(No Model.) 2 Sheets—Sheet 1.

E. C. TECKTONIUS.

BROADCAST SEED SOWER.

No. 421,634. Patented Feb. 18, 1890.

Fig. 1.

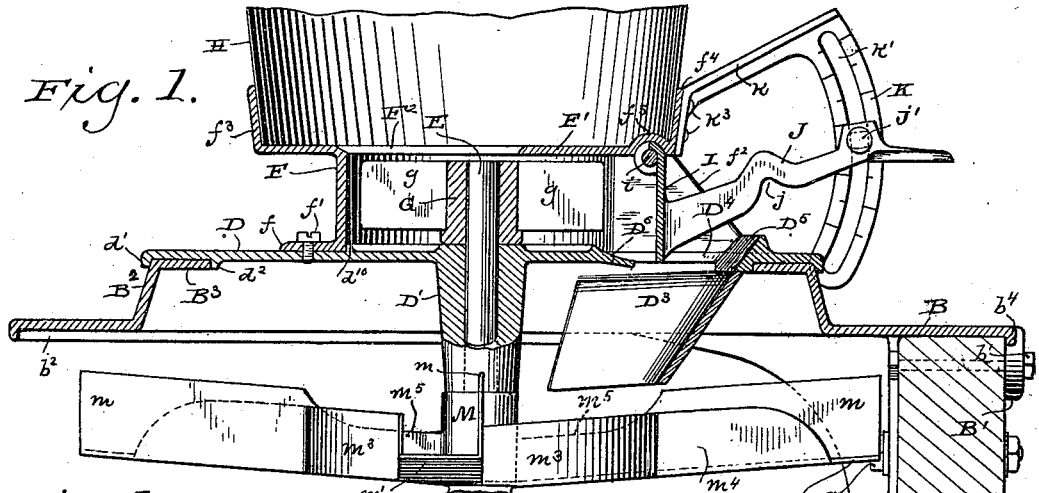


Fig. 5.

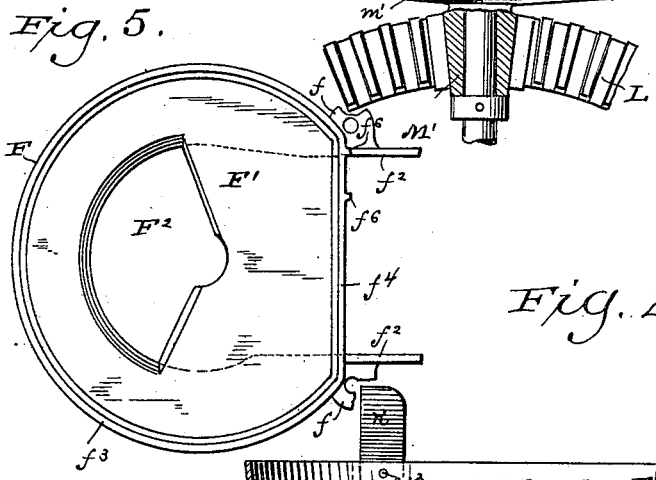
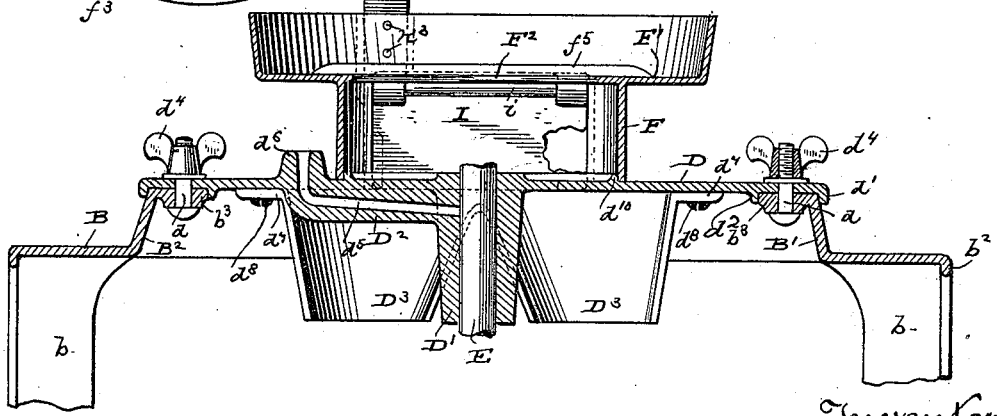


