(No Model.)

J. M. ALLISON & C. P. BOWDEN.

CORN PLANTER.

No. 345,757. Patented July 20, 1886.

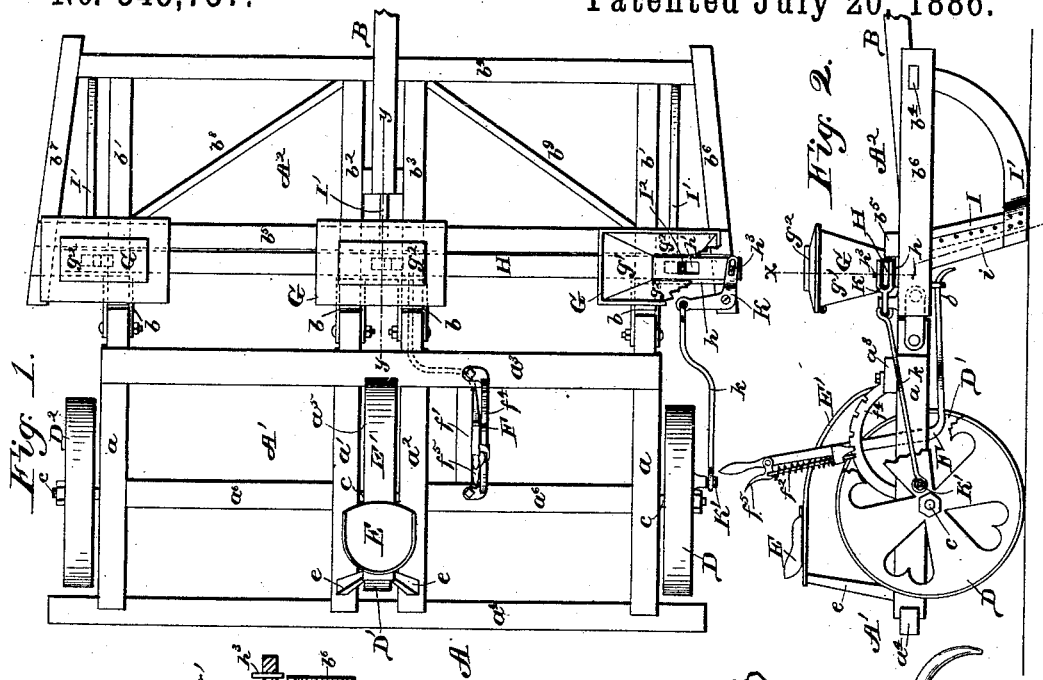

Fig. 1.

Fig. 2.

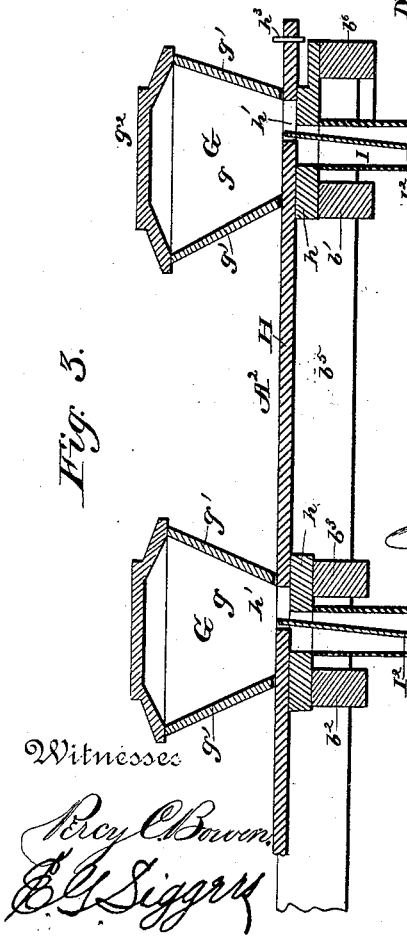

Fig. 3.

