(No Model.) 2 Sheets—Sheet 1.

M. FREEMAN.

BROADCAST SEEDER.

No. 435,691. Patented Sept. 2, 1890.

Fig. 1.

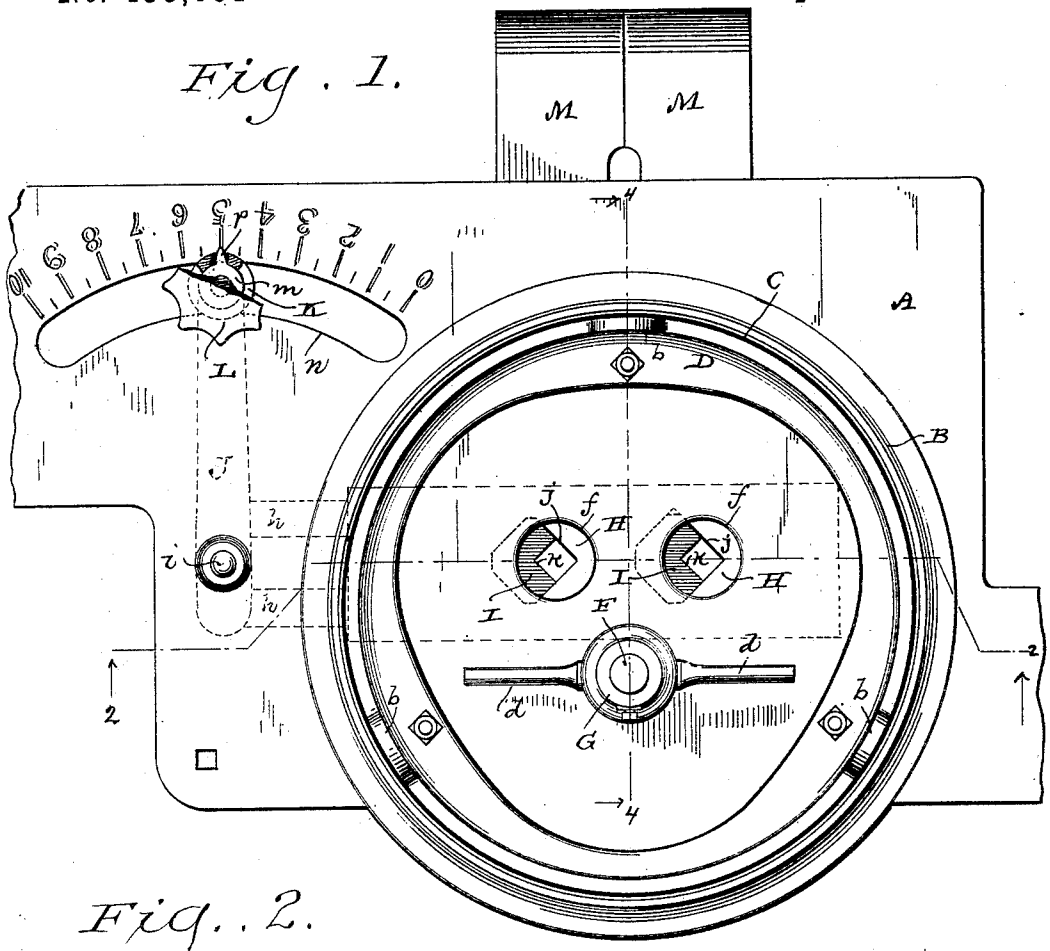
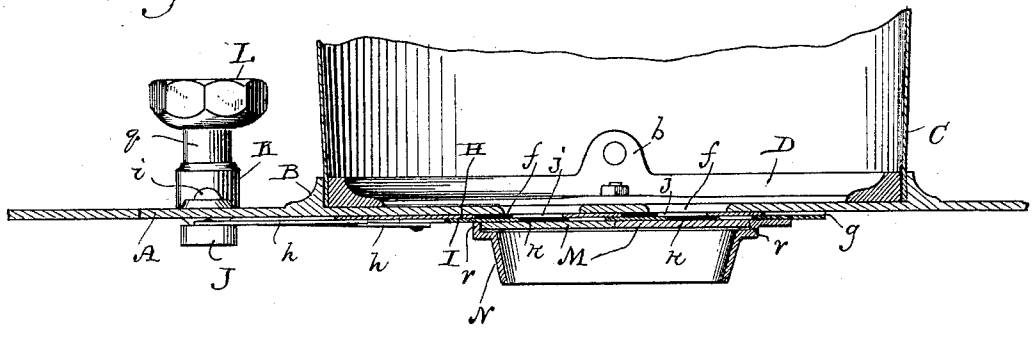


