(No Model.)

W. D. LLOYD.

CULTIVATOR.

No. 341,106. Patented May 4, 1886.

FIG. 1.

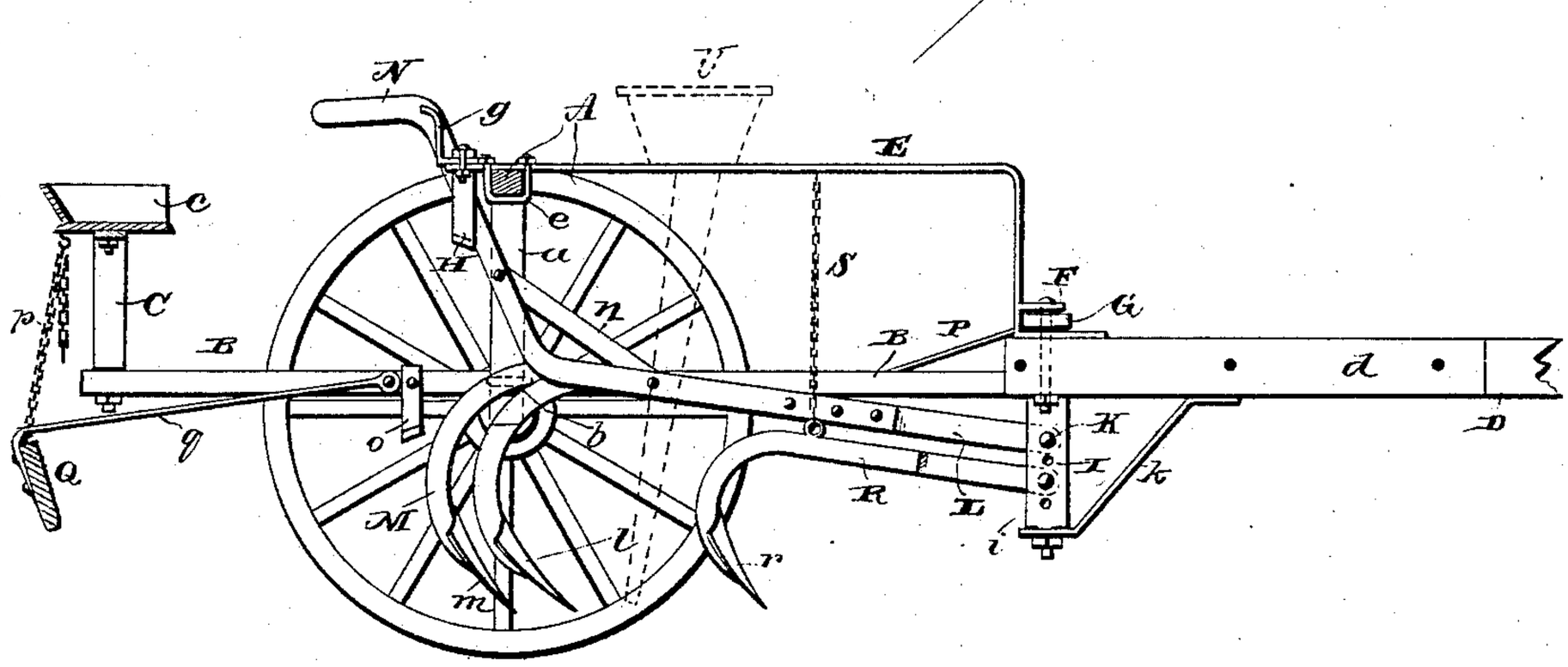
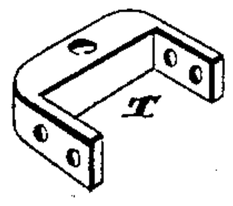


FIG. 3.



