

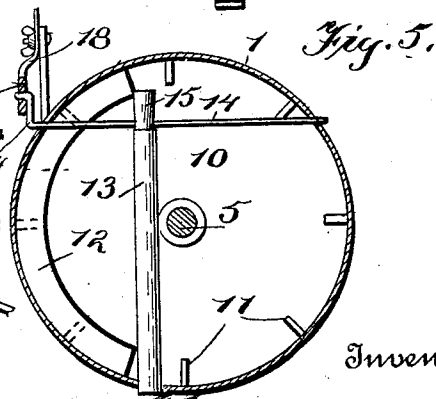
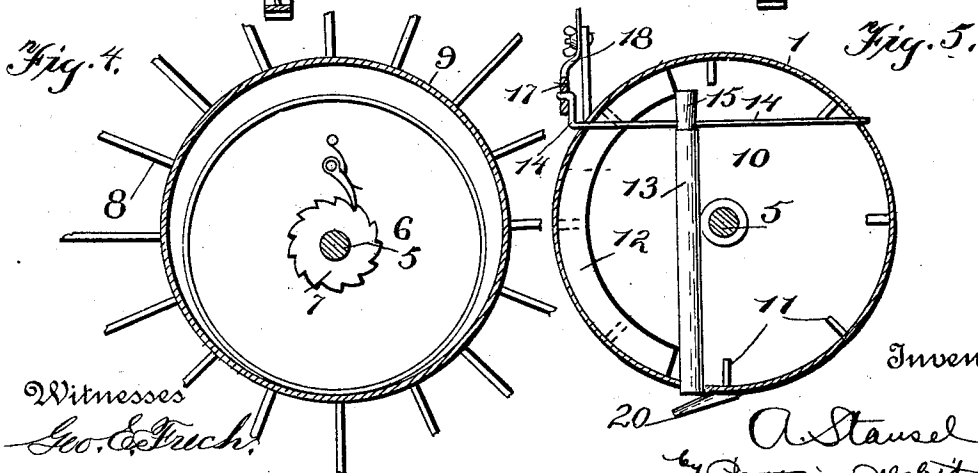
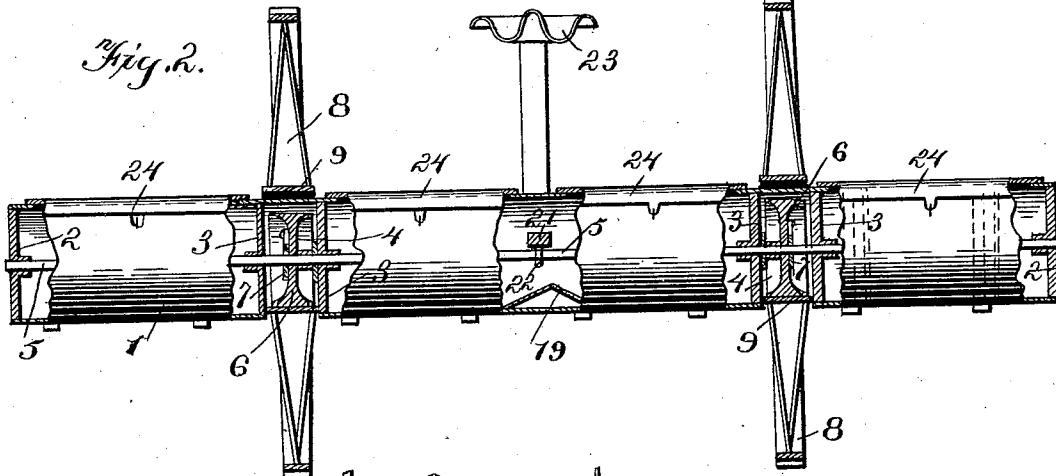
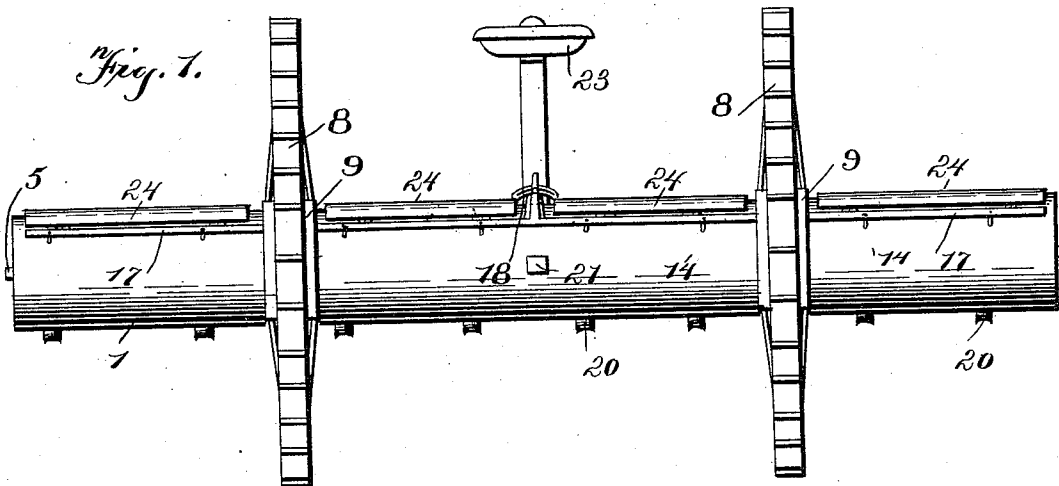
(No Model.)

