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D. E. SPEICHER

HORN SEED SOWER

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Inventor

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To all whom it may concern:

Be it known that I, Daniel E. Speicher, a citizen of the United States, residing at Urbana, in the county of Wabash and State of Indiana, have invented certain new and useful Improvements in Horn Seed Sowers, of which the following is a specification.

This invention appertains to certain improvements in seed sowers or distributors generally, and more particularly to a manually operable and portable type thereof.

The principal object of the invention is to provide for a device of the class mentioned, and one of a comparatively simple, inexpensive and durable construction and arrangement of parts, capable of being readily carried by a person over the ground to be seeded, and easily manipulated to efficiently and effectively distribute or sow the seed broadcast in an accurate and uniform manner.

Another object of the invention is to provide for a device of the type set forth, and one embodying a mechanically refined construction and arrangement of parts, whereby to be readily collapsed and folded into a convenient compact package or bundle, when not in use, and wherein the parts may be easily assembled together into operative condition, or separated one from the other for replacement or repair.

A further object of the invention is to provide for a seed sower or distributor as hereinbefore characterized, and one embodying a simple and effective means for regulating the number or volume of seed to be broadcast therefrom, and, in addition thereto, a means for assuring of the proper spray or spread of the seed from the device.

With the foregoing and other objects in view, the invention resides in the certain new and useful construction and arrangement of parts, as will be hereinafter more fully described, set forth in the appended claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of the seed as it appears in position for use.

Fig. 2 is a fragmentary longitudinal section of certain of the parts, and showing the manner of mounting the gage or regulator in position for operation therein and to connect the parts aforesaid together, and

Fig. 3 is a front elevation of the gage or regulator per se,

Fig. 4 is a similar view thereof, but with the gage or regulator disk removed therefrom.

Fig. 5 is a longitudinal section taken on the line 5-5 of Fig. 3.

Fig. 6 is a fragmentary perspective view of a preferred construction of discharge tube, and showing the formation of the same for effecting the proper spray or spread to the seed, and

Fig. 7 is a similar view of one of the inner or intermediate tube sections of the collapsible discharge or distributor spout.

Referring to the drawing, wherein similar characters of reference designate corresponding parts throughout the several views thereof, the numeral 10 indicates a bag or sack open at its upper edge and arranged to be suspended from the neck of a person by means of a suspension strap 11. Extending laterally from one side of the bottom of the bag or sack 10 is a discharge spout 12, which is of taper formed outwardly from its point of connection therewith. The free end of the spout portion 12, of the bag or sack 10, is preferably turned upon itself in a manner to provide a bead 13, arranged to abut an annular bead 14 formed at the larger end of a cylindrical gage or regulator casing 15, when the latter is passed outwardly of the open end of the spout 12.

The casing 15 is frictionally engaged within the larger end of an inner section 16, of a tapered collapsible discharge tube or horn formed of an intermediate tube section 17 and an outer distributor tube section 18, in addition to the inner tube section 16, To effect a spraying or spreading action to the seed in its discharge from the small end of the outer tube section 18, this end of the same is preferably cramped or fluted in an inward direction, as at 19, in Fig. 6, or as shown in Fig. 7, the end may be simply turned or spun on curved lines as at 20, for such purpose.

To regulate the discharge of seed from the bag or sack 10 to the distributor horn or tube, the gage or regulator casing 15 is provided with an outer end wall 21, which is cut away to provide an opening 22, and cooperative with this opening is a regulator disk 23 mounted for rotary movement on the outer face of the end wall 21, by means of a pivot stud or pin 24 secured in the wall 21 at the center thereof, an opening 26 being provided therein for the reception of the pivot.
pin, substantially as is shown in Fig. 4. The regulator or gage disk 23 is bent to provide an angularly disposed edge portion 26, which is utilized as a finger grip for the rotation of the same on its pivot 24. When the disk 23 is turned on the pivot 24, to bring the line of the bend of the angularly disposed portion 26 thereof into alignment with the straight wall of the opening 22, the full area of the latter will be available for the passage therethrough of seed from the bag or sack 10, and by turning the disk 26 from such position to vary the angular relation of the line of bend of the portion 26 with respect to the straight edge of the opening 22, the size of the latter is to be varied accordingly to the kind of seed to be distributed. To retain the disk 23 at any of its several predetermined positions, the same is provided with a single indentation 23', at a point inwardly of its peripheral edge, which is arranged to snap into engagement with any one of a semi-circular series of indentations 21' formed in the end wall 21 of the gage or regulator casing 18, during the turning movement of the disk 23. As shown in Figs. 3 and 4, associated with each of the indentations 21', of the end wall 21, are numeral graduations which are to be registered by an opening 22' formed in the disk 23 for the purpose, whereby the size of the opening 22 will be varied according to the graduation selected and registered by the sight opening 23' of the disk 23. To assure of the slight frictional contact of the disk 23 with the wall 21, and of the engagement of the indentation 23' of the former, with the indentations 21' of the latter, and to prevent free rotation of the disk or accidental displacement of the same from set position, the disk 23 is formed at its center with an outwardly convex resilient portion 27 centrally through which the pivot pin 24 passes, the outer end of the pivot pin being headed in a manner that this portion 27 is placed slightly under tension for such purpose.

As an instance of the use of the device, the graduation numerals 1, 2, 3, 4, 5 and 6 are arranged to admit of the disk 23 being adjusted correspondingly to vary the size of the opening 22 for the discharge therethrough from the bag or sack 10 of seeds of different kinds, and for the several settings of the disk 23, the following schedule of approximate values has been determined: By setting the disk 23 with the numeral 1 of the graduations exposed through the slight opening 23' thereof, the device will be set for the sowing of oats at the rate of two bushels to the acre; at the graduation 2, wheat, one and one-half bushels to the acre; at the graduation 3, alfalfa, twenty pounds to the acre; or flax, three gallons to the acre; at the graduation 4, clover, eight pints to the acre; and at the graduation 5, timothy, four pints to the acre.

From the foregoing, it will be readily apparent that, while a preferred embodiment of the device has been described and illustrated herein in specific terms and details of construction and arrangement, various changes in and modifications of the same may be resorted to without departing from the spirit of the invention, or the scope of the claims appended hereto.

Having thus fully described the invention what is claimed, is:

1. In a seed sower a tubular discharging element, a plate arranged therein and of a contour to provide a segment-shaped opening, and an adjustable pivoted gage disk shaped similar to said plate for varying the size and shape of said opening for discharge.

2. In a seed sower a tubular discharging element, a plate arranged therein and of a contour to provide in connection with said element a segment-shaped discharge opening, and an adjustable gage disk pivotally supported from and against one face of said plate and of a contour similar to that of the plate and providing means when shifted for varying the size and shape of said opening for discharge.

In testimony whereof, I affix my signature hereto.

DANIEL E. SPEICHER.