J. O. GREENE.

SEEDER.

APPLICATION FILED OCT. 29, 1913.

1,105,075.

Patented July 28, 1914.

2 SHEETS—SHEET 1.

Fig. 1

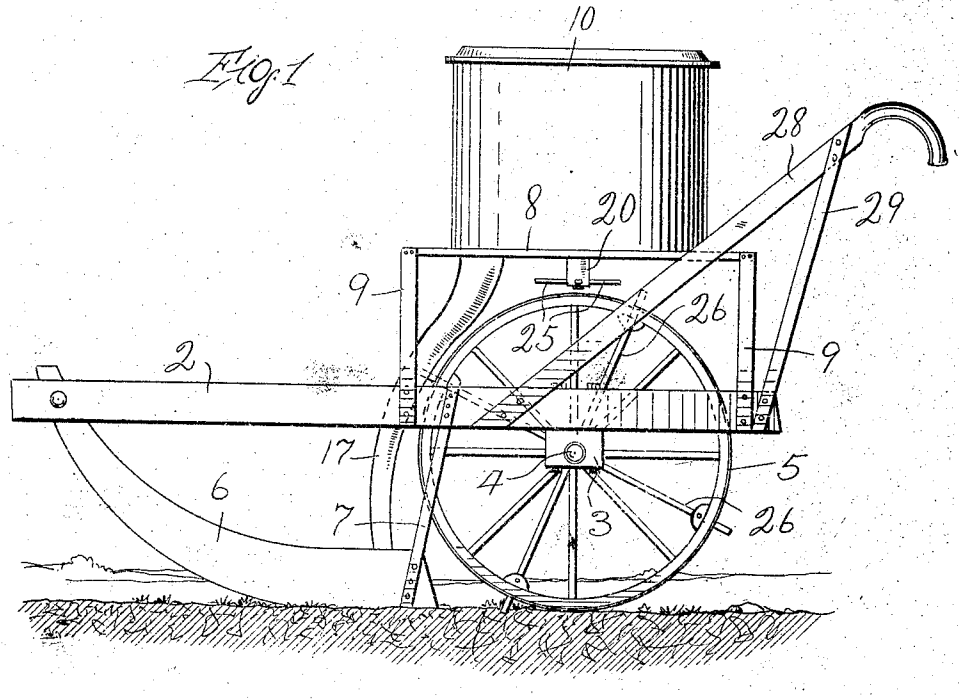


Fig. 3

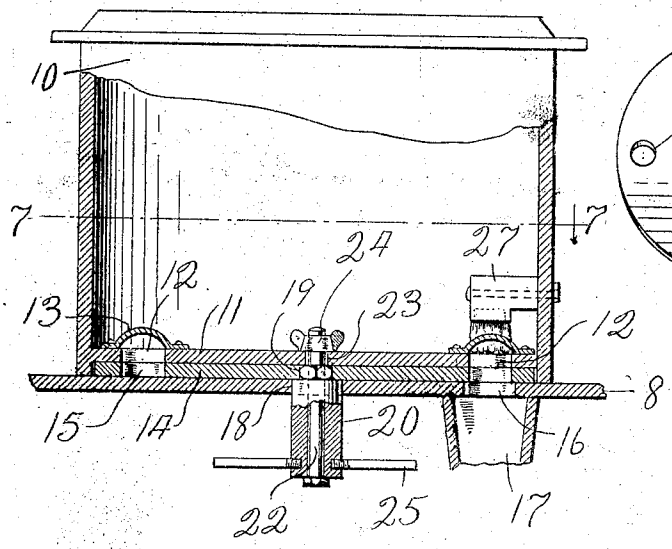
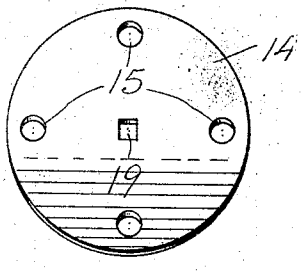


Fig. 5



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2 SHEETS—SHEET 2.