2 Sheets—Sheet 1.

A. STANSEL.
BROADCAST SEEDER.

No. 579,903.

Patented Mar. 30, 1897.



Witnesses

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(No Model.)

2 Sheets—Sheet 2.

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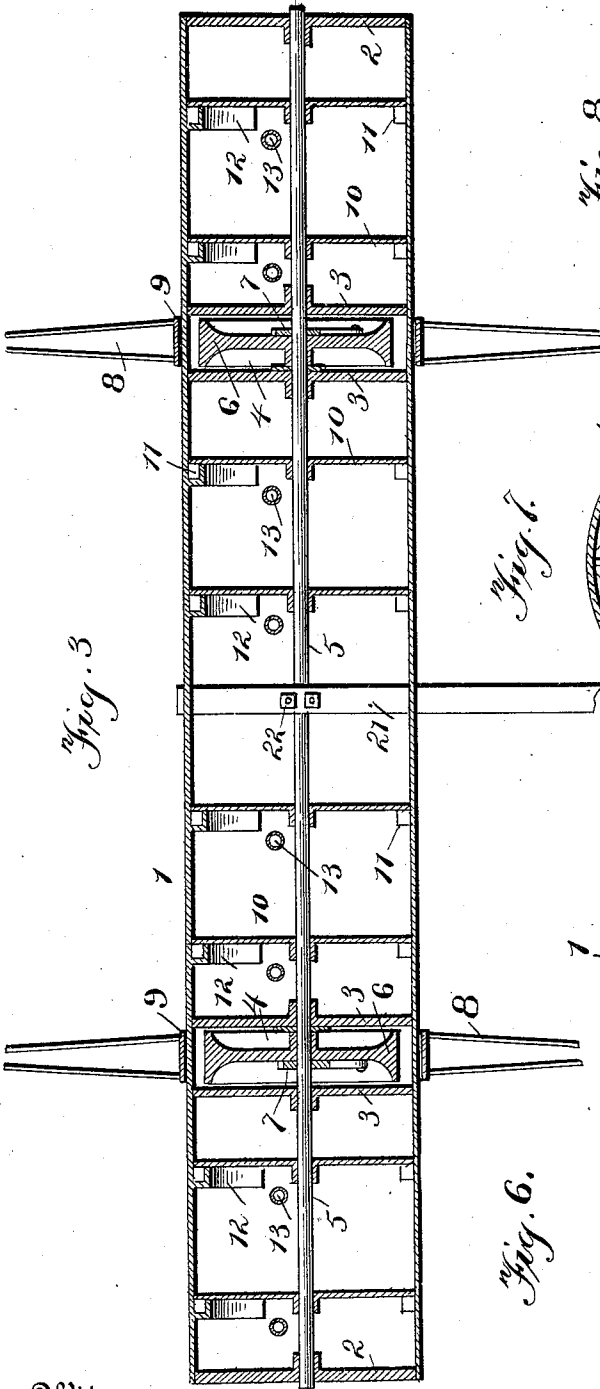


Fig. 3.

