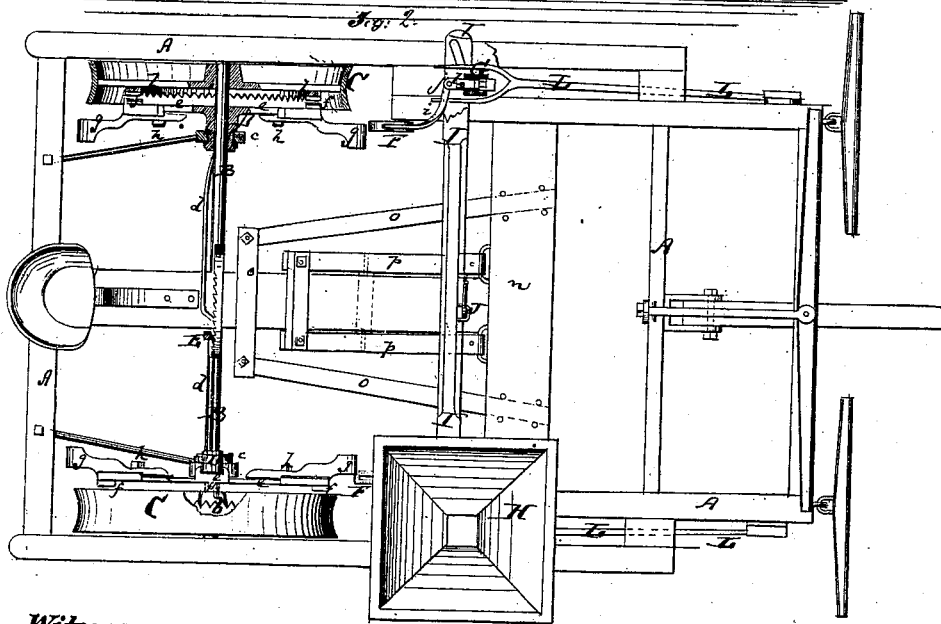
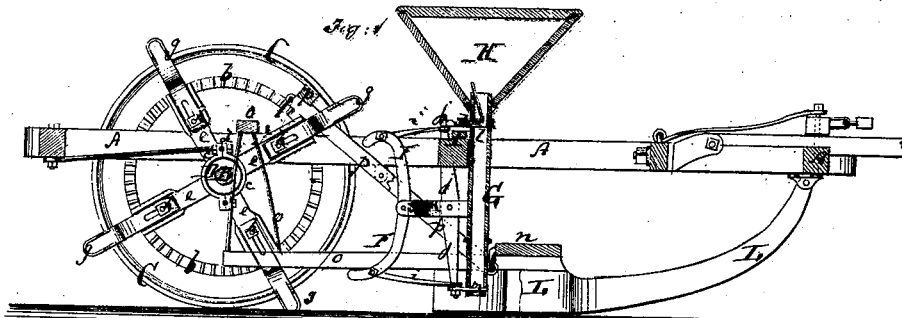


G. B. VAUGHAN.  
CORN PLANTER.

No. 108,656.

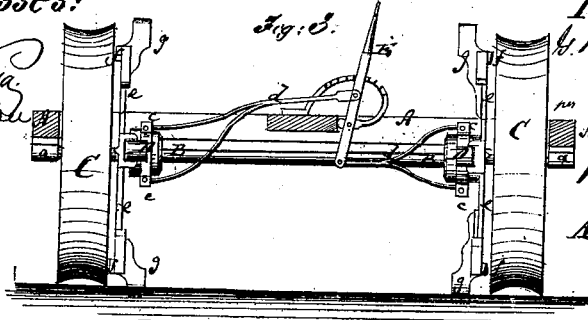
Patented Oct. 25, 1870.



Witnesses:

*Chas. Nida*  
*Robt. H. H. H. H.*

Fig. 3.



Inventor:

*G. B. Vaughan*

*Wm. L. Mumford*  
Attorney

# United States Patent Office.

GEORGE B. VAUGHAN, OF MARSHALL, MISSOURI.

Letters Patent No. 108,656, dated October 25, 1870.

## IMPROVEMENT IN CORN-PLANTERS.

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, GEORGE B. VAUGHAN, of Marshall, in the county of Saline and State of Missouri, have invented a new and improved Corn-Planter; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of my improved corn-planter.

Figure 2 is a plan or top view, partly in section, of the same.

Figure 3 is a vertical transverse section of the same. Similar letters of reference indicate corresponding parts.