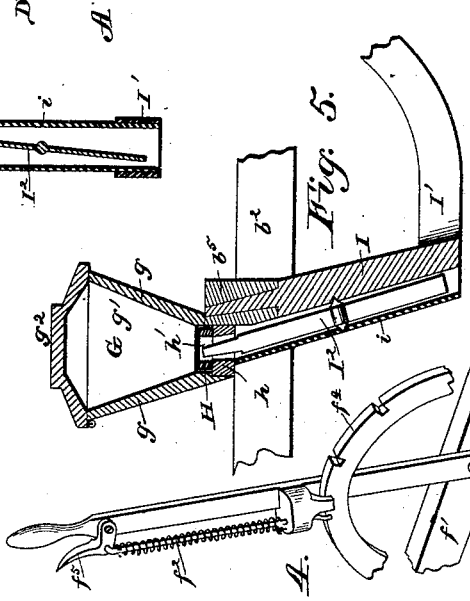

Fig. 5.

Fig. 4.

Witnesses:
Percy C. Bowen.
E. G. Siggers.

Inventors,
John M. Allison.
Charles P. Bowden.
By their Attorneys
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JOHN MOSES ALLISON, OF COLUMBIA, AND CHARLES PRATTSMAN BOWDEN, OF JOHNSTOWN, MISSOURI.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 345,757, dated July 20, 1886.

Application filed March 30, 1886. Serial No. 197,192. (No model.)

To all whom it may concern:

Be it known that we, JOHN MOSES ALLISON and CHARLES PRATTSMAN BOWDEN, citizens of the United States, residing at Columbia and Johnstown, in the counties of Boone and Bates and State of Missouri, have invented a new and useful Improvement in Corn-Planters, of which the following is a specification, reference being had to the accompanying drawings.

Our invention relates to improvements in corn-planters, having for its object the provision of an implement of the class named, the several parts of which are simple, durable, and easily operated.

With this end in view the invention consists in the construction, arrangement, and combination of parts, substantially as hereinafter described, and specifically pointed out in the claims.

Referring to the drawings, in which similar letters of reference denote similar parts, Figure 1 represents a top plan view of a corn-planter embodying our improvements. Fig. 2 is a side elevation thereof. Fig. 3 is a transverse section on the line x x of Fig. 2. Fig. 4 is a detail perspective view of the lever that operates to raise and lower the drill-opening shoes. Fig. 5 is a detail vertical sectional view on the line y y of Fig. 1.

In the drawings, A designates the frame of the machine, which is in two parts, A′ A^2, hinged together at b. The former of said parts, A′, consists of side rails a and intermediate rails a' a^2, held in position by transverse rails a^3 a^4. The intermediate rails a' a^2 are placed a short distance from each other, in planes parallel with the side rails a, to form a space, a^5, in which operates one of the wheels of the planter, as hereinafter described.

a^6 designates transverse timbers that extend from the outer surfaces of the rails a' a^2 to the side rails a at each side of the machine, for the purpose of supporting an axle, c, placed in juxtaposition with the lower surfaces of said timbers a^6, and upon which the wheels D D′ D^2 of the machine are mounted.

E designates a seat mounted upon the rear end of a seat-supporting spring, E′, that extends from the rail a^3.

e designates uprights that extend from the lower surface of the seat to the bars or rails a' a^2.

F designates a bell-crank lever fulcrumed at f to a short timber, f', extending between the rails a^3 a^6, at the right-hand side of the machine, within reach of the driver's seat. The upper end or arm of the lever F is provided with a spring-controlled rod, f^2, the lower end of which engages with detents formed in a rack-segment, f^4, secured to the frame A.

f^5 designates the handle that operates the rod f^2 up or down. The lower arm of the lever F extends forward to a point below the transverse rail a^3, thence laterally to a point below the forward end of the rail a^2, thence forward below the rear end of the timber b^3 of the part A^2, and is received in a staple or loop projecting downward from said timber at the point last named. The end of the lever-arm is bent downward, for a purpose to be explained further on. The forward frame-section, A^2, consists of side rails b' and intermediate spaced rails b^2 b^3, held in position by transverse rails b^4 b^5.

b^6 b^7 designate short rails secured to the outer ends of the rails b^4 b^5, outside of the side rails b', to form bearings for short seed-plates h, that extend from one to the other of the timbers b' b^6 and b' b^7, as well as the intermediate timbers b^2 b^3 in rear of the transverse rail b^5, and also for the purpose of forming bearings for the hoppers G, hereinafter described.

B designates the draft-pole or tongue, secured at its rear end between the timbers b^2 b^3 of the part A^2, and extending thence forward over the rail b^4.

b^8 b^9 designate braces extending diagonally in the spaces formed by the side, end, and intermediate rails of said part A^2, as shown.

