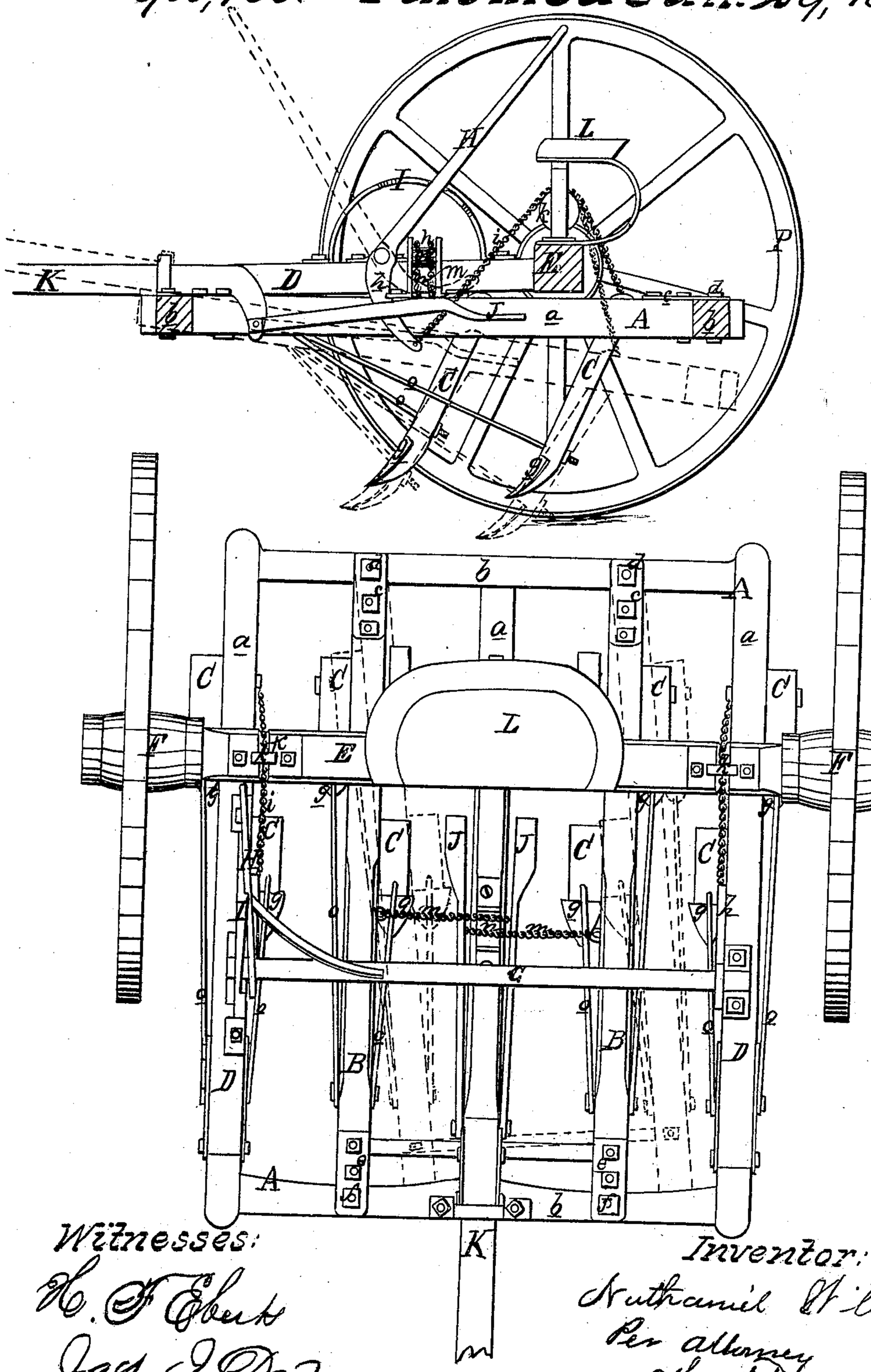
N. Wilson.

Wheel Cultivator.

No. 92,135. Patented Jun. 29, 1869.



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NATHANIEL WILSON, OF ST. LOUIS, MICHIGAN.

Letters Patent No. 92,135, *dated June* 29, 1869.

IMPROVEMENT IN SULKY-CULTIVATOR.