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

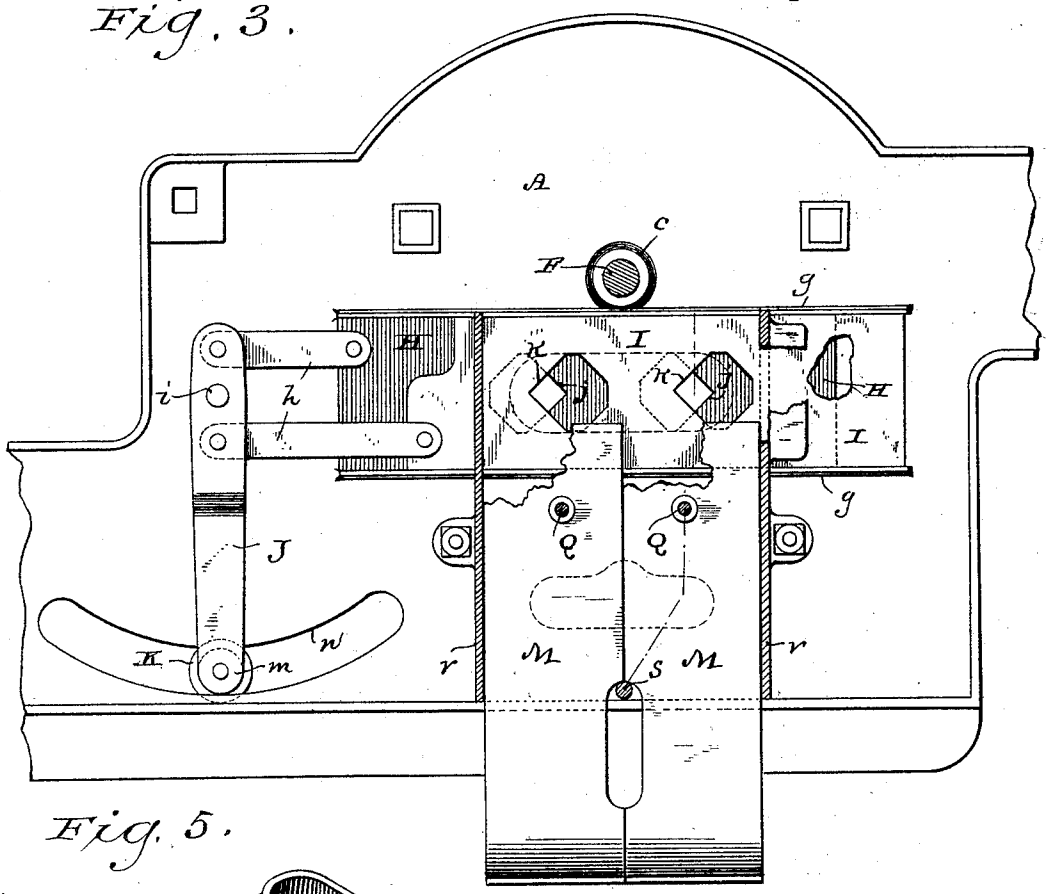


Fig. 5.

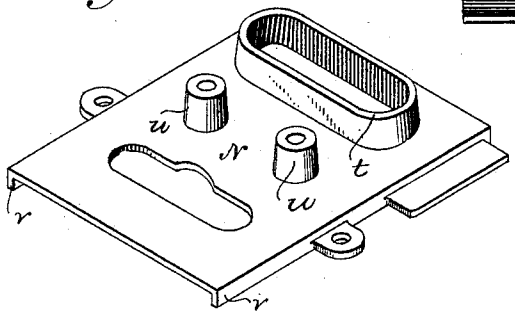
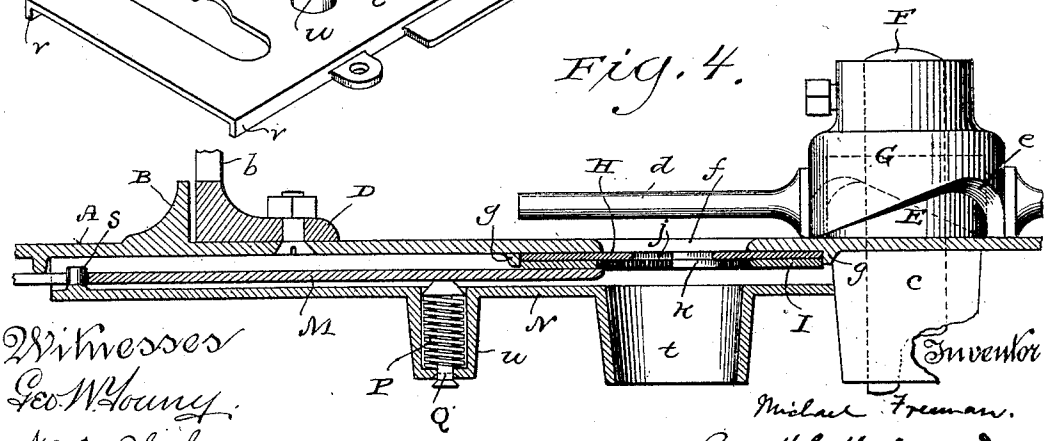


Fig. 4.



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UNITED STATES PATENT OFFICE.

MICHAEL FREEMAN, OF RACINE, WISCONSIN, ASSIGNOR TO THE S. FREEMAN & SONS MANUFACTURING COMPANY, OF SAME PLACE.

