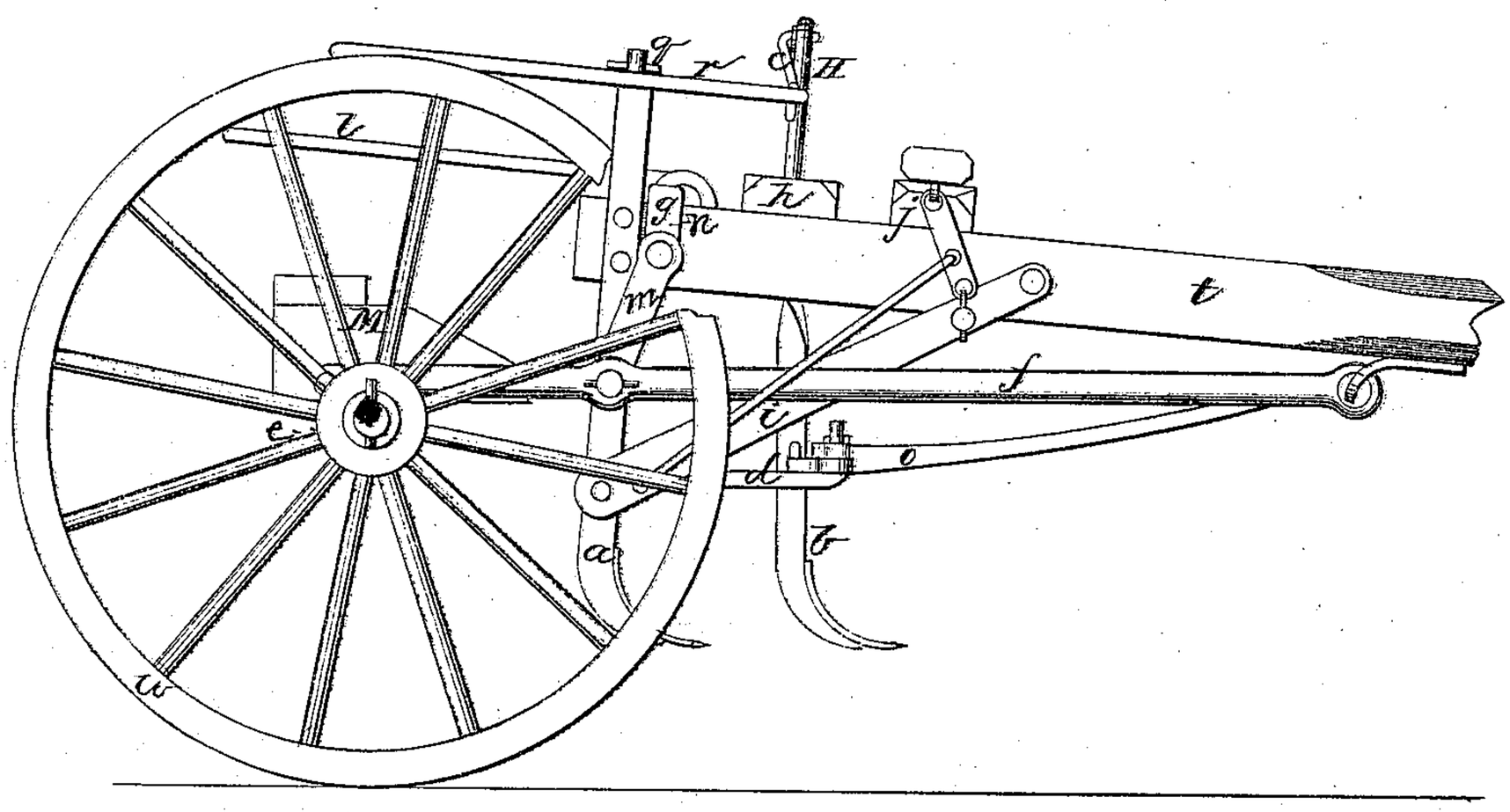
C. L. CARTER.

CULTIVATOR.

No. 181,245. Patented Aug. 22, 1876.

Fig. 1.



