

(No Model.)

C. E. P. HOBART.
PLANTER.

No. 542,560.

Patented July 9, 1895.

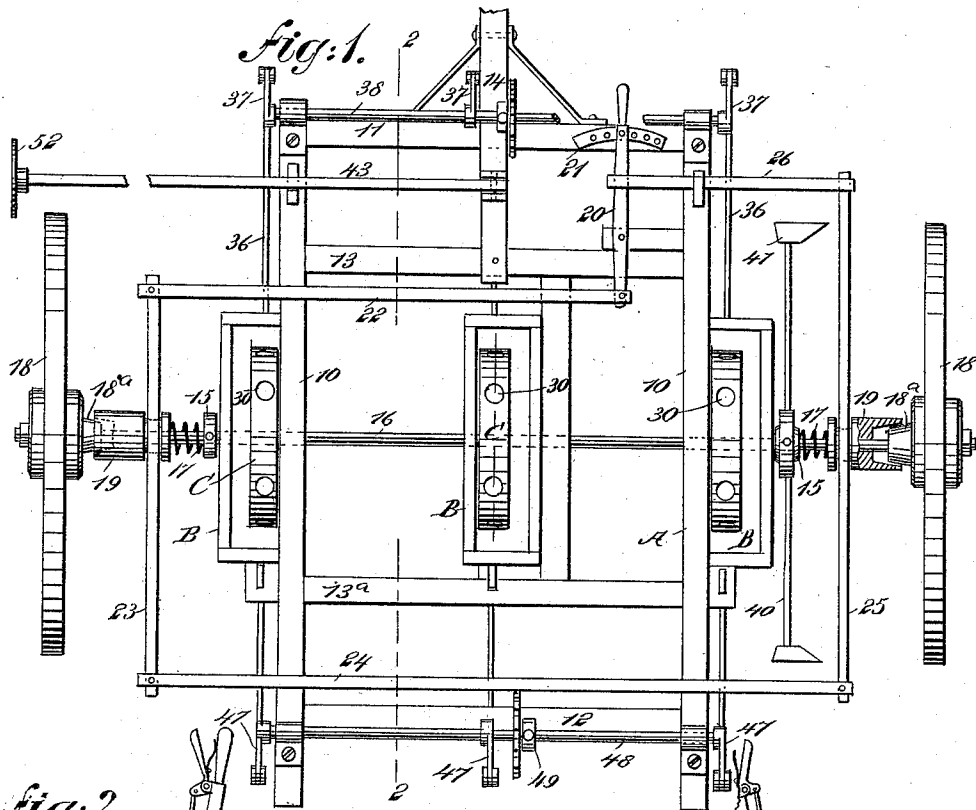


Fig. 2.

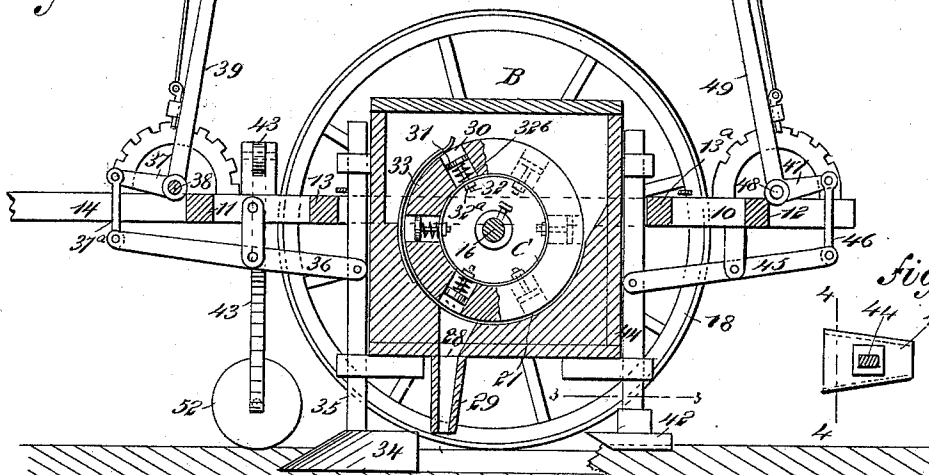
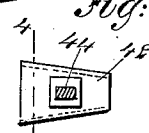


Fig. 3.



WITNESSES:

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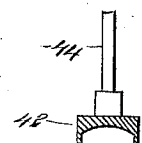
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Fig. 4.



UNITED STATES PATENT OFFICE.

CALEB E. P. HOBART, OF CHEROKEE, IOWA.

PLANTER.

SPECIFICATION forming part of Letters Patent No. 542,560, dated July 9, 1895.

Application filed January 10, 1895. Serial No. 534,460. (No model.)

To all whom it may concern:

Be it known that I, CALEB ELIPHALET PACKARD HOBART, of Cherokee, in the county of Cherokee and State of Iowa, have invented a new and useful Improvement in Planters, of which the following is a full, clear, and exact description.

