

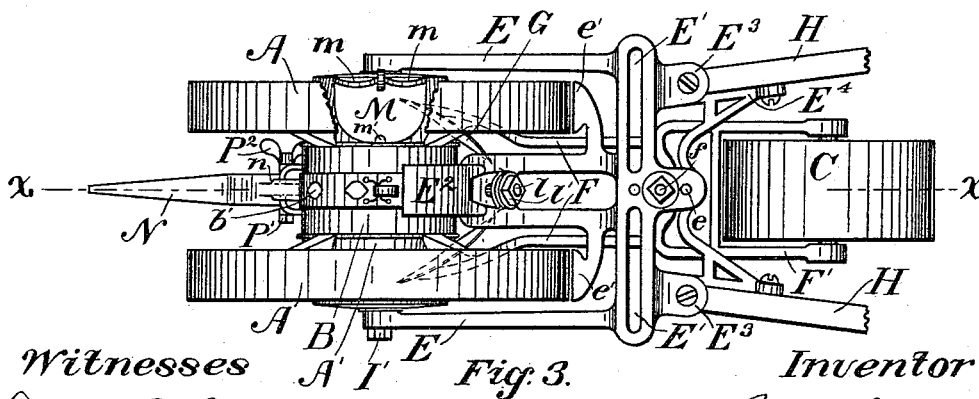
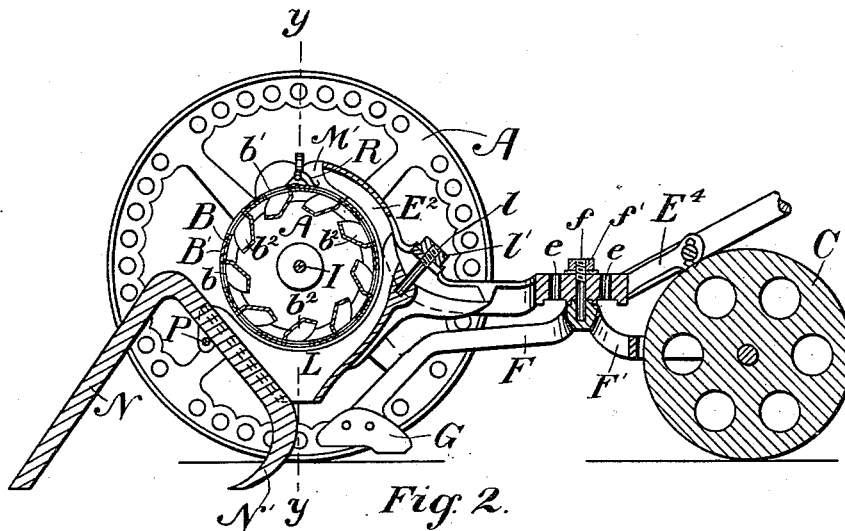
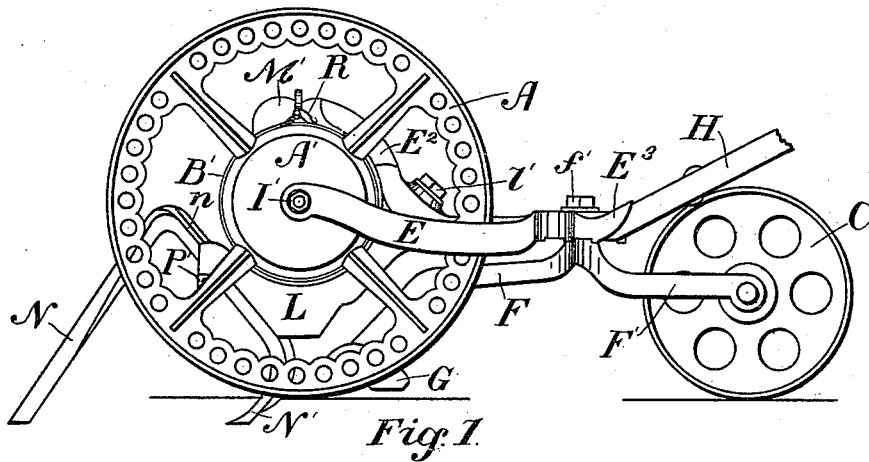
(No Model.)

2 Sheets—Sheet 1.

S. L. ALLEN.  
SEED PLANTER.

No. 420,181.

Patented Jan. 28, 1890.



*Witnesses*  
Albert E. Leach  
M. H. Thompson.

