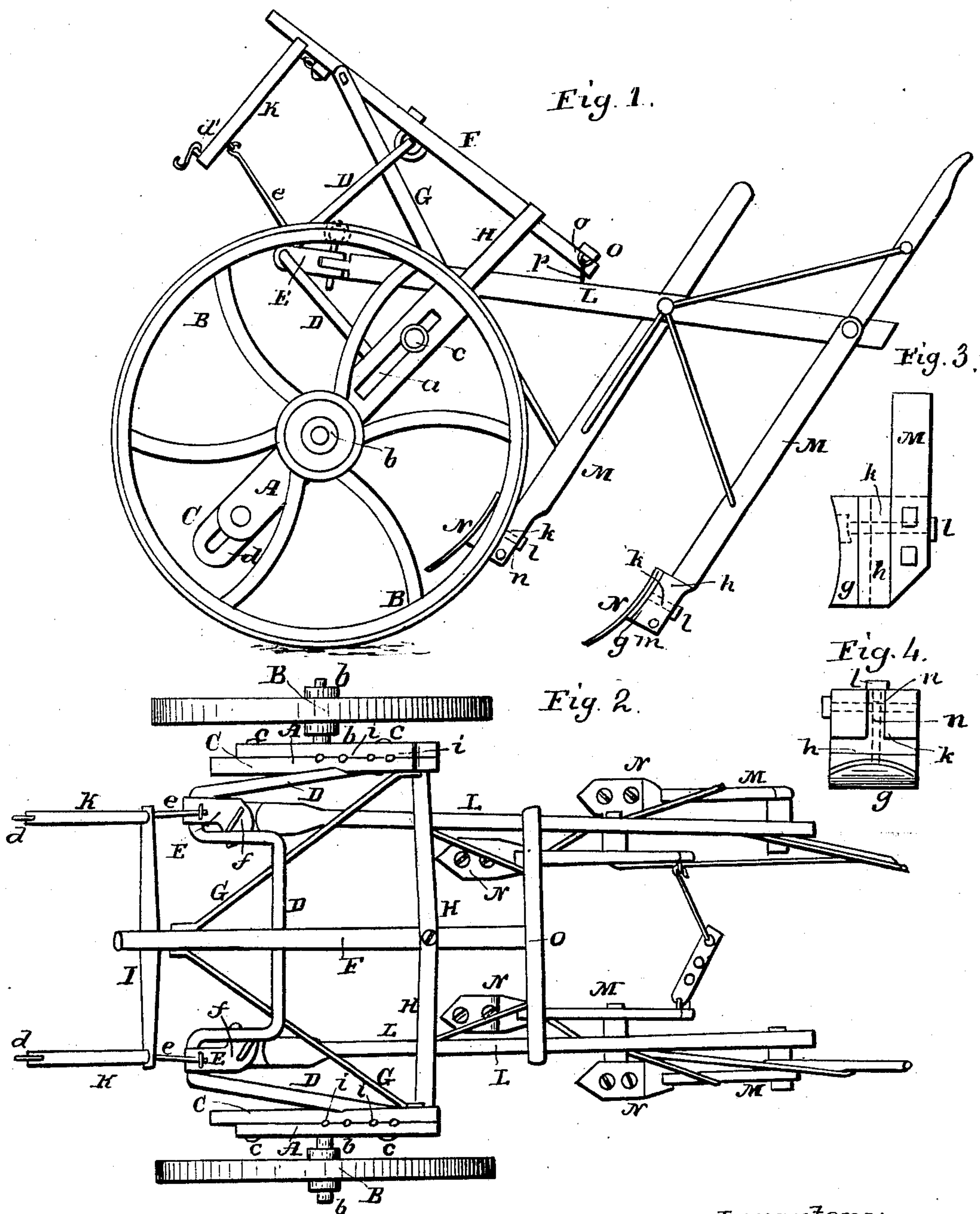


TOBIAS & BATES.

Wheel Cultivator.

No. 86,329.

Patented Jan. 26, 1869.



Witnesses:
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United States Patent Office.

JOHN C. TOBIAS AND WILLIAM N. BATES, OF EL PASO, ILLINOIS.

Letters Patent No. 86,329, dated January 26, 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 we, JOHN C. TOBIAS and WILLIAM N. BATES, of El Paso, in the county of Woodford, and in the State of Illinois, have invented certain new and useful Improvements in Cultivators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of our invention consists in the construction and general arrangement of a cultivator, but more particularly in the manner of arranging the draught for the team, the adjustable axle, and in the manner of attaching the plows or shovels to the shins.