My invention relates to an improvement in planters, and it has for its object especially to improve upon the construction of the planter for which Letters Patent were granted to me July 24, 1894, No. 523,525, the improvements being such that the plungers or followers in the seed-pockets will be so made as to relieve the fender or smoothing device from undue friction by reason of a possible overcrowding of the pockets, and to provide for a more complete covering for the seed when dropped, and to employ a greater number of seed-droppers, together with a shifting-wheel for the shaft operating the droppers, the said wheel being provided with marking-shoes serving as check-rows, and also to provide an auxiliary marker serving to line the rows when necessary.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the machine. Fig. 2 is a section taken substantially on the line 2 2 of Fig. 1. Fig. 3 is a section on the line 3 3 of Fig. 2, and Fig. 4 is a section on the line 4 4 of Fig. 3.

In carrying out the invention the frame A of the machine usually consists of two parallel side bars 10, a front cross-bar 11, a rear cross-bar 12, and intermediate bars 13 and 13^a, together with a pole or tongue 14. Preferably at the central portion of the frame a seed-box B is secured, and at each side of the frame like seed-boxes are attached, all of the seed-boxes being in transverse alignment.

An axle 16, adapted as a drive-shaft, is journaled at the central portion of the machine, transversely thereof, and extends through and beyond each seed-box, the driver's seat

being usually located over this axle, but said seat is omitted from the drawings. A supporting-wheel 18 is loosely mounted upon each end of the axle or drive-shaft 16, and the hub of each wheel is provided with a conical section 18^a upon its inner face, as is best shown in Fig. 1, and the said conical hub-sections are adapted to fit into and have frictional engagement with conical sockets 19, said sockets being mounted to slide upon the shaft or axle and turn therewith. These sockets are normally held in frictional engagement with the conical hub-sections through the medium of springs 17, engaging with the inner ends of the sockets, and having bearing against collars 15, secured upon the drive shaft or axle. Both sockets may be simultaneously carried out of engagement with the drive-wheels, in order that the shaft or axle shall not be turned by the revolution of said wheels, and this action is accomplished through the medium of a lever 20 within reach of the driver's seat and fulcrumed preferably upon the right-hand portion of the frame in advance of the seed boxes, preferably ordinarily between the center and right-hand seed box, although this lever may be differently located. The lever 20 is placed in a horizontal position in the drawings; but it may be otherwise situated, and is adapted for engagement with a rack 21. The lever is fulcrumed ordinarily between its center and rear end, and a link 22 is pivotally connected with the rear end of the said lever, which link extends over the frame to the left-hand side of the machine. The left-hand end of the link 22 is pivotally connected with a shifting-bar 23, the said bar being loosely engaged with the left-hand socket 19, as shown in Fig. 1, and through the medium of the shifting-bar 23 the said socket is moved upon the shaft against the tension of its spring 17.

The rear end of the shifting-bar 23 is fulcrumed upon the left-hand end of a cross-bar 24, located at the rear of the seed-boxes. The right-hand socket 19 is operated through the medium of a shifting-bar 25 of like construction as the opposite shifting-bar 23, the shifting-bar 25 being pivotally connected with the right-hand end of the cross-bar 24, and the forward end of the right-hand end of the shifting-bar 25 is pivotally connected with a

link 26, which in its turn is pivotally connected with the shifting-lever 20 forward of the fulcrum of the latter. Thus by moving the shifting-lever in one direction the sockets 5 19 will be simultaneously carried out of engagement with the conical hub-sections of the drive-wheels 18, and when the lever is released the springs 17 controlling the sockets will automatically and simultaneously force 10 both sockets in engagement with the hubs, causing the axle or drive-shaft to revolve with the drive or supporting wheels.

Each seed-box is provided with a semicircular inner wall 27 at the bottom and lower 15 portion of its sides, and an opening 28 is made in the bottom portion of each semicircular wall, as shown in Fig. 2, communicating with a chute 29, through which the seeds pass into the furrow made to receive them.

20 A cylindrical seed-dropper C is located in each box, being secured upon the driving shaft or axle 16, and each seed-dropper is provided with one or more pockets 30 produced in its periphery, ordinarily three pockets being employed at equal distances apart when 25 the machine is used for planting in hills in squares; but when it is desired to use the machine for drilling in rows usually not less than six or more than twelve pockets are employed. 30

Each pocket contains an auxiliary bottom 31, having sliding movement in the pocket, whereby the seed-carrying capacity of the pocket may be increased or decreased, as desired. 35 The pockets are preferably made circular in cross-section, and their auxiliary bottoms may be adjusted by attaching to them screw-shanks 32, made to slide in the solid portions of the droppers, the inner ends of the said shanks being provided with nuts 32^a, 40 limiting their movement, and springs 32^b are coiled around the shanks between the main bottoms of the pockets and their auxiliary bottoms 31. In order that the nuts 32^a may be readily accessible for adjustment of the 45 false bottoms 31 the inner portion of the dropping-wheel C is recessed concentric with the shaft whereon it is mounted, as will be readily understood from inspection of Fig. 2.