Fig. 4.

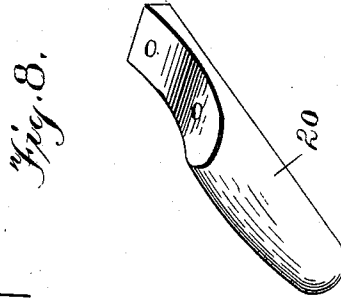
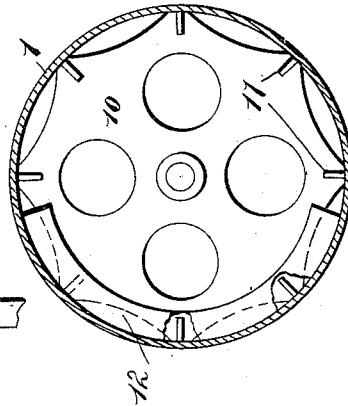
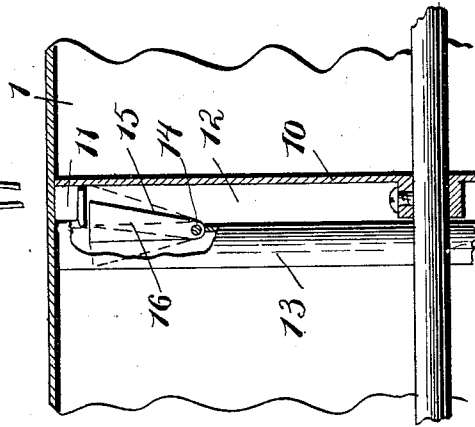


Fig. 8.

Fig. 6.



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UNITED STATES PATENT OFFICE.

ALONZO STANSEL, OF YORKVILLE, ILLINOIS.

BROADCAST SEEDER.

SPECIFICATION forming part of Letters Patent No. 579,903, dated March 30, 1897.

Application filed September 4, 1896. Serial No. 604,880. (No model.)

To all whom it may concern:

Be it known that I, ALONZO STANSEL, of Yorkville, in the county of Kendall and State of Illinois, have invented certain new and useful Improvements in Broadcast Seeders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to broadcast seeders; and the object thereof is to provide a machine simple in its construction and operation, having no complicated parts, and one which will sow the seed with extreme regularity and which may be accurately gaged to sow the amount of seed desired.

The invention consists in the novel features of construction hereinafter fully described and claimed, and illustrated by the accompanying drawings, in which—

Figure 1 is a rear elevation of the machine.

Fig. 2 is a vertical longitudinal sectional view looking rearward from the front of the machine. Fig. 3 is a sectional plan view. Fig. 4 is a vertical cross-sectional view taken at a point adjacent one of the drive-wheels. Fig.

5 is a similar view taken through one of the seed-disks. Fig. 6 is an enlarged detail view of the upper portion of one of the seed tubes and disks, illustrating the adjustment of the tube-spout with relation to the disk. Fig. 7 is a view showing one of the disks 10 in side elevation. Fig. 8 is a detached enlarged perspective view of one of spreaders at the delivery end of the spout.

The casing 1 is of cylindrical form and preferably constructed of heavy sheet-iron or light boiler-iron. Each end of the cylinder-casing is closed by a strong head 2. The casing is divided off into three sections or compartments by heads or partitions 3, said heads or partitions occurring in pairs to form spaces 4. Shaft 5 extends centrally from end to end of the casing and is suitably journaled in heads 2 and 3. Friction-rollers 6 are mounted loosely on the shaft in spaces 4 and are connected with the shaft by ratchet mechanism 7, so that the pulleys in rotating in one di-

rection will turn the shaft, but their opposite rotation will be free thereon.