Inventor  
Sam. L. Allen  
by ~~Wm. Brown~~  
attys -

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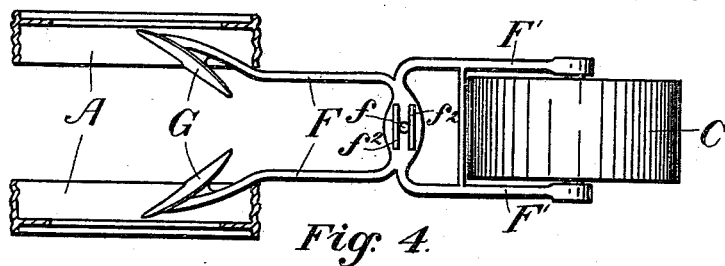


Fig. 4.

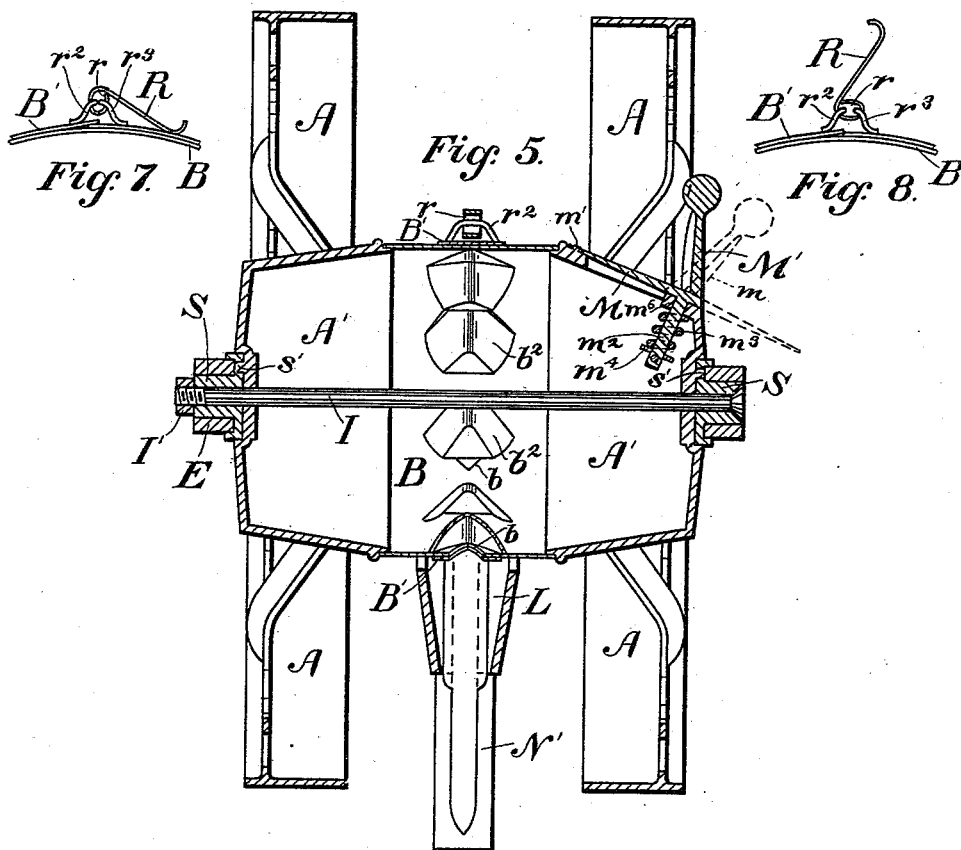


Fig. 5.



Fig. 7. B

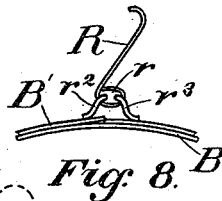


Fig. 8. B

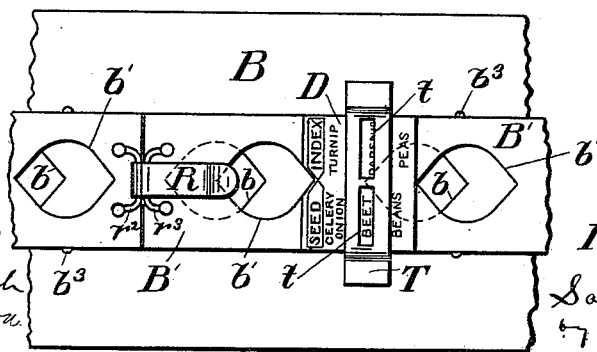


Fig. 6.

