

W. L. CHISM.
CORN-PLANTER.

No. 193,110

Patented July 17, 1877.

Fig. 1

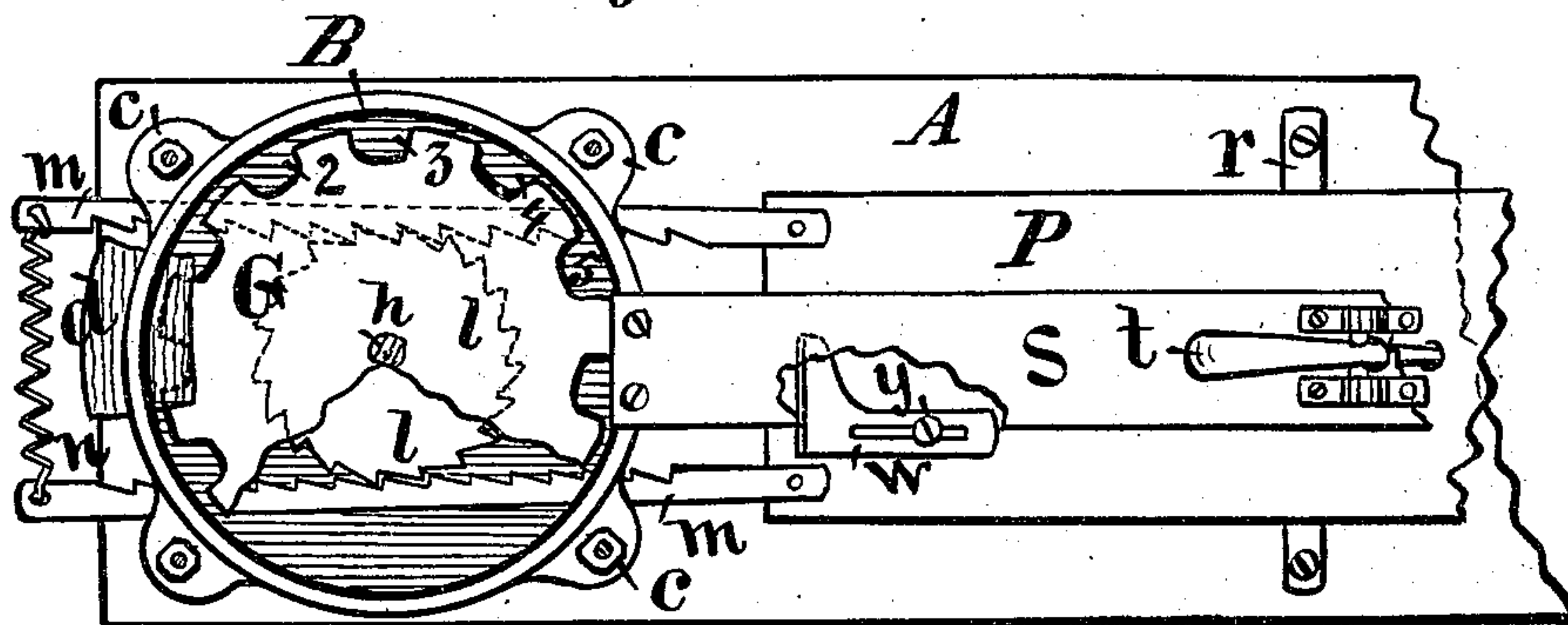
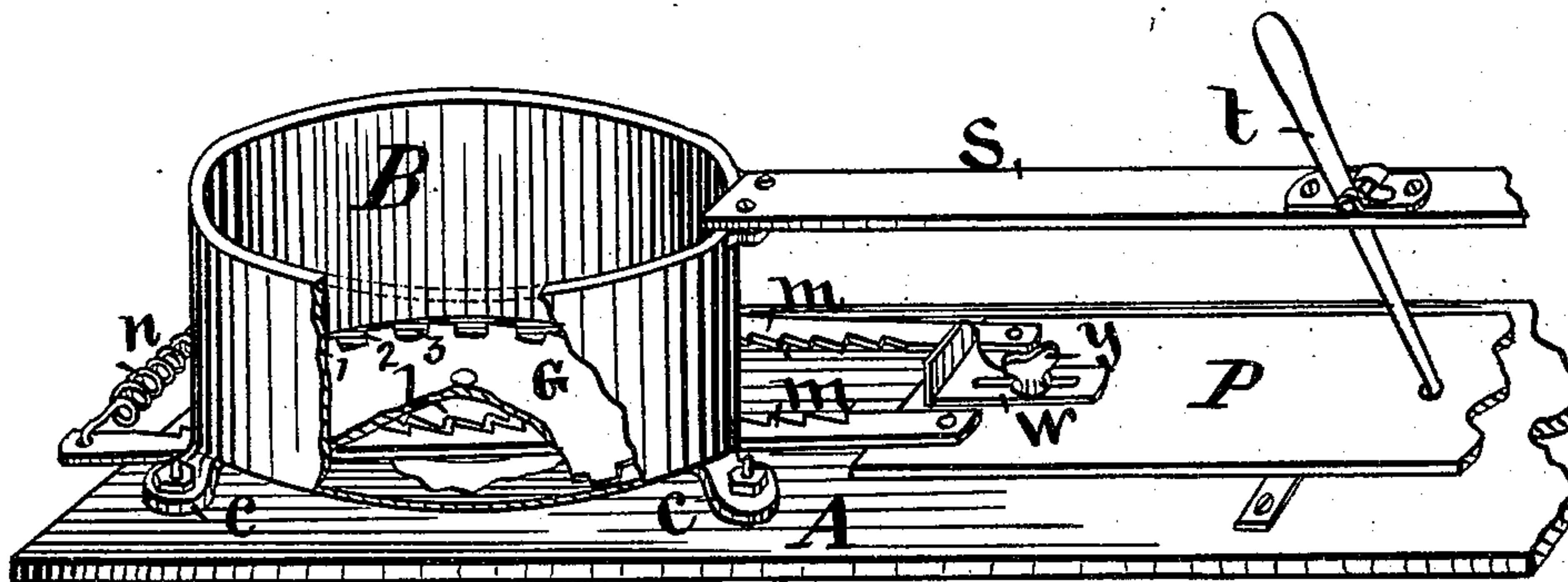


Fig. 2



Witnesses:
Philo C. Keenyon,
Arthur Stimson.

