2 Sheets—Sheet 1.

A. DRAKE.

Corn-Planter.

No. 19,242.

Patented Feb. 2, 1858

Fig. 1.

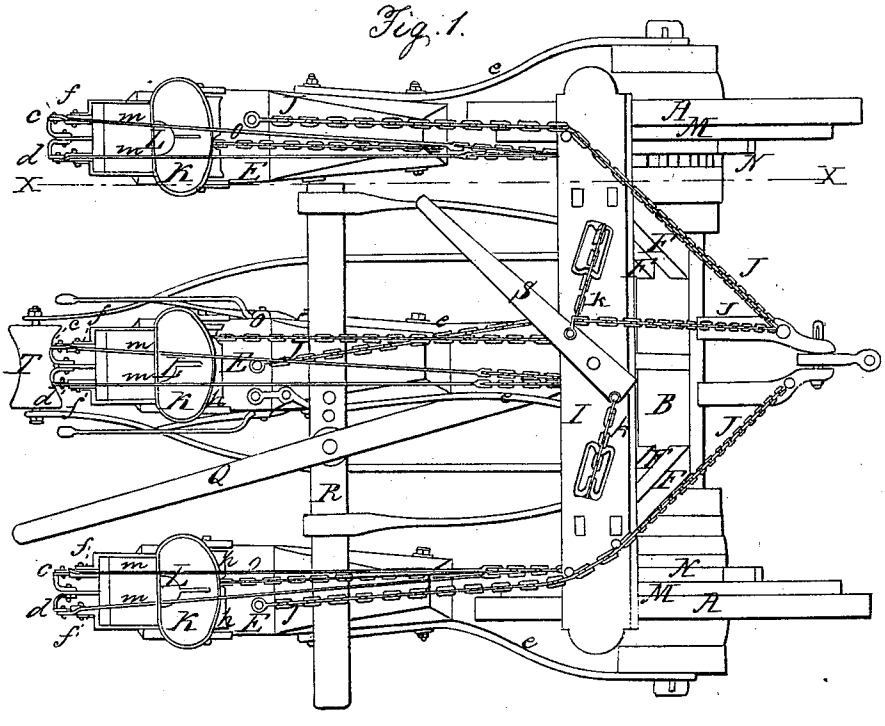
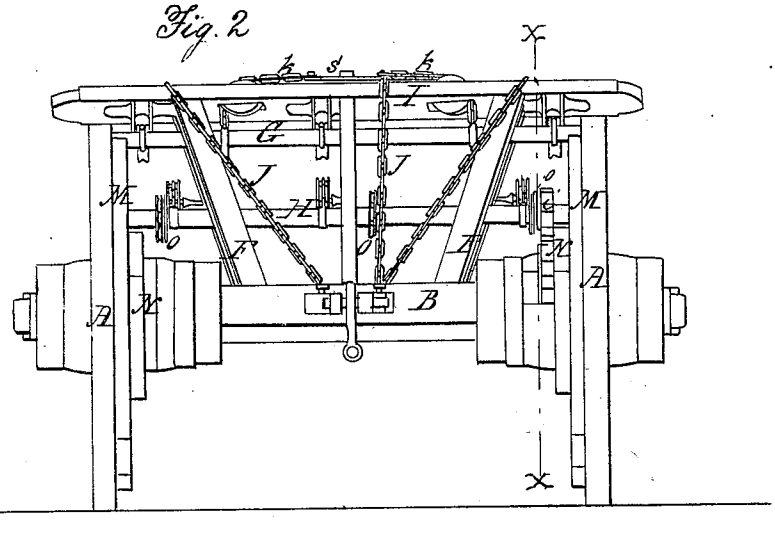


Fig. 2



2 Sheets—Sheet 2.

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Fig. 3.