Fig. 2.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3

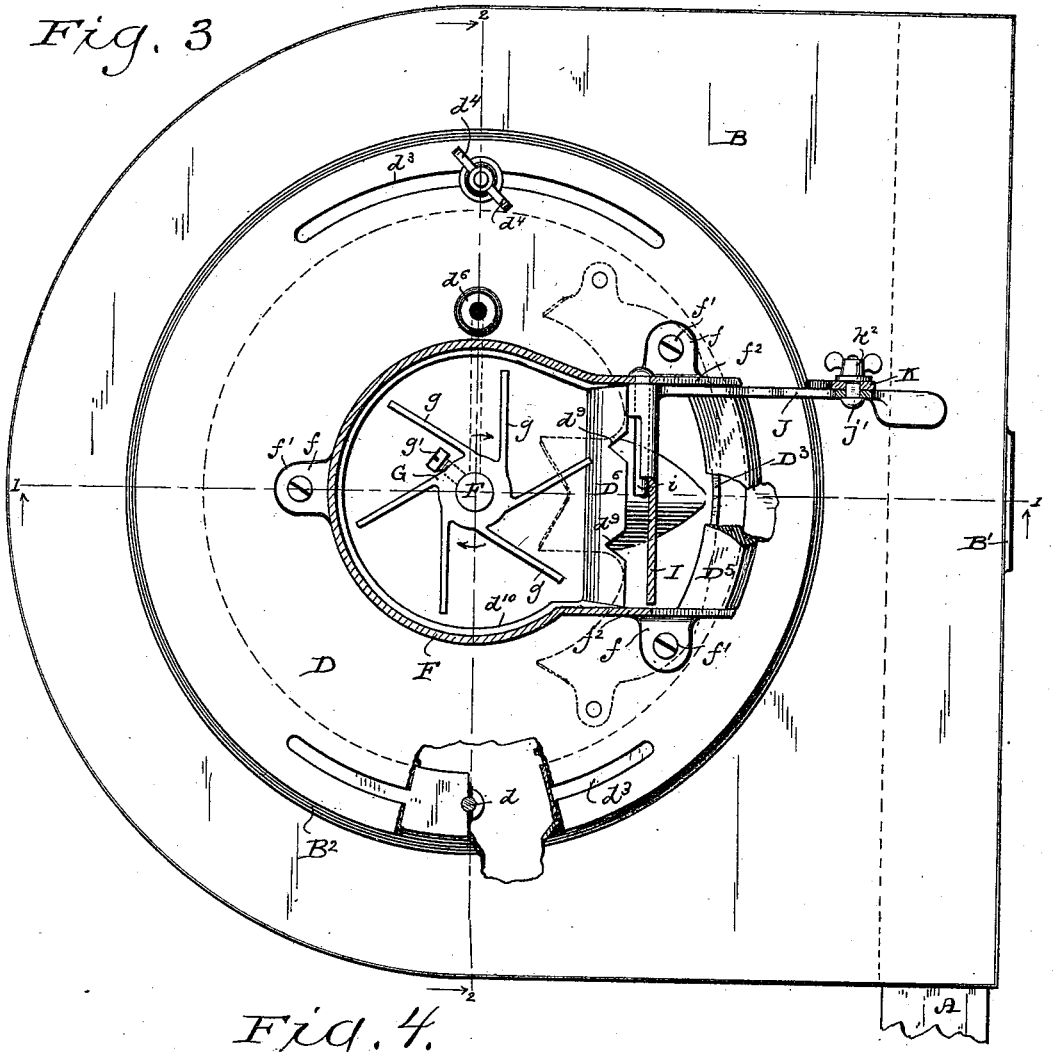
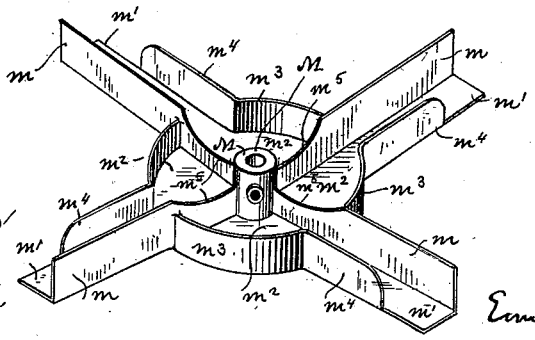


Fig. 4.



