E. O. BAXTER.

Grain-Drill.

No. 24,001. Patented May 17, 1859.

Fig. 2.

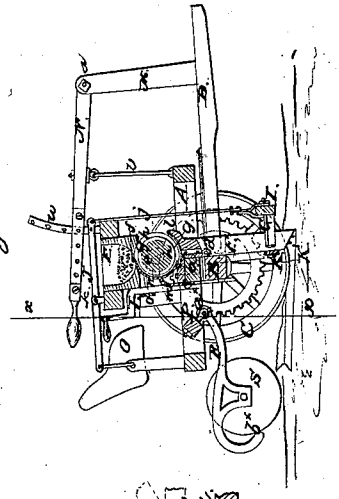


Fig. 3.

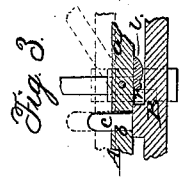
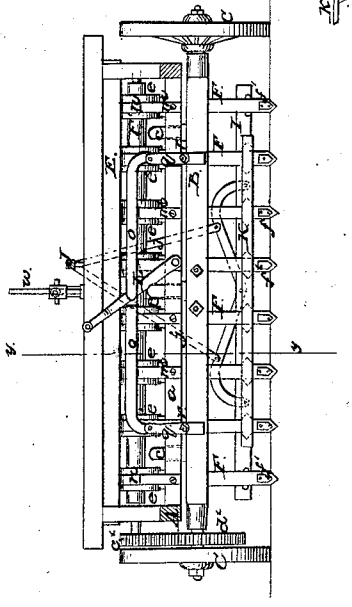


Fig. 4.

Fig. 1.



Witnesses.

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UNITED STATES PATENT OFFICE.

E. O. BAXTER, OF FORESTON, ILLINOIS.

IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. **24,001**, dated May 17, 1859.

To all whom it may concern:

Be it known that I, E. O. BAXTER, of Foreston, in the county of Ogle and State of Illinois, have invented a new and Improved Seeding-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a vertical section of the same, taken in the line *y y*, Fig. 1; Fig. 3, a section of a portion of the same, taken in the line *z z*, Fig. 2. Fig. 4 is a detached plan of one of the clearers.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain improvements in that class of seeding-machines which are designed for planting or sowing seed either broadcast, in drills, or in hills.

The object of the invention is to place the machine under the complete control of the driver and obviate various difficulties hitherto attending the operation of such class of machines, as hereinafter fully described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a horizontal rectangular frame, in which a bar, *a*, is placed longitudinally and centrally. This bar *a* has mortises *b b* made in it, one near each end, and in these mortises uprights *c c* fit loosely, said uprights being attached to an axle, B, having a wheel, C, on each end, the bar *a* being directly over the axle B. To the axle B a draft-pole, D, is attached by a joint, *d*, and on the frame A a seed-box, E, is placed, which extends the whole length of the frame A.

Directly below the seed-box E a shaft, F′, is placed, said shaft being parallel with the seed-box, and having a series of wheels, *e*, placed on it at equal distances apart, and apertures *f* are made in the bottom of the box E, one over each wheel *e*. The wheels *e* have seed-cells *g* made radially in them, and these cells are made in blocks *h*, which are fitted in the peripheries of the wheels *e*, so that different blocks provided with different-sized cells may be used, according to the size of the seed to be planted. This will be fully understood by referring to Fig. 2.

To the bar *a* of frame A a series of seed-tubes, F, are attached. These tubes transversely are of triangular form, and their lower ends internally are hollowed out to prevent choking or clogging, as shown at *s′* in Fig. 1, the lower ends of tubes F forming shares to open the ground for the reception of the seed. On each seed-tube F a clearer, G, is placed. These clearers are formed of two metal bars, *i i*, having inclined lower surfaces and placed in contact with the two front sides of the seed-tubes F, and the front ends of said bars *i i* are attached to a bar, I, the latter being connected by rods *j j* to a lever, J, having its fulcrum at *k*, as shown clearly in Fig. 2. The bar I is connected by bolts to a bar, K, which is at the back sides of the tubes F. The upper end of each seed-tube F has a curved flange, *l*, which extends upward in front of the wheels *e*, and to the bar plates *m* are attached, said plates having curved strips *n* attached, one to each. These strips are placed at the backs of the wheels *e*, as shown clearly in Figs. 1 and 2.

