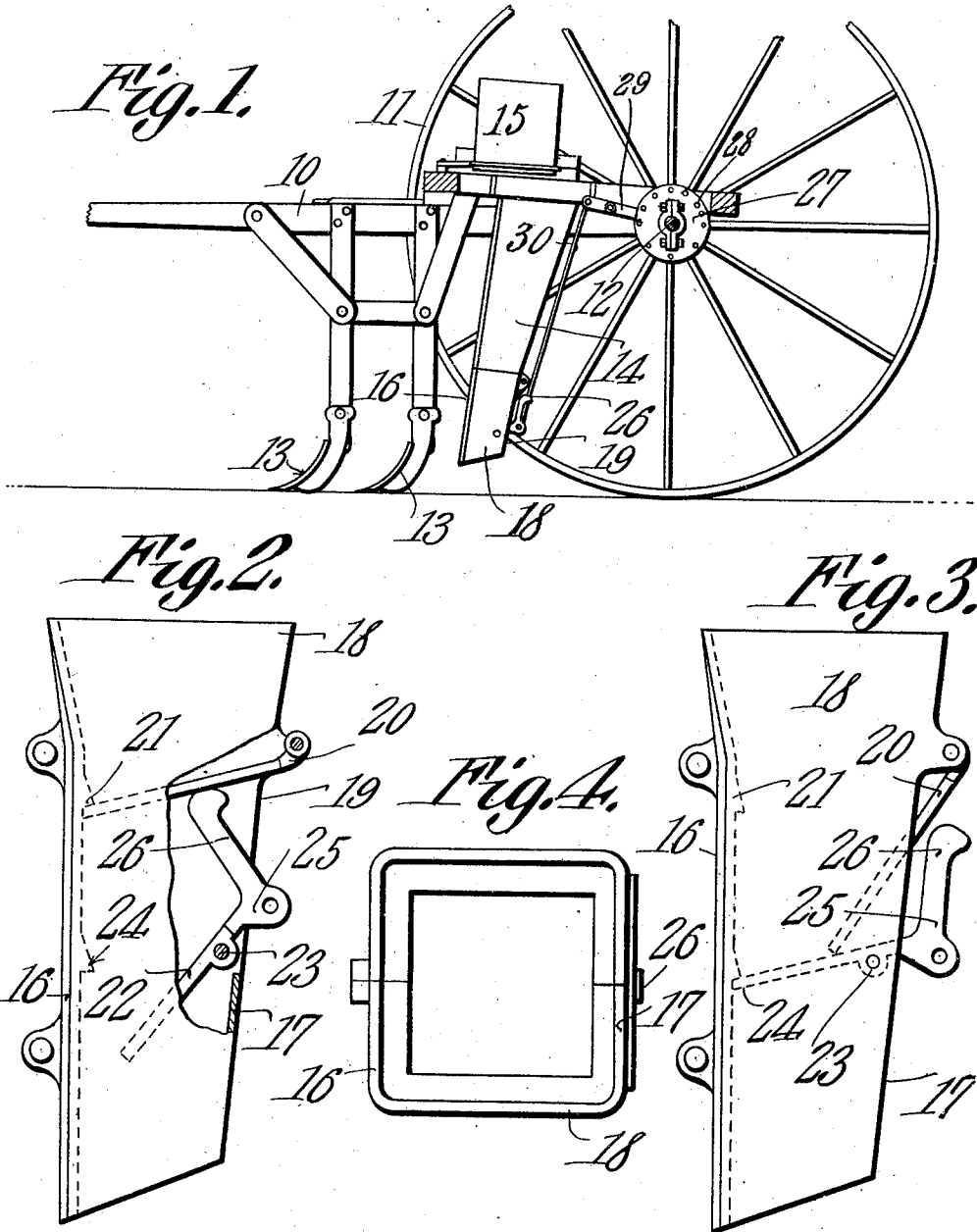


E. B. FITZGERALD.
SEEDER.
APPLICATION FILED DEC. 6, 1909.

972,178.

Patented Oct. 11, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

EDMOND B. FITZGERALD, OF ROSEDALE, MISSISSIPPI.

SEEDER.

972,178.

Specification of Letters Patent.

Patented Oct. 11, 1910.

Application filed December 6, 1909. Serial No. 531,679.

To all whom it may concern:

Be it known that I, EDMOND B. FITZGERALD, a citizen of the United States, residing at Rosedale, in the county of Bolivar and State of Mississippi, have invented a new and useful Seeder, of which the following is a specification.

It is the object of the present invention to provide an improved construction of seeder, and the invention resides specifically speaking, in a seed discharge mechanism which is mounted within a seed discharge spout located at the lower end of the discharge spout commonly employed in seeders. Mounted within this secondary discharge spout are valve plates, one of which is to be intermittently actuated and has engagement with the other plate whereby to actuate the same, and this connection constitutes one of the novel features of this invention.

