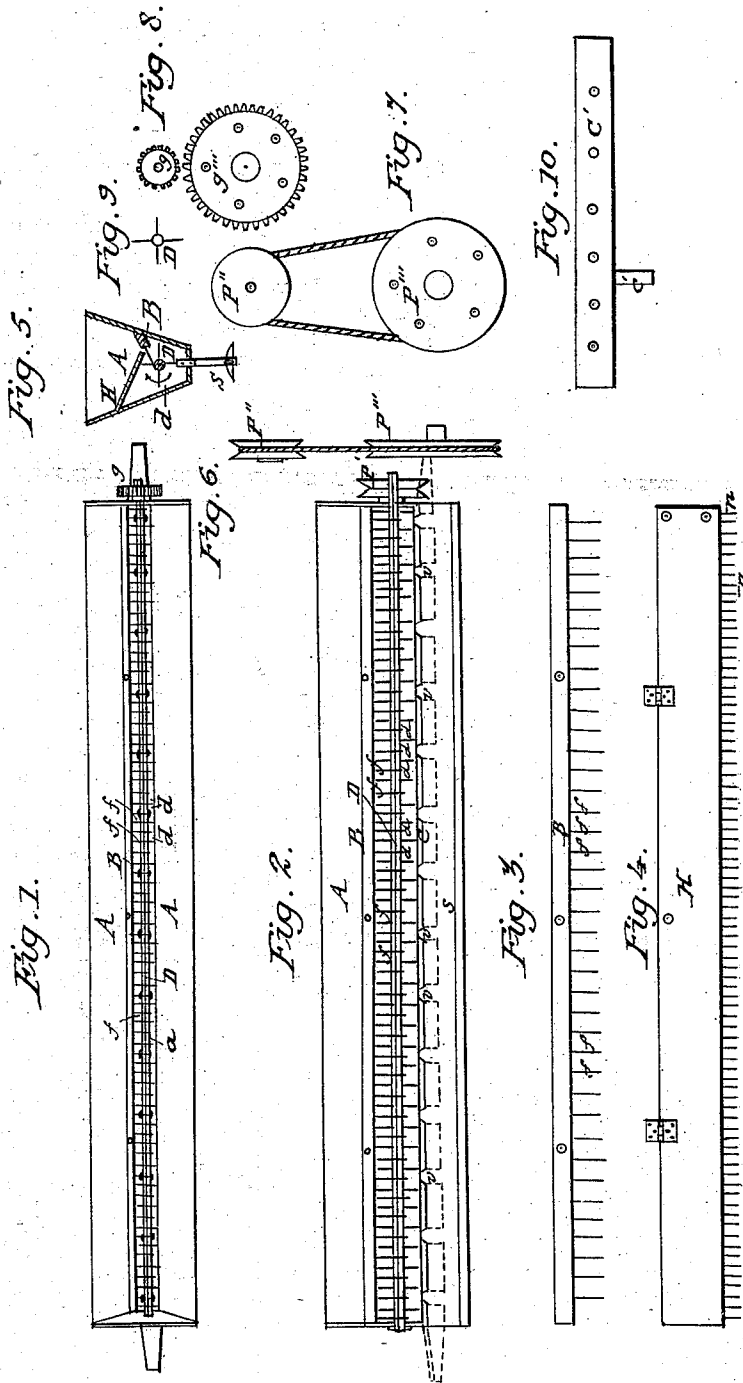


H. A. GASTON. Seed Dropper.

No. 83,624.

Patented Nov. 3, 1868.



WITNESSES:

J. G. Humphrey
S. Williams

INVENTOR:

Henry A. Gaston

United States Patent Office.

HENRY A. GASTON, OF STOCKTON, CALIFORNIA.

Letters Patent No. 83,624, dated November 3, 1868.

IMPROVEMENT IN SEEDING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, HENRY A. GASTON, of the city of Stockton, in the county of San Joaquin, and State of California, have invented certain new and useful Improvements in Seeding-Machines, for the sowing of cereals broadcast; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a top or plan view of my grain-sower, with the relief-board, H, removed, to show the rotating shaft D, with its fingers *d*, and a system of fixed fingers or teeth, projecting to the shaft from the inner surface of the bin in which the grain is placed.

Figure 2 shows a central vertical section of the machine, the relief-board being still removed.