BROADCAST SEEDER.

SPECIFICATION forming part of Letters Patent No. 435,691, dated September 2, 1890.

Application filed May 17, 1890. Serial No. 352,201. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL FREEMAN, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Broadcast Seeders; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to broadcast seeders; and it consists in certain peculiarities of construction and combination of parts to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a top plan view of a portion of a broadcast seeder embodying my improvements; Fig. 2, a section on line 2 2 of the preceding figure; Fig. 3, an under side view, certain of the parts being broken away and in section; Fig. 4, a section on line 4 4 of Fig. 1, and Fig. 5 a detail perspective view of a plate that constitutes part of the seeder.

Referring by letter to the drawings, A represents the floor of the seeder, and this floor is provided with an annular flange B, within which is arranged the lower end of the seed-hopper C, the latter being bolted to ears *b* on a ring D, that is also bolted to the seeder-floor in opposition to said flange.

The construction thus far described having been set forth and claimed in Patent No. 403,882, of May 21, 1889, no claim is made thereto in the present application. Like in Patent No. 386,699, of July 24, 1888, a flange E for the inclosure of lubricant projects from the floor A to surround the distributer-shaft F, that has a bearing *c* depending from said floor, and detachably connected to said distributer-shaft is a cap G, fitted over said flange and provided with radial fingers *d* for stirring the seed in the hopper. In the present instance the cap G is cut away between the fingers *d* to form angularly-disposed and beveled faces *e*, that serve to force the material in the hopper away from said cap and toward said fingers, thereby insuring a better feed and preventing any of said material from working in between the cap and adjacent flange.

The floor A is provided with the usual openings *f* for the delivery of material from the hopper, and beneath these openings are plates H I, that are loosely arranged one upon the other between guides *g* and connected by links *h* with a lever J, the latter being secured to the under side of said floor by means of a pivot *i*, arranged between the links, whereby when this lever is moved on its pivot the plates will slide on each other in opposite directions.

The plates H I are respectively provided with polygonal openings *j k*, so arranged that when the lever J is at the full extent of its throw in one direction the surface of one plate will close the openings in the other, and the openings *f* in the floor of the seeder will also be closed. When the parts are positioned as just described, the angle of two sides of each opening in the plates H I is slightly past the center of the corresponding opening *f* in the floor A, and a movement of said plates to uncover the openings *j k* therein will result in said angle being drawn back away from said center. The continued movement of the plates H I will cause the opposing angles of the openings *j k* therein to recede from each other and the common center to form square openings through both plates for the escape of the material in the hopper, the area of the latter openings being proportionate to the throw of the lever J, the outer end *m* of the latter being turned up to engage with a segmental slot *n* in the floor A, and provided with a pointer *p* for registration with divisions of a scale cast on the top of said floor, as shown in Fig. 1, and by the construction and operation just described the machine may be readily set to sow a given quantity of material per acre. Slipped on the turned-up end *m* of the lever J to rest against the floor A is a thimble K, and a hand-piece L has its shank *q* passed through the thimble to engage with said turned-up end of the lever.

Arranged beneath the plates H I, and at right angles thereto, are the usual cut-off plates M, the latter being held against lateral movement by the flanges *r* of a plate N, bolted to the under side of the floor A and provided with a stop *s* for said cut-off plates, a delivery-spout *t*, and depending seats *u* for spiral springs

P, this construction being somewhat similar to what is set forth in Patent No. 340,774, of April 27, 1886.

In order to limit the expansion of the springs P, I pass bevel-headed pins Q down through said springs and the bottoms of the seats *u*, and then upset the lower ends of these pins against the bottoms of said seats, as shown in Fig. 4. By limiting the expansion of the springs they cannot rise up far enough to interfere with the placing of the cut-off plates M in position for use.

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

1. In a broadcast seeder, a distributer-shaft, a flange arranged on the seeder-floor to surround the shaft, a cap fitted over the flange and secured to said shaft, and fingers radiating from the cap, and the latter cut away between the fingers to present angularly-disposed and beveled faces, substantially as set forth.

2. In a broadcast seeder, the floor thereof provided with delivery-openings, two reciprocating plates arranged beneath these openings to slide one upon the other in opposite directions, and in turn provided with polygonal openings that come in and out of register relative to the centers of said openings in the seeder-floor, substantially as set forth.

3. In a broadcast seeder, the floor thereof provided with delivery-openings, two plates loosely arranged one upon the other below the delivery-openings and in turn provided with polygonal openings, the latter in one plate being arranged to come in and out of register with those in the other relative to the centers of said delivery-openings, a lever pivoted to the seeder-floor, and links connecting the plates and lever on opposite sides of the pivot-point, substantially as set forth.

4. In a broadcast seeder, seats arranged beneath the seeder-floor, spiral springs arranged in the seats, headed pins arranged with relation to said seats and springs to limit the expansion of the latter, and cut-off plates arranged above the pins, 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.

MICHAEL FREEMAN.

Witnesses:
J. E. DODGE,
GEO. G. ROBERTS.