G designates the hoppers, preferably three in number, consisting of inclined sides and ends g g' and hinged covers g^2. The hoppers G are placed in position over the seed-plates h, and are provided at their ends, near the bottoms thereof, with cut-away parts, through which the feed-bar H operates. The feed-bar consists of a flat plate of metal, having apertures h' formed therethrough at distances similar to the distance between the apertures of the seed-plates, and said bar is placed and moves upon said seed-plates, the apertures h'

therein registering with the apertures in said seed-plates, to permit the passage of seed from the hopper to spouts *i*, secured to the rear sides of the downwardly-projecting shoe, supporting studs I, secured to the lower surface of the rail b^5.

I^2 designates an oscillating bar pivoted at its middle to the studs I in the spouts *i*.

I′ designates the drill-opening shoes, the forward ends of which are secured to the transverse rail b^4, and from thence extend down in a curved plane to the lower end of the studs I, at which points they are provided with bifurcated portions, through which the seed drops to and into the drill.

The seed-bar H is operated by a bell crank lever, K, having a bifurcated forward end, that engages a pin, h^3, projecting upwardly from the bar H. Said lever K is fulcrumed upon the rearwardly-projecting end of the timber b^6, and is connected by a rod, *k*, with a crank-pin, *k′*, projecting from the wheel D.

By reference to the drawings it will be observed that the parts A′ A^2 of the frame may be set and held at angles with each other by the lever F, for the purpose of causing the shoes I′ to open deep or shallow drills, as desired.

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

It will be observed from the foregoing description, taken in connection with the drawings, that the section A′ of the frame is carried by the axle *c* and the bearing-wheels, which are journaled thereon, and also the seat and lever for elevating or depressing the frame-section A^2, which is hinged to and carried by the section A′. The frame-section A^2 can be conveniently and easily elevated or depressed by the operator seated on the section A′, and the seed-tubes and dropping or planting devices are also carried by the section A^2, and can be adjusted therewith without interfering with the operation of planting. The swinging bar I^2 serves to prevent the passage of seed from the hopper to the conducting-tube at the end of each stroke of the reciprocating slide-bar H, and the upper end of the said swinging bar or valve projects through the slot of the hopper-bottom *h′*, and into the slot of the slide-bar, so that the valve is swung on its pivot from one side to the other, and the lower end of the valve or rod is caused to bear against or come in contact with opposite sides of the seed-tube alternately, as will be very readily understood. The hand-lever F is pivoted or fulcrumed on the frame-section A′, and it has a right-angled arm, *m*, that lies in line therewith and extends to the front rail, a^3. The free end of the arm *m* is bent at right angles to provide the arm *n*, that lies out of line with lever F, the free end of the said arm *n* being bent to provide the end *o*, that lies parallel with and to one side of the arm *m*, and engages the staple or loop on the frame-section A^2, to elevate the latter. By the peculiar arrangement and disposition of the arms *m n o* the direct weight and strain of the frame-section A^2 on the pivot or fulcrum of the lever E is reduced, and the parts are rendered more durable, from the fact that the pivot is not so liable to be broken.

Having thus described our invention, we claim—

1. In a corn planter, the combination of the frame-section A′, carrying the supporting-wheels, the axle therefor, and the driver's seat, the frame-section A^2, hinged directly to the section A′ at *b*, and carrying the seed-hoppers, the reciprocating slide-bar, and the conducting tubes, the lever F, fulcrumed upon the section A′ in juxtaposition to the seat thereon, and having the arms *m n o*, arranged as described and connected to the section A^2, for elevating or depressing the latter, and lever and pitman connections intermediate of one of the supporting-wheels, and the reciprocating bar for actuating the latter, as set forth.

2. In a corn-planter, a two-part-frame, A, hinged together at *b*, one of its parts, A′, having wheels D D′ D^2, mounted upon an axle-rod, seat E, spring E′, lever F, and rack-segment f^4, in combination with the part A^2, having drill-opening shoes I′, studs I, and spouts *i*, having an oscillating bar, I^2, hoppers G, having seed-bar *h*, provided with openings, feed-bars H, operated by a bell-crank lever, K, connected by rod *k* with the crank-pin *k′* of the wheel D, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOHN MOSES ALLISON.
CHARLES PRATTSMAN BOWDEN.

Witnesses:
S. W. MAXEY,
J. D. RHEA.