50 At the forward upper portion of the inner wall 27 of each seed-box a spring-fender 33 is located, as illustrated in Fig. 2, which plate or fender is made to conform to and is adapted substantially for engagement with the periphery 55 of the dropper rotating in the box.

It will be observed that the droppers may be provided with any desired number of pockets, since any that are not needed may be closed by proper adjustment of the auxiliary 60 bottoms 31. Owing to this construction a change from hill-planting to drilling may be quickly made. It is further obvious that by rendering the auxiliary bottoms spring-controlled, should the pockets become to any extent 65 overloaded the surplus contents will not cause undue friction against the fender 33 or the sides of the box in which the dropper ro-

tates, since the auxiliary bottoms will yield sufficiently to bring the seed flush with the periphery of the dropper. 70

In the operation of dropping the seed will occupy the exposed pocket contained within the box, and when the pocket reaches the spring plate or fender 33 the seed will be smoothed over at the outer end of the mouth 75 of the pocket, and the plate or fender will likewise serve to prevent seed from spilling from the pocket, the forward portion of the semicircular wall 27 of the box serving to confine the seed in the descending pocket of the 80 dropper until the said descending pocket reaches the exit-opening 28 in the bottom of the seed-box, at which time the seed will drop from the lower pocket through the chute 29 into the furrow or upon the ground. Each 85 dropper is set upon the shaft in the same manner, so that corresponding pockets will fill and drop simultaneously, and the droppers are placed within their hoppers or boxes upon the axle a distance apart corresponding to 90 the desired distance or required width between hills. The seeds drop or fall into the furrow made to receive them, the said furrows being created by means of plows 34, of suitable shape, located one in front of or in advance of each delivery-chute 29. The shanks 95 35 of these plows are preferably given sliding and guided movement upon the front of the seed boxes or hoppers, and the shank of each plow is pivotally connected with a link 36, 100 fulcrumed upon the frame, as shown in Fig. 2, the said links at their forward ends being pivotally connected by links 37^a with crank-arms 37 formed upon the outer ends of a shaft 38, journaled in the forward portion of the 105 machine, the said shaft being rocked by a lever 39 within convenient reach of the driver's seat, provided with a suitable thumb-latch and rack. By raising and lowering this lever the plows may be raised or lowered, as 110 occasion may demand. The earth is pressed down upon the seed—in fact, the furrow is closed and the seed covered—by means of packing-shoes 42, mounted upon standards 44, having vertical-guided movement upon 115 the sides of the frame. The covering or packing shoes are concaved upon their under faces, the toe being about seven inches wide and the heel about five inches, and the bottom or sole of the shoe is provided at each 120 side with a downwardly-extending marginal flange, whereby the dirt is gathered and pressed over the seed in a most effective manner. The standards 44 are connected with 125 links 45, fulcrumed upon the frame, the said links being connected, usually, by shorter links 46 with crank-arms 47, located upon a rear shaft 48, and operated by means of a lever 49 within convenient reach of the driver, and provided with a thumb-latch and rack. 130 When the driving axle or shaft 16 has been stopped—as, for example, at the end of a furrow—and when any row is about to be commenced, a proper registry of the droppers

with the hills already planted may be expeditiously and conveniently effected, since the driving shaft or axle will be out of driving engagement with the supporting-wheels, and a wheel 40 is secured upon the axle adjacent to the outer face of one of the outer boxes, the said wheel serving to turn the axle, and the spokes in the said wheel will correspond in number and location to the pockets in the seed-dropper used for planting in squares.

In order that a check-row may be provided, each spoke of the wheel 40 is provided with a shoe or fixed marker at its outer end, and the diameter of the marking and regulating wheel 40 is about equivalent to that of a supporting-wheel 18.

An additional marker 43 may likewise be pivoted upon the tongue or pole, capable of being carried to the right or to the left, which will mark continuously or in an unbroken line and will serve as a guide for the driver, the marking-arm 43 having preferably a marking-wheel 52 at its extreme outer end.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

In a planter, the combination, with a series of seed boxes, a shaft held to revolve in all of the boxes, and rotary droppers located in the said boxes and provided with a series of peripheral openings, of wheels loosely mounted on the said shaft or axle, having conically shaped hubs, sockets, springs mounted on the shaft or axle and normally holding the sockets in engagement with the hubs, a shifting lever, a connection between the shifting lever and both of the sockets, and a wheel comprising a hub and spokes, secured on the shaft or axle at the outer side of the outer box, the spokes being provided with shoes at their outer extremities for marking purposes, and the number of spokes being made to correspond to the number of pockets in a dropper, as and for the purpose specified.

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Witnesses:

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