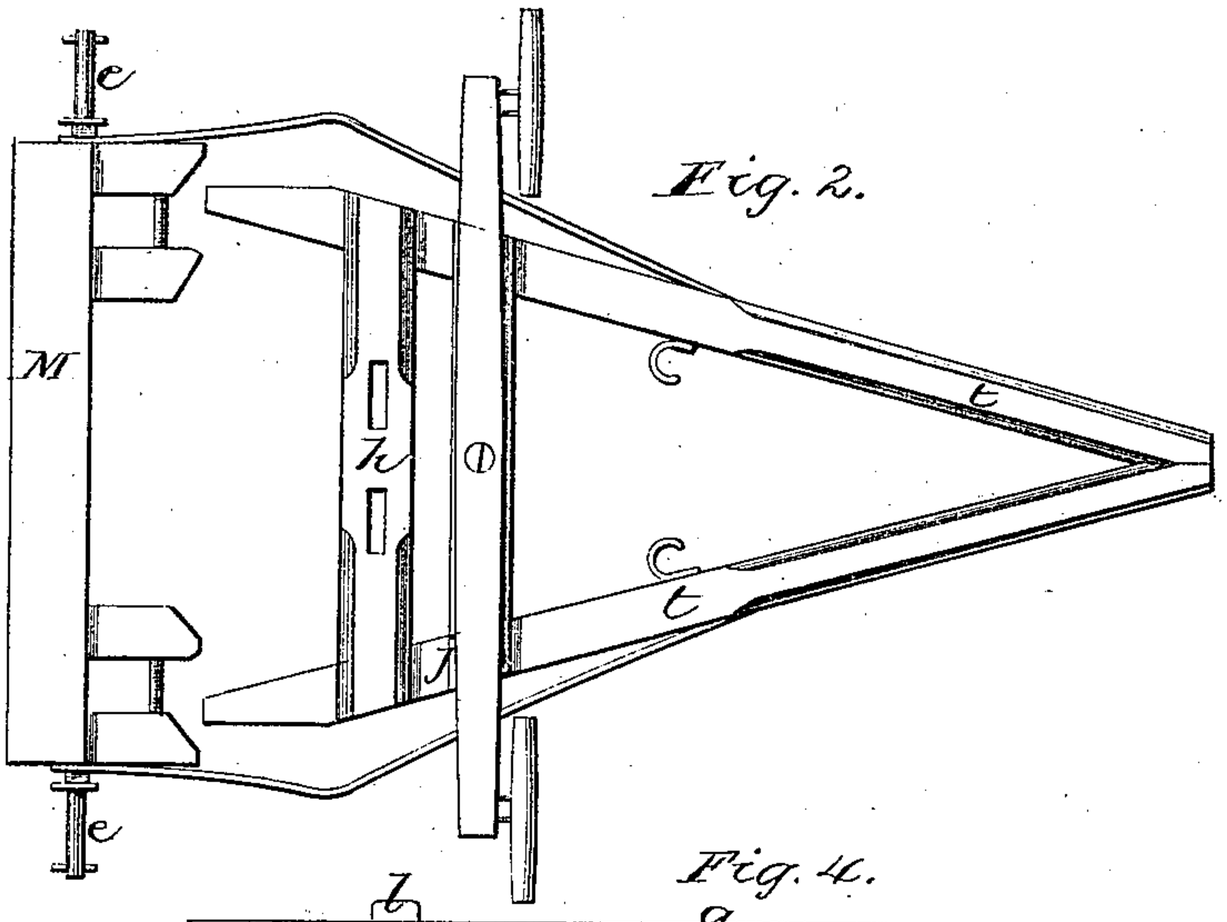


Fig. 2.

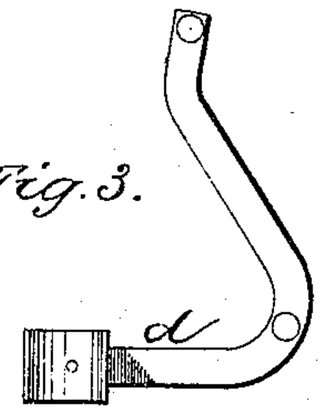
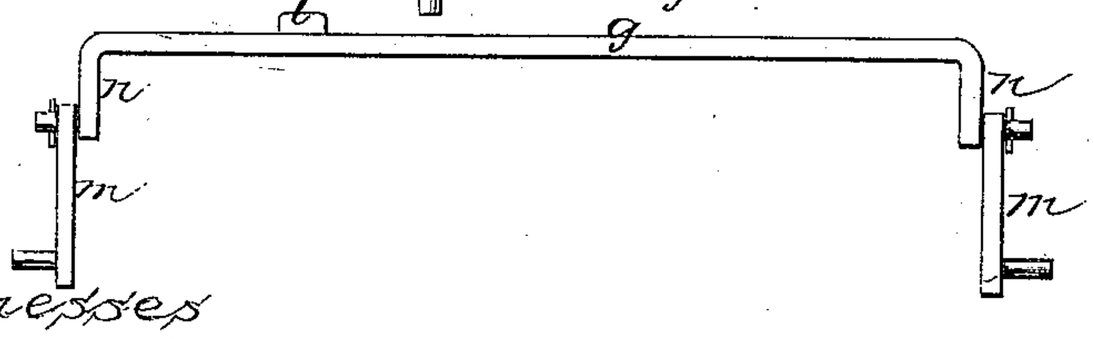


Fig. 3.

Fig. 4.



Witnesses
Pierre Gray
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CLEMENT L. CARTER, OF UNION CITY, INDIANA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **181,245**, dated August 22, 1876; application filed May 11, 1876.

To all whom it may concern:

Be it known that I, CLEMENT L. CARTER, of Union city, Randolph county, and State of Indiana, have invented certain Improvements in Cultivators, of which the following is a specification:

The object of this invention is to construct a cultivator that will be completely under the control of the operator, and will plow to the end of the row and be easily managed.

