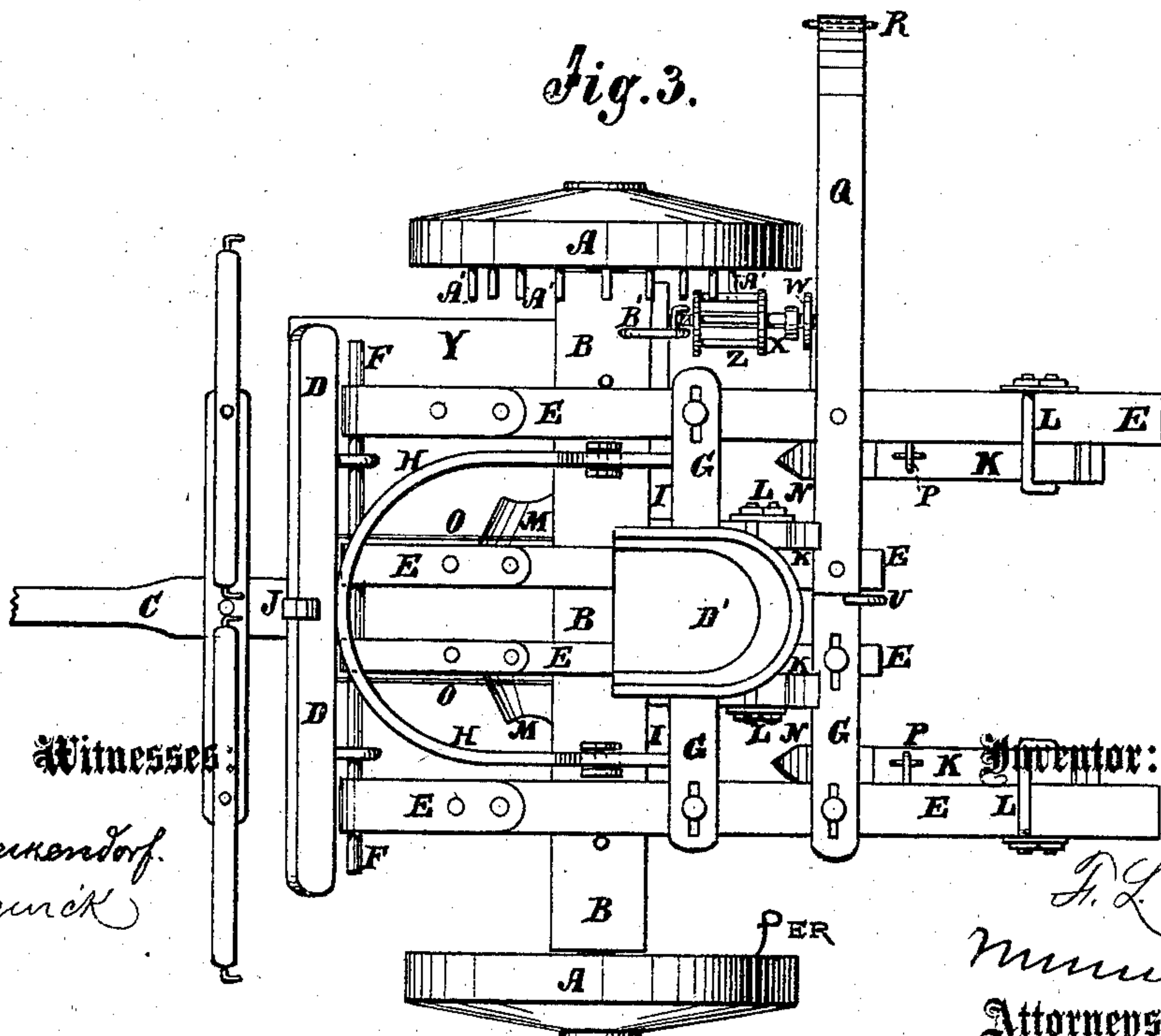
