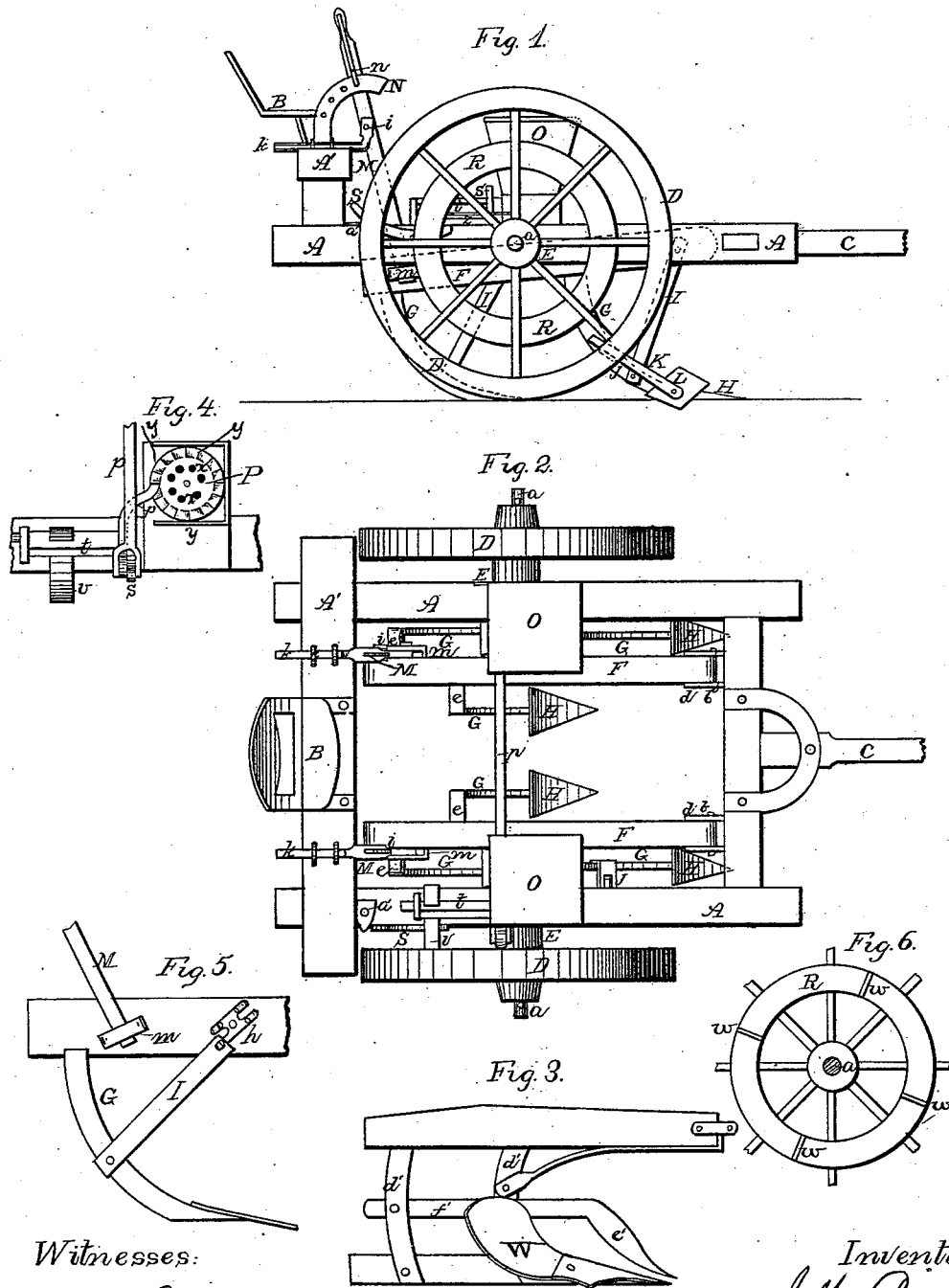


J. M. BROWNWELL.  
Corn-Planter.

No. 213,093

Patented Mar. 11, 1879.



Witnesses:

J. W. Garner  
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per  
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# UNITED STATES PATENT OFFICE.

JAMES M. BROWNELL, OF BEDFORD COUNTY, TENNESSEE.

## IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. 213,093, dated March 11, 1879; application filed January 3, 1879.

*To all whom it may concern:*

Be it known that I, JAS. MILTON BROWNELL, in the county of Bedford and State of Tennessee, have invented certain new and useful Improvements in Corn-Planters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a corn-planter and cultivator, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

Figure 1 is a side elevation of my invention. Fig. 2 is a plan view of the same. Figs. 3, 4, 5, and 6 are details of the same.

A represents a square or rectangular frame of any suitable dimensions, having its rear bar, A', elevated above the side bars to form a convenient support for the driver's seat B, as well as for the segments which hold the levers. C is the tongue, secured in the center to the front of the frame. On each side of the frame A is attached a plate or casting, E, from which projects a spindle, a, to receive the driving-wheel D. This spindle is made movable in the casting, so as to be adjusted forward or backward, as may be required, to bring the wheels at the proper point for the purpose of balancing the machine to remove any unnecessary strain from the horses' necks.

