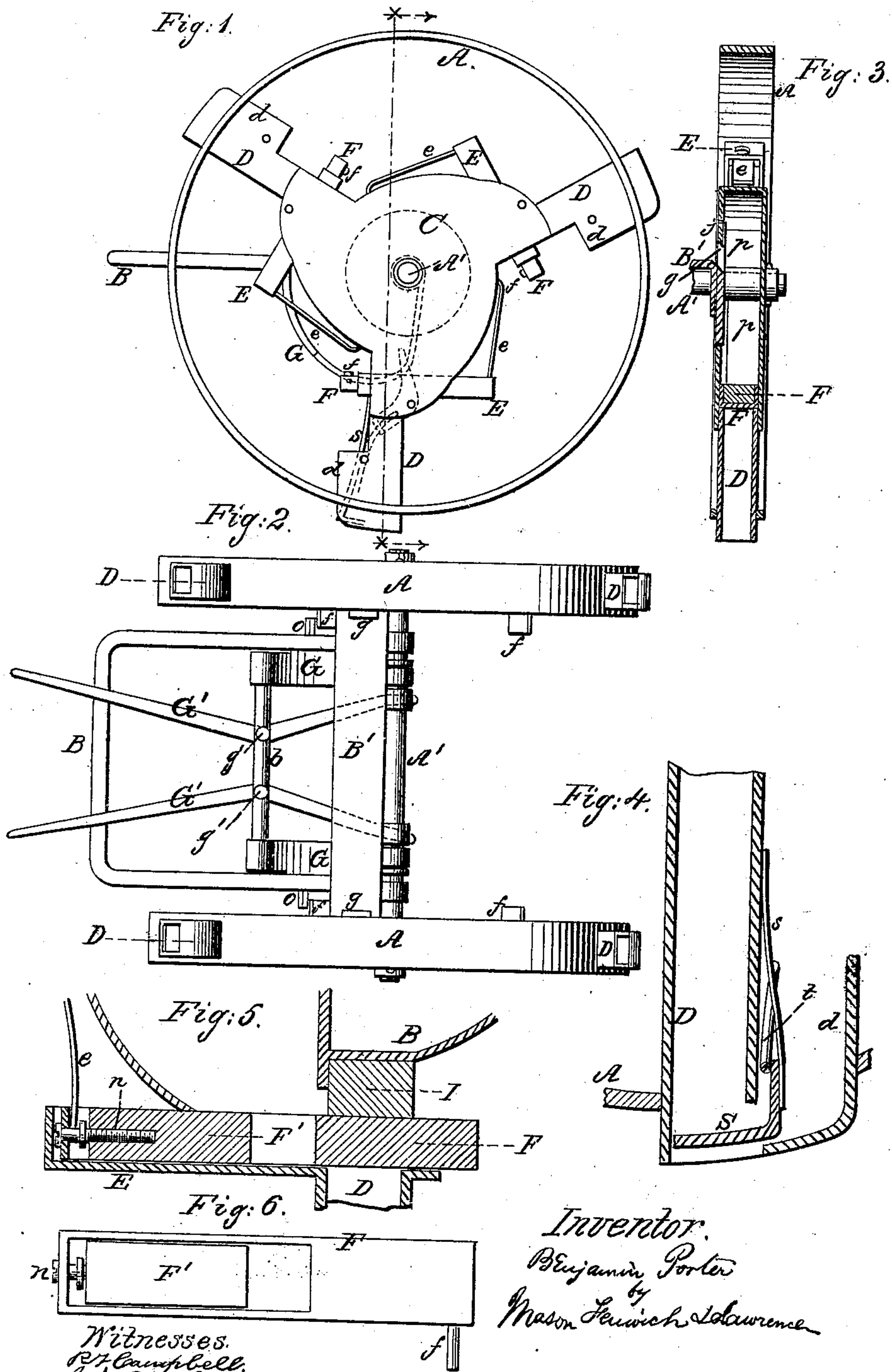


B. PORTER.
Corn Planter.

No. 103,499.

Patented May 24, 1870.



Inventor.
Benjamin Porter
by
Mason Leitch Lawrence

Witnesses.
R. Campbell.
J. V. Campbell.

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2 Sheets—Sheet 2.

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Fig. 7.

