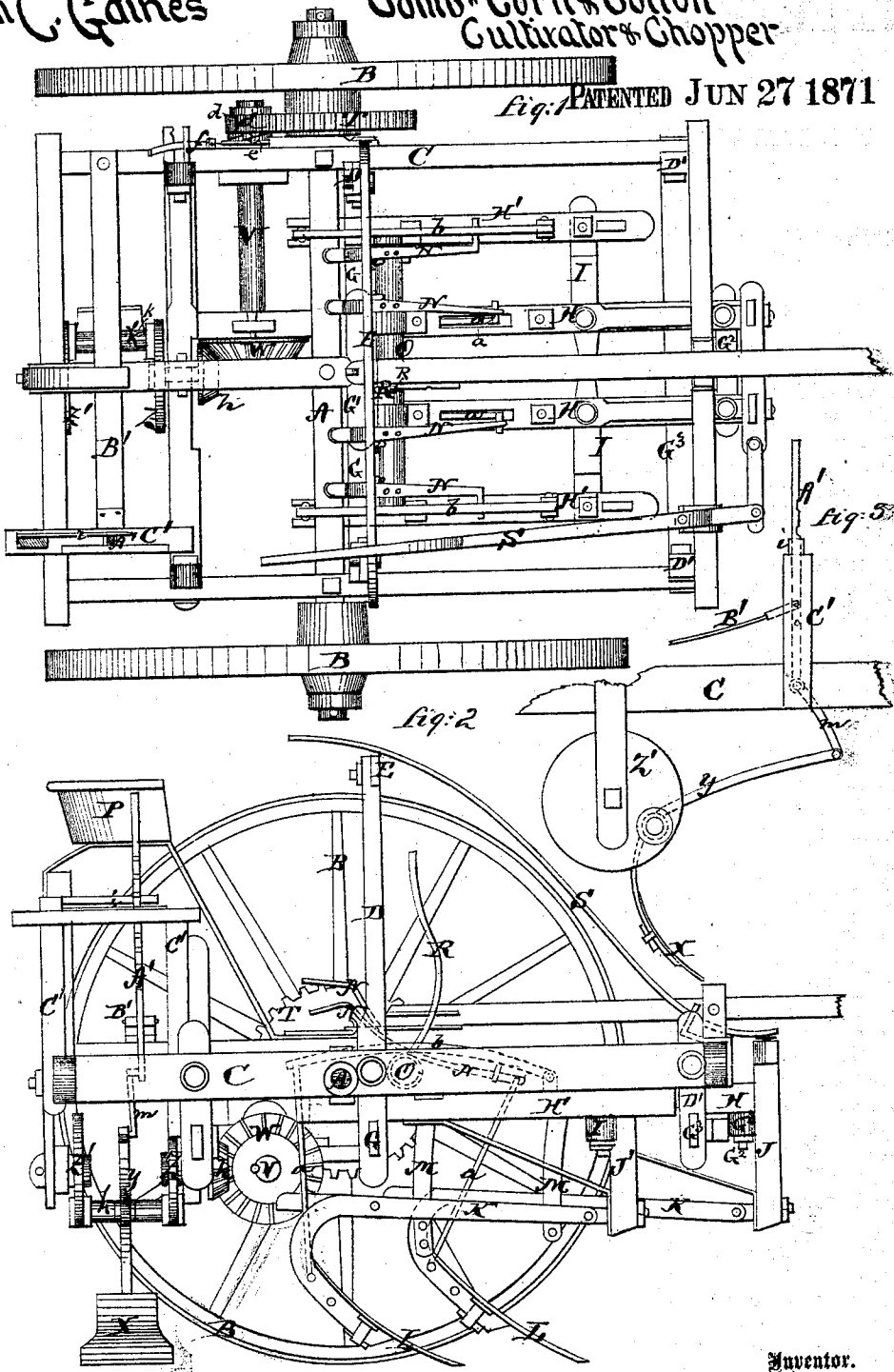


William C. Gaines

Comb^d Corn & Cotton
Cultivator & Chopper

116425

fig. 1 PATENTED JUN 27 1871



Witnesses.

L. L. Evert.
A. A. Yeatman.

Inventor.

Wm C. Gaines.
per
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UNITED STATES PATENT OFFICE.

WILLIAM C. GAINES, OF SALEM, ASSIGNOR TO HIMSELF AND HARVEY B. VARNES,
OF MANASSAS, VIRGINIA.