Fig. 2

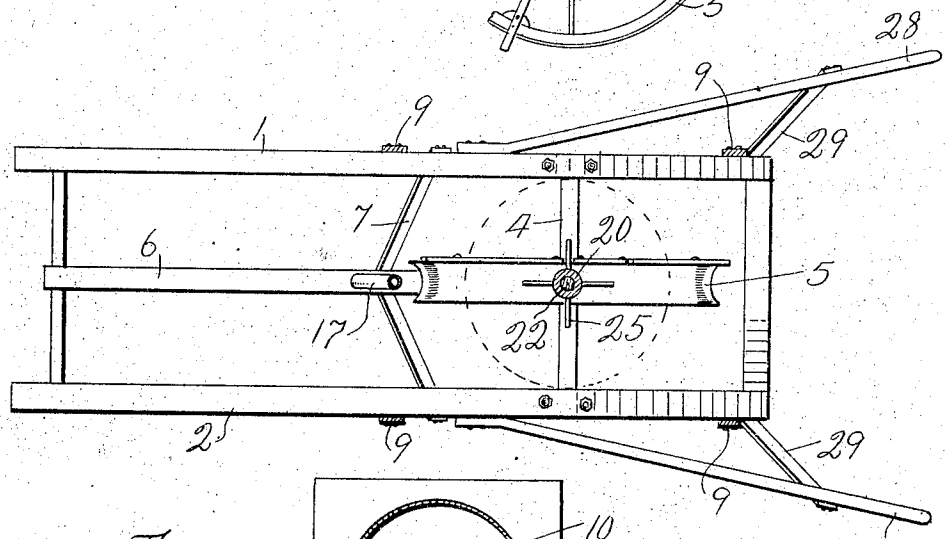


Fig. 9.

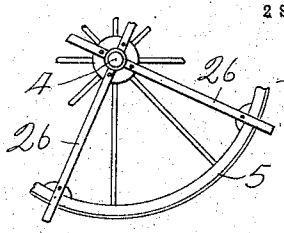


Fig. 4

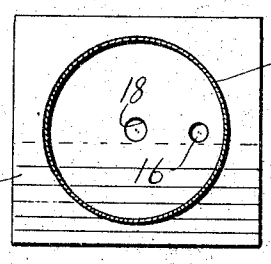


Fig. 6

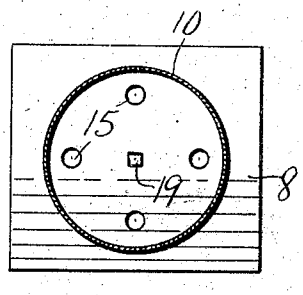


Fig. 7

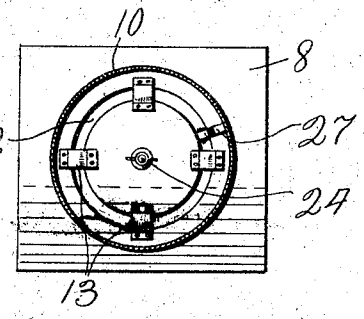
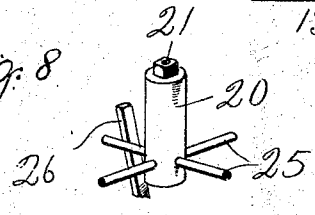


Fig. 8



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UNITED STATES PATENT OFFICE.

JAMES O. GREENE, OF LAKE CITY, FLORIDA, ASSIGNOR OF ONE-THIRD TO JOSHUA L. EDWARDS AND ONE-THIRD TO ROBERT N. PENLAND, OF WATERTOWN, FLORIDA.

SEEDER.

1,105,075. Specification of Letters Patent. Patented July 28, 1914.

Application filed October 29, 1913. Serial No. 798,073.

To all whom it may concern:

Be it known that I, JAMES O. GREENE, a citizen of the United States, residing at Lake City, in the county of Columbia and State of Florida, have invented certain new and useful Improvements in Seeders, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in seeders and more particularly to an improvement in dropping means therefor and the primary object of the invention is to provide an improved dropping mechanism which is operated directly from the driving wheel of the device.

Still another object of the invention resides in providing a device of this character which is simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawings forming a part of this application, Figure 1 is a side elevation of a device constructed in accordance with my invention. Fig. 2 is a plan view thereof. Fig. 3 is a vertical section partly in elevation of the hopper or seed-box used in connection with the device. Fig. 4 is a horizontal section through the seed-box applied on the base plate and disclosing the bottom of said seed-box with the dropping plate removed. Fig. 5 is a perspective view of the dropping plate removed. Fig. 6 is a horizontal section through the seed-box with the bottom thereof removed. Fig. 7 is a horizontal section through the seed-box or hopper as seen on line 7—7, of Fig. 3. Fig. 8 is a detail perspective view of the sleeve member with the radial arms thereon; and Fig. 9 is a detailed side elevation of the ground and driving wheel of the device, disclosing the radial rods or arms thereon.

