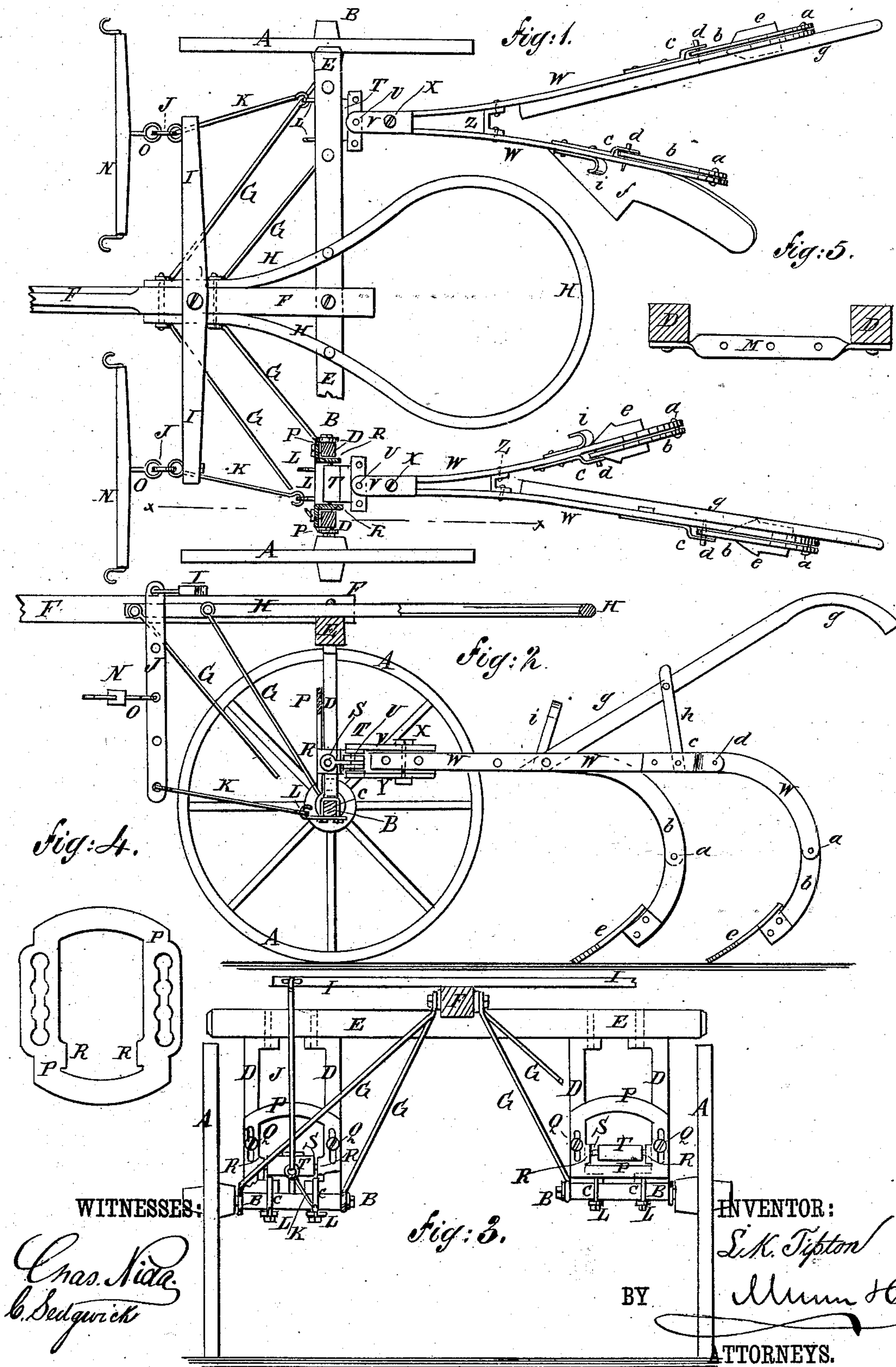


(No Model.)

L. K. TIPTON.
Cultivator.

No. 238,989.

Patented March 15, 1881.



UNITED STATES PATENT OFFICE.

LAFAYETTE K. TIPTON, OF MAYSVILLE, MISSOURI.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 238,989, dated March 15, 1881.

Application filed November 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, LAFAYETTE K. TIPTON, of Maysville, in the county of De Kalb and State of Missouri, have invented a new and useful Improvement in Cultivators, of which the following is a specification.

Figure 1 is a plan view of the improvement. Fig. 2 is a sectional side elevation taken through the line *x x*, Fig. 1. Fig. 3 is a front elevation, the tongue being shown in cross-section. Fig. 4 is a front elevation of the adjustable frame that carries the coupling. Fig. 5 is a sectional plan view, showing a modification of the draw-rod attachment.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish cultivators so constructed that they can be readily adjusted to work deeper or shallower in the ground, that the points of draft attachment can be adjusted directly in front of the centers of resistance, and that the mechanism will not be broken should the plows strike obstructions.

A are the wheels, and B are the axles, of the carriage. Each axle B is secured, by clips C or other suitable means, to the lower ends of a pair of uprights, D, the upper ends of which are secured to a cross-bar, E.

