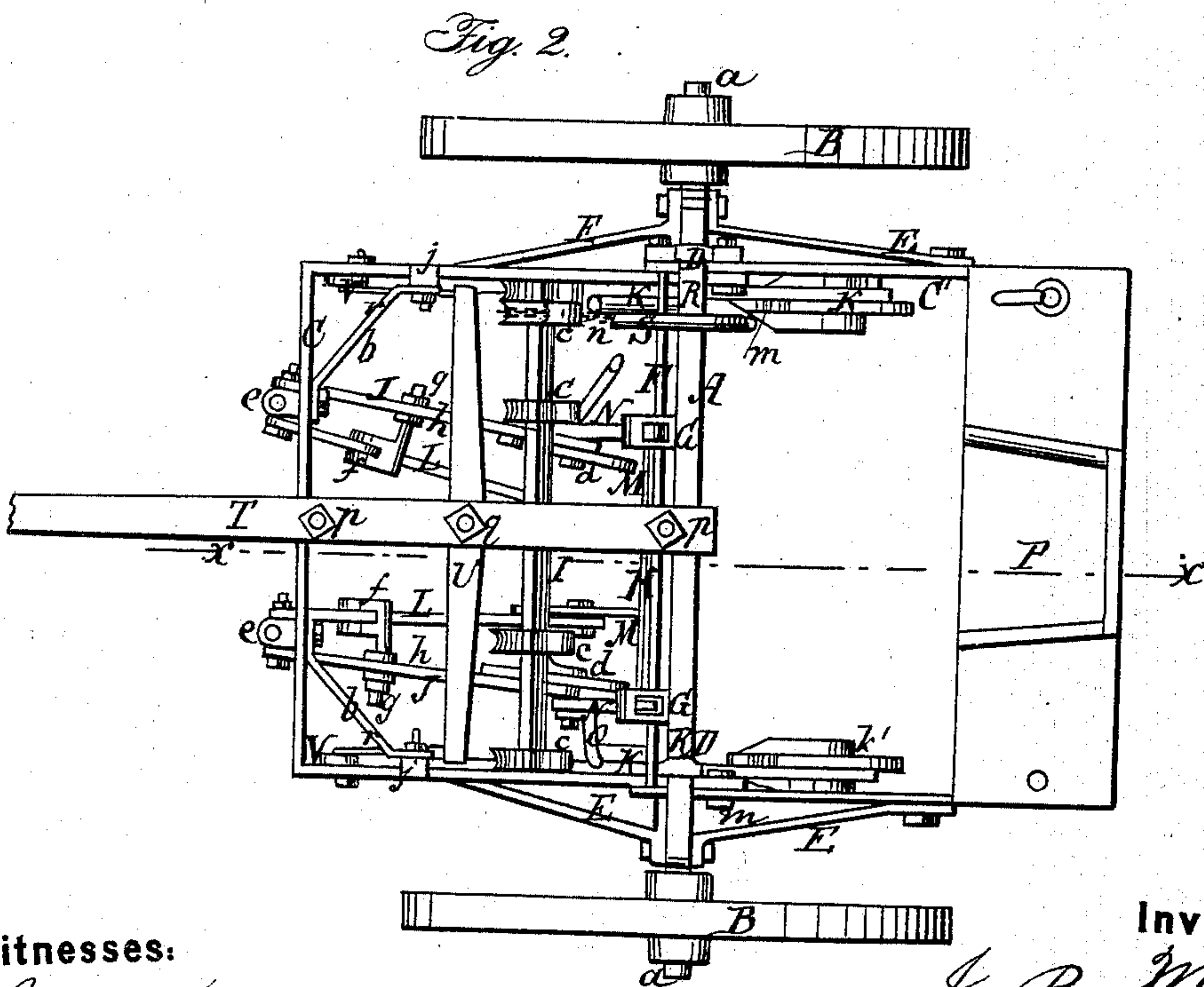
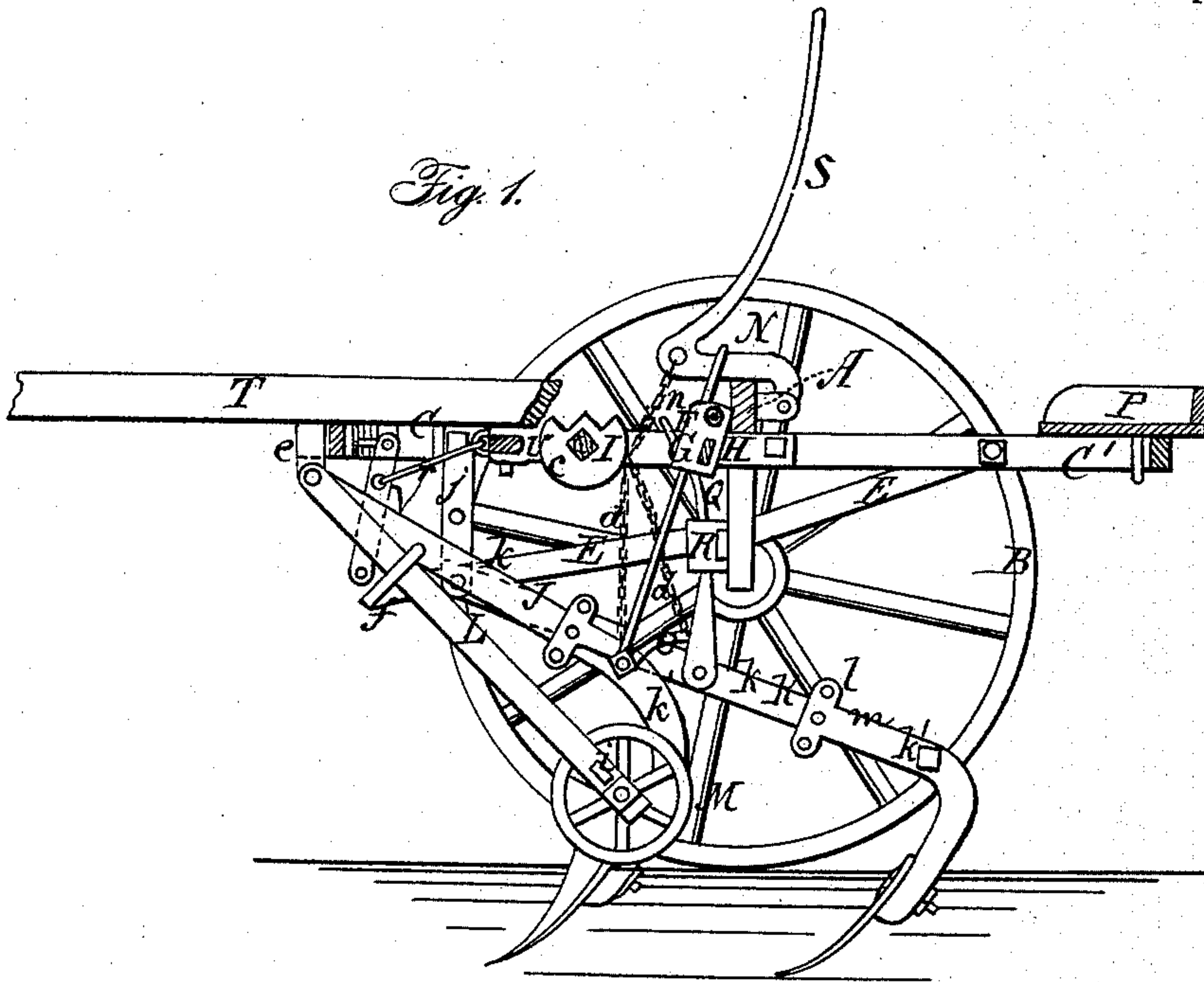