IMPROVEMENT IN COMBINED CORN AND COTTON CULTIVATORS.

Specification forming part of Letters Patent No. 116,425, dated June 27, 1871.

To all whom it may concern:

Be it known that I, WILLIAM C. GAINES, of Salem, in the county of Fauquier and in the State of Virginia, have invented certain new and useful Improvements in Combined Corn and Cotton Cultivator and Chopper; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a combined corn and cotton cultivator, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view of my machine, and Fig. 2 is a side elevation of the same with one wheel removed. Fig. 3 is a rear view of the chopper.

A represents the axle, with a wheel, B, on each end, and the frame C attached to it. To the side pieces of the frame C, immediately in front of the axle A, are secured standards D B, the upper ends of which are connected by a rail, E; and their lower ends are also connected, a suitable distance below the frame, by a bar, G. H H and H' H' represent four beams, all secured, a suitable distance apart, to a cross-bar, I, and the two center beams H H are, at their rear ends, connected by a cross-bar, G¹, which is pivoted in the center on the bar G. The front ends of these center beams H H extend beyond the front end of the frame C, and are connected by a cross-bar, G². These beams rest upon a bar, G³, connecting standards D' D' extending downward from the front corners of the frame C. The side beams H' H' rest upon the bar G, and extend under and a short distance in rear of the axle A. At the front ends of the beams H and H' are downward-projecting arms J J', respectively, and which are braced by suitable braces, as shown in Fig. 2. To the lower end of each of said arms is hinged or pivoted, by any suitable means, a plow-beam, K, having its rear end curved, as shown, and provided with a plow, L, for cultivating cotton or corn. This plow-beam is either slotted at a suitable point, or provided with a side bar, so as to

form a slot for the passage of a curved guide-bar, M, attached one to each of the beams H and H'. The guide-bars M are provided with any desired number of holes for the insertion of a pin, by the changing of which the depth at which the plows are to work may be readily regulated, because the plow-beams cannot come any further down than said pins. The plow-beams K K, being hinged at the lower ends of the arms J J', are always nearly horizontal, which eases the draft. The rear end of each of the plow-beams K is connected by a rod or chain, a, with a lever, N, attached to a collar placed loosely on a shaft, O, which has its bearings in suitable boxes upon the rear ends of the center beams H H. By this means the operator, seated upon the seat P, can, by his feet, raise any of the plows out of the ground that may be desired. To the shaft O is attached a lever, R, so that said shaft may be turned, and pins on the same engage with projections upon all the collars to which the foot-levers N N are attached, and thus raise all the plows at one time out of the ground when turning, going to or from the field, or whenever, for any reason, it may be desired. The rods a a, from the center plow-beams, are attached directly to the front ends of their respective foot-levers; but those from the side plow-beams are connected each with a bar, b, hinged upon the side beam H', and upon these bars the other levers N operate so as to raise or lower the side plows. A hand-lever, S, pivoted at the front end of the frame C, and connected with the front ends of the center beams H H, enables the operator to move all the plows from side to side when necessary. Upon the hub or inner side of one of the driving-wheels B is attached a cog-wheel, T, which gears with a pinion, d, upon a shaft, V, situated under the rear portion of the frame C, and a clutch, e, with lever f on said shaft, will throw the shaft in gear with the pinion or not, as may be desired. Upon the inner end of the shaft V is a miter-wheel, W, which gears with a bevel-pinion, h, upon the journal of a wheel, Z. Directly opposite, and a suitable distance in rear thereof, is a similar wheel, Z', the two wheels being connected by a rod or short shaft, k, on one side of the centers of the wheels. On this rod or shaft is placed a bent lever, y, to the lower end of which the hoe-blade X is secured, the other end of said lever being, by a pivoted bar, m, connected with an upright

notched lever, A', which is pivoted to a spring, B', and passes through a slot in an upright frame, C', where it is held at any desired height by a spring, i, forcing it against a suitable catch engaging with or entering into the notches on the lever. The machine being in motion the hoe X obtains the required chopping motion, and by means of adjusting the lever A' the stroke of the hoe is readily regulated.

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

The frame with slotted beams H H', laterally adjusted by means of lever S, in combination with rock-shaft O, lever R, and levers N N, whereby the plows can be raised separately or collectively, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of May, 1871.

W. C. GAINES.

Witnesses:

A. N. MARR,
C. L. EVERT.