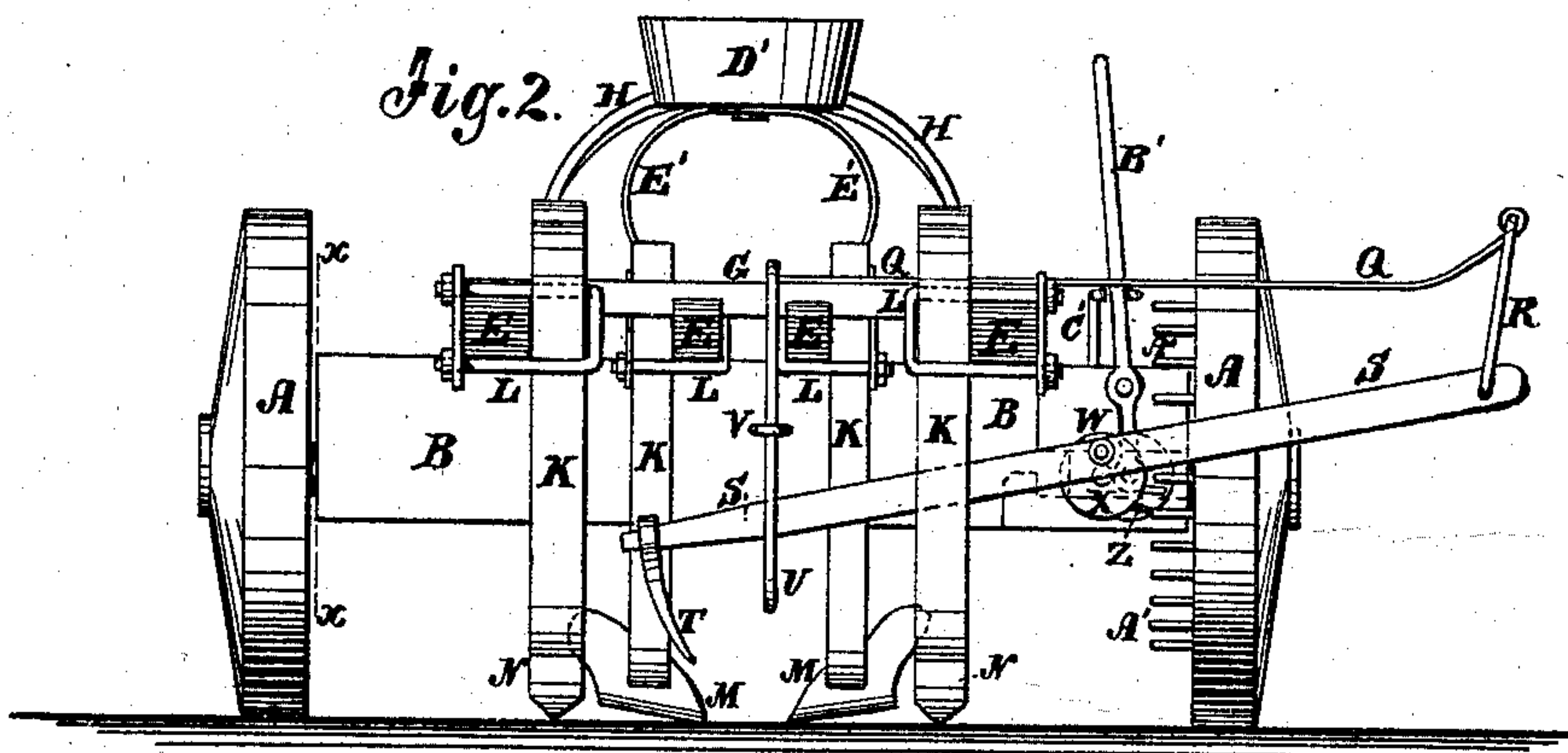
