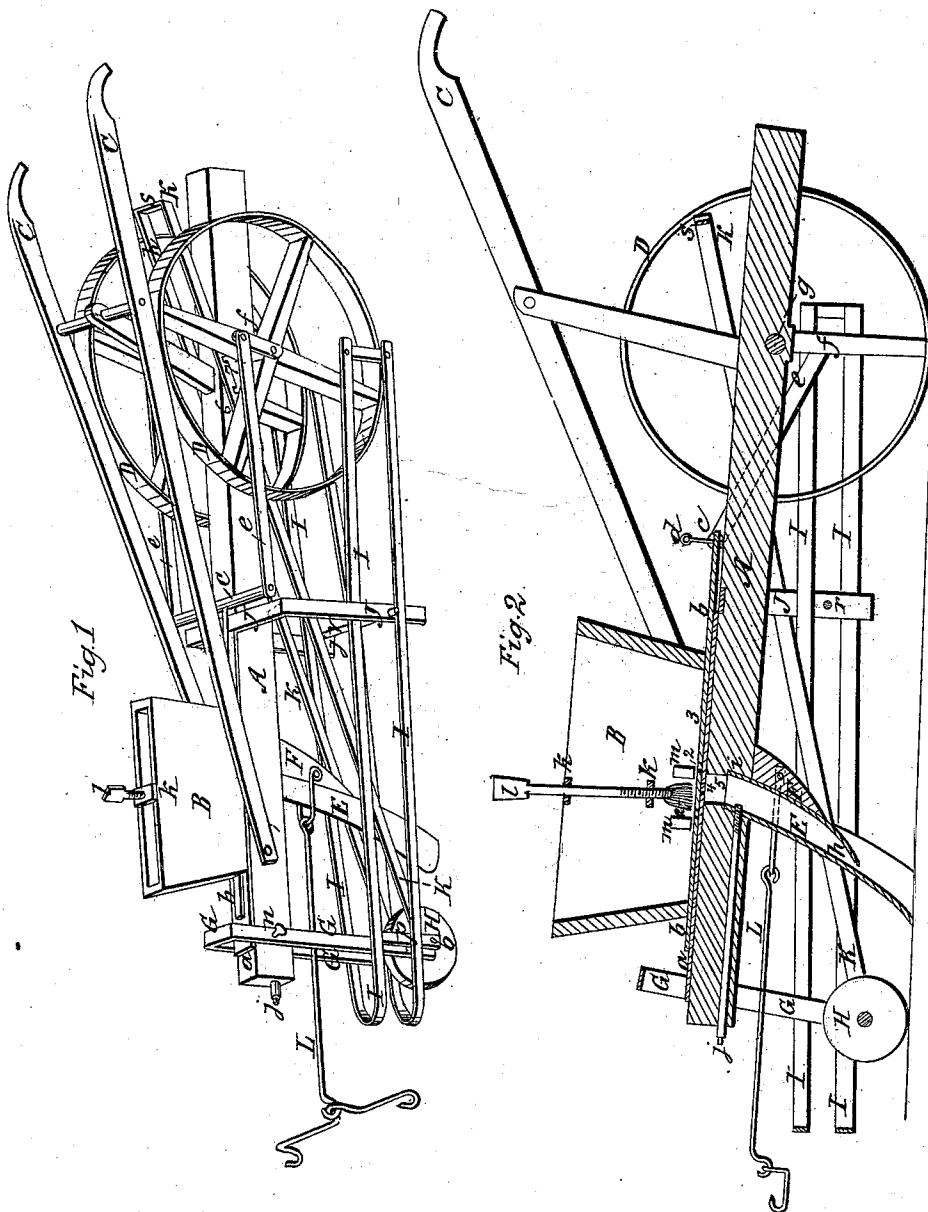


G. M. EVANS.

Seed-Planter.

No. 17,145.

Patented Apr. 28, 1857.



UNITED STATES PATENT OFFICE.

GEORGE M. EVANS, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. 17,145, dated April 28, 1857.

To all whom it may concern:

Be it known that I, GEORGE M. EVANS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Seed-Planters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1 represents a perspective view of the machine. Fig. 2 represents a vertical longitudinal section through the same.

Similar letters of reference, where they occur in the separate figures, denote like parts of the machine in both.