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UNITED STATES PATENT OFFICE.

EMIL C. TECKTONIUS, OF RACINE, WISCONSIN.

BROADCAST SEED-SOWER.

SPECIFICATION forming part of Letters Patent No. 421,634, dated February 18, 1890.

Application filed November 29, 1889. Serial No. 332,000. (No model.)

To all whom it may concern:

Be it known that I, EMIL C. TECKTONIUS, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Broadcast Seed-Sowers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to broadcast seed-sowers; and it consists in certain peculiarities of construction, as will be fully set forth hereinafter and subsequently claimed.

In the drawings, Figure 1 is a vertical central section through my device on the line 1 1 of Fig. 3. Fig. 2 is a like section, taken at right angles to the foregoing, on the line 2 2 of Fig. 3 and partly broken away. Fig. 3 is a plan view of my device partly broken away and with some of the upper parts shown in section. Fig. 4 is a perspective view of the distributer, and Fig. 5 a plan view of the force-wheel casing and hopper-seat.

A represents the tail-board of a wagon to which my device is attached.

B is the platform, cast solidly with depending bracket-arms b b, through which by means of bolts a a, it is secured to the tail-board, said platform having a rear downward lug B′, a bolt b' passing also therethrough and through the said tail-board for additional security, and being cast with a strengthening rib or flange b^2 and a similar flange b^4 at the rear, which latter flange, preferably, just fits over the inner upper edge of the tail-board and clamps the latter between said flange and the bracket-arms b b. The said platform B has an elevated central circular flange B^2, having an inturned annular rim B^3 surrounding a central opening, and this annular rim is strengthened as at b^3 b^3 on opposite sides and there perforated for the passage of screw-bolts d d, as hereinafter explained.

D is a circular disk or plate having annular flanges or ribs d' d^2 on its under side so as to just fit over and against the outer and inner edges of the described annular rim B^3, and enable said disk to turn on said rim, the said disk having arc slots d^3 d^3 in line with the perforations in the strengthening-bosses b^3 b^3 in the rim below, which slots receive the described screw-bolts d d, which latter are provided with thumb-nuts d^4 d^4 in order to secure the disk and rim together after the former has been adjusted to the desired position. The said disk is cast with a vertical hub D′ for the distributer and force-wheel shaft E, and on its under side with a rib D^2, which has a channel d^5 cored therethrough communicating with the bore of the hub D′ and with a perforated boss d^6 on the upper side of the disk, to afford a convenient means of oiling the said vertical shaft E.

D^3 represents an inward-projecting double spout, having flanges d^7 d^7 secured to the under side of the disk, as by screws d^8 d^8, just beneath an opening D^4 in said disk. At the outer end of said opening is an upper-inclined ridge D^5, and at the opposite inner end of said opening is a downward-inclined edge D^6 with two notches d^9 d^9 cut therein, preferably V-shaped, as shown, and from the corners of the inner edge D^6 there extends back and around the central portion of the disk D on the upper side thereof a ridge or rib d^{10} of the outline shown in Fig. 3.

F is a casting comprising the casing for the force-feed wheel G and the seed and the seat for the hopper H. The lower part of this casing is of the shape best shown in section in Fig. 3, fitting snugly outside the ridge or rib d^{10} at the base and having flanges f f f, whereby it is secured to the upper side of the disk D by screws f' f' f'. The rear end of said casing extends, as shown at f^2 f^2, along the sides of the opening D^4, while the upper part f^3 extends back of and around the line of the casing proper to form the hopper-seat, as stated, and is separated from the lower part by a floor or plate F′, having an opening F^2, as shown best in Fig. 5, the wall which forms the hopper-seat f^3 being generally circular in outline, but square in the rear, as shown at f^4, just inside which the floor or plate F′ is rounded up across, as shown at f^5, to provide room for the pintle or hinge journal i of a door I, hinged as shown to said pintle and adapted to normally close the rear of the casing F, which is otherwise open between the ends f^2 f^2 of the lower part and below the rear part of the floor or plate F′ of said casing.