Figure 3 represents a series of stationary fingers or teeth, arranged parallel to each other, and extending from end to end of the bin, within.

Figure 4 represents the relief-board of the machine.

Figure 5 represents an end view of all parts of the machine, one end of the bin being removed.

Figures 6 and 7 show a system of pulleys, with rope-belt, for causing the shaft D of the machine to rotate.

Figure 8 shows a system of gearing, for the object last named.

Figure 9 shows an end view of the rotating shaft, provided with fingers or teeth, extending outward from it in different directions.

Figure 10 is a detached view of the valve-slide.

The same letters refer to like parts of the machine in all the figures.

A represents the bin; B, a system of stationary fingers or teeth, within the bin; C, the bottom of the bin, perforated with valves or discharging-orifices *v*; C', the valve-slide, working under the bottom, C, of the bin, and provided with a spur, *c*', projecting from the same, in the same plane and at right angles, and extending beyond the side of the bin, and protruding through upright levers on the outside of the box, the said levers receiving the usual reciprocal motion, which is communicated by means of the spurs to the valve-slide. To accommodate the spurs, and to give room for this movement, I cut a space on the top of the axle or bed-piece of the bin, of sufficient length to permit the spurs to move far enough in one direction to open the discharging-orifices completely, and no more, and to move in the opposite direction far enough to close those orifices entirely. By this novel contrivance, I keep the inner side of my bin wholly free from levers, nuts, and other protuberances, which interfere with the grain, while, at the same time, I can more readily open and close the discharging-orifices than by the means already used. D, the rotating shaft, provided with its fingers as at *a*; N, the relief-board, with or without screen-spikes,

and S the scatter-board of the machine. *f* represents a single fixed finger, and the office of the other letters will be understood without explanation.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation more minutely.

I construct my grain-sowers or seeding-machines of any desired length, say from twenty inches to as many feet, (of which the drawings would represent sections on a scale of an inch to one foot,) and vertically, of a triangular form, the bin being open at the top, and of the width and depth of about sixteen inches, the general form of the machine being shown by combining figs. 1, 2, and 5.

Near the bottom of this triangular box, and extending through it from end to end, and through one or both its ends, I place a shaft, D, either rotating or oscillating, which shaft I make either of iron, as gas-pipe, or of wood.

This shaft I provide with teeth or fingers *d*, which I make of rod-iron, of about one-fourth of an inch in diameter, and about three inches in length. These fingers extend through the shaft, say at right angles to each other consecutively, and at any desired distance apart, but not nearer than one inch from each other. These fingers I arrange in such a novel manner, that, when the shaft is rotated or oscillated, one of the fingers passes upon one side of the valve or discharging-orifice *v*, while the next succeeding tooth or finger follows it upon the opposite side of the valve.

By this novel arrangement, the grain in the bin is constantly being stirred toward the discharging-orifice *v*, and regularly dropped therefrom upon the scatter-board S.

I deem it unimportant to describe any kind of gearing or pulleys for rotating the shaft of my machine, because I use, indiscriminately, either small gearing, as that represented at *g*', fig. 1, and *g*" and *g*", fig. 8, or pulleys like those shown at P', fig. 2, and P" and P", figs. 6 and 7, which I propel with rope-belts. For reciprocating the shaft, I use a pitman and pulleys. I also refrain from connecting a representation of any other machine with my grain-sower, because I use, and intend to use it, by itself, as a simple broadcast grain-sower, running on wheels, and provided with tongue, or without tongue, or at the front end of a harrow, gang-plow, cultivator, or other machine, as circumstances, economy, or convenience may demand. The gearing and pulleys shown, therefore, are intended to represent the universal application of my machine as a grain-sower, propelled by wheels of any kind. The office of the scatter-board S is simply to scatter the kernels of grain as they fall upon it from the valves or ports *v*.

What I claim as my invention, and desire to secure by Letter Patent, is—

1. The rotating fingers *d*, when constructed to operate

between fixed fingers, *f*, of a grain-sowing machine, substantially as above described.

2. The combination and arrangement of the rotating shaft D, and its fingers *d*, with the stationary fingers, *f*, and the further combination and arrangement of the relief-board H with the remaining internal machinery

of a grain-sowing machine, substantially as above described.

3. The spur *c'*, in combination with the slide C', substantially as above described.

Witnesses: HENRY A. GASTON.

T. G. HUMPHREY,
H. WILLIAMS.