To the rear side of the front cross-bar of the frame are hinged two beams, F F, by means of hooks *b b* at the front end of each beam engaging with eyebolts *d d* in said bar of the frame. To each beam F are secured three plow-standards, G, each having a shovel-plow, H, secured to its lower end. Each standard G is curved, substantially as shown, and its upper end bent sidewise, forming an arm, *e*, which is placed in a gain or recess made in the under side of the beam, and fastened to the beam by one or more bolts. The arm *e* has several holes or a slot for the passage of the fastening bolt or bolts, so that the standard may be adjusted laterally, as may be required. To the standard G is attached a brace,

I, which extends forward and upward, and has its front end perforated, so as to connect with either prong of a four-pronged hook, *h*, fastened to the side of the beam. The four prongs of this hook are of unequal length, so as to lengthen or shorten the brace and hold the standard at different angles, thus bringing the points of the plows at more or less angle to the ground, according to the kind of soil and the kind of work to be done. To the standard G is further secured an arm, J, which projects horizontally from the same, and is slotted longitudinally, as shown. To this arm is attached the longitudinally-slotted shank K of a fender, L, by means of a bolt passing through the two slots, so that the fender can be adjusted both vertically and laterally with relation to the plow.

Upon the elevated bar A' of the frame are placed two short shafts or rods, *k k*, placed in suitable boxes or bearings across the bar. The forward end of each shaft forms a fork, *i*, in which is pivoted a lever, M. The lower end of this lever is held to the side of the beam F by a staple, *m*, while the upper portion of the lever has a slot to pass over a perforated segment, N, attached to and projecting from the center of the shaft *k*. The lever M is provided with a pin or pawl, *n*, to take into any one of the holes in the segment, and thus hold the lever in place. By this means the beams F can be raised or lowered, as required, to set the plows at any height, and when so set and held they can yet be tilted to either side during the work, as may be required, the shafts *k k* being capable of turning or rocking in their bearings.

O O represent the corn-boxes, each of which is provided with a centrally-pivoted dropping wheel or disk, P. This disk is provided with suitable grain-openings *x*, which are intended to be made adjustable—that is to say, made larger or smaller—so as to drop more or less grain in each hill.

In the upper surface of the disk, near the edge, is made a series of ratchet-teeth, *y*, into which takes a pawl, *p*, for rotating the disk. Both the pawls *p p* are pivoted to an arm, *s*, projecting from a rocking bar, *t*, which is placed in suitable bearings on one of the side bars of the frame A.

It will, of course, be understood that one of these pawls is long, to reach to the box on the opposite side, while the other pawl is short, to act upon the disk in the nearest box.

The rocking bar *t* is provided with an arm, *v*, which projects beyond the frame sufficiently far to be acted upon by lugs or pins *w w* on the side of an annular ring, *R*, attached to the inner side of one of the driving-wheels. As the machine moves forward these lugs *w* raise the arm *v*, turning the rocking bar *t* far enough to cause the pawls *p* to rotate the disks *P* the required distance, and as soon as a lug, *w*, passes from under the arm *v* a spring, *z*, acting upon said arm, returns the parts *t p* to their former position.

The number of lugs *w* and of the teeth and seed-openings in the disks *P* should correspond, so as to drop a certain number of hills during each revolution of the driving-wheel. The number of hills may be changed by changing these parts for others.

On the side of the frame is pivoted a lever, *S*, for raising and holding the arm *v* out of reach of the lugs *w* in turning the planter--going to or from the field--said lever being held by means of a catch, *a'*.

The various plows may be changed and arranged in any desired manner. For planting corn, one is used on each beam as a furrow-opener, and one or two as coverers, the seed-passing from each box through a spout or conductor, which is held to the frame by hooks, so as to be readily removable when required. For other purposes in cultivating the ground, before or after planting, the plows are changed, as required.

The beams *F F*, with their attachments, may be removed from the frame, and a single turning-plow, *W*, attached in the center to the front bar of the frame. This turning-plow is constructed with two standards, *d' d'*, attached to the beam, and provided with a colter, *e'*, the shank *f'* of which extends horizontally along the side of said standards, and is adjustably secured thereto.

One of the levers *M* is to be used with this plow for properly manipulating the same.

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

1. In combination with the plow-standard *G*, the perforated brace *I* and the pronged hook *h*, having its prongs of unequal length, substantially as and for the purposes herein set forth.

2. The combination, with the plow-beam *F*, of the lever *M*, rocking shaft *k*, with fork *i* and segment *N*, and the pin or pawl *n*, all constructed substantially as and for the purposes herein set forth.

3. The combination of the rotating dropping-disks *P P*, pawls *p p*, rocking bar *t*, with arms *s v*, spring *z*, and the annular ring *R*, with lugs *w*, secured to the driving-wheel, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of December, 1878.

JAMES MILTON BROWNWELL.

Witnesses:

WILLIAM G. GLASSCOCK,  
JOHN THOMAS STALLING.