# M. HAYDEN.

## Seed-Planter.

No. 47,637. Patented May 9, 1865.

*Fig. 1.*

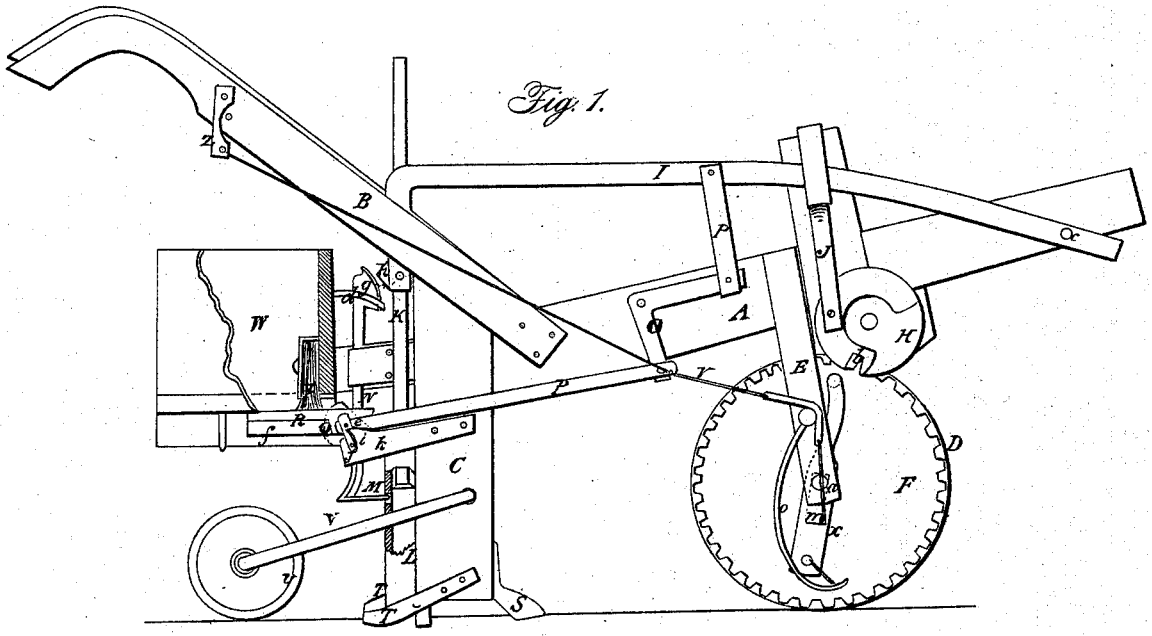



*Fig. 2.*

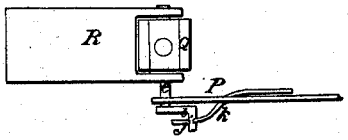



*Fig. 3.*

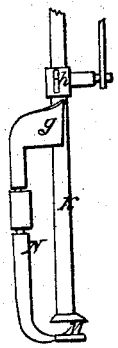
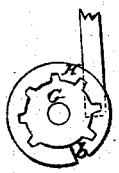



*Fig. 4.*


*Fig. 5.*




**Witnesses:**

E L Topliff
Theo Tusch

**Inventor.**

M Hayden
By Munn & Co attys

# UNITED STATES PATENT OFFICE.

MARTIN HAYDEN, OF ROCHESTER, MICHIGAN.

## IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. **47,637**, dated May 9, 1865.

*To all whom it may concern:*

Be it known that I, MARTIN HAYDEN, of Rochester, in the county of Oakland and State of Michigan, have invented a new and Improved Seed-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 drawings, forming part of this specification, in which—

Figure 1 is a side view of my invention, partly in section; Fig. 2, a detached plan or top view of a portion of the seed-distributing device; Fig. 3, a side view of another portion of the same; Figs. 4 and 5, detached views of portions pertaining to the driving mechanism.

Similar letters of reference indicate like parts.

This invention relates to a new and improved seed-planter for planting seed in hills and in check-rows, and also in drills, if desired.

A represents the beam; B B, the handles, and C a standard at the rear end of the beam. These parts, being well known and used in various seed-planters, do not require a minute description.

D represents a wheel, the axle *a* of which has its bearings in a pendent fork, E, attached to the beam. This wheel D has a toothed plate, F, at one side of it, and above the wheel D there is a pinion, G, having a circular concentric plate, H, at its outer side with a notch, *b*, in its edge. (See Figs. 1 and 5.) The pinion G has one vacant tooth, as will be seen by referring to Fig. 5.