This invention relates to a new corn-planter, which is so constructed as to operate automatically, depositing the seed and marking the hills at the proper distances apart.

The invention consists chiefly in a novel mechanism for throwing the axle of the main wheels into gear, and in the application thereto of adjustable markers.

The invention consists also in a new construction of dropping mechanism, and in the connection therewith of the arms which carry the aforesaid markers; also, in a new device for readily operating the drop-pers by hand whenever it is desired to use manual power for that purpose.

A in the drawing represents the frame of my improved corn-planter. This frame is made of wood or other suitable material in such manner as to be best adapted to the support of the machinery used on my improved planter.

The frame A is supported by a transverse axle, B, upon which are hinged loosely the driving-wheels C C.

The ends of the axle B hang in boxes *a a*, which are secured to the frame A, and so made that the axle can turn in them.

Each wheel C carries a toothed band or ring, *b*, as shown in fig. 1.

Upon the axle B are fitted two hubs, D D, which are grooved to receive clutches *c*, that are, by rods *d*, connected with a lever, E, by which said hubs can be moved toward or away from the wheels C respectively.

From each hub D project four, more or less, radial arms, *e e*, of which each carries, near its outer end, a projecting tooth, *f*.

A slotted marker, *g*, is, by means of a bolt, *h*, secured to the outer part of each arm *e*. When, by means of the lever E, the hubs are moved toward the

wheels C, the teeth *f*, or the arms *e* will catch into the toothed rings *b*, and will thereby lock the said wheels to the axle and cause the hubs to revolve with the same. The markers *g* will, during the revolutions of the wheels C, mark the hills, enabling the driver to notice that the seed is dropped opposite the marks made in the preceding row, &c.

In front of each set of rotary markers there is pivoted, at each side of the machine, a crescent-shaped bar, F, the pivot *s* passing through the middle of the same, as shown in fig. 1.

This bar has both ends connected by rods *i i* with an upright rod, *j*, that is in the middle, pivoted to an arm, *k*, projecting from the rear of the drop-tube G.

The upper end of the rod *j* is connected with the seed-gauge *l*, working in the feed-box H.

The lower end of the rod *j* is connected with a horizontal slide, *m*, working in the lower end of the tube G.

As the wheels revolve with the hubs D, the markers *g* will alternately strike the upper and lower ends of the crescent bars F, imparting thereby oscillating motion to the same. This causes the reciprocating motion of the gauges *l* and slides *m*, whereby the seed from the hoppers is first, in proper quantities, dropped into the tubes, and subsequently discharged to the ground.

The machine operates as follows:

The machine is first turned in the proper direction on the field. The driver takes hold of one of the markers and turns it to the desired point for starting. Then the machine is thrown into gear by means of the lever E, and started so that the wheels, axle, hubs, and markers turn together.

The markers, in revolving, strike alternately the upper and lower ends of the crescents, forcing the gauges into the seed-boxes, and withdrawing the slides *m* from the tubes and *vice versa*, the gauges being properly adjusted for taking the desired quantity of seed.

The markers also indicate on the ground where the seed was deposited.

Whenever it is desired to work the machine by hand, the hubs D are thrown out of gear, and a bar, I, having V-shaped slots at the ends, is applied transversely to the machine.

The upper ends of the rods *j* pass through the slots in said bar I. When, therefore, the latter is connected with a suitable hand-lever, J, to receive reciprocating motion, the rods *j* will be oscillated to operate as above set forth.

L L are the runners or shears for opening the furrows; their front ends are pivoted to the front part of the frame A, while their rear ends are forked to embrace the tube G. The two runners are connected

by a cross-piece or bench, *n*. The same is connected with levers *o* for being lowered, and with other levers for being elevated. The runners are thus simultaneously adjusted.

Having thus described my invention,

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

1. The tubes *D*, fitted upon the axle *B* and provided with arms *e*, that have teeth *f* for locking into the toothed bands *b* of the wheels *C*, substantially as herein shown and described.

2. The crescent-shaped bar *F*, connected with the seed-gauge *l* and slide *m*, to operate the same by the action of the rotating arms *e*, substantially as herein shown and described.

3. The combination of the vibrating vertical bars *j*, slides *l* and *m*, reciprocating slotted bar *I*, hand-lever *J*, and seed-tube *G*, substantially as shown and described.

Witnesses:

GEORGE B. VAUGHAN.

O. E. HARRIS,

W. E. MARVIN.