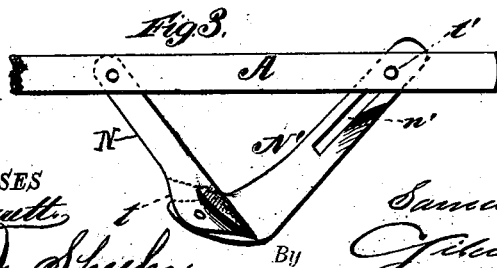
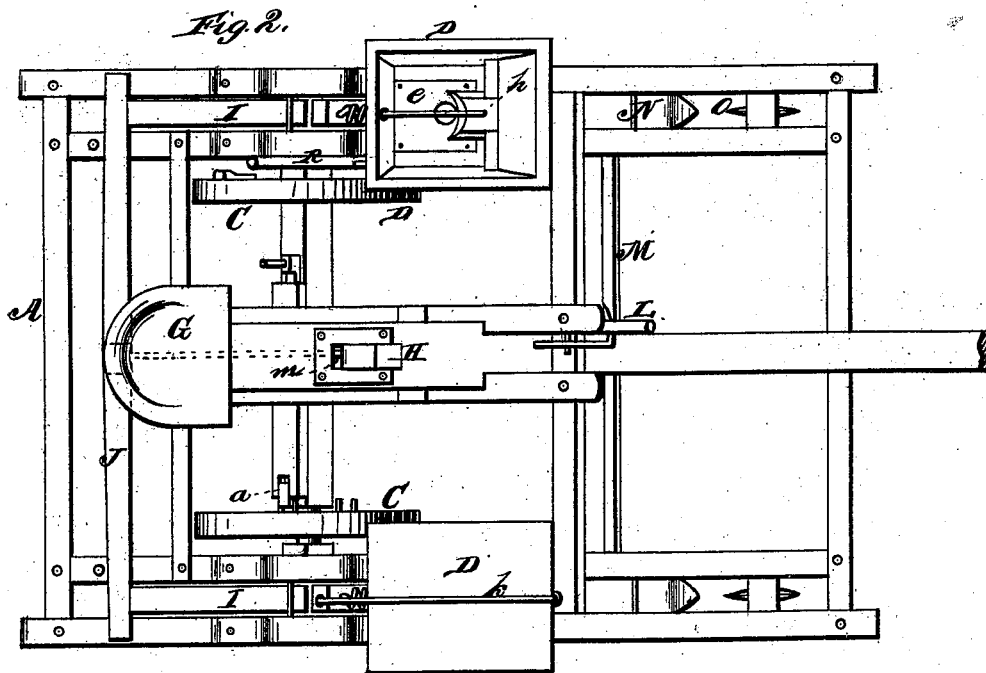
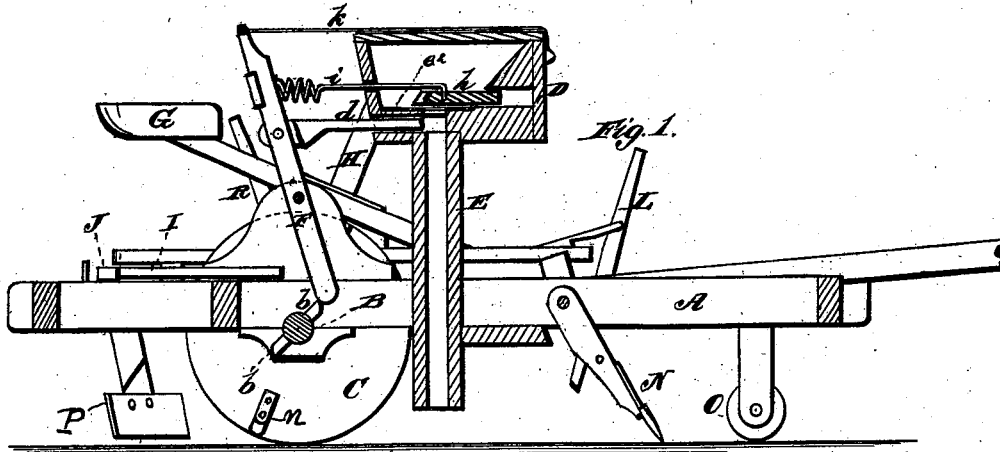


S. R. HAWLEY.  
Seed-Planter.

No. 210,118.

Patented Nov. 19, 1878.