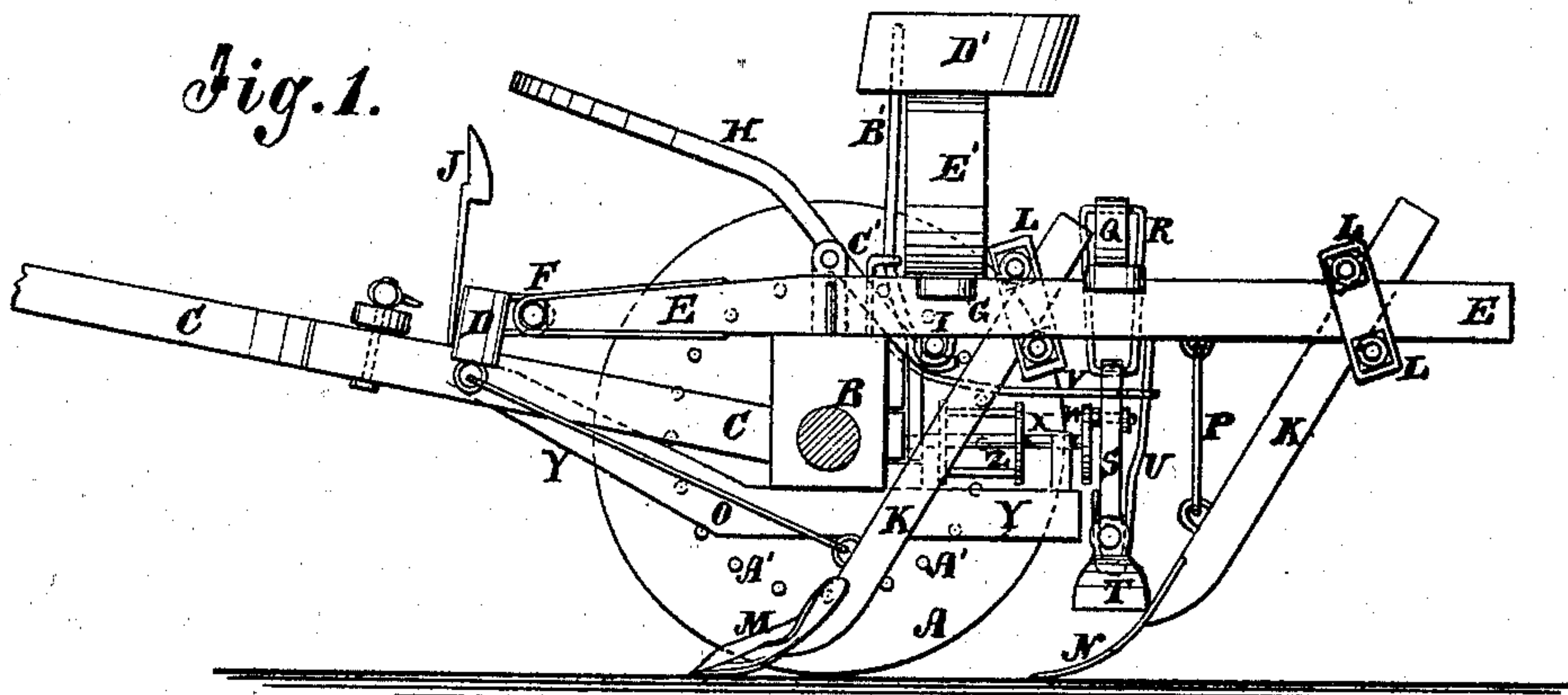