J is an arm extending upward at an angle from one side edge of the door I and provided

with a notch or bend j to receive the ridge D^5 when said arm is brought down horizontally on the disk D, and the said door forced inward against the inclined inner edge D^6 of the opening D^4. The rear wall f^4 of the part F is provided with vertical ways f^6 f^6, receiving between them the rear end of the arm k (secured by bolts k^3 k^3) of a slotted quadrant K, projecting downward and provided with a suitable scale or scales, as shown in Fig. 1, the arm J being provided with a screw-bolt j', whose shank moves in the said slot k' in the quadrant, being secured to any desired adjustment (and consequent inclination of the door I) by a thumb-nut k^2, as shown in Fig. 3.

The vertical shaft E, already named, carries at its upper end the force-feed wheel G, having its blades g g set tangentially around its hub, as best shown in Fig. 3, said wheel revolving in the direction of the arrows shown, adjacent to its hub, and hence forcing the seed evenly from one edge or side of the opening D^4 to the opposite edge or side, said wheel G being secured to the said upper end of the shaft E by a set-screw g', as shown.

M is the hub of the distributer or fan secured to the vertical shaft E beneath the double spout D^3 and cast with a pinion M′, which meshes with the usual bevel-wheel L in the ordinary manner common to broadcast seed-sowers of this class, and which I do not deem requires further illustration or explanation. The blades m m of the distributer incline upward from their center to their ends and have bottom plates m' m' of the same inclination extending to the ends of the blades and there having straight outer edges, the said bottom plates being extended near the hub M, so as to form in effect in the illustration given the four quarters m^2 m^2 m^2 m^2 of a circular concave plate having segmental vertical outer guards or flanges m^3 extending between one vertical blade m and the straight outer edge of the bottom plate m' of the next blade m, and thence continuing in a straight line along the straight outer edge of said plate m' in a vertical flange or guard m^4 for about half the distance or a little more between the end of the said segmental flange m^3 and the extreme outer end of the said bottom plate m'. The segmental flanges m^3 are in a circular line just outside the lower line of the double spout D^3, and hence will always receive the seed on the concave plate formed by the described sections m^2, while the described construction of the blades and their bottom plates and outer flanges produces in effect a series of upwardly-inclined spouts and prevents the seed from dropping off the distributer adjacent to its hub. The blades m are further cut out adjacent to said hub M, as shown at m^5 m^5, the bottom of said cut-out portion being on a lower plane than that of the top of the outer segmental flange m^3, so that the seed will not be forced out over the top of the latter even if it is forced over the top of the inner ends of the blades m; or, if preferred, the blades m may be made of a less height than the segmental flanges m^3 to accomplish the same result.

The operation of my device will be understood from the foregoing description of its construction, the double spout being practically the same as that shown in my patent, No. 417,115, dated December 10, 1889, and the shape of the lower portion of my present seed or force feed-wheel casing being likewise the same except that the rear end of my present casing F is open and closed by a hinged door instead of being always closed, as in said former application.

My described arrangement of hinged door is designed to accommodate my device to the different kinds of seed to be sown. For instance, with a very fine grass-seed I would close the door I as tightly as possible, so that said seed would only escape through the notches d^9 d^9, whereas with a coarser seed the said door would be opened more or less and fixed in the desired adjustment by means of the slotted quadrant K, arm J, screw-bolt j', and thumb-nut k^2. Further, the disk D and attached double spout D^3 may be turned in any direction desired, so as to sow to the right or left, or against the wind if necessary, and secured in such position by means of the arc slots d^8, screw-bolts d, and thumb-nuts d^4. The advantages of my present construction of distributer and force-feed wheel have already been set forth hereinbefore. By making the platform B and its bracket-arms b b all in one casting with the described strengthening rims or flanges, I secure a better and stronger article and one more readily attached to the wagon tail-board.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a seeder, a supporting-platform consisting of a plate having a raised central portion, provided with a circular opening and formed with exterior strengthening-flanges, and downward-depending bracket-arms near its rear portion, all cast in one piece, substantially as set forth.

