

(No Model.)

B. F. MARTIN.
FERTILIZER DISTRIBUTER.

No. 459,758.

Patented Sept. 22, 1891.

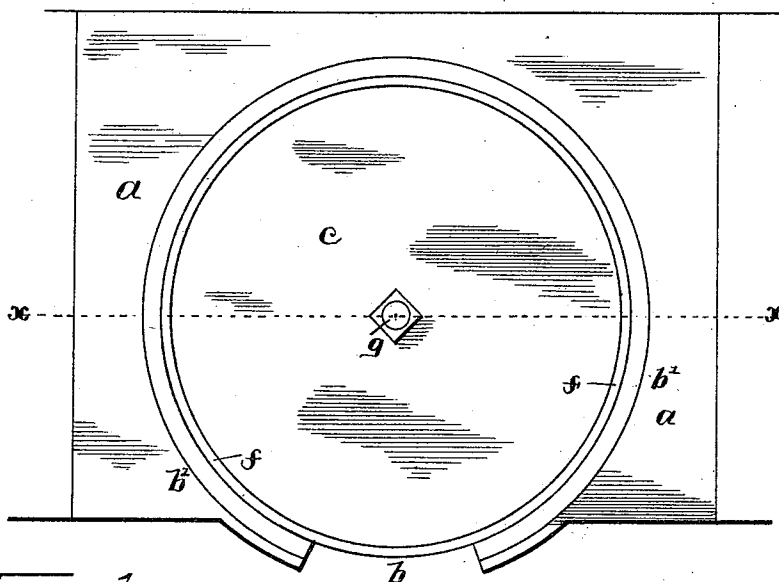


FIG. 1.

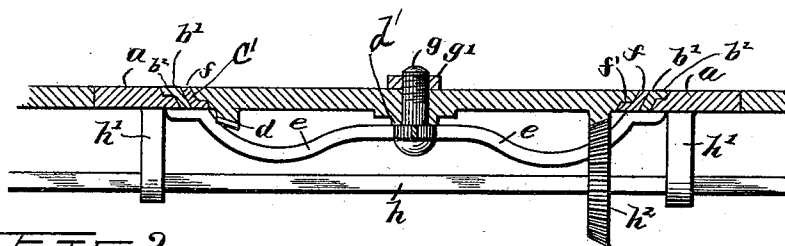


FIG. 2.

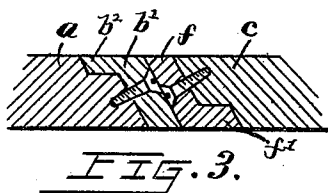


FIG. 3.

WITNESSES:

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BENJAMIN F. MARTIN, OF COLUMBUS, OHIO.

FERTILIZER-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 459,758, dated September 22, 1891.

Application filed January 7, 1891. Serial No. 377,048. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. MARTIN, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Fertilizer-Distributers, of which the following is a specification.

My invention relates to the improvement of fertilizer-distributers of that class which are designed to be used as attachments for grain-drills.

The objects of my invention are to so form the feeding-disk of devices of this class as to combine with a desirable fertilizer-carrying surface a superior non-corrodent bearing-surface, which will resist the action of the acid or other elements of the fertilizer, and thus prevent the formation on said bearing-surface of rust, gum, or other foreign deposits, which will interfere with the free action of said disk, to so form said bearing portion of the disk as to admit of its being readily detached, if desired, and to provide the plate-aperture within which said disk bears with a bearing-ring of a similar non-corrodent substance. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved feeding-disk and a bottom plate of the fertilizer-receptacle in which said disk revolves. Fig. 2 is a sectional view on line *xx* of Fig. 1, and Fig. 3 is a sectional view in detail of the bearing portions of the disk and plate.

Similar letters refer to similar parts throughout the several views.

a represents the bottom plate of a fertilizer-receptacle, which may be of any desirable or well-known form, and which does not form a part of my invention.