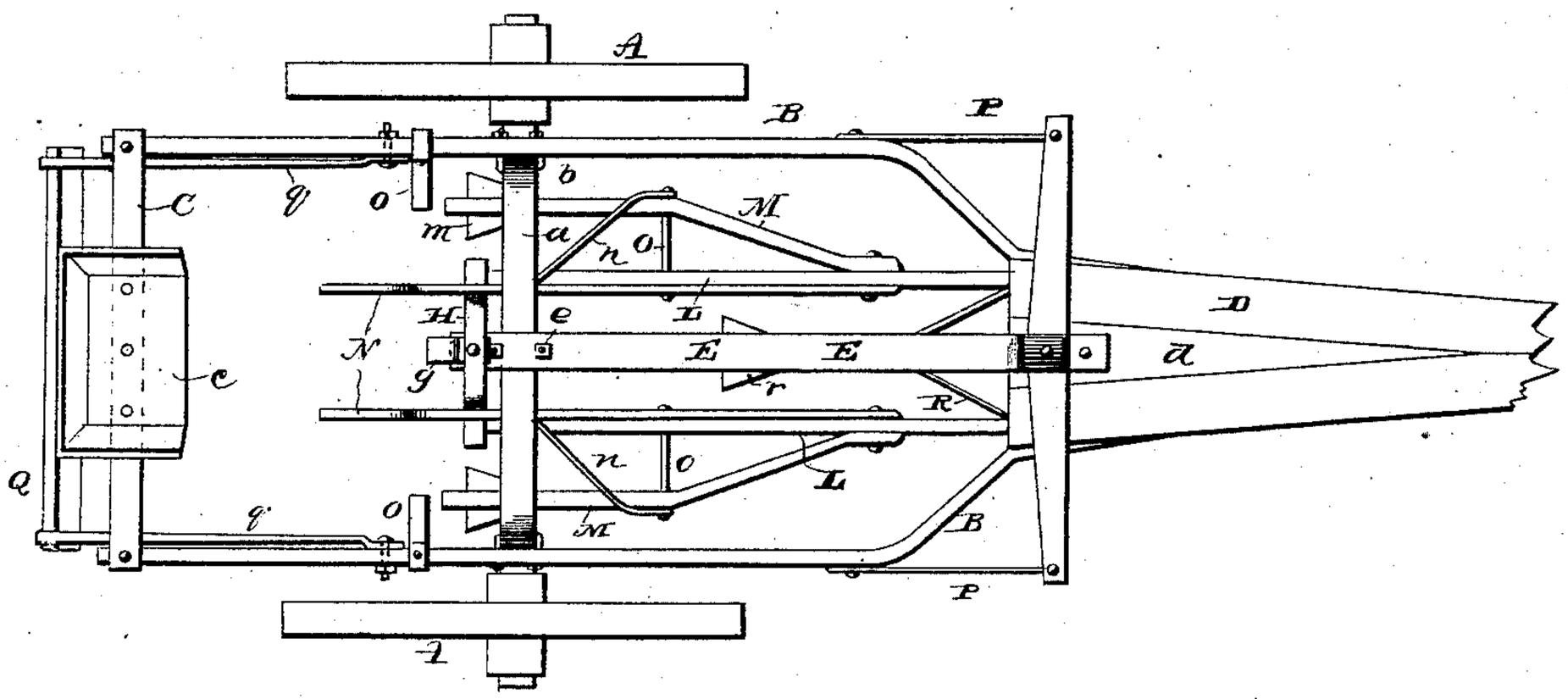


FIG. 2.

WITNESSES
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WILLIAM D. LLOYD, OF JOHNSON CITY, TEXAS.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 341,106, dated May 4, 1886.

Application filed December 30, 1885. Serial No. 187,154. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. LLOYD, of Johnson City, in the county of Blanco and State of Texas, have invented certain new and useful Improvements in Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in cultivators.

The object is to provide a sulky-cultivator which shall be particularly well adapted to use in cotton and corn cultivation, and on ground filled with roots or on stony ground.

A further object is to provide a cultivator adapted to receive a plow for breaking new land, a hopper for seeding purposes, and a leveler for breaking lumps and evening the furrows, a further object being to provide a light, durable, and economical cultivator for general farm use.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the cultivator in vertical longitudinal section. Fig. 2 is a top plan view, and Fig. 3 represents a clevis for attaching the breaking-plow to the cultivator.

A represents a pair of supporting-wheels mounted on the ends of an arch-axle, *a*.

On the axle *a*, in close proximity to the inner ends of the hubs, are secured the side rails, B, of the skeleton frame. The rails B are preferably secured to the axle by yokes or clips *b*. The rear ends of the rails are connected by a spring-bar, C, on which the driver's seat *c* is secured, and their forward ends, after gradually approaching each other for a greater or lesser distance, are bolted or otherwise secured to the sides of the rear end of the tongue D. The tongue D is preferably made quite broad at its rear end, as shown, and gradually tapers toward the front. It may be either constructed in one solid piece or a wedge-shaped piece, *d*, may be inserted between the branches of the split end. A central longitudinal brace, E, forming a backbone of the frame-work, is secured at its front end to the rear end of the tongue, and from thence extends upwardly and then rearwardly to the crown of the arched axle, to which it is secured by means of a clip, *e*, or its equivalent.

A short distance above the point where it is attached to the tongue the brace E is provided with a projecting arm, F, between which and the end attached to the tongue the double-tree G is secured. The rear end of the brace E extends a short distance over the axle, and is there provided with a U-shaped bar, H, secured thereto in an inverted position, at the central portion of its loop, its ends being turned outwardly to form rests for the cultivator-handles when in elevated adjustment.

To the central portion of the loop of the bar H is secured conveniently, by means of the same bolt which secures the bar H to the brace E, the standard *g*, for retaining the reins when the driver's hands are employed in managing the cultivators.