2. In a seeder, the combination, with a plate or platform having a central opening, a circular disk or plate having arc slots, and a feed-opening, and adapted to have rotary motion upon said first-named plate, adjusting-screws passing through one plate and the said arc slots in the other plate, and provided with securing-nuts, a feed-wheel, and seed-casing surrounding the same on said movable plate in communication with said feed-opening, and a spout fixed to the under side of said plate beneath said feed-opening, substantially as set forth.

3. In a seeder, the combination of a plate having a feed-opening therethrough, a seed-casing on said plate having an open rear end communicating with said opening, a feed-wheel in said casing, and a hinged door provided with an adjustable securing device and

adapted to close the rear opening in the casing more or less, substantially as set forth.

4. In a seeder, the combination of a plate having a feed-opening therethrough, a spout secured beneath said opening, a seed-casing on said plate having an open rear end communicating with said opening, a feed-wheel in said casing, a slotted quadrant supported adjacent to said casing, a door hinged to said casing and adapted to close said rear opening therein, and an arm projecting from said door and carrying a pin or bolt in adjustable engagement with said slotted quadrant, and a securing device for holding said arm and door in the desired adjustment, substantially as set forth.

5. In a seeder, the combination of a plate having a feed-opening therethrough provided with an inclined and notched-out inner edge, a seed-casing on said plate having an open rear end communicating with said opening, a feed-wheel in said casing, and a hinged door provided with an adjustable securing device and adapted to engage with the outer edge of the said inclined edge of the feed-opening or to be set at any desired distance therefrom, substantially as set forth.

6. In a seeder, the combination of a plate having a feed-opening therethrough, a seed-casing and hopper-seat on said plate having an extended open rear end communicating with said feed-opening, a force-feed wheel provided with tangentially-arranged blades in said seed-casing, a plate separating the casing proper from the hopper-seat and having a seed-opening therein, and a hinged door provided with an adjustable securing device and adapted to close the rear opening in the casing more or less, substantially as set forth.

7. In a seeder, the combination of a plate having a feed-opening therethrough and a vertical hub on the under side, a seed-casing on said plate communicating with said opening, a vertical shaft extending up through said hub and carrying a feed-wheel in said casing, a rib on the under side of said plate having a channel communicating with the bore of said hub, and a boss on the upper side of said plate outside of said casing and having a perforation communicating with said channel, substantially as set forth.

8. In a seeder, the combination, with a plate having a feed-opening therethrough and a centrally-inclined feed-spout beneath the same, a seed-casing on said plate communicating with said feed-opening, and a vertical shaft carrying at its upper end a feed-wheel within said casing, of a fan or distributer secured to said shaft below said spout having a series of blades extending upward from their center to their ends having corresponding bottom plates with vertical flanges, forming distributing-tubes, substantially as set forth.

9. In a seeder, the combination, with a plate having a feed-opening therethrough, and a centrally-inclined spout beneath the same, of a central shaft carrying a distributer having a hub and a series of vertical blades inclined upwardly from said hub to their outer ends, bottom plates secured thereto and extended near said hub to form the sections of a concave circular plate and thence extended in straight lines to the end of the said blades, and curved vertical flanges on the outer edge of said circular plate just outside the inner line of said spout, and thence extended in straight lines along the edges of the straight extensions of the bottom plates to a point intermediate between the curved portions and the ends of said bottom plates, the said curved portions rising to a higher plane than the adjacent inner portions of the vertical blades, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand at Racine, in the county of Racine and State of Wisconsin, in the presence of two witnesses.

EMIL C. TECKTONIUS.

Witnesses:
JOHN W. KNIGHT,
ALBERT L. ANDERSON.