J. S. BOGLE.
Grain-Drills.

No. 197,085 Patented Nov. 13, 1877.

Fig. 1.

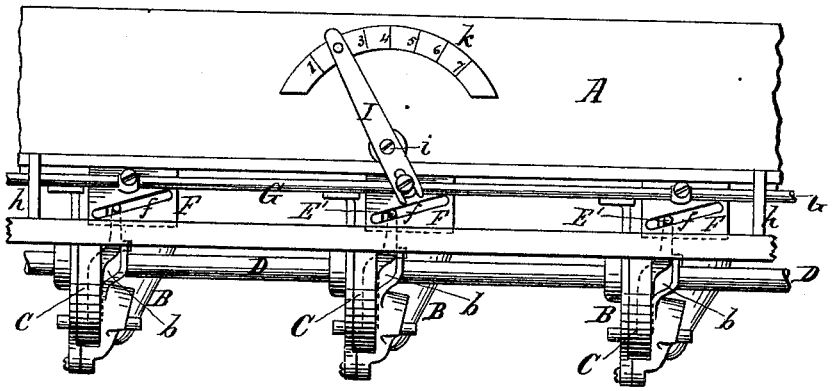


Fig 2.

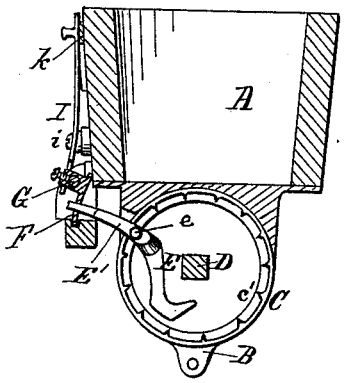
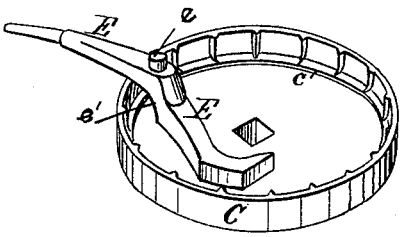


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES S. BOGLE, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN GRAIN-DRILLS.

Specification forming part of Letters Patent No. **197,085;** dated November 13, 1877; application filed July 19, 1877.

To all whom it may concern:

Be it known that I, JAMES S. BOGLE, of Springfield, county of Clarke, State of Ohio, have invented certain new and useful Improvements in Grain-Drills, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a rear elevation of a section of the grain-box, showing my improvements applied. Fig. 2 is a vertical section through the same in line with one of the distributers, and Fig. 3 is a perspective view of one of the flanged distributer-wheels and its adjustable gage detached.

Similar letters of reference denote corresponding parts of the machine wherever used.

My invention relates to that class of grain-drills employing what is termed a "force feed," consisting, in the present instance, of a series of vertical distributing-wheels, flanged on the periphery, and having the feed-channel formed inside of said flange, at the side of the wheel, and employing each an adjustable gage within said channel, for regulating the quantity of grain passing through the channel to the discharge-outlet; and my improvement consists, first, in a novel means for effecting the simultaneous and uniform adjustment of the several gages; and, second, in a novel construction of the distributing-wheels, whereby each is provided with a permanent ledge or templet for regulating the setting of the gage, and thereby securing the arrangement of the several gages in uniform relation to the several distributing-wheels.

In the accompanying drawings I have shown only so much of a grain-drill as is necessary to illustrate my improvement, the parts of the machine not shown being constructed in any usual or preferred manner.

A represents the grain-box; B B, the distributer-wheel casing, secured underneath said box; and C C, the vertical distributing-wheels, arranged within said casings, and mounted upon a common through-axle, D, by means of which they are rotated in any usual manner. These wheels are provided each with a peripherical flange, having the usual inner ribs or starts, and just inside of these starts the disk portion of the wheel has an annular ledge, c', formed upon it, as shown in Figs. 2 and 3, affording a permanent templet for and insuring the uniform setting of the gages, as hereinafter explained.

E E are the gages, arranged one in each of the flanged distributing-wheels, and provided on the side opposite to the wheel with a stud or pivotal pin, *e*, which has a bearing in the adjacent casing-plate. The gage is made in angular form, or is cut away at e', to accommodate the flange of the wheel, and to permit the shank E′ of said gage to pass by and outside of said flange, through a slot or opening at *b* in the casing-plate, and the outer end of this shank enters an inclined slot, *f*, formed in a laterally-reciprocating plate, F. (See Fig. 1.)

A series of the slotted plates F is shown, in the present instance conforming to the number of distributing-wheels employed, each adjustably connected with a sliding rod or bar, G, by a sleeve and set-screw, or equivalent device, adapting them to be simultaneously and uniformly adjusted; but other constructions may be employed for effecting the uniform adjustment of the gages. For example, the inclined slots, instead of being formed in separate plates adjustably attached to the sliding rod or bar, as explained, may be formed in the bar itself, expanded in width to accommodate them. The former construction is, however, preferred, as permitting the relative adjustment of the plates to compensate for any little inaccuracies in the castings or differences in the feed of the different wheels.

The slotted plates F and rod or bar G are arranged and move in a line parallel with the distributer-wheel shaft, or nearly so, in suitable guide or bearing brackets *h* at the rear lower corner of the grain-box, thus giving them a compact arrangement, out of the way of the other operative parts of the machine; and they are operated by a lever, I, pivoted at *i* upon the rear wall of the grain-box, as shown, or at any other suitable or convenient point on the machine, as may be preferred. The upper end of this lever moves over a graduated arc or surface, *k*, and serves, in connection therewith, to indicate the position of the gages, and the amount of seed to be sown per acre, or other given quantity of ground.

The lever may be held at any desired point of adjustment, by means of a spring-pin entering a notch, by a set-screw attached to the lever and moving through a slotted arc, or by any other suitable device for the purpose.

In setting the gages E, they are allowed to drop and rest on the ledge or templet *c'*, in which position they permit the minimum flow or discharge of seed. The slotted plates F are then adjusted on the rod G to suit this uniform position of the gages, and are then firmly secured to said rod by the set-screws or equivalent fastening device, as explained, and thereafter any adjustment of the rod G will effect the simultaneous and uniform adjustment of the gages, for increasing or diminishing the amount of seed to be sown per acre, as desired.

The operation of the other parts will be understood without further description.

The form of gage may be varied to suit the construction of the feed-wheel employed, the character of the work to be done, or the preference of the manufacturer, and I therefore do not wish to be limited to any specific form of gage; but

What I claim as new is—

1. An adjustable pivoted gage arranged and vibrating within the channel of the distributing-wheel, in combination with a slide reciprocating in a line a right angles, or thereabout, to the path of movement of the gage, for adjusting the latter, as described.

2. The sliding rod G, provided with the slotted plates F, in combination with the adjustable gages E, arranged and working within the channels of the distributing-wheels, as described.

3. The slotted plates F, combined with and made adjustable on the sliding rod or bar G, for regulating or adjusting the throw of the gages, as described.

4. The pivoted gages E, arranged and made adjustable in the channels of the distributing-wheels, as described, in combination with the slides F, or their equivalent, and adjusting index-lever I, substantially as and for the purpose set forth.

5. The adjustable gages E, in combination with the annular ledge or templet *c'*, formed on the distributing-wheel, for effecting the uniform setting of the gages, as described.

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Witnesses:

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