Drive-wheels 8 are formed with large internally-smooth hubs 9, and the hubs are of sufficient diameter to slip over the ends of casing 1 to spaces 4. The casing at the bottom of these spaces is cut away to permit the wheel-hubs to seat therein and be engaged by friction-rollers 6. In this manner the drill-casing is supported upon the drive-wheels, and the cut-away portions of spaces 4 form offsets sufficient to hold the wheels in proper place. Heads 3 are of substantial material, as hereinbefore stated, and are sufficiently strong to resist lateral displacement of the drive-wheels without injury to the casing proper.

When the machine is moved forward, friction-rollers 6, owing to their frictional contact with the wheel-hubs, will be rotated, and ratchet mechanism 7 is so arranged that when the pulleys are revolved in that direction shaft 5 will also be turned. When moving in the opposite direction, as when backing the machine to proper place for starting the sowing, friction-rollers 6 will move freely upon the ratchet and the shaft will not be operated.

Secured to shaft 5 at proper intervals are disks 10, which fit snugly the interior of the casing, and arranged upon one side only of each disk, and at proper intervals, are the lifts 11. These lifts are adapted to travel in the semicircular passages 12, secured to the back or rear side of the interior of the casing, said semicircular passages being formed of angular metal and extending from the bottom to the top of the casing-interior. Seed-tubes 13 are secured in vertical position in the casing, the same being arranged adjacent passages 12 and at their lower ends discharging through the casing-bottom, as will be presently explained. At the upper end of each tube and upon the side adjacent the seed-disk is formed an opening, and pivotally mounted in the lower end of this opening, upon crank-shaft 14, is the spout 15, having side flanges 16. The seed-tube is so arranged that the spout 15, when turned outward, forms a continuation of the upper end of passage 12, so that as the seed is raised upward through said

passage by lifts 11 of the disk it will at the upper end of the passage discharge into spout 15 and by said spout be deflected into the seed-tube. The crank ends of shafts 14 extend outward to the rear side of casing 1 and are united by bar 17, extending longitudinal the casing, said bar being provided with an adjusting device 18. This bar enables the operator to so adjust the spouts in unison that all the seed carried upward through passages 12 will be deposited thereinto and passed outward through the seed-tubes, or the adjustment may be such that the spouts will extend only partially across the path of the lifts and thus receive only part of the seed raised. In this way the amount of seed sown may be accurately regulated.

As before stated, by giving the spouts the extreme outward adjustment all the seed will be passed into the tubes, and from this the amount of seed sown may be lessened according to the adjustment of the spouts, as will be readily understood. By turning the spouts entirely into the tubes, as when the seeder is being moved to or from the field, the discharge of seed is entirely cut off. V-shaped bridges 19 are arranged between the respective seed-disks on the bottom of the casing, so as to cause the seed to move toward the disks automatically.

The seed is passed through the casing-bottom and deposited upon the deflectors 20, secured to the exterior of the casing-bottom and arranged immediately beneath the discharge ends of the tubes. These deflectors serve to effectually scatter the seed.

The seeder may be provided with a pole 21, having its rear end projected through the casing and provided with a bearing 22 for shaft 5. Seat 23 may also be conveniently arranged upon the casing. Suitable openings are provided in the upper side of the casing for filling the same, said openings being closed by hinged covers 24.

From the foregoing description and the drawings it will be seen that the machine-casing consists in the main of a metallic cylinder, which of itself, owing to its cross-sectional form, is of the greatest possible strength, and this in conjunction with the several heads and partitions makes the same extremely rigid and durable, while at the same time it is light and comparatively inexpensive. The operation is sure and accurate, as the seed-operating mechanism must act when the seeder is moving forward. The adjustment of the spouts for deflecting the seed into the tubes is sure and accurate and may be easily and quickly manipulated. By simply moving the spout-adjusting bar it becomes impossible for any seed to discharge from the casing, as the spouts when closed into the tubes completely close them from the casing-interior, so that by no possibility can seed get thereinto. The seed-dropping tubes, being entirely within the casing, are protected, so that breaking from contact with stumps and other obstruc-

tions, as is so often the case with seeders, is avoided.