My invention consists in constructing a cultivator that is complete in all its parts, and without beams or handles, simple, and durable, the accompanying drawing forming part of this specification.

Figure 1 represents a side elevated view of my cultivator; Fig. 2, a plan view of the frame M, to which the wheels are attached, the connecting-bars *f*, and the tongue *t*, with the cross-bars *h* and *j* and the axles *e*; Fig. 3, the foot-levers *d*; Fig. 4, the rock-shaft *g*, with the double cranks *n n* and *m m*.

In the construction of my cultivator I use the ordinary double tongue, separating the rear end to about three feet. This, with the cross-bars *h* and *j*, forms the rigid frame-work that supports the plows. *w w* represent the wheels; M, the wheel-frame; *e*, the axles; *a*, the outside standards; *b*, the center shovels; H, the upper ends of the center standards; *l*, the lever used in lifting the plows; *r*, the hand-lever for moving the center standards; *c*, the rods connecting center standards H to the lever *r*; *o*, the swinging braces that prevent the center standards H from being drawn backward; *f*, the bars connecting the wheels with the frame M to the tongue; *i*, braces to support the outside standards; *d*, the foot-levers; *t*, the tongue; *q*, the elongation of the right standard *a*. The outside standards *a* are bolted to the rear ends of the tongue, supported by the braces *i*, they being secured by bolts near the lower ends of the standards *a*. One, passing forward and upward, is bolted to the tongue; the other, passing upward, is bolted to the cross-bar *h*, this arrangement making the standards *a* perfectly rigid. The center standards H pass through mortises in the bar *h*. Bolts passing through the bar *h* and the standards H hold the standards in place. The swinging braces *o*, being fastened near the lower ends of the standards H and to the tongue *t*, will permit them to swing to the right or left with ease. The foot-levers *d* are bent somewhat in the form of a sharp elbow, turning on a hinge or pivot at the angle, and supported by the outside standards *a*. One arm of each lever *d* has a stirrup riveted to it for the foot, the other end being attached to the center standards H by hinges near their lower extremities, and, as the standards H are free to move to the right or left, it will be seen (the feet being in the stirrups) that, by pushing the feet back and forth, the standards H will receive a swinging motion to the right or left, the object of which is to enable the operator to guide the plows *b* and throw them around the plants, should they not be in line. The lever *r* is attached to the standards H by the rods *c*, the elongation of the right standard *a* forming the fulcrum for the lever *r* at *q*. The lever *r*, being moved to the right or left, will give the standards H a corresponding motion. Thus it will be seen that the foot-levers *d* and the lever *r* will give the standards H the same motion. The lever *r* is for use when the operator is walking.

The center shovels *b* are intended to be used in cultivating small plants, the lower half of the shovel being the same size and shape of an ordinary cultivator-shovel, and the upper half cut from each side, leaving the center about two inches wide; and, as the wide part of the shovel *b* will run some inches under the ground, it will be seen that it will loosen the ground, and yet throw but little dirt on the small plants. The rock-shaft *g* is a bar of the proper length to reach across the rear ends of the tongue, and bent at each end to form the cranks *n n*. It is also perforated at the proper width for staples, by means of which it is fastened to the tongue. The lever *l* is also rigidly attached to the rock-shaft *g*. The cranks *n n* are attached to the cranks *m m*, and they to the connecting-bars *f*, a short distance from the axles *e*, the connecting-bars *f* being connected to the tongue some three feet from the axles *e*.

I make a rigid frame for the wheels by bolting two pairs of timbers together. I connect these together by bolting a board some four feet long at right angles with the timbers.

This forms the frame M, to which the axles *e* and the connecting-bars *f* are securely bolted. It will readily be seen that the frame M that connects the wheels *w* is independent of the frame formed by the tongue and the cross-bars *h* and *j*, to which the plows are attached, the only connection being by the connecting bars *f* and the cranks *n n* and *m m*, the rock-shaft *g* being connected to the rear end of the tongue by means of staples.

By this arrangement it will be seen that the rear end of the tongue, to which the plows are attached, is free to move up and down, and, by moving the lever *l* backward, the cranks *n n* and *m m* will be brought into line, and, as the cranks *m m* cannot move downward, by reason of the resistance of the connecting-bars *f*, the rear end of the tongue, with the plows attached, is forced up, thus lifting the plows out of the ground; but when the lever *l* is pushed forward, bringing the cranks *n n* and *m m* at right angles, or less, the rear end of the tongue is lowered, thereby allowing the plows to enter the ground.

Thus it will be seen that, the operator being seated on the frame M, with his feet on the levers *d*, by them or the lever *r*, or all together, he can move the center plows from right to left at will, or, when walking, can move them the same by the lever *r*, and by the lever *l* can lift the plows out of the ground, and all without much labor.

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

The rock-shaft *g*, with its cranks *n*, in combination with the connecting-links *m* and bars *f*, thus uniting the frame M with the tongue-bars *t*, as and for the purpose specified.

CLEMENT L. CARTER.

Witnesses:

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