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# UNITED STATES PATENT OFFICE.

SAMUEL L. ALLEN, OF CINNAMINSON, NEW JERSEY.

## SEED-PLANTER.

SPECIFICATION forming part of Letters Patent No. 420,181, dated January 28, 1890.

Application filed July 27, 1889. Serial No. 318,849. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL L. ALLEN, a citizen of the United States, residing at Cinnaminson, in the county of Burlington and State of New Jersey, have invented certain new and useful Improvements in Seed-Planters, of which the following is a full specification.

Referring to the accompanying drawings, Figure 1 is a side elevation of my improved machine. Fig. 2 is a longitudinal vertical section on  $x x$ , Fig. 3. Fig. 3 is a plan view. Fig. 4 shows the position of the scrapers or covering-blades with reference to the wheels. Fig. 5 is a transverse vertical section on  $y y$ , Fig. 2, on an enlarged scale. Fig. 6 shows on a still larger scale the operation of the seed-index and devices for regulating the flow of seed, and Figs. 7 and 8 are detail views in a closed and open position of the clamping device on the sliding strap.

My invention relates to seed-planters; and it consists, mainly, of improved features of construction therein, whereby among other advantages the adjustability of the various parts may readily be accomplished.

The seed is contained in a barrel or receptacle formed of a central cylindrical portion B, supported between and accurately fitting the hollow end portions A' A', which are concentric and preferably integral with the wheels A A'. The wheels and receptacle thus formed turn upon their axis between the arms E E of the frame, being supported in suitable bearings at the end of said arms.

As shown in the drawings, S, Fig. 5, represents the bearing turning within a hole near the end of the arm E and compelled to turn with the wheel by means of the pin  $s'$ , fitting a corresponding hole in the piece S. By means of the bolt I and the nut I' the parts when in place are held firmly together.

The seed is introduced into the receptacle through an opening normally closed by the cover M, which swings around on the downwardly-projecting pin  $m^2$  as an axis, the said pin passing through a lug  $m^6$  in the top of the part A'. The cover is held firmly down on its seat by means of the spring  $m^3$ , the action of which is clearly shown in Fig. 5 of the drawings. When it is desired to pour seed

into the receptacle, the cover is swung half-way around on the pin  $m^2$  into the position indicated by the dotted lines in Fig. 5, in which position the portion M' of the cover acts as a chute to conduct the seed into the opening, the seed running down along the hollowed trough-like channels  $m$  (shown in Fig. 3) and into the receptacle. When closed, a notch in the middle of the cover fits over a small boss  $m'$ , thus keeping the seed-cover in place. The part M' also forms a convenient handle whereby the cover is readily opened and closed.

At regular intervals along the cylindrical portion B of the seed-receptacle are the openings  $b$ , preferably of the shape shown.

B' is a strap or band sliding along the surface of the cylinder B between guides  $b^3$ , placed at intervals, the said strap being provided with holes  $b'$ , corresponding in shape and arrangement with the holes  $b$  in said cylinder. By sliding the strap B' into different positions along the surface of the cylinder B, which it embraces, openings are formed of varying sizes for the discharge of the seed from the receptacle, according to the kind of seed used; or, if desired, the said receptacle may be completely closed. To make the sizes of the discharge-openings readily adjustable for the various kinds of seed employed, I provide the strap B' with an index D, affixed to its upper surface, while T represents a bridge fixed to the surface of the cylinder B and perforated with slots  $t$ , so arranged that as the strap B' is slid along the surface of the cylinder the index D moves under the bridge T, and the names of the various kinds of seeds printed or stamped on said index pass successively under one or the other of the slots  $t$  in the bridge, thus indicating the size of opening appropriate for any given seed in a manner readily seen by reference to Fig. 6.

The strap B' is provided with a device by which it may be clamped firmly in any position. This preferably consists of a handle or lever R, the cam-shaped inner end of which engages with links or eyes  $r^2 r^2$ , one at each end of the strap B', arranged as shown in Figs. 6, 7, and 8, whereby when the handle R is raised, as in Fig. 8, the strap is loosened, so that it may be moved back and forth along

the cylinder B, while when the handle is pressed down, as in Fig. 7, the strap is tightly drawn around the cylinder and held so that it cannot move.