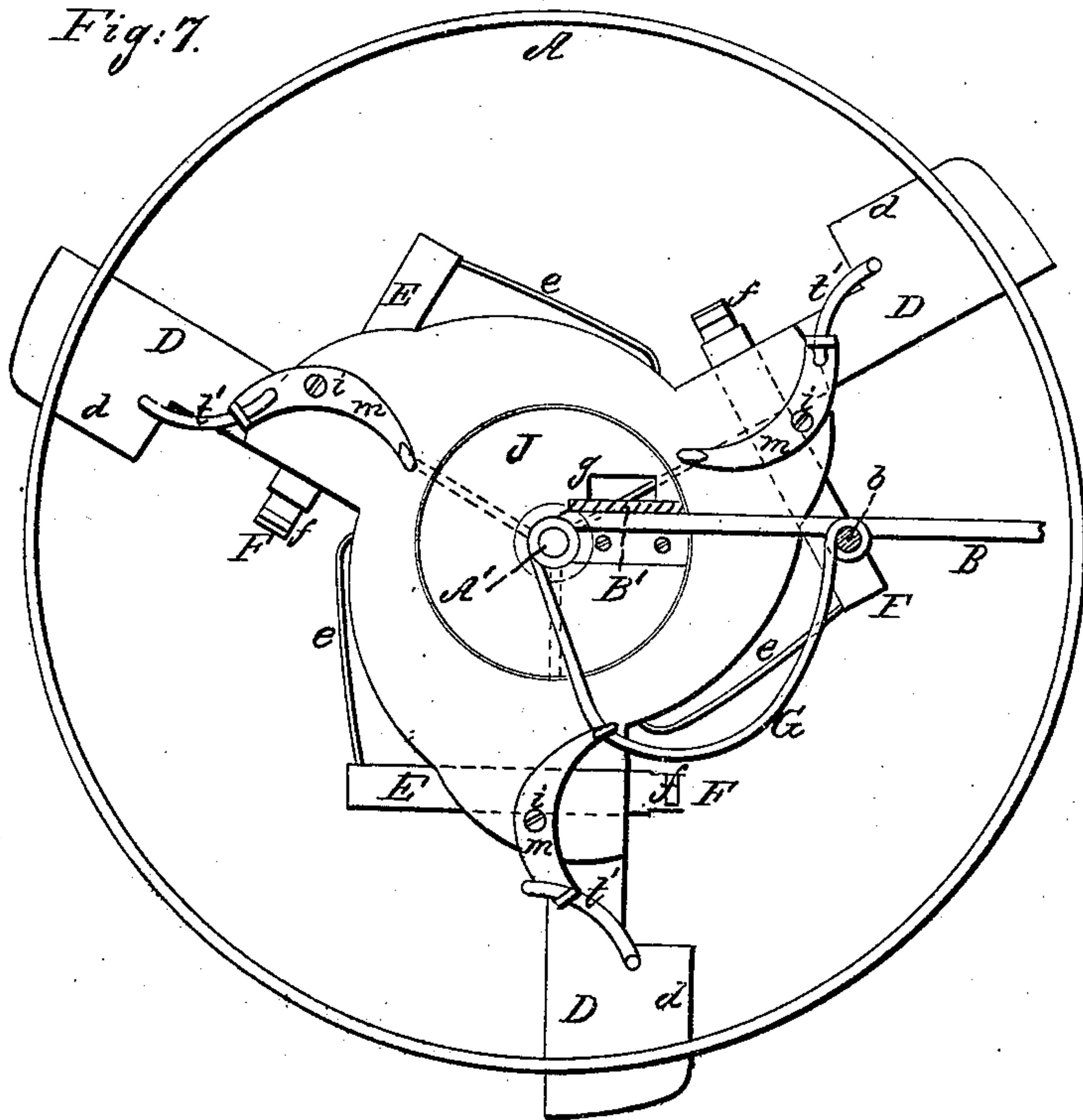
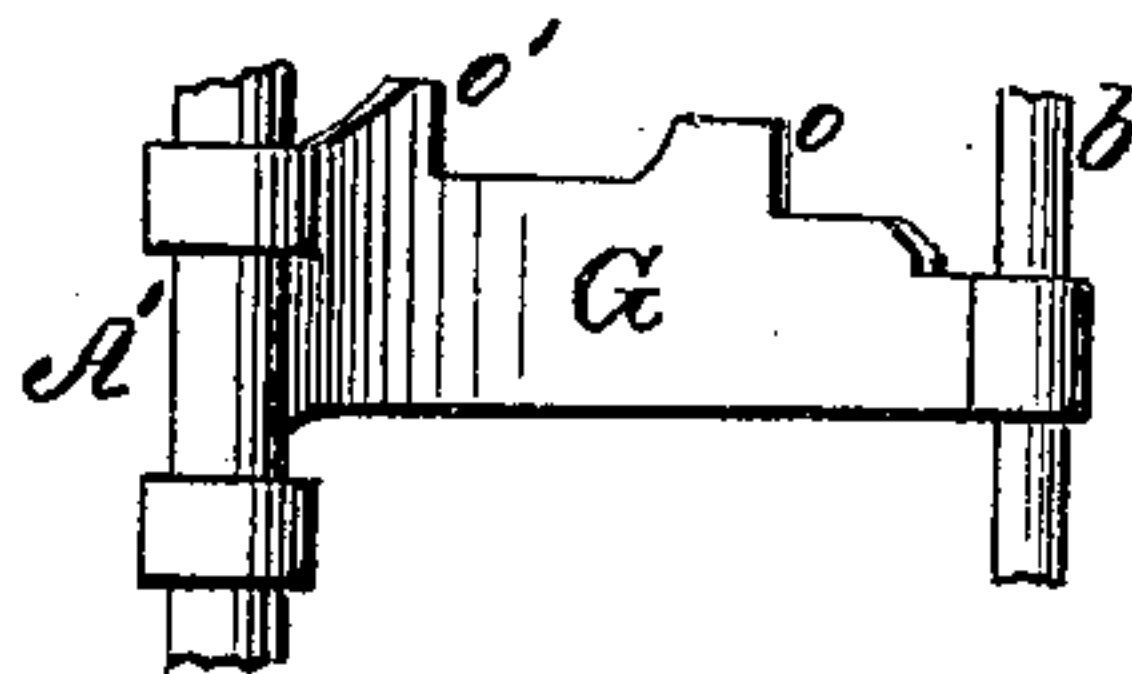