Inventor:
Wesley L. Chism,
By Thomas G. Orrig,
Attorney.

UNITED STATES PATENT OFFICE.

WESLEY L. CHISM, OF ANKENY, IOWA.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. 193,110, dated July 17, 1877; application filed April 16, 1877.

To all whom it may concern:

Be it known that I, WESLEY L. CHISM, of Ankeny, in the county of Polk and State of Iowa, have invented an Improved Corn-Planter, of which the following is a specification:

The object of my invention is to provide seed-dropping mechanism that can be readily adjusted to govern the number of seeds dropped, and to insure a uniform number of seeds being planted in each hill.

It consists in forming, arranging, and combining disk-form rotary seed-valves, having a series of seed-cups of uniform size in their peripheries, with ratchets that can be adjusted to move the rotary valves any fractional part of a revolution desired, to drop any number of seeds desired, all as hereinafter fully set forth.

Figure 1 of my drawing is a top-plan view. Fig. 2 is a perspective view of my improved mechanism. Together they illustrate the construction and operation of my complete invention.

A represents a bench, designed to be mounted upon the runners and furrow-openers of a corn-planter, to connect them, and to support the seed-boxes and the seed-dropping mechanism. B is one of the seed-boxes, of cylindrical form, and in a vertical position. It has ears *c c*, formed integral therewith, by means of which it is secured to the bench A in an elevated position, to allow a rotary ratchet-wheel and its bearing to be fitted under the bottom of the seed-box. *d* is a flexible seed-cup cover, preferably made of leather, fixed in a horizontal slot formed in the cylinder of the box B, immediately over an opening formed in the bottom of the box, to allow seeds to pass and drop out as they are delivered to that point successively by my rotary seed-valve. G is one of my disk-form valves, having a series of seed-cups, 1 2 3 4 5, formed in its edge. It has a central shaft, *h*, rigidly attached, and extending downward to a suitable bearing fixed underneath the box B to the bench A. *l l* represent a ratchet-wheel, that is rigidly secured to the shaft *h* of the disk G. *m m* are ratchet-bars, having their teeth standing in opposite directions, to alter-

nately engage the wheel *l l*, on the opposite sides of which they are placed. *n* is a torsion-spring, connecting the outside ends of the ratchet-bars *m*. It serves to keep them engaged with the ratchet-wheel, and to allow them the lateral motion required when they move longitudinally to operate the valve G. P is a plate, sliding upon suitable bearings *r*, fixed upon the bench A. To the ends and corners of this plate the inner ends of the ratchet-bars *m* are pivoted. S is a strut plate or bar, rigidly secured at its ends to the seed-boxes B, in an elevated position relative to the sliding plate P, to serve as a fulcrum for a valve-operating lever. *t* is a hand-lever, pivoted to the plate S in a vertical position, and connected at its bottom end with the sliding plate P, in any suitable way that will cause a vibrating motion of the lever to move the sliding plate longitudinally. *w* represents a gage, clamped to the sliding plate P by means of a set-screw, *y*, passed through its longitudinal slot. By adjusting this gage and a corresponding one at the opposite end of the slide relative to the seed-boxes B, the movement of the sliding plate is controlled and its strokes lengthened and shortened, as required, to regulate the fractional revolutionary motions of the valve G, that is actuated by the ratchet devices *l l* and *m m*, connected with the sliding plate P.

In the practical operation of my invention the gages *w* are set to limit the rotary movement of the valves G, so that one, two, three, or any number of seed-cups desired, will pass the opening under the cover *d* during the partial revolution of the valve. The seed-cups are designed to be formed, in shape and size, so that each one will receive and retain and carry only one seed, and as a cup passes over the opening in the bottom of the seed-box a single seed will drop through. Every motion of the lever *t* can thus be made to actuate the valve G, so that each valve will make a partial revolution, which will pass only one seed-cup in each over the opening in the bottom and side of each seed-box, and drop only one seed from each. Or the ratchets may be gaged to make two, three, four, five, or six seed-cups pass the openings suc-

cessively by one motion of the hand-lever *t*, to drop a corresponding number of seeds in a line in a hill.

By the intermittent motion of the hand-lever the seed can be dropped at uniform distances and in continuous rows.

I claim as my invention—

In a corn-planter, the seed-boxes B, mounted upon the bench A, and having a cup-cover, *d*, the rotary disk-form valve G, having a series of uniform seed-cups, 1 2 3 4, in its edge,

and a central shaft, *h*, carrying a ratchet-wheel, *l l*, the slide P, having the ratchet-bars *m* pivoted at its corners, and carrying the gage *w*, and the fixed and elevated bar S, supporting the hand-lever *t*, all arranged and combined to operate substantially as set forth.

WESLEY L. CHISM.

Witnesses:

ARTHUR T. STIMSON,
R. J. PIERSON.