5 The cylinder B is provided in its interior with buckets  $b^2$ , one at each of the openings  $b$ , of such a shape as to cover the said openings in the manner shown in Fig. 2. These are of such a shape and so arranged as to  
10 equalize the discharge of the seed through the openings, causing it to be the same whatever the amount of seed in the barrel or receptacle.

$E^2$  forms a curved hood or cover projecting forward from the frame, and to the frame  
15 is secured by means of the bolt  $l$  and nut  $l'$  the spout L, down which runs the seed as it is discharged from the receptacle. The front of the seed-spout L is divided, as shown by the dotted lines in Figs. 3 and 5, to form a slot, in  
20 which is held the furrow-opening tool  $N N'$ , the sides of the front of the spout fitting like tongues into grooves  $n$ , one on each side of the opening-tool. By means of the thumb-screw  $P^2$ , Fig. 3, on the bolt P, passing through  
25 the two sides of the spout, the furrowing-tool is clamped between them, the depth of the tool being easily varied by loosening the thumb-screw and sliding the tool up or down between the sides of the spout.

30 The furrowing-tool has the forwardly-projecting arm N and the blade  $N'$  in line therewith and in the rear thereof, the narrow arm N being intended to loosen the earth in advance of the blade and ward off sticks and  
35 other obstacles.

The wheels A A have wide inner flanges, as shown in Figs. 4 and 5, and on these flanges are thrown up the dirt by the furrowing-blade  $N'$ , which, as shown, is in advance  
40 of the seed-spout opening. The end of the spout L terminates immediately in the rear of this furrowing-blade, and in order to fill in the furrow after the seed has been dropped therein I employ the covering-blades G, one  
45 on each side, which, being close to the flanges of the wheels, acts as scrapers, removing the dirt therefrom and conveying it into the seed-furrow. These blades, which are preferably easily removable, occupy the position  
50 with reference to the wheels shown in Fig. 4, and may be connected to the frame in a variety of ways. As shown in the drawings, they are secured to arms F F, projecting forward from the frame which carries the roller C, and are detachable with the roller. The  
55 roller is supported in bearings at the rear of the arms  $F' F'$ , and the roller, with the covering-blades G G, is connected to the frame of the machine by the single bolt  $f$ , which  
60 may pass through either of the three holes  $e$  in the frame, thus varying the position of the covering-blades. I may, however, if desired, have the arms bearing the covering-blades G made integral with or secured to

the spout L, so as to be removable therewith. 65  
The roller C serves to pack down the loose earth thrown by the covering-blades into the seed-furrow.

The frame of the machine is furthermore preferably provided with the tool-holding 70 slots  $E' E'$ , one on each side thereof, whereby variously-shaped cultivator plow-blades and other tools may be adjustably secured thereto for the purpose of smoothing over the ground after the seed has been dropped and covered 75 in the manner described.

H H are handles secured to the rear of the frame, whereby the machine may be pushed along the ground.

I claim—

1. In a seed-planter, the combination, with 80 wheels having wide inner flanges, of a roller-frame provided with a roller and having forwardly-projecting arms bearing covering-blades set close to the flanges of the wheels, 85 whereby the earth deposited upon the flanges is scraped off and conveyed toward the center, substantially as and for the purposes described.

2. In a seed-planter, the combination, with 90 a revoluble seed-receptacle and a central seed-spout, of a central furrowing-blade, wheels having wide inner flanges, and covering-blades set close to said flanges, substantially as and for the purposes described. 95

3. In a seed-planter, a cylindrical seed-receptacle provided with discharge-openings  $b$ , in combination with a slotted bridge, a sliding strap having corresponding openings  $b'$  and provided with a graduated seed-index, 100 and a clamp acting upon the ends of said strap, whereby it may be tightly drawn around said cylinder, substantially as and for the purposes described.

4. In a seed-planter, a perforated seed-re- 105 ceptacle provided with a slotted bridge, in combination with a sliding perforated strap provided with a graduated seed-index, substantially as described.

5. A seed-planter having a spout divided 110 in front to embrace a grooved furrowing-tool and provided with a fastening screw-bolt P, whereby the said furrowing-tool may be clamped at varying depths, substantially as described. 115

6. In a seed-planter, the combination, with a revoluble seed-receptacle, wheels, furrowing-blade, and covering devices, of a frame provided with tool-holding slots, whereby smoothing-cultivator tools may be secured 120 to said planter, substantially as described.

In witness whereof I have hereunto set my hand.

SAML. L. ALLEN.

Witnesses:

JOHN C. ALLEN, Jr.,  
OSWALD SMITH.