I. B. MAHON.
Wheel-Cultivator.

No. 69,003.

Patented Sept. 17. 1867.



Witnesses:

Theo. Fische
J. Alison Fraser

Inventor:

I B Mahon
Per Munnell &
Attorneys

United States Patent Office.

ISAAC B. MAHON, OF DUNKIRK, OHIO.

Letters Patent No. 69,003, dated September 17, 1867.

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, ISAAC B. MAHON, of Dunkirk, in the county of Hardin, and State of Ohio, have invented a new and improved Cultivator; and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

This invention relates to a new and improved cultivator for cultivating crops which are grown in hills or drills, and it consists in a novel construction of the device, as hereinafter fully shown and described, whereby a very desirable implement for the purpose specified is obtained. In the accompanying sheet of drawings—

Figure 1 is a side sectional view of my invention taken in the line *x x*, fig. 2.

Figure 2 a plan or top view of the same.

Similar letters of reference indicate like parts.

A represents the axle of the machine, which is bent or curved downward at each end, with arms *a* thereon to receive the wheels B B, which turn loosely on the arms.

The frame of the machine is composed of two parts, C C', connected together by suitable bolts, and secured to the under side of the axle by clips D, and properly supported by braces E at the front and rear sides of the axle. The front part C of the frame is also strengthened by braces *b* at each corner.

The forward ends of the rear part C' of the frame are bent upward, forming bearings in front of the axle for a rod or shaft, F, on which two guides, G G, are placed loosely, so that they may move freely thereon.

These guides are connected by a bar, H, the latter passing through the guides, and so arranged that the guides may be secured at a greater or less distance apart, as may be desired.

