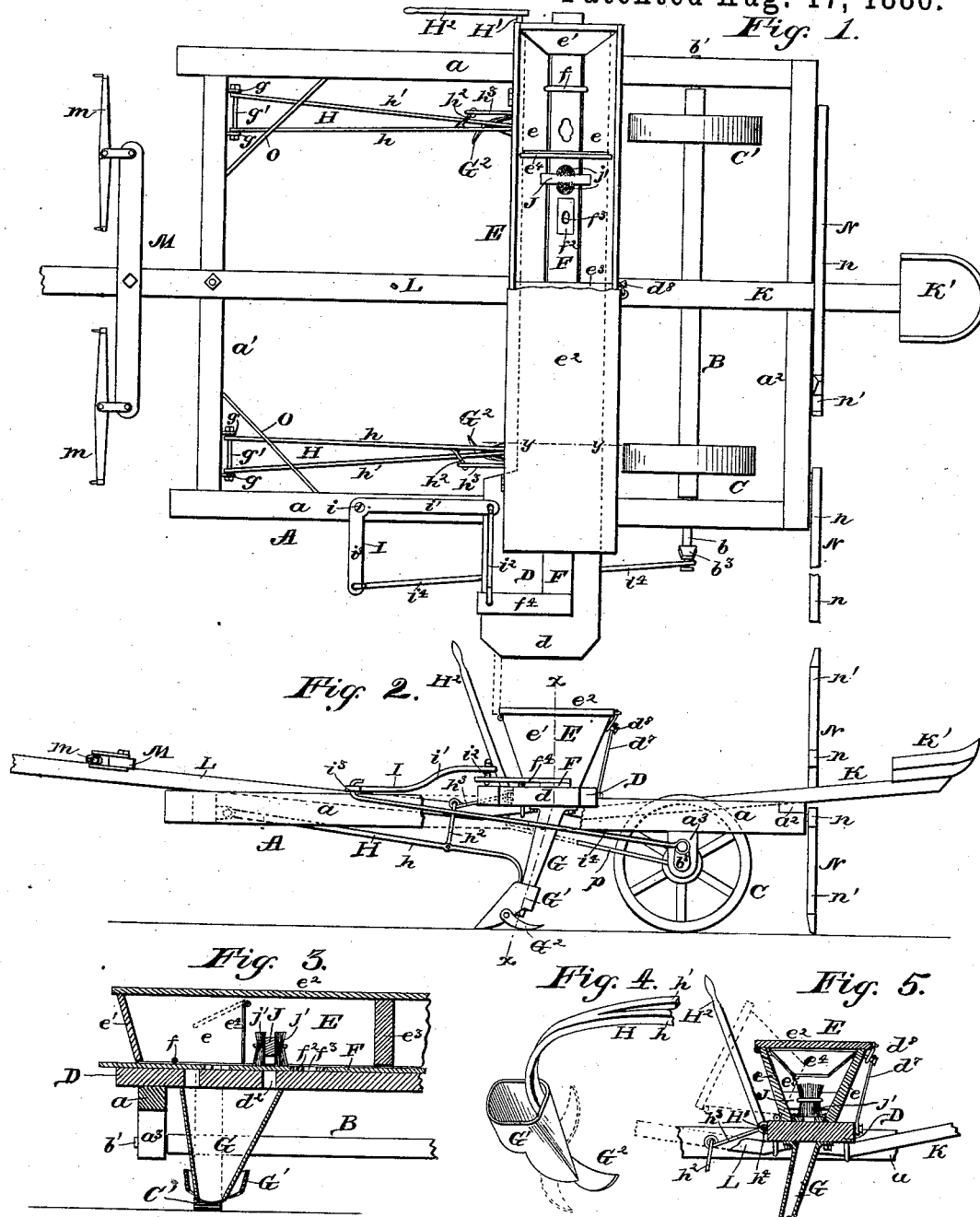


(No Model.)

J. S. MULHOLEN.
CORN PLANTER.

No. 347,499.

Patented Aug. 17, 1886.



Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH S. MULHOLEN, OF FOSTORIA, PENNSYLVANIA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 347,499, dated August 17, 1886.

Application filed February 10, 1886. Serial No. 191,472. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. MULHOLEN, a citizen of the United States, residing at Fostoria, in the county of Blair and State of Pennsylvania, have invented new and useful Improvements in Corn-Planters, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in corn-planters, and has for its object the provision of a cheap, simple, and durable implement of the class named; to which end the invention consists in the construction, combination, and arrangement of the several parts for service, substantially as described, for the purpose specified.

In the drawings, Fig. 1 represents a top-plan view of a corn-planter embodying my improvements, parts broken away to show details of construction. Fig. 2 is a side elevation thereof. Fig. 3 is a transverse sectional view on the line *x x* of Fig. 2, looking rearward. Fig. 4 represents a detached detail view of one of the dropper-boots. Fig. 5 represents a transverse sectional view through the seed-hopper and its connected dropper-boot on the line *y y* of Fig. 1, and Fig. 6 represents a detached detail view, in perspective, of one of the adjustable feed-plates, together with a section of the feed-bar.