F. L. BATES.
Cotton Cultivators.

No. 138,555.

Patented May 6, 1873.



Witnesses:

*A. Benneken & Co.
Sedgwick*

Inventor:

*F. L. Bates
Munroe
Attorneys.*

UNITED STATES PATENT OFFICE.

FINIS L. BATES, OF BREMOND, TEXAS.

IMPROVEMENT IN COTTON-CULTIVATORS.

Specification forming part of Letters Patent No. **138,555**, dated May 6, 1873; application filed February 21, 1873.

To all whom it may concern:

Be it known that I, FINIS L. BATES, of Bremond, in the county of Robertson and State of Texas, have invented a new and useful Improvement in Cotton-Cultivator, of which the following is a specification:

Figure 1 is a side view of my improved cotton-cultivator, partly in section, through the line *xx*, Fig. 2. Fig. 2 is a rear view of the same. Fig. 3 is a top view of the same.

Similar letters of reference indicate corresponding parts.

The invention consists in the improvement of cotton-cultivators, substantially as hereinafter described and pointed out in the claim.

A are the wheels, which revolve upon the journals of the axle B, to which the tongue C is securely and rigidly attached. To the tongue C, in front of the axle B, is securely attached a cross-bar, D. E are the plow-beams, four of which are used, and the forward ends of which are pivoted to the cross-bar D by a rod, F, which passes through holes, eyes, or loops formed in or attached to the ends of the said beams E, and through eyes or other supports attached to the said cross-bar D. The beams E rest upon the axle B, and are kept from side movement, while allowed to move up and down freely by guide-pins attached to said axle. The two inner beams are made shorter than the two outer ones, as shown in Fig. 3. The four beams E are connected and held in their proper relative position by two cross-bars, G, to which they are secured by bolts which pass through short longitudinal slots in said bars G, and into or through the said beams E, so that, by simply loosening the said bolts, the beams E may be adjusted further apart or closer together, as may be required. H is a bent bar or lever, the end parts of which are pivoted to two studs or other supports attached to the axle B at the inner sides of the outer beams E. The ends of the bent bar H project in the rear of the axle B, and pass beneath a rod or bar, I, attached to the under side of the four beams E so that the driver, by bearing down upon the forward or bent part of the bar H, may readily raise the rear parts of the beams E, raising the plows away from the ground. As the forward or bent part of the bent bar H descends

it is caught and held by the spring-catch J attached to the tongue C. K are the plow-standards, which are secured to the outer sides of the rear ends of the shorter inner beams E, and to the inner sides of the rear ends of the longer outer beams E by loops L, which pass around the beams E and the standards K, and are secured by a yoke and nuts, as shown in Figs. 1, 2, and 3, so that, by simply loosening the said nuts, the standards K may be readily slipped up and down to adjust the plows to work shallower or deeper in the ground, as may be desired. To the lower ends of the inner and forward standards E are attached the scrapers M for barring off the cotton; and to the lower ends of the outer and rear standards E are attached plows N for throwing soil around the stalks of the cotton. The draft-strain upon the forward plow-standards K is sustained by draft-rods O, the rear ends of which are connected with said standards, and their forward ends with the cross-bar D. The draft-strain upon the rear plow-standards K is sustained by the draft-rods P, the rear ends of which are connected with the said standards, and their forward ends with the beams E. To the rear cross-bar G, or to the beams E, is attached a spring, Q, which projects at the side of the machine, and with the outer end of which is connected, by a loop, R, the outer end of the lever S, which projects inward beneath the beams E, and in front of the plows N, and to its inner end is attached the hoe T for chopping the cotton. The inner end of the lever S is supported and caused to move up and down vertically by a loop, U, attached to the rear cross-bar G, and the forward draft-strain is supported by the draft-rod V, the rear end of which is attached to the guide-loop U, and its forward end is attached to the axle B. The middle part of the lever S is pivoted to the crank or crank-wheel W attached to the rear end of the shaft X. The rear journal of the shaft X revolves in bearings attached to the rear end of the bar Y, which is attached to the axle B and cross-bar D. The forward journal of the shaft X revolves in a bearing which slides horizontally in supports attached to the rear side of the axle B. To the shaft X is attached a cog-wheel, Z, which meshes into the circle of cogs

or teeth A' attached to the wheel A, so that the chopper may be operated by the advance of the machine. To the shaft X, or to its sliding bearing, is pivoted the lower end of the lever B', which is pivoted to the axle B, and the upper end of which projects upward into such a position that it may be conveniently reached and operated by the driver from his seat to throw the wheels Z A' into and out of gear with each other. The lever B' may be held in position when adjusted by a catch, C', attached to the axle B. D' is the driver's seat,

which is supported from the forward cross-bar G by a spring support, E'.

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

The spring Q attached at one end to bar G, and connected by a link at the other with the end of hoe-handle, as and for the purpose described.

Witnesses:

FINIS L. BATES.

J. T. BATES,

F. F. McFADDEN.