As is usual in this class of distributers, the plate or plates *a* are provided at intervals with apertures or circular openings, which are broken only by an opening or mouth *b* at one side thereof, and through which is deposited in the ordinary manner a fertilizing material. Fitted within each of the plate-apertures and of equal height with said plate is a narrow ring of glass *b'*, having an upper flange or shoulder *b²*, said ring being shaped to conform to the bevel of the inner surface of the aperture. This plate-ring *b'* may be secured by screws or otherwise to the plate, its flanges *b²*

having a flush bearing in a suitable seat in the plate-surface adjoining its aperture, and is provided with a break or opening therein, which corresponds with the mouth *b* of the plate-aperture both in size and location.

c represents the feeding-disk, which is of a thickness corresponding with the thickness of the plate *a*, and the body of which is formed of a suitable metallic substance. The periphery of this metallic disk-body is beveled, as shown, to conform to the bevel of the plate-apertures, and is formed with a periphery *c'*, which is produced by forming the lower portion of said disk of a less circumference than its upper portion.

The under side of the disk has formed therewith a circular row of cog-teeth *d*, while a short downwardly-extending boss *d'* is formed about the central bolt-hole thereof.

f represents a bushing or bearing ring of glass, which is provided on its lower side with a short inwardly-projecting flange *f'*, and which has its outer surface or periphery inclined or beveled to correspond with the incline or bevel of the disk-body, as shown. This glass bearing-ring *f* is of equal height with and fits against the periphery of the disk *c*, its flanges *f'* bearing upward against the shoulder *c'* of the disk-body. The ring *f*, which is preferably connected with the disk-body by screws, may be otherwise detachably connected therewith. The disk thus formed is of such size as to fit within and rotate in contact with the plate-ring *b'*.

The central boss *d'* of the disk-body is supported upon the hub or center of the bearing-frame *e*, the outwardly-extending arms of which curve upwardly and are connected or formed with the plate *a*. This body is pivoted in its position upon the frame center by means of a short pivot bolt *g*, which passes loosely through said frame-hub or center and the center of the disk-body and has screwed upon its upper end a nut *g'*.

h represents the disk-operating shaft, which is journaled in the usual manner in suitable bearing-arms *h'*, which depend from the bottom plates *a*. This shaft *h* carries a gear-wheel *h²*, which gears with the cog-teeth *d* of the disk-body *c*.

From the construction herein shown and described it will be seen that the contact or

bearing surfaces of the bottom plates *a* and feeding-disks are formed of a non-corroding material which will prevent any tendency of the bearing parts toward becoming clogged through the action thereon of the chemical elements of the fertilizing material.

I am aware that feeding-disks formed entirely of glass have been used heretofore; but it has been demonstrated that while glass forms a superior bearing or contact surface, for the reasons before given, its smooth or slippery surfaces does not form as effective a surface as the metal, inasmuch as the natural roughness of the latter aids in taking up the fertilizer, while the smooth surface of the glass allows the material to slip thereon without engaging with its surface again.

From the construction shown and described it will also be observed that the bearing-rings are removable and may be replaced by new rings if it is found desirable to do so.

The construction of other parts of fertilizing attachments for grain-drills has been omitted from the description and illustration

herein given, said parts being old and well known and forming no part of my invention.

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

1. In a fertilizing-distributor, a pivoted feeding-disk having a metallic body and a peripheral bearing-ring of glass or other non-corroding material detachably connected with said body, substantially as described.

2. In a fertilizing-distributor, the combination, with the pivoted feeding-disk body of metal and a peripheral disk-ring of glass or other non-corroding material, of a fertilizer-receptacle bottom plate *a*, provided with an aperture, and a bearing-ring of glass or other non-corroding material lining said aperture, said feeding-disk supported and adapted to be rotated in said aperture, substantially as specified.

BENJAMIN F. MARTIN.

In presence of—

C. C. SHEPHERD,

C. D. SAVIERS.