Fig. 8.



Witnesses.
R. Campbell
J. V. Campbell.

Inventor.
Benjamin Porter
by
Mason Lawrie & Lawrence

United States Patent Office.

BENJAMIN PORTER, OF OSSIAN, NEW YORK.

Letters Patent-No. 103,499, dated May 24, 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, BENJAMIN PORTER, of Ossian, in the county of Livingston and State of New York, have invented certain new and useful Improvements in Corn-Planters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1, plate 1, is an elevation of one side of the improved machine.

Figure 2, plate 1, is a top view of the machine.

Figure 3, plate 1, is a section through one of the wheels and its seeding devices, taken in the plane indicated by dotted line $x x$ in fig. 1.

Figure 4, plate 1, is an enlarged section of the lower portion of one of the seed-tubes.

Figures 5 and 6, plate 1, show the construction and manner of applying each one of the discharging seed-slides.

Figure 7, plate 2, is an elevation of the inner side of one of the wheels and its seeding devices.

Figure 8, plate 2, is a top view of one of the laterally adjustable cams.

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

This invention relates to improvements on that class of corn-planters which has the seeding devices applied directly to the transporting-wheels, so that the hubs of the wheels constitute the seed-hoppers or boxes, and the spokes of these wheels the seed-discharging tubes, as will be hereinafter shown.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings—

A A represent two transporting-wheels, which are applied fast on the extremities of an axle, A', at such distance apart as may be required to plant the corn.

B is a frame, which is connected to the axle A' by means of eyes, through which latter the axle passes, and in which it is allowed to turn freely.

The frame B may be made in any suitable manner, and to it is applied a cross-bar, b , on which hand-levers G' G' are pivoted at $g' g'$. A horizontal transverse piece, B', is also applied to the frame B, to the extremities of which circular plates J are secured, through which holes G are made for supplying the seed-boxes or hoppers with corn.

The rear extremities of the hand-lever G' G' are connected loosely to two curved cams G G, which are connected to the axle A' and the bar b by means of eyes, so that these cams can be moved laterally into and out of working position.