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

To whom it may concern:

Be it known that I, NATHANIEL WILSON, of St. Louis, in the county of Gratiot, and State of Michigan, have invented a new and useful Improvement in Sulky-Cultivators; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification.

Figure 1 is a side elevation of my invention.

Figure 2 is a plan view from the top.

Like letters indicate like parts in each figure.

The nature of this invention relates to an improvement in wheel, or sulky-cultivators; and consists in so constructing the same, that when employed in cultivating rows of corn, and straddling the same, should the rows be crooked, the bars upon each side, which carry a part of the teeth, may be moved laterally to or from the row, by the foot of the driver pressing upon suitable treadle-levers.

It also consists in attaching to the axle forward-projecting arms, to which the cultivator-frame is pivoted, and in a peculiar arrangement for raising and lowering said frame, for the purpose of cultivating at any desired depth.

In the drawings—

A is a frame, composed of three longitudinal bars, *a*, and two cross-ties, *b*, suitably put together by proper mortises and tenons.

B are two other longitudinal bars, pivoted at the rear end of the frame, by means of metallic plate, *c*, and bolts, *d*.

At the front ends of these bars B, there are secured other similar metallic plates, *e*, which over and underlap the front cross-tie of the frame.

Bolts, *f*, provided with suitable nuts or keys, pass through the ends of the plates *e* and the front cross-tie, to hold said bars B rigidly in place when desired; or said bolts may be removed when required, for the purposes hereinafter described.

To the longitudinal bars *a* and B are properly secured two series of standards, C, and steel or iron cultivator-teeth, *g*, in such a manner that the rear series follow the spaces left between the front series, and the two outside ones of the rear engage with the soil immediately outside of the outside ones of the front series.

This frame A is securely pivoted to the front ends of the projecting arms D, the rear ends of which are rigidly secured to the axle E, upon which the traction-wheels F revolve.

G is a rock-shaft, journalled, upon each end, to the projecting arms D, and is provided with arms, *h*, one at each end, to which arms are attached ropes or chains, *i*, which, passing over pulleys *k*, secured to the axle, are fastened, at their opposite ends, to the rear end of the frame A.

A lever, H, is secured to one end of this rock-shaft, which, by its engagement with the notched quadrant I, secured to the top of one of the projecting arms D, holds the frame in position when raised by means of the arms *h*, chains, and pulleys, already described.

When it is desired to drop the frame, to allow the cultivator-teeth to enter the ground, the lever should be disengaged from the notched quadrant, when the weight of the rear end of the frame will cause it to drop. The position of the frame, standards, and cultivator-teeth, when dropped, is shown in red lines in fig. 1.

J are treadles, the front ends of which are pivoted, one each side of the centre-bar *a*, by a suitable bolt, which also secures the pole K to the implement.

The rear ends of these treadles are extended to a proper position to be operated by the foot of the driver, upon the seat L.

To each one of these treadles is secured a rope or chain, *m*, which ropes pass in opposite directions over the pulley *n*, which is secured to the centre-bar *a*, and the outer end of each of these chains are secured to the longitudinal and pivoted bars B.

By means of these treadles and chains, the operator can at will, alternately pressing the treadles, change the position and direction of the cultivator-teeth, which are secured to said bars B. This change is shown in red lines in fig. 2.

It will be borne in mind, that when it is desired to change the direction, as just described, the bolts *f* must be removed; and they may be replaced at any time that it is desired to use the implement, with the bars B rigidly in a parallel position with the bars *a*.

Suitable iron braces, *o*, secured near the front end of the frame, and extending downward and rearward to the standards C, keep them in their relative position to the frame.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The bars B, secured to the frame A, as described, and operated by the treadles J, ropes or chains *m*, and pulley *n*, substantially as set forth.

2. The rock-shaft G, arms *h*, ropes or chains *i*, pulleys K, lever H, and quadrant I, in combination with the longitudinal bars *a* and B, provided with standards C, and cultivator-teeth *g*, operating as and for the purposes described.

3. The arrangement of the parts A, B, C, D, E, F, G, H, I, J, K, L, *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*, *i*, *k*, *m*, *n*, and *o*, or their equivalents, when combined and operating substantially as and for the purposes herein set forth.

NATHANIEL WILSON.

Witnesses:

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