In describing my invention, I shall refer to the drawings in which similar reference characters designate corresponding parts throughout the several views and in which—

1 and 2 indicate a pair of longitudinal beams connected at various points in their length to transverse bars, to form a frame for the device and rotatably mounted in bearings 3, which are carried adjacent the rear ends of said beam, on an axle 4, which carries an enlarged ground wheel 5 thereon.

Mounted at the forward end of the frame, between the beams 1 and 2, is the furrow-opener 6, which is braced at its lower end to the frame, by means of the bracing arms 7. Mounted on the frame formed of the arms 1 and 2, over the ground wheel 5, is a base or supporting plate 8, held in position above the wheel by means of the supporting arms 9, projecting upwardly from the rear portions of the beams. Mounted on this base and supporting plate 8, is a hopper or seed box 10, the bottom 11 of which is spaced slightly above the lower edge of the walls thereof, so as to provide a space between said bottom and the supporting or base plate, when said seed-box or hopper is placed on the latter. The bottom 11 of this seed-box is provided with an annular slot 12 which completely divides said bottom into two sections, the innermost being a disk and the outermost section an annulus, and these two sections are secured together by a plurality of arcuate securing braces 13.

Interposed between the bottom 11, of the hopper or seed-box and the base plate 8, is a dropping plate 14 which is provided at regular intervals with a plurality of openings 15, the same being in such position on the plate as to register with the annular slot 12 of said bottom 11. The base plate 8 is also provided with a discharge opening 16, with which is adapted to register the opening 15 of the dropping plate 14 and a spout or discharge tube 17 which is secured to the under face of the base plate 8 to surround said opening 16, permits the seeds which are dropped therethrough to be conveyed to the rear end of the furrow-opener. Extending through central registering openings 18 and 19 of the base plate 8 and the dropping plate 14, respectively, is a sleeve member 20 and the opening in said dropping plate 14 is squared to receive snugly therein a square portion 21 of said sleeve. Extending through the bore of the sleeve 20, from the bottom thereof, is a bolt 22, which extends also through a central opening 23 in the bottom 11 of said seed-box or hopper and engaged with the upper threaded end of said bolt is a wing nut 24. From this construction, said seed-box and dropping

plate are securely held in position on the base plate 8 and a means is afforded whereby said dropping plate may be rotated. The sleeve member 20 depends somewhat below the base plate 8 and has a pair of crossed arms 25 carried thereon, whereby to form four projecting portions. Of course, as many projecting portions should be provided as are found necessary, but the number shown and described, is preferable.

Secured to the driving and ground wheel 5, are a plurality of arms or bars 26, four in number, which are secured to the hub and rim respectively, of said wheel. The outer ends of these arms or bars project beyond the periphery of said wheel and form markers for the latter and are also designed for engagement with the projecting arms 25 of the sleeve 20. As the device is propelled, it will be seen that the projecting portions of the arms 26 will contact with the projecting arms 25 on the sleeve 20 and cause said sleeve to be rotated. With the rotation of the sleeve, the dropping plate will also be rotated and seed and other material in the hopper will be received in the openings 15 of said dropping plate and conveyed to the discharge opening 16 in the base plate 8, where the same will be conveyed through the discharge tube 17 to the furrow-opener.

Mounted in the side wall of the hopper or seed-box 10, adjacent the discharge opening 16 therein, is a brush 27, whereby the excess seed and grain will be cleaned from the plate 14 prior to the discharge thereof from the hopper. Handle bars 28 are secured to the sides of the beams 1 and 2 and project upwardly and rearwardly therefrom, the outer ends of the same being provided with handle members and said handle bars are supported from the beams by means of the bracing arms 29.