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

1. An improved seeder comprising a seed-containing casing, a tube discharging therefrom, a seed-lift movable in the casing adjacent the tube, and a spout adjustable across the discharge of said lift for deflecting the seed into the tube, substantially as shown and described.

2. An improved seeder comprising a seed-containing casing, a tube discharging therefrom, said tube being provided with an opening, a spout adapted when turned inward to close said tube-opening, a seed-lift arranged adjacent the tube, said spout being adapted to turn outward in line with the lift-discharge and deflect the seed into the tube, and an operating means, substantially as shown and described.

3. An improved seeder comprising a seed-containing casing, a tube discharging therefrom, a curved passage-way within the casing and having its open ends adjacent the bottom and top respectively of the casing-interior, a rotary carrier, lifts thereon adapted to traverse the curved passage-way from end to end and carry seed therethrough, a device adjacent the discharge end of the passage-way for deflecting the seed into the tube, and an operating means, substantially as shown and described.

4. An improved seeder comprising a seed-containing casing, a tube discharging therefrom, a curved passage-way open at its ends to the interior of the casing, said passage-way being formed with one open side, a disk rotatable in the casing and adapted to close said open side, lifts arranged on one side of the disk, and adapted to traverse the passage-way and carry seed therethrough, a device at the discharge end of the passage-way for deflecting the seed into the tube, and an operating means, substantially as shown and described.

5. An improved seeder comprising a seed-containing casing, said casing having open-bottom spaces formed therein, a shaft journaled in the casing, seed-dropping mechanisms adapted to be operated by the shaft, friction-rollers arranged on the shaft in said casing-spaces, and drive-wheels having enlarged hubs which are adapted to be confined in said open-bottom spaces and have frictional contact with said friction-rollers, whereby when the drive-wheels are rotated, the friction-rollers and the shaft will also be rotated, substantially as shown and described.

6. An improved seeder comprising an elongated cylindrical casing, said casing being formed with open-bottom spaces between its ends, a shaft extended through the casing, seed-dropping mechanism operated by the shaft, friction-rollers arranged on the shaft in the said casing-spaces, and drive-wheels

having enlarged hubs which are adapted to slip over the casing ends and be confined in the open-bottom spaces and have frictional contact with the pulleys in said spaces, whereby when the drive-wheels are rotated the friction-rollers and shaft will also be revolved, substantially as shown and described.

7. An improved seeder comprising a seed-containing casing, a shaft extending there-through, a seed-operating mechanism adapted to be actuated by the shaft, friction-rollers mounted loosely on the shaft, ratchets connecting the friction-rollers with the shaft so as to cause the same to move together when turning in one direction but which permit the friction-rollers to move freely on the shaft when moving in the opposite direction, and drive-wheels having enlarged hubs which encircle the said friction-rollers with which they have frictional contact, whereby when the drive-wheels are revolved the friction-rollers will also revolve and cause the shaft to revolve or else revolve freely on the shaft according to the direction of rotation, substantially as shown and described.

8. An improved seeder comprising an elongated casing of cylindrical form, heads closing the respective ends of the casing, heads arranged intermediate the casing ends and in pairs, the heads of each pair being slightly

separated to form spaces, said spaces being open at their bottom, a shaft journaled centrally in the casing and extending from end to end, seed-dropping mechanisms operated by the shaft, the friction-rollers on the shaft in said open-bottom spaces, and the drive-wheels having enlarged hubs which encircle the open-bottom spaces and have frictional contact with the pulleys, substantially as shown and described.

9. An improved seeder comprising a seed-casing, a delivery-spout within the casing, a carrier within the casing for carrying the seed to the spout, deflectors for receiving the seed, and a shaft connected to the deflectors, said shaft having a crank, and an operating means connected to the crank, substantially as described.

10. An improved seeder comprising a seed-casing, a series of delivery-spouts, deflectors arranged in the receiving ends of the spouts, and an operating-bar connected to and operating all of the deflectors simultaneously, substantially as described.

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

ALONZO STANSEL.

Witnesses:

GEORGE N. RUBY,
F. R. FRAZIER.