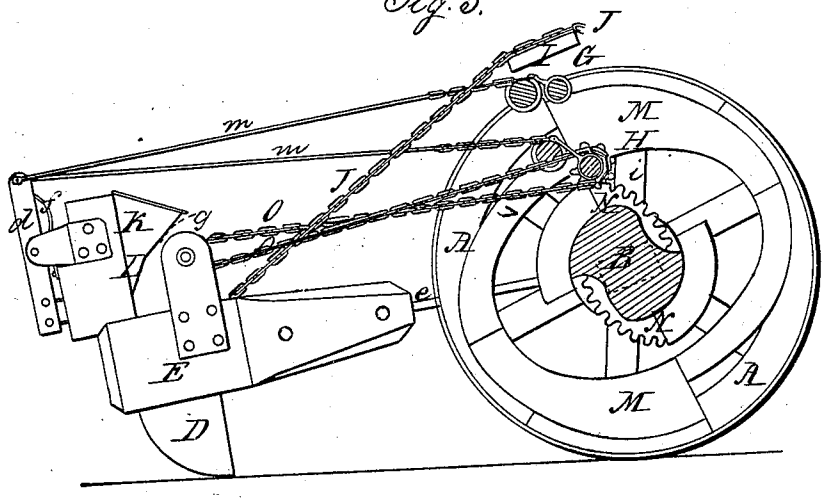


Fig. 5.

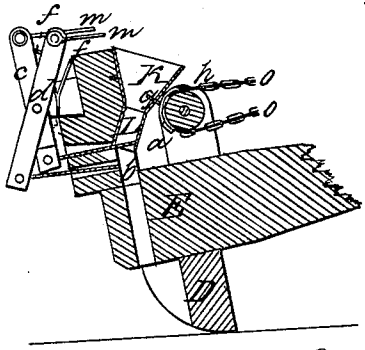
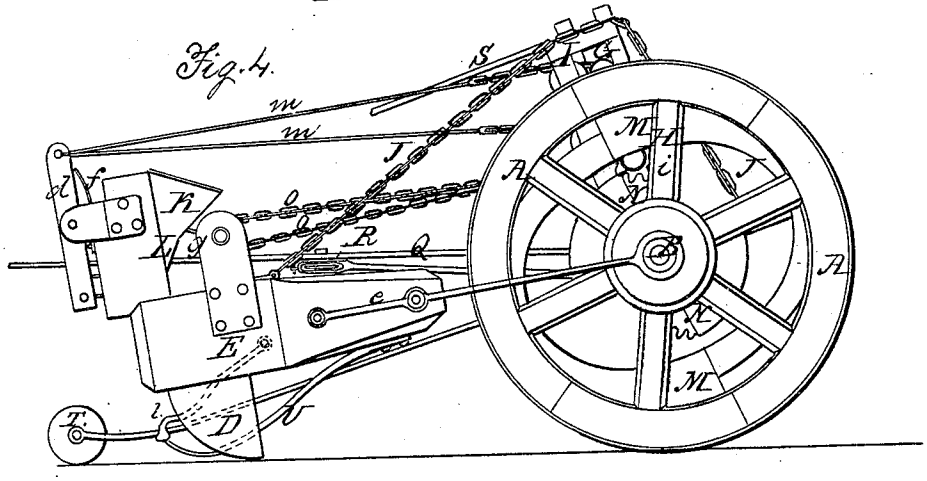


Fig. 4.



UNITED STATES PATENT OFFICE.

N. DRAKE, OF NEWTON, NEW JERSEY.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **19,242**, dated February 2, 1858.

To all whom it may concern:

Be it known that I, NATHANIEL DRAKE, of Newton, in the county of Sussex, and State of New Jersey, have invented certain Improvements in Corn-Planters, the construction and operation of which I have described in the following specification and illustrated in the accompanying drawings with sufficient clearness to enable competent and skillful workmen in the arts to which it pertains or is most nearly allied to make and use my invention.

My said invention consists in, first, the device, hereinafter described, for keeping the valves from choking; second, in the combination of a weight or weights, or its equivalent, which operates the valves, with cam-shaped gears, as set forth, for giving motion to the apparatus for clearing the valves, as set forth.