From the foregoing description of the construction of my improved device, the operation thereof will be readily understood and it will be seen that I have provided a device which is simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

While I have particularly described the elements best adapted to perform the functions set forth, it is obvious that various changes in form, proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described this invention, what is claimed is:—

1. In a seeder of the class described, the combination with a main frame, and rotatable supporting means therefor; of a plate secured on said frame and provided with a discharge opening, a hopper mounted on said plate, the bottom of which is provided with a slot, a dropping plate interposed between the bottom of said hopper and the aforesaid plate, said dropping plate being provided with a plurality of spaced openings adapted to register with the aforesaid slot and discharge opening, a sleeve loosely disposed through the center of the first mentioned plate, the extreme upper end of said sleeve being squared and disposed through the center of said dropping plate to cause the latter to be operated therewith, means to support said sleeve in position, a plurality of radial arms carried on the lower end of said sleeve, and means in connection with the rotatable supporting means of the frame adapted to contact with the radial arms of said sleeve to rotate the latter as the device is propelled.

2. In a seeder of the class described, the combination with a main frame; of a plate supported thereabove having a discharge opening therein and also provided with a central opening, a hopper mounted on said plate at the bottom thereof and having an annular slot therein and also provided with a central opening, means securing the sections formed by the annular slit therein together, a dropping plate interposed between said bottom, and the first mentioned plate, said dropping plate being provided with a central squared opening and having a plurality of other openings therein adapted for registration with the aforesaid annular slot, and said discharge opening, a sleeve loosely disposed in the central opening of the first mentioned plate, the extreme upper end of said sleeve being squared and disposed snugly in the square opening of said dropping plate, means in connection with said sleeve and the bottom of the hopper to rotatably secure the sleeve in position, and means for rotating said sleeve whereby to cause said dropping plate to be rotated.

3. In a seeder of the class described, the combination with a main frame; of a plate supported thereabove having a discharge opening therein and also provided with a central opening, a hopper mounted on said plate, the bottom thereof having an annular slot therein and also provided with a central opening, means securing the sections formed by the annular slot therein together, a dropping plate interposed between said bottom and the first mentioned plate, said dropping plate being provided with a central squared opening and having a plurality of other openings therein adapted for registration with the aforesaid annular slot and said discharge opening, a sleeve loosely disposed in the central opening of the first mentioned plate, the extreme upper end of said sleeve being squared and disposed snugly in the squared opening of said drop-

ping plate, a bolt disposed through said sleeve and through the opening in the bottom of said hopper, means in connection with the upper end of said bolt to rotatably retain said sleeve in position, a plurality of arms removably engaged with the lower end of said sleeve and projecting outwardly therefrom, and means adapted for engagement with said arms to rotate said sleeve and correspondingly rotate said dropping plate.

4. In a seeder of the class described, the combination with a main frame, and supporting means therefor; of a plate supported above said frame having a discharge opening therein, and also provided with a central opening, a hopper mounted on said plate and having the bottom thereof spaced slightly above said plate, said bottom of the hopper being provided with an annular slot and also having a central opening therein registering with the opening of the aforesaid plate, a dropping plate interposed between said bottom and first mentioned plate, said dropping plate being provided with a central squared opening and having a plurality of other openings therein adapted for registration with the aforesaid annular slot and the discharge opening in the first mentioned plate, a sleeve disposed loosely through the central opening of the first mentioned plate to abut a portion of the dropping plate, the extreme upper end of said sleeve being reduced and squared to be received snugly in the square opening of said dropping plate, a bolt disposed through said sleeve and through the opening in the bottom of said hopper, said bolt having the head thereof disposed in engagement with the lower end of said sleeve, a nut engaged with the upper end of the bolt and contacting with the upper face of the bottom of the hopper, to retain said sleeve in position for rotation, and means for rotating said sleeve to correspondingly rotate the dropping plate between the bottom of the hopper and the first mentioned plate.

5. In a seeder of the class described, a supporting member, a hopper mounted thereon, a dropping plate in connection with the hopper and supporting member, a sleeve-like member depending from the supporting member and having connection with the dropping member to actuate the latter upon the rotation of said depending member, said depending member being provided with a plurality of threaded sockets adjacent its lower end, a plurality of radial arms between the inner ends thereof, threaded into engagement with the threaded sockets of said depending member, and means adapted for engagement with said radial arms to rotate the member carrying the latter.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JAMES C. GREENE.

Witnesses:
B. D. GRUN,
MARY COLE.