To the back of the bar *a* a lever, L, is attached, and to this lever, near its upper end, the inner ends of two rods, *o o*, are attached. The outer ends of these rods *o o* are attached by pivots *p* to levers *q q*, which are attached to shafts *r*, having cams *t* attached, said cams being between the bar *a* and axle B.

On the draft-pole D an upright, M, is placed, and to this upright a lever, N, is secured by a fulcrum-pin, *u*. This lever N is connected by a rod, *v*, with the front part of the frame A, and it is secured at any desired point within the range of its movement by means of a pin fitting in a perforated segment-rack, *w*, attached to the upper part of the seed-box.

On the back part of the frame A the driver's seat O is placed, and in said frame, directly below the seat O, a shaft, P, is placed and allowed to turn freely. This shaft has bolts $a^{\times}$ passing through it, one near each end, and to the ends of the bolts a shaft or rod, Q, is attached, said rod having a series of roller-frames, R, attached to it and allowed to work freely thereon, the shaft or rod passing through the front ends of the roller-frames. The rollers S are allowed to rotate freely in their frames R, and in the back part of each frame a scraper, $b^{\times}$, is placed, said scrapers bearing on the back parts of the rollers. On one end of the shaft F′ a bevel-pinion, $c^{\times}$, is placed, and this pinion, when

the machine is in operation, gears into a bevel-wheel, $d^{\times}$, attached to one of the wheels C.

The operation is as follows: As the machine is drawn along the shaft F′ is rotated from the wheel C by the gearing $c^{\times}$ $d^{\times}$, and the seed in box E is distributed into the tubes F by the wheels *e*, the seed entering the cells *g* in the blocks *h*, and being thereby conveyed around to the tops of the tubes F, through which they drop into the furrows made by the lower ends of the seed-tubes. The seed may be planted more or less deep, as desired, by adjusting the lever N, as the front end of the frame A may be inclined more or less thereby. In case the tubes F should be encumbered with weeds, trash, or clay adhering to them, they may be cleared by operating the lever J, which will cause the bars *i i* to rise and fall and scrape the tubes perfectly clean. In case the seed-distributing device is not required to operate, the lever L is actuated and the cams *t t* will raise the frame A and seed-box E bodily, so that the pinion $c^{\times}$ will be free from the wheel *d′*. The seed may be planted at a greater or less distance apart by placing blanks or solid blocks *h* in some of the wheels *e*.

The whole device, it will be seen, is placed under the perfect control of the driver.

The rollers S cover and press down the earth on the seed, and owing to their mode of attachment are allowed to rise and fall freely with the frame A and to conform to the inequalities of the ground.

I do not claim the wheels *e*, provided with seed-cells for the purpose of distributing the seed; neither do I claim the rollers S, for such devices have been previously used; but

I do claim as new, and desire to secure by Letters Patent—

1. The clearers formed of the bars *i i*, placed on the seed-tubes F, connected with the bar I, and operated through the medium of the lever J, or its equivalent, substantially as and for the purpose set forth.

2. The frame A, fitted to the axle B, as shown, in connection with the cams *t t*, interposed between the axle B and frame A, substantially as shown, so as to raise the frame A when desired to throw the seed-distributing device out of gear with the driving-wheel.

3. The arrangement of the frame A, lever N, connected with frame A by the rod *v*, and the upright M on draft-pole D, substantially as shown, for the purpose of regulating the depth of the furrows, as described.

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Witnesses:
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