In the front part C of the frame of the machine there is fitted a shaft, I, which is just in front of the rod or shaft F, and is parallel with it. On this shaft I there are placed pulleys or segments *c*, to which chains *d* are attached, the lower ends of said chains being connected to plough-beams J J K K. The inner plough-beams J J are connected by universal joints *e e* to the front cross-piece of the front part C of the frame, and the fender-bars L L are connected to the front part of C by the same joints *e e*, and said bars pass through guides *f* attached to the plough-beams J J. These guides are attached to the plough-beams J by a screw, *g*, and nut *h* in such a manner that the fenders M may be adjusted nearer to or further from the ploughs of the beams J, as may be desired.

The fenders M are of circular form, and may be described as wheels constructed in skeleton form or with spokes. The guides *f* may be adjusted or turned forward or backward to hold the fenders at the desired height, and the rear ends of the fender-bars L are slotted longitudinally, as shown at *i*, to admit of the fenders being set further forward or backward, as desired, and by having the fenders constructed in skeleton or open form, the fine dirt is allowed to fall or pass gently through them against the plants, while clods of earth or other large substances are not allowed to pass through, and the plants are thereby protected.

The plough-beams K K are pivoted to pendants *j* at each side of the front part C of the frame of the machine. The beams K K have an up-and-down movement, but not a lateral one, that not being required for the outside ploughs. Each plough-beam is composed of two parts, *k k'*, the parts *k* being straight, and the parts *k'* curved and connected to *k* by pivot-bolts. The upper ends of the parts *k'* are provided with a plurality of holes *l*, through any of which a bolt, *m*, passes into the parts *k*, to secure the ploughs at the required angle of inclination. This will be fully understood by referring to fig. 1.

The inner plough-beams J J have uprights N pivoted to them, which pass through the guides G G, and to the lower part of each upright a stirrup, O, is attached, by which the driver, from his seat, P, may operate the plough-beams J laterally, so that the ploughs attached thereto may conform to the sinuosities of the rows of plants. The outer plough-beams K K have uprights Q attached to them, which pass through fixed guides R attached to the sides of the part C of the frame.

S is a lever secured to the axle A, within convenient reach of the driver on his seat. The lower end of this lever *s* is connected by a chain, *n*, to a pulley, *o*, on the shaft I, and by actuating this lever the ploughs of

of all the beams may be raised or lowered simultaneously, the chain *n* being unwound from its pulley *o* as the ploughs are raised, and wound upon it as the ploughs are lowered.

The ploughs of the inner beams J J are curved or twisted in such a manner that they may be made to throw the earth to or from the plants by simply reversing them on the beams, the ploughs being only detached and removed or reversed.

The draught-pole T is attached to the front part C of the frame and to the axle A by screw-bolts *p*, and a double-tree, U, is attached to the under side of the draught-pole by a pivot-bolt, *q*. The ends of the double-tree are connected by links *r* to vertical whiffle-trees V V, the upper ends of which are pivoted to the sides of the front part C of the frame.

The frame of the machine is to be constructed of iron, and the driver's seat is attached to the rear part C' of the frame in such a manner that it may be adjusted further forward or backward on said part, as occasion may require.

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

1. Constructing the metallic frame of the machine in two parts, C C', connected together and braced in the manner substantially as shown and described.

2. Suspending the frame to the axle A by clips D, arranged in connection with the braces E and the pendants *j*, to which the outer plough-beams are attached, all being arranged substantially as and for the purpose specified.

3. The double-tree U pivoted to the draught-pole T, in connection with the whiffle-trees V V pivoted to the frame of the machine, and connected to the ends of the double-tree by links *r*, all arranged substantially as set forth.

4. The attaching of the inner plough-beams J J to the front of the frame by means of universal joints *e e*, substantially as described.

5. The fender-bars L L, connected with the inner plough-beams J J and universal joints *e e*, and arranged in the manner shown, so that the fenders M may be set at any desired height, and at a greater or less distance from the ploughs, and have an independent up-and-down motion, and at the same time retain their relative position with the ploughs, substantially as shown and described.

6. The open or skeleton fenders M, when applied to the fender-bars L L so as to admit of being adjusted further forward or backward on said bars, substantially as and for the purpose specified.

7. The pulleys or segments *c* on the shaft I, connected by chains *d* to the plough-beams J J K K, in combination with the lever S, connected by a chain, *n*, with a pulley, *o*, on shaft I, all being arranged substantially as and for the purpose specified.

8. The guides G G on the shaft F, in connection with the uprights N, passing through said guides, and the stirrups O attached to said uprights, all arranged to operate substantially as described.

9. The fixed guides R attached to the frame of the machine, with the uprights Q of the outer beams K passing through the same, substantially as and for the purpose set forth.

ISAAC B. MAHON.

Witnesses:

CHS. MAHON,

H. M. SHAFFER.