WITNESSES  
*Robert Smith*  
*James J. Sheehy*

INVENTOR.  
*Samuel R. Hawley*  
*J. G. Smith & Co.*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

SAMUEL R. HAWLEY, OF ODIN, ILLINOIS.

## IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. **210,118**, dated November 19, 1878; application filed October 5, 1878.

*To all whom it may concern:*

Be it known that I, SAMUEL R. HAWLEY, of Odin, in the county of Marion and State of Illinois, have invented a new and valuable Improvement in Seed-Planters; 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal central section of my seed-planter. Fig. 2 is a top-plan view of the same, and Fig. 3 is a detail view.

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

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

A represents the frame of my planter, constructed in any suitable manner, and provided with bearings or journal-boxes, in which the axle B rotates, said axle being provided with the driving-wheels C C. One of these wheels is fast on the axle, while the other wheel is loose and connected to it by a slide or key, *a*, or a clutch, or in any other known or convenient manner, so that it can be easily disconnected in turning, &c.

D D represent the seed-hoppers, with chutes or conductors E E extending downward, as shown.

Back of each hopper D, and directly over the axle B, is pivoted a vertical lever, F, the lower end of which is actuated by lugs or knockers *b* on the axle. There may be one or more of these lugs for each lever, according to the distance desired between the hills, this being, of course, measured by the size of the driving-wheels.

In a mortise in the upper portion of the lever F is pivoted a valve, *d*, which extends forward in the bottom of the hopper, beneath the adjustable plate *e*<sup>2</sup>.

On top of the bottom of the hopper is a plate, *e*, with a seed-aperture through it. This plate will, in a full-sized machine, be made adjustable, so as to increase or diminish the size of the feed-opening, and thus regulate

the amount or size of seed to be sown. Above the plate *e* is a cut-off, *h*, connected by a spring-rod, *i*, with the lever F.

It will thus be seen that the valve and cut-off move simultaneously by the movement of the lever F.

*k* is a spring to retract the lever after it has been acted upon by the lug or knocker *b*.

During the operation a certain number of grains pass through the plate *e* onto the valve, and as the lever is operated the cut-off prevents any more from passing down, while the valve at the same time discharges the grains previously left on it.

G is the driver's seat, supported from the main frame. In front of the seat G is pivoted a lever, H, the lower end of which is, by a rod, *m*, connected with a cross-bar, J, and to each end of this cross-bar is attached a bar, I, which extends forward in rear of the lever F and below its pivot-point. By these means the levers F F can be thrown beyond the reach of the knockers on the axle, so that the machine may be moved without depositing any grain. This is of great importance for setting the machine properly at the beginning of the rows.

Still farther in front of the driver's seat is a lever, L, to operate against a cross-bar, M, connecting the drills N N for adjusting the latter to the required position.

In front of the drills N are adjustable circular cutters O O, to be used in foul ground for cutting stalks or other trash, and thus prevent the drills or openers N from becoming clogged. The drills are followed in rear by the coverers P P, two to each row.

R represents a brake or lever, to be applied on the axle for locking the same. *n n* are markers attached to the driving-wheels, for making indentations in the ground to indicate the hills.

The drill N is slotted at *t* to receive the lower end of the drill-tender N', which is pivoted therein. The drill-tender N' is also slotted at *n'*, extends upward, and is pivoted by a pin, *t'*, between the bars of the frame A.

By this construction of drill the same will rise out of the ground to pass over obstructions, and not catch under roots and the like,

necessitating the backing of the machine. When the obstruction is passed the drill immediately sinks to its former position.

I am aware that the patent to Starrett & Keal, May 12, 1874, shows a construction wherein an arm is reciprocated by means of a double cam secured on the axle, which strikes the rear end of the arm and pushes it forward, thus forcing forward two arms pivoted at right angles, and they, in turn, draw back the seed-slide, thus discharging the seed into the drill-tube, and then to the ground. The arm is retracted by a coil-spring. This construction I do not claim.

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

1. In a seed-planter, the combination of the pivoted lever F, provided with the short piv-

oted slide *d*, and the spring *i*, provided with the cut-off *h*, extending beyond the slide *d*, operated by the knockers *b b* and the retracting-spring *k*, with the hopper D, substantially as and for the purposes set forth.

2. The drill-tender N', having the elongated slot *n'* working between the bars of the frame A on the pivot *t'*, in combination with the drill N *t*, having the drill-tender pivoted thereto, as shown and described, for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SAMUEL R. HAWLEY.

Witnesses:

C. A. WALKER,  
NATHAN B. LANE.