Referring to the drawings, in which similar letters of reference denote similar parts, A designates the frame of the machine, consisting of side rails, *a*, and end rails, *a'* *a''*. *a*³ designates downwardly-projecting studs from the rails *a*, the lower ends of which are apertured to form journal-bearings for the ends *b b'* of the axle B, as shown.

C C' designate the bearing-wheels, one of which, C, is rigidly secured to the shaft or axle B, to rotate the same, for a purpose hereinafter described, while the other, C', rotates freely upon said axle.

D designates a board or plank that extends transversely on the frame from side rail to side rail thereof, and projects at one end outwardly beyond one of said rails at *d*, for a purpose hereinafter to be explained. This board D operates as a bottom to the seed-hopper E, and also as a bearing or support for the feed-bar F, that moves freely back and

forth thereon in loops or staples *f*, that hold it in proper position.

f' designates rectangular apertures formed through the bar F, to receive removable plates *f''*, that are provided with apertures *f'''* for the passage of seed and fertilizer from the hopper E, through apertures *d''* in the board D, to spouts G, secured at their upper ends to the bottom of said board, and extending thence downwardly to adjustable boots G', the lower forward ends of which are adapted to open a drill or groove in the ground for the reception of the seed and fertilizer material.

G² designates covering-blades hinged to the boots G', at one side thereof, for the purpose of covering the seed, as will be understood. The boots G' are secured to the rear ends of the draw-bars H, having two parts, *h h'*, that extend to the forward transverse rail, *a'*, of the frame A, and are hinged thereto by staples *g* and rods *g'*.

h'' designates rods that extend from the rear ends of the draw-bars H upwardly, and are connected to the outer ends of rock-arms *h'''*, projecting from a rock-shaft, H', journaled in bearings *h''''* upon the forward edges of the board D, and provided at its end with a lever, H², within reach of the driver's seat. The purpose of this shaft H' is to raise the boots G' when desired.

I designates a bell-crank lever fulcrumed at *i* upon one of the rails *a*, beyond which the board D projects. One arm, *i'*, of said lever is connected by a rod, *i''*, with the outer end of a forwardly-projecting arm, *f''*, secured to the outer end of the slide-bar F. The remaining arm *i'''* of the lever I is connected by a rod, *i''''*, with a crank-arm, *b'''*, formed upon one end of the axle B, whereby, when said axle is rotated, motion is imparted through the lever I to the bar F.

E designates the hopper, consisting of inclined sides *e*, ends *e'*, and hinged cover or top *e''*. The hopper E is divided into compartments by a fixed partition, *e'''*, at its middle, and hinged partitions *e''''*, placed intermediate of said partition *e'''* and the ends of the hopper, whereby the hopper may be divided at will into either two or four compartments.

J designates blocks extending transversely of the hopper at each side of the middle parti-

tion, e' , above the feed-apertures f' of the bar F. j' designates brushes secured to said blocks at each side thereof, the purpose of which is to sweep the surplus seed from the top of the seed-openings in the bar F, as will be understood. The hopper thus constructed is hinged at its forward bottom edge to the board D and held in position by a hook, d' , extending from said board and engaging with an eye, d'' , upon the rear surface of the hopper, whereby said hopper may be raised when it is desired to expose the bar F for the purpose of cleaning, &c.

K designates the seat-bar, and extends from the bottom of the board D, to which it is secured, rearwardly over the rear rail, a'' , and is provided at its rear end with a seat, K'.

L designates the pole or tongue extending from the forward bottom edge of the board D over the forward rail, a' .

M designates the double-tree, pivoted to the top of the tongue in the usual manner, and provided with whiffletrees $m m$, as shown.

N N designate markers, consisting of outwardly-projecting rods $n n$, provided at their outer ends with downwardly-projecting arms n' . The inner end of each of the rods n is hinged to the rear surface of the rail a'' at the ends thereof, and said markers operate in the usual well-known manner.

The frame A is provided at its forward end with corner-braces O, that extend between the side rails, a , and end rail, a' , and also with similar braces, p , that extend from the bottom of the studs a'' upwardly and forwardly to the bottom of the side rails, as shown. The peripheries of the wheels C C' are broad, so that said wheels shall not sink into the ground when the machine is in use.

The operation of my improved corn-planter will be fully understood from the foregoing description, taken in connection with the drawings hereto annexed.

Modifications in detail of construction may be made in the herein-described invention without departing from the spirit or sacrificing the advantages thereof.

I claim—

1. In a corn-planter, the combination of a frame, a board, D, affixed thereon, a hopper hinged at one side to the board and having a rigid partition, e' , and the brushes, the swinging partitions e'' , pivoted in the hopper between the rigid partition and the ends thereof, and a seed-slide, F, substantially as described.

2. In a corn-planter, the combination of a main frame having the board D, an axle, the carrying-wheels, a hopper hinged to the board and having the keepers f , a seed-slide, F, secured in the keepers and having the removable slotted plates fitted in the opening thereof, the brushes carried by the keeper and arranged above the openings or slots in the seed-slide, a rigid central partition, e' , the swinging partitions e'' , supported in the hopper between the ends thereof and the partition e' , and connections intermediate of the axle and the seed-slide for reciprocating the latter, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOSEPH S. MULHOLEN.

Witnesses:

JAMES MULHOLEN,
SAMUEL T. NIVLING.