With the above and other objects in view, the invention consists in the construction and arrangement of parts shown in the accompanying drawings in which—

Figure 1 is a view in side elevation some of the parts being omitted, of a seeder of the ordinary type illustrating the invention applied thereto. Fig. 2 is a view in detail and partly in side elevation and partly in section showing the secondary discharge spout and illustrating the arrangement of the valve plates therein, the upper one of the said plates being shown closed. Fig. 3 is a view similar to Fig. 2 but illustrating the upper one of the plates open and the lower plate closed. Fig. 4 is a top plan view of the said secondary discharge spout.

In the drawings, and particularly in Fig. 1, the frame upon which the present invention is mounted includes in its structure the usual frame 10, supported upon wheels 11, which are mounted at the end of an axle indicated by the numeral 12. The usual furrow opener 13, mounted upon a suitable standard is supported by the frame 10 in advance of the usual seed discharge spout 14 which leads from the seed hopper 15 disposed upon the frame 10. The seeds are discharged from hopper 15 in predetermined quantities in the usual manner and fall down the main discharge spout 14, and into the discharge spout embodied in the present invention, which spout will now be specifically described as will also the valve plates therewithin.

The discharge spout embodied in the pres-

ent invention is fitted upon the lower end of the hopper 15, and embodies a front wall 16, a rear wall 17, and side walls 18. The rear wall 17, is formed with an opening 19, and at the upper edge of this opening is hinged the rear edge of a valve plate 20, which is arranged to close the spout when it is in the position shown in Fig. 2. of the drawings, and to open the spout when in the position shown in Fig. 3. of the drawings. When in the former position, the rear or free edge of the valve plate 20 rests against a shoulder 21, upon the front wall 16 of the spout. A valve plate 22, is pivoted as at 23 within the spout in a plane below the plate 20, and is movable to position to open the spout as illustrated in Fig. 2 of the drawings or to close the same as illustrated in Fig. 3. of the drawings, and when in the latter position it rests at its free or rear edge against a shoulder 24, which is formed upon the rear face of the forward wall 16. Rearwardly beyond its body, the plate 22 is formed with an elbow 25 from which extends an upwardly projecting finger 26, the same extending substantially at right angles to the plate 22, and it will be observed from an inspection of Figs. 2 and 3 of the drawings, that the upper end of this finger 26 is convex and bears at all times against the under surface of the plate 20, whereby to support the same in closed position when the plate 22 is in the position shown in Fig. 2 of the drawings. When the plate 22 is swung to the position shown in Fig. 3 of the drawings, in which position it closes the spout, the finger 26, rides rearwardly beneath the plate 20 and allows the same to drop to open position as shown in Fig. 3. It will thus be understood that the seed discharge by way of the main spout 14, into the secondary discharge spout will fall first upon the plate 20, the plate being in the position shown in Fig. 2. of the drawings, in which position it is supported by the engagement of the finger 26 therebeneath.

As will be presently explained, means is provided for oscillating the plate 22 between the two positions illustrated in the drawings, and upon oscillation of the said plate 22, to assume the position shown in Fig. 3 of the drawings, the plate 20 will be allowed to drop as heretofore explained, thereby discharging the seed onto the plate 22. Upon movement of the plate 22 to the position

shown in Fig. 2 of the drawings, the seed will be discharged therefrom and the plate 20 will be moved to closed position, the discharged seed falling into the furrow made by the furrow opener 13. Another portion of seed will then be discharged upon the plate 20 and the above described operation will then be repeated. The provision of these cooperating valve plates insures of a more regular dropping of the seed in that they have a less distance to fall and are fed at regular intervals.

Means is provided for oscillating the plate 22 whereby to cause cooperative movement of the plates 20 and 22 and as this means forms the subject matter of a separate application, it need not be specifically described although it is here indicated as consisting of a disk 27 carrying a number of trip pins 28 which are adapted to engage successively with one end of a rock arm 29 to the other end of which arm is connected the upper end of a rod 30 pivoted at its lower end to the elbow 25, it being understood that as each pin engages with the arm 29, the same will be so rocked as to swing up that end of the arm to which the rod is connected, thereby exerting an upward pull upon the rod and swinging down the plate 22 to the position shown in Fig. 2 of the drawings, disengagement of the pin from the arm permitting the plates to return to the position shown in Fig. 3.

What is claimed is:—

In a seeder, a discharge spout, a valve plate hingedly mounted in the spout and freely movable upon its hinge, a second valve plate hingedly mounted beneath the first mentioned plate and also freely movable upon its hinge, shoulders formed upon the wall of the spout opposite the wall to which the valve plates are hinged and so arranged as to constitute abutments for the free edges of the said plates whereby to limit their upward swinging movement, the last mentioned plate being formed at its hinged end with an upstanding finger, the upper end of said finger being arranged to ride beneath the first mentioned plate in the direction of its free end when the second mentioned plate is swung down upon its hinge, and thereby swing the said first mentioned plate upwardly, said upper end of the finger being also arranged to ride beneath the first mentioned plate in the direction of its hinged end when the second mentioned plate is swung upwardly upon its hinge, and thereby permitting the said first mentioned plate to fall by gravity.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EDMOND B. FITZGERALD.

Witnesses:

C. A. CARROLL,
N. FOSS.