In order to enable others skilled in the art to make and use our invention, we will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a side view,

Figure 2, a plan view, and

Figures 3 and 4, sections of the plow-fastenings.

A represents a plate or bar, which is provided, in its upper end, with a vertical slot, *a*, and the wheel B is put on a rod or journal, *b*, extending from the side thereof, below said slot.

To the inside of the plate A, another plate, C, is attached, by means of a bolt, *c*, and screw passing through the upper part of the plate C, and through the slot *a* on the plate A, and by a similar screw or bolt, *c*, passing through the lower part of the plate A, and through a vertical slot, *d*, on the lower part of the plate C. By this arrangement the axle D, which is fastened to the inside plates C C, can be raised or lowered, at pleasure.

To prevent the plates A and C from sliding from the position in which it is desired to hold them, I provide the inner side of one of them with a series of notches, *i i*, and the inner side of the other with one similar notch, as shown in fig. 2.

I place this one notch opposite one of the other, and put an iron pin through the hole thus formed. This will effectually prevent the plate C from gliding downward, when the bolts *c c* are properly tightened.

The axle D, which is fastened in any suitable manner to the inner side of the plate C, extends forward, then inward far enough to allow the slotted blocks E E to be placed around it. It then passes upward a suitable distance, then across and down, in like manner, on the other side, to be fastened to the inside of the other plate C.

In the centre, on the upper part of the axle, the tongue F is secured, which tongue is steadied by means of bars G G running from the top of the plate C, to said tongue, forward of the axle, and by other bars, H H, running also from the top of said plate C, and across the rear end of the tongue.

At the front end of the tongue, the whiffle-tree I is placed, said whiffle-tree being provided at each end with a small bar, K K, suspended therefrom, at the lower ends of which bars are hooks, *d d*, to which the team is hitched.

These bars being connected with the slotted blocks E E, by means of rods *e e*, it will be seen that the draught of the team is directly on these slotted blocks, to which the plow-beams are attached, as will be hereafter shown, so that the team will not be as easily tired out, as in other cultivators.

The slotted blocks E E, which are placed on the axle D, in the manner already mentioned, extend a short distance in rear of said axle, and this part it is that is provided with a horizontal slot, as may be seen in fig. 1.

The front ends of the plow-beams L L are cut with a tongue, which is inserted in the said slot, and held there by means of a pin, *f*, passing through the two jaws or lips forming said slot and this tongue, so that the plow-beams are, in a manner, pivoted on the axle, and can be moved in any direction desired, either right and left, by the tongue being in said slot, or up and down, by the motion of the blocks on said axle.

The plow-beams are provided with shins, M M, to the lower end of which the shovels or plows N N are secured.

In case the shins M M are of iron, we fasten the shovels to a block, *g*, by means of two screws. This block is, however, first cut with a slot, and a bolt, *k*, passed through the same, and through a second block, *h*. This latter is provided with a flange to cover the side of the shin, and fastened to the same by means of a bolt, *m*, and nut. The bolt *k* is then tightened on the back of said shin and flange by means of a nut, *l*, as seen in fig. 1.

In case the shins are of wood, the block *h* is not provided with a tongue, as in the former case, but has a tongue, *n*, on its rear side, which is inserted into a vertical groove on the shin. Bolts and nuts are then placed the same as in the former case, as shown in figs. 3 and 4.

On the rear end of the tongue F is a cross-bar, O, which has eyes *o o* on its end, so that the plow-beams may be suspended therefrom, by means of hooks *p p* on the same.

Having thus fully described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

1. The slotted bars A and C, constructed as described, and with the axle D fastened to one, and the wheel B attached to the other, for the purpose of raising or lowering the axle, and with it the plow-beams, substantially as and for the purposes herein set forth.

2. The arrangement of the axle D, tongue F, whiffle-tree I, and bars K K, in combination with the rods *e e* and slotted blocks E E, for the purpose of having the draught direct on the plow-beams, substantially as herein set forth and described.

In testimony that we claim the foregoing, we have hereunto set our hands, this 9th day of June, 1868.

JOHN C. TOBIAS.
WM. N. BATES.

Witnesses:

E. FISHER,
A. BROWN.