I is a lever which is attached to the side of the beam A by a fulcrum-pin, *c*, and is operated from the plate H of the pinion G by a connecting-rod, J. (See Fig. 1.) The rear end of this lever I is bent downward, and connected by an arm to a vertical plunger-rod, K, which works in a tube, L, at the rear of the standard C.

M is a valve which projects horizontally from the lower end of a vertical shaft, N, at the rear of tube L, the shaft N being allowed to turn in its bearing, and having a spring, *d*, bearing against it, which spring has a tendency to keep the valve M within the tube L, an opening being made in the latter for the valve to work through.

O is a bent lever, attached to the side of the beam A, and connected by a bar, P, with the lever I. The lower end of the bent lever O is attached to a bar or rod, P, the rear end of the latter being connected to the axis *e* of a seed-cup, Q, in a slide, R, which works between suitable guides, *f*.

At the lower end of the standard C there is a furrow-opener, S, and two covering-shares, T T, are attached to the rear of the standard at its lower end. A roller, U, is also fitted on an arm, V, attached to the standard, said roller being behind the covering-shares.

The shaft N of the valve M has a lateral projection, *g*, at its upper end, against which a cam-projection, *h*, on the plunger rod K acts, (see Figs. 1 and 3,) and the axis *e* of the seed-cup Q has a crank, *i*, at one end, which enters a curved slot, *j*, in a bar, *k*, at the rear of beam A, as the seed-cup approaches the termination of its forward movement, the seed-cup working under or within the lower part of a seed-box, W, which is provided with a strike or cut-off, *l*. (See Fig. 1.)

X is a bar, which has an oblong slot, *m*, in it, near its center, and which is fitted on the axle *a* of wheel D. The upper end of this bar is bent over and inward toward beam A, as shown at *u*, to form a cog or tooth to supply, when necessary, the place of the absent tooth of pinion G. The bar X has a spring, *o*, connected to it, which spring has a tendency to keep the tooth *u* pressed down free from the pinion G and the teeth of plate F, (see Fig. 1,) and said bar is connected by a rod, Y, with a pendent arm, Z, attached to one of the handles B.

In planting in check-rows the field should be furrowed one way before the device is used, the latter crossing the furrows at right angles and the seed dropped in each furrow as the standard C passes over or intersects them.

The seed-distributing device is inoperative when the bar X is down and the tooth *u* free from the teeth of plate F, on account of the pinion G having an absent tooth; but the operator, by throwing up the bar X through the medium of the arm L and cord Y, causes the tooth *u* to pass into the notch *b* of plate H, so that the teeth of plate F will come in contact with it, and the pinion G will be rotated and motion communicated to lever I, which, through the medium of the bent lever O and bar P, operates the seed-cup Q, drawing the filled cup

out from the seed-box W, said cup, when it nearly reaches the termination of its forward movement, being tilted in consequence of the crank *i* of the cup entering the curved slot *j* of bar *k* and the seed discharged into the tube L and upon the valve M, and as the seed-cup is forced back into the seed-box W to be refilled the rod K is forced down, the cam-projection *h* on the latter acting against the projection *g* at the upper end of the valve-shaft N and throwing the valve M outward, while the plunger-rod forces the seed down into the furrow.

It will be seen from the above description that the device may be made to drop the seed continuously in drills by doing away with the bar X and having a full complement of teeth on pinion G, or by having a pin inserted in plate A at the proper point, to serve as a tooth.

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

1. The adjustable or movable bar X, provided with the tooth *u*, in combination with the pinion G, having a vacant or absent tooth, and provided with a notched plate, H, for the purpose herein set forth.

2. The lever I, arranged and combined with the pinion G, plunger-rod K, valve-shaft N, and seed-cup Q, to operate substantially as and for the purpose specified.

3. The placing of the seed-cup Q on an axis, *e*, provided at one end with a crank, *i*, in connection with the curved slot *j* in the bar *k* for the purpose of tilting the seed-cup, as described.

4. The combination of the valve M, plunger-rod K, seed-cup Q, when arranged to operate in the manner substantially as and for the purpose set forth.

MARTIN HAYDEN.

Witnesses:
WM. J. WEIR,
A. R. INSLEY.