To the rear end of the tongue are firmly secured a pair of depending standards, I. The standards I may either each be formed of a single piece, and provided with elongated slots, or may each be formed of a pair of bars secured a short distance apart, the object being to adapt them to receive the ends of the plow or cultivator beams. The standards I are each provided with a series of perforations, *i*, adapted to receive securing bolts or pins K, by means of which the plow or cultivator beams are pivotally secured to the standards in different vertical adjustments.

A standard consisting of a single bar provided with a series of perforations might be used in the place of the slotted or double bar standards, but is not considered as practicable as the other forms. A pair of oblique braces, *k*, connecting the lower ends of the standards I with the tongue, serve to hold the standards securely in position, and at the same time form guards to prevent the standards from striking against any obstruction.

L represents a pair of cultivator or plow beams, pivotally secured at their forward ends in the standards I, and curving downwardly at their rear ends to receive the teeth or plows *l*.

To the outside of the beams L are secured the additional beams, M, which branch away from the beams L for a short distance and then

extend rearwardly somewhat farther than the beams L, curving downwardly to receive the teeth or plows *m*.

To the inner sides of the beams L are secured the handles N, which extend rearwardly and upwardly to within convenient reach of the driver when sitting on the seat *c*. Oblique braces *n* connect the handle with the outer ends of cross-braces O, extending transversely through the handles and beams.

To the side rails, B, a short distance to the rear of the axle, are secured the foot-rests *o*.

The ends of the double-tree G are connected with the side rails, B, by rods or straps P.

A clod-crusher and leveler, Q, is pivotally secured to the side rails, B, by arms *q*, attached to its ends, and is adapted to be elevated and depressed by the driver, an operating rod or chain, *p*, being provided for that purpose within his convenient reach.

An independent plow or cultivator tooth, *r*, is secured to a beam, R, the forward end of which beam is bifurcated and its branches pivotally secured to the depending standards I. This plow or tooth is adapted to be locked in elevated adjustment by means of a hooked rod, S, or its equivalent, leading from the beam R to the brace E.

It is sometimes found advantageous to secure a plow in the position which the independent plow *r* occupies, which shall have the additional advantage of a lateral as well as a vertical movement. For this purpose I provide a clevis, T, which is constructed to be secured to the standards I in vertically-rocking adjustment, and which is further adapted to have the end of the plow-beam secured thereto in a free laterally-swinging adjustment. Such plow might also be provided with a handle leading to within reach of the driver, and becomes a very convenient and effective arrangement for breaking up new land, on account of the freedom with which it may be made to dodge the stumps, roots, and stones.

By attaching the feed-hopper U to the backbone or brace E, and leading a dropping-throat from it to a point at the rear of the independent tooth *r*, the cultivator becomes a planter, the independent plow opening the furrow, the pair of plows on each side of the center acting as coverers, and the clod crusher or leveler serving, if desired, to free the row from lumps and level the earth over the seeds, thereby causing the sprouts to come up evenly.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention; hence I do not wish to limit myself to the construction herein set forth; but,

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

1. The combination, with a sulky, of a set of plows secured to the sulky in vertically-swinging adjustment, each having a rearwardly-projecting handle, a rest secured to the sulky for holding the plows in elevated position, and a clod crusher or leveler pivoted to the sulky and adapted to be adjusted by the driver, substantially as set forth.

2. The combination, with the arched axle, the side rails rigidly secured thereto and projecting in front of and behind said axle, the said side rails being curved or bent inwardly at their front ends, a tongue secured to said front ends of the side rails, a bar connecting the rear ends of the side rails, and a driver's seat secured on said bar, of standards depending from the tongue, plows secured to the standard, and handles secured to the plow-beams and projecting upwardly behind the axle within reach of the driver, substantially as set forth.

3. The combination, with the sulky, the two sets of plows hinged thereto, each having a rearwardly-projecting handle and a rest secured to the sulky for engaging the handles and supporting the plows while in an elevated position, of the single plow hinged in advance of the two sets and the clod-crusher and leveler hinged at the rear, substantially as set forth.

4. The combination, with the arched axle, the skeleton frame supported thereon, and the tongue attached to the frame, of the backbone or brace leading from the tongue to the axle, and provided at its rear end with plow or cultivator handle rest and rein-holder, substantially as set forth.

5. The combination, with the arched axle, the side rails rigidly secured thereto and curved or bent inwardly at their front ends, and a tongue secured to the front ends of said rails, of the brace E, connecting the axle and tongue, substantially as set forth.

6. The combination, with a skeleton frame supported upon a pair of wheels and a backbone or brace connecting the tongue with an arched axle, of a furrow-opener, the covering-plows, and a feed-hopper and dropper, arranged substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM D. LLOYD.

Witnesses:
LOUIS SELLAVAN,
WM. GREEN.