To the center of the cross-bar E is secured the rear end of the tongue F, which is strengthened against side strain in guiding and turning the cultivator by braces G. The upper ends of the braces G are attached to the opposite sides of the tongue F, and their lower ends are attached to the axles B at the opposite sides of the pairs of uprights D.

To the opposite sides of the tongue F are also attached the ends of a bar, H, the middle part of which is bent into circular form, and which is designed to serve as a support to the plow-beams when passing from place to place. The bent bar H is further secured in place, and at the same time made to brace the tongue F, by being bolted to the cross-bar E.

To the tongue F is pivoted the double-tree I, to the end parts of which are hinged the upper ends of two bars, J.

To the lower ends of the swinging bars J are hinged the forward ends of the draw-rods K, the rear ends of which have eyes formed upon them to hook upon hooks L attached to the

axles B or formed upon the forward ends of the yokes of the clips C; or the rear ends of the draw-rods K may have hooks formed upon them to hook into holes or eyes in bars M, the ends of which are bolted to the lower parts of the uprights D. Several hooks, L, are attached to the axles B to receive the rear ends of the draw-rods K, or several holes are formed in the bars M when the said bars are used to receive the rear ends of the draw-rods K, to allow the said draw-rods K to be adjusted to bring the points of draft attachment directly in front of the centers of resistance, so that the plows may be more easily drawn by the team and more easily guided and controlled by the plowman.

N are the whiffletrees, which are connected with the hanging bars J by hooks O, clevises, or other suitable couplings. Several holes are formed in the hanging bars J for the attachment of the whiffletrees N, so that the points of draft attachment can be raised and lowered as may be desired.

To the lower parts of the forward sides of the uprights D are attached small metal frames P, the side bars of which are slotted longitudinally to receive the bolts Q that secure the said frames to the said uprights, so that by loosening the bolts Q the frames P can be raised and lowered to raise and lower the forward ends of the plow-beams, and thus cause the plows to work shallower or deeper in the ground.

If desired, notches may be formed in the side bars of the frames P along the sides of their slots, as shown in Fig. 4, to receive the bolts Q, and thus prevent the said frames from slipping out of place.

Upon the inner edges of the lower parts of the side bars of the frames P are formed lugs R, which project to the rearward across the inner sides of the lower parts of the uprights D, and have holes formed in them to receive the pins or bolts S. The pins or bolts S also pass through eyes or sockets in the forward edges of the plates T to hinge the said plates to the frames P.

Upon the rear edges of the plates T are formed cross-heads, which have a number of holes formed in them to receive the pins U attached to the forward ends of the plates V. The rear ends of the plates V are secured to the upper sides of the forward ends of the

plow-beams W by bolts X. The plow-beams W are kept from rising and drawing the pins U out of the holes in the cross-heads of the plates T by the plates Y, which are secured to the lower sides of the forward ends of the plow-beams W by the bolts X. The forward ends of the plates Y project and underlap the cross-heads of the plates T, and thus prevent the forward ends of the plow-beams W from rising. The plow-beams W are made in pairs, the forward ends of the beams of each pair being secured to each other or to a block interposed between them. The beams W of each pair incline from each other, and are secured in place by a brace-bar, Z, interposed between them. The inner beam of each pair is made shorter than the outer beam, to bring the plows of the said beams to the proper relative position. The rear end of each plow-beam W is curved downward, and to the side of the said end is pivoted, by a bolt, *a*, the standard *b*, which is curved to correspond with the curvature of the said beam W. The upper end of each standard *b* enters a keeper, *c*, attached to the side of the beam W at the upper end of the curve, and is secured to the said beam and keeper by a wooden pin, *d*, which pin is made of such a strength as to hold the standard *b* against the draft-strain under ordinary circumstances, but which will break, should the plow strike an obstruction, and allow the standard *b* to swing back to prevent the plow from being broken.

The standards *b* may have shovel-plows *e* attached to their lower ends, or turn-plows *f* may be attached to the inner standards or to the outer standards, as the character of the work to be done may require.

To the middle parts of the outer beams W are attached the forward ends of the handles *g*, which handles are supported at the desired elevation, and are strengthened in position by

the braces *h*, attached to them and to the said beams W.

To the middle parts of the inner beams W are attached hooks *i*, which are designed to be hooked upon the bent bar H, to support the plows away from the ground when turning the cultivator and when drawing it from place to place.

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

1. In a cultivator, the combination, with the uprights D of the carriage-frame and the coupling S T V X Y attached to the plow-beam, of the frame P, having longitudinal slots in its side bars, and the fastening-bolts Q, substantially as herein shown and described, whereby the forward ends of the plow-beams can be raised and lowered, as set forth.

2. In a cultivator, the combination, with the adjustable frame P, attached to the uprights D of the carriage-frame, and having lugs R upon its side bars, and the plow-beams W, of the hinging rod or bolt S, the hinged plate T, having perforated cross-head upon its rear end, the plate V, having pin U, the guard-plate Y, and the fastening-bolt X, substantially as herein shown and described, whereby the plow-beams can have a free vertical and lateral movement, as set forth.

3. In a cultivator, the combination, with the axle B and uprights D of the carriage-frame and the draft-rods K, of a series of hooks, L, substantially as herein shown and described, whereby the point of draft attachment can be adjusted in line with the center of resistance, as set forth.

LAFAYETTE K. TIPTON.

Witnesses:

G. K. GWATHMEY,
JOHN KEATS.