

UNITED STATES PATENT OFFICE.

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SEED-PLANTER.

SPECIFICATION forming part of Letters Patent No. 542,921, dated July 16, 1895.

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To all whom it may concern:

Be it known that we, WILLIAM E. BERRY and WILLIAM A. MEDLIN, citizens of the United States, residing at Blue Mountain, in the county of Tippah and State of Mississippi, have invented certain new and useful Improvements in Seed-Planters; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in seed-planters; and it consists in the novel features hereinafter described and claimed.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 is a top plan view of our planter.

Fig. 2 is a side elevation of the same. Fig. 3 is a detail sectional view of the hopper used in our planter, taken on the line X X of Fig. 1. Fig. 4 is a detail view of one of the bell-crank levers for operating the pitman.

A represents the frame of the planter, composed of the side pieces A' A', cross-piece A², and draft-beam A³.

B is the wheel for supporting and carrying the frame A and for operating the feed-slides. This wheel B is mounted upon the shaft B', which shaft revolves in journal-bearings in the side pieces A' and is provided with a double set of holes, of which b⁰ represents the outer set and b⁰⁰ represents the inner set, as shown in Fig. 2. Each of these sets of holes is arranged around the center of the wheel in a circle concentric with its circumference and in line with the same radii, and the holes in each set are arranged at equal intervals. We have shown eight holes in each set; but this number may be varied according to the size of the wheel B, or for any other reason, if desired. There should, however, be an even number of holes in each set.

C C represent two bell-crank levers, one on either side of the wheel B, as shown in Fig. 1. Each of these bell-crank levers is pivoted, as at c⁰⁰, by means of a bolt, a screw, or other suitable means, to one side of the forward end of the swinging lever G. This pair of levers G are each pivoted at g' to its side piece A' and are provided at the rear end

with a handle g². By means of these levers either or both of the bell-crank levers C may be thrown into or out of engagement with the pins on the wheel B, when desired.

g³ g³ are a pair of pins adapted to set in holes in the cross-piece A² on either side of the levers and to hold the said levers in or out of gear, as before described. The upper arm c' of each one of the pair of bell-crank levers C is pivoted at C⁰ to a pitman D by means of a crank-pin d. The forward end of each of these pitmen is pivotally connected by a bolt or rivet d' to the arm e of a seed-slide E. Each of the said slides is provided with two holes or pockets e⁰. While one of these holes in each side is dropping the seed the other is being filled.

F represents the seed-hopper separated by means of a partition f² into the two compartments F' F'; or a second partition f³ (shown in dotted lines in Fig. 2) may be used to divide the same into four parts.

f is a cross-piece or sill carrying a pair of cut-offs or brushes f' f'. The slides work in the apertures f⁰ f⁰ under these brushes and the said brushes remove the excess of seed and leave the desired quantity in the pocket through which the seed is about to be dropped. When the pocket reaches a point over one of the inclined vents A⁰ the seed drops down into the conducting-tube I, bolted, as at i' i', beneath the hopper, and falls behind the shovel I'. This shovel may be bolted or riveted to the tube I or it may be integral therewith. The said shovel is provided with a pair of wings i², only one of which is seen in the drawings, to cause the earth to fall over upon and thus to cover the seed.

K represents a plurality of teeth set in the frame of the planter just in front of the outlet-tube and above the shovel to stir up the earth and to catch any weeds or other litter that may be in the way.

H H represent a pair of handles bolted at their forward ends, as at h², to the side pieces A' A' and provided with a cross-piece or round H². Braces H' H' are bolted at the upper end to the handles, as at h, and at their lower ends, as at h', to the side and serve to steady the handles.

To describe more fully the manner in which

the wheel B operates the slides E, referring to Figs. 1 and 2 of the drawings, it will be seen that pins fitted in the holes in the said wheel are used for pushing the bell-crank lever C forward and backward. The holes b^0 in the wheel B are adapted to receive pins b' , as shown in Fig. 2. These pins are arranged to strike against and slide upward on the rear face of the upper arm c' of the bell-crank lever C as the wheel revolves forward and to push said arm c' and the pitman D and slide E pivoted thereto forward. These pins are readily removed or put into place, and the number used and their location will depend upon the width of the intervals at which the seed is to be dropped from the hopper where slide is operated from that side.

It will be seen that we use two slides, and these may be operated simultaneously or at different intervals in the manner hereinafter described.

When it is desired to have the two slides operate simultaneously the pins may be made long enough to project laterally from each side of the wheel to a sufficient distance to strike the rear face of the arm c' of each of the pair of the bell-crank levers C at the same time as the wheel B revolves; but when it is desired to operate the two slides at different intervals shorter pins may be inserted in the holes b^0 on one side of the wheel and another set of short pins may be inserted on the other side at the desired intervals; but wherever two pins would coincide a long pin may be used, as stated. Thus we may use four pins on one side and one on the other side, in which case the slide on the former side would be pushed forward four times by its pitman and bell-crank lever, while the slide on the latter side would be pushed forward but once during one revolution of the wheel B.