The nature of my invention relates to the adjustable fender surrounding the front and sides of the seed-planter, for the double purpose of adjusting the depth at which the shoe shall run and for shielding the supporting-wheels and shoe from clods, &c., whereby the machine would be otherwise raised or lowered or thrown from its direct path by any obstructions meeting it.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

My machine is constructed mainly of bars of uniform size from end to end and bent, when necessary, into their exact shape. This enables me to build the machine entirely, or nearly so, of iron bars, as found in the market, and makes the machine both strong and light.

A represents the beam or main frame; B, the seed-hopper, C the handles, and D the rear supporting-wheels, all attached to said beam or frame.

On top of the beam, and underneath the seed-hopper, is laid a flat plate, *a*, which is fixed, and over this plate slides the seeding-bar *b*, the rear end of which seeding-bar is connected to a cross-head, *c*, by a pin, *d*. To each of the ends of this cross-head are connected respectively one of the ends of a pitman, *e*, the other ends of said pitmen being attached to wrist-pins at *f* to the wheels D D, said wheels being fast on and turning with the axle *g*, on which they are placed. The seed slide or bar *b* is furnished with a series of holes, 1 2 3, which traverse over a single hole, 4, in the fixed bar below it, and the charge of seed contained in the cells 1 2 3 every time they pass the open-

ing 4 drop through said opening and through the passage 5 in the beam A, and thence into the shoe E and to the bottom of the furrow opened by said shoe. *h* is a guide-piece in the rear part of the inside of the shoe to direct the grain close to the front of the shoe, so that it shall be deposited in the furrow before any loose earth drops in to fill it up. F is a shoe-stock firmly fixed to the beam A, against which the rear of the shoe rests to strengthen it against the resistance of the earth in opening the furrow. The upper end of the shoe E, or "seeding-tube," as it is sometimes called, passes up into the beam, as seen at *i*, Fig. 2, and, as above stated, rests against the stock F. A screw-rod, J, is then passed in from the end of the beam, and, being screwed into the seed-tube E, firmly holds it in its place in the beam and against the stock, and as readily admits of its removal when desired for any purpose.

Across the hopper B are placed braces *k*, through which may pass a screw-rod, *l*, and to the bottom of this screw-rod may be attached a brush or piece of rubber or any other elastic material for keeping back the seed as the slide traverses to and fro, and small projections *m* may be attached to the sides of the hopper, between which this brush or rubber may be supported.

To the front of the beam is pivoted, at *n*, a yoke or bow, G, which extends downward and supports in its lower extremities an axle, *o*, carrying the front supporting-wheel, H, and to this axle *o* is also pivoted, by arms *p*, the front part of the fender or shield I, which is composed of flat thin bars of iron bent around the front of the machine and extending rearward to or past the tread of the rear supporting-wheels to fend off all clods, sod, or other obstructions to the smooth passage of the machine over the ground. This fender, for the sake of lightness with strength, may be in skeleton form, the main bars united by ribs or stays, as seen in the drawings. A second yoke or bow, J, is permanently fixed to the beam A, which has a rod, *r*, passed through its pendent legs, upon which the after portion of the fender may rest or slide, as the case may be.

To the axle *o* is attached the forward ends of two bars, K K, which extend rearward and upward, so as to be in convenient position for the operator, their rear ends being united by

a cross-bar, s, so as to draw said fender back or push it forward for raising or lowering it on the frame, the tube E being fixed, and the fender, thus adjustable and in contact with the ground, regulates the depth at which the shoe shall penetrate. In the bars K are slots or gains 6 7, &c., which take over a pin in the beam, and thus hold the fender to its adjusted position.

L is the drag-bar, which, instead of being connected to the beam or frame, as is usually the case, is attached to the stock F behind the tube E, so as to put the draft where the resistance is most prominent, and I have discovered that by thus attaching the drag-bar there is less shock to the machine when the shoe strikes an obstruction than when it is attached to the beam or frame.

Having thus fully described the nature of my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

The so uniting of the wheel and guard-frame to the beam and to the rods or bars K as that the operator may from his position between the handles of the machine adjust the depth at which the shoe shall open the furrow by moving said wheel and guard-frame forward or back, substantially in the manner and for the purpose herein set forth and explained.

GEO. M. EVANS.

Witnesses:

A. B. STOUGHTON,
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