.

L are two levers, the middle parts of which are pivoted to the side-bars F, and the two ends of each of which are inclined downward and inward.

Upon the rear ends of the lever L, are formed stirrups, to receive the feet of the driver, so that he may conveniently guide the inner plows, in plowing crooked rows, and in avoiding irregular hills.

The forward ends of the levers L are connected with the standards K, by short connecting-rods  $l'$ , as shown in fig. 2.

The draught-strain upon the standard K is sustained by the draught-rods M, the forward ends of which are pivoted to the front cross-bar E, and the rear ends of which are adjustably connected with the lower parts of the standards K, by eye-bolts and nuts, so that the length of the said draught-rods may be adjusted at pleasure.

N is a bent lever, which is pivoted, at its angle, to the side-bar C, and the upper end of which extends up into such a position, that it may be conveniently reached and operated by the driver from his seat.

The lower or forward end of the lever N is connected, by a short connecting-rod,  $n'$ , with the outer end of the arm O, the other end of which is rigidly attached to the rock-shaft P, the ends of which work in bearings attached to the side-bars C, and to which are rigidly attached two arms, Q, the free ends of which rest against the under side of the side-bars F, so that, by operating the lever N, the pivoted frame E F G, and with it all the plow-standards and plows, may be raised from the ground, when desired, for the purpose of avoiding obstructions, or of passing from place to place.

R is a semicircular plate, attached to the side-bar C at the side of the lever N, and provided with holes to receive the catch-pin of the catch-lever S, which is pivoted to the lever N, and held in proper position against the catch-plate R, by a spring placed between the upper parts of the levers N and S. By this device the plows may be raised to and secured at any desired elevation.

T are the plows, which are secured to a shoe, U, fitting upon the lower part of the plow-standards, to which it is secured by a bolt passing through the said standards, and through a cross-slot in the upper part of the shoe U, so that the plows may be conveniently adjusted to throw the dirt toward or from the plants, as may be desired.

The shoes U are made in two parts, which are jointed to each other, as shown in figs. 1 and 2. This construction enables the plows to rise out of the ground when the horses are backed, thus guarding against accidental breakage from this cause.

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

1. Connecting the inner plow-standards K to the  
rear cross-bar G of the pivoted frame E F G, by the  
adjustable slotted plates  $k^1$ , and pivot-plates or pivots  
 $k^2$ , substantially as herein shown and described, and for  
the purpose set forth.

2. The adjustable jointed and slotted shoes U, to  
which the plows are attached, in combination with the  
plow-standards, substantially as herein shown and de-  
scribed, and for the purpose set forth.

B. F. YOUNG.

Witnesses:

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MILES A. FULLER.