To move the slide backward pins b^2 are inserted in the holes b^{00} in the inner series. These pins b^2 are adapted to strike against the lower face of the arm c^2 of the bell-crank lever as the wheel revolves, and by pushing the said arm upward throws the said arm c' backward, carrying with it the pitman D and slide E pivoted thereto. The number of these pins b^2 to be used in the inner series on one side of the wheel should be the same as the number of pins b' used in the outer series on the same side, and they should be inserted into the holes of the inner series which are at intermediate intervals between the holes in the said series which are in line with the same radii as the holes in the outer series into which the pins b' have been inserted. In this way the outer pin or pins will push the bell-crank lever forward and the inner pin or pins will push it backward, and the intervals at which this backward and forward motion will take place will depend upon the predetermined arrangement of the pins.

It will be seen that by differing the arrangement of the pins on the two sides the two slides in the said hopper may be operated in-

dependently of each other and seeds of different nature may be dropped simultaneously or at different intervals, as desired. Thus beans or peas may be dropped from one compartment of the hopper by its slide at one point, and corn may be dropped from the other compartment by its slide at another point, or they may both be dropped together.

Either or both of the slides may be readily thrown into or out of engagement while the pins are in position by means of the swinging hand-lever G and held in gear or out of gear by the pins g^3 , as hereinbefore described.

It will be seen that many modifications of the herein-described machine might be made which could be used without departing from the spirit of our invention.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

1. In a seed planter of the character described, the combination with a horizontal frame, a wheel mounted in said frame and provided with two sets of radially arranged perforations, having an even number of perforations in each set; a pin or pins fitting in one or more of the perforations in the outer set at equal intervals; and a similar number of pins fitting in the intermediate hole or holes of the inner set; of a seed hopper mounted on said frame in front of said wheel; a slide moving beneath said hopper and adapted to discharge seed therefrom; a pitman pivoted to the rear end of said slide; and a bell-crank lever pivoted to the side of the frame and to the rear end of said pitman, one arm of which bell crank lever is adapted to engage the outer pins in said wheel to push the pitman forward, and the other arm of which is adapted to engage the inner set of pins to draw said pitman backward, as the wheel revolves, and thus operate said slide, substantially as and for the purposes described.

2. In a seed planter of the character described, the combination with a horizontal frame, a wheel mounted in said frame and provided with two sets of radially arranged perforations extending entirely through said wheel, and having an even number of perforations in each set; a pin or pins fitting in one or more of the perforations in the outer set on either side of said wheel, and at equal intervals; and a similar number of pins fitting in the intermediate hole or holes of the inner set on either side; of a seed hopper mounted on said frame in front of said wheel, and composed of two separate compartments; a slide moving beneath each compartment of said hopper, and adapted to discharge seed therefrom independently of the other; a pitman pivoted to the rear end of each of said slides; and a bell crank lever pivoted to the side of the frame and to the rear end of each of said pitmen, on either side of said wheel; one arm of each bell crank lever being adapted to engage the outer pins in its side of said

5 wheel to push its pitman forward, and the other arm of each bell crank lever being adapted to engage the inner set of pins in said wheel to draw said pitman backward, as the wheel revolves, substantially as and for the purposes described.

10 3. In a seed planter of the character described, the combination with a horizontal frame, a wheel mounted in said frame and provided with two sets of radially arranged perforations, having an even number of perforations in each set; a pin or pins fitting in one or more of the perforations in the outer set at equal intervals; and a similar number of pins fitting in the intermediate perforation or perforations of the inner set; of a seed hopper mounted on said frame in front of said wheel; a slide moving beneath said hopper and adapted to discharge seed therefrom; 20 a pitman pivoted to the rear end of said slide; a bell crank lever pivoted to the rear end of said pitman and to the forward end of a swinging arm on said frame by means of which swinging arm the said bell crank lever 25 may be thrown into or out of engagement with the pins in said wheel; one arm of said bell crank lever being adapted to engage the outer pins in said wheel to push the pitman forward, and the other arm of which is adapted 30 to engage the inner set of pins to draw said pitman backward, as the wheel revolves, substantially as and for the purposes described.

35 4. In a seed planter of the character described, the combination with a horizontal frame, a wheel mounted in said frame and provided with two sets of radially arranged

perforations extending entirely through said wheel, and having an even number of perforations in each set; a pin or pins fitting in one or more of the perforations in the outer set on either side of said wheel, and at equal intervals; and a similar number of pins fitting in the intermediate hole or holes of the inner set on either side; of a seed hopper mounted on said frame in front of said wheel, and composed of two separate compartments; a slide moving beneath each compartment of said hopper, and adapted to discharge seed therefrom independently of the other; a pitman pivoted to the rear end of each of said slides; and a pair of bell crank levers, one on each side of said wheel, pivoted to the rear end of one of said pitmen and to the forward end of a swinging arm on said frame, by means of each of which swinging arms one of said bell crank levers may be thrown into or out of engagement with the pins in said wheel independently of the other; one arm of each bell crank lever being adapted to engage the outer pins in its side of said wheel to push its pitman forward, and the other arm of each bell crank lever being adapted to engage the inner set of pins to draw said pitman backward, as the wheel revolves, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM E. BERRY.

WILLIAM A. MEDLIN.

Witnesses:

D. I. HERDIN,

G. W. SCOTT.