Each cam has on its outer edge two shoulders O O', as shown in fig. 8, against which shoulders certain de-

vices strike, which effect the discharge of the corn from the hoppers, as will be hereinafter explained.

The seeding devices of both transporting-wheels A A are constructed precisely alike; therefore, it will not be necessary for me to refer in the following description to both wheels and both sets of said devices.

C represents a hollow hub or seed-carrying hopper, which is supplied with seeds through the opening g made through disk J.

From this hub or hopper C radiate seed-tubes D D D, which pass through the rim of the wheel and extend short distances beyond its periphery. Through the tubes D the corn is conducted to the place for its deposit into the ground.

Each tube is provided near its outer end with a vibrating spring-valve, S, which is an angular piece applied to the lower end of a spring, s , and acted upon by a crank, t , carrying on its inner end a curved arm, t' . The spring closes and keeps the valve S closed when not acted upon by crank t , thereby preventing the escape of the grains from the seed-tube, until such tube is in proper position for depositing the grains into the ground. The outer end of each tube may be constructed with rear extended wings $d d$, without such wings, or the outer end of each tube may be curved forward.

At the inner terminus of each tube D, and arranged at right angles to it, is a case, E, which is open at one end and closed at the other.

Within said case E is a seed-slide, F, carrying on its inner side, near its protruded end, a lug, f , which, when the machine is moved along, will strike against the shoulder O on a cam, G, thereby moving the slide so that its seed-cell will deposit a charge into the tube D. A spring, e , will return the slide F to its place in its case when lug f is released from the cam G.

Figs. 5 and 6 show clearly the construction of the seed-slide, and the manner of applying it between a seed-tube and the hopper C. The seed-cell is between the solid piece and a movable piece, F', and this cell can be increased or diminished in size by turning the screw n .

On the inner side of the hopper C, and pivoted at i , are curved levers m , through the outer ends of which the curved crank-arms pass loosely. The inner end of each lever m is turned inwardly so as to be caught by the shoulder O' on one of the cams G as the wheel revolves, thus moving the valve S so as to effect a discharge of the grain from the seed-tube.

The disk or circular plate J, which is fixed to the frame of the machine, and which does not rotate with the wheel, is fitted loosely into a circular hole made through the inner side of the hopper C. This plate allows the hopper to be supplied with corn, at any time, from a seed-box, and it prevents the escape of the corn

from this hopper except through the proper channels. Within the hopper are radial ribs *p*, which subdivide it into compartments corresponding in number to the number of seed-tubes, and which also serve as guides for the grains to pass into the seed-tubes.

It will be seen from the above description—

First, that the seeding devices are applied to each wheel, the hub and spokes of which are made hollow for the purpose.

Second, that the hopper or hollow hub of each wheel is supplied with corn from a box and through an opening, *g*, made through a circular plate, *J*, which is fast on the axle *A'*.

Third, that each seed-tube or spoke *D* is provided with a slide or drawer, *F*, and also with a vibrating valve, which are alternately operated by a cam, *G*, so that a charge is dropped into a tube from the hopper *C*, and retained at the lower end of such tube until it is in a position for depositing the charge into the ground, when the valve *S* is moved so as to effect such discharge.

Fourth, that the cams *G* are laterally adjustable, and can be moved inwardly so as not to operate upon the discharging devices.

In practice, I may use more than two wheels. I may also apply a marker to the frame in front of the wheels, for marking on the ground a line by which to

run the outside wheel, thus making the planted rows straight.

The rubber-block shown at *I*, fig. 5, is designed for preventing the escape of corn, or the crushing of the corn when the slide or drawer *F* is moved so as to bring a charge over the seed-tube. Instead of the blocks of rubber *I*, brushes, or other equivalent devices, may be used.

Having described my invention,

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

1. A wheel, *A*, constructed with a hollow partitioned hub, *C*, closed on the inner side by a circular perforated plate, *J*, and also with radial seed-tubes *D*, in combination with seed-discharging devices, substantially as described.

2. The laterally movable cams *G*, in combination with seed-discharging devices, applied to wheel *A*, substantially as described.

3. The seed-drawer *F*, provided with adjustable block *F'*, a spring, *e*, and a lug, *f*, and fitted to work in a case which is between the hub *C* and seed-tube *D*, substantially as described.

Witnesses: BENJAMIN PORTER.

JNO. C. EDWARDS,

OSCAR PORTER.