In the accompanying drawings, Figure 1 is a plan of my improved machine. Fig. 2 is a front elevation, with some of the rear parts omitted. Fig. 3 is a vertical longitudinal section, showing the parts at the left-hand side of the line X X drawn across Figs. 1 and 2. Fig. 4 is a side elevation. Fig. 5 is a sectional elevation of some of the parts, and shows the construction and operation of the clearing apparatus for keeping the valves from clogging, and also the construction and arrangement of the valves.

A A are the traction-wheels. B is the axle. The plows D, which are here represented as being three in number, are so connected to this axle that they may rise and fall independently of each other and of the position of the wheels to accommodate themselves to the unevenness of the ground over which they pass. The plows are hung to the beams E *e* E *e* E *e*, which are jointed to the axle B for the purpose of allowing this vertical motion to the plows, as above stated. There are stanchions or posts F framed into the axle B to support the rollers or weights G H, which operate the valves and keep them in position. These stanchions or posts are secured at the top by the cap I. The weight of the tongue and whiffletrees upon the hounds would naturally throw the stanchions forward out of their proper place; but this effect is prevented by the check-chains J, which are attached to the hounds, and, passing over the cap I, connect at the other end to the beams E, and thus by the weight of that one of these beams which happens to be in the lowest position keeps the stanchions in their proper position.

K K K are the hoppers in which the seed is placed, constructed and arranged as shown in the drawings. They terminate at the bottom in tubes L, which conduct the seed to the ground and serve as valve-boxes, in which the seed is measured by the valves *a b*, which open alternately for that purpose. These valves *a b* are attached to levers *c d*, and are opened by the weight of the rollers G H, which are connected to these levers *c d* by the connecting-rods and chains *m*. The rollers G H are raised by the cams M N, which are attached to the traction-wheels for that purpose, to allow the valves to be closed by the spring *f*. An inspection of the form of the cams, as represented in the drawings, will make their relative motions quite clear.

To prevent the seed from becoming choked in upon the upper valve, the arm *g*, attached to the shaft *h*, is made to work upward through the narrow slit in the tubes L in such a manner as to agitate the seed and insure the filling of the valves. The shaft *h* has an intermittent motion for that purpose communicated to it by the chain O from the roller or weight H, to which this intermittent motion is given by the cam-wheel N, working into the pinion *i* on the roller H. The amount of seed delivered at each dropping is measured by the cavity between the valves *a* and *b*.

The plows may be so attached to the beams that they may be turned by the lever Q, attached to the slide R, to which the plow is connected by the arm *j*.

When it is desirable to stop the deposit of seed the rollers G H may be raised by means of the lever S, which is connected to them by chains *k* for that purpose, which allows the valves to remain closed till they are again allowed to fall.

It often happens that light and fibrous particles collect in front of the plows and prevent their making a proper furrow to receive the seed. To enable me to clear away these particles with facility, I have provided a clearing-plate, U, which I attach to the beam forward of the plow, as shown in Fig. 4, and may be flexible or attached to the beam by a hinge-joint, as considered most desirable. It is forked, so as to stride the plow and wipe off obstructions when the plow is raised and the

clearer held down, which latter may be done by pressing down with the foot upon the lever *l*.

To insure the closing of the furrow behind the plow after the seed is dropped, I attach a longitudinally-concave roller, T, behind the plows, as shown, to roll the sides of the furrow in upon the seed by its concavity—as, the ends being the largest and the under surface inclining upward toward the center, it will force the soil inward upon the seed, as stated.

The particular improvements which constitute my said invention, and which I claim as having been originally and first invented by me, are—

1. The agitator *g*, arranged with relation to the seed-boxes and valves, substantially at set forth.

2. Combining with one of the weights which operate the valves, or its equivalent, a cam-shaped gear-wheel corresponding in form with the cams which operate said weights, substantially as and for the purposes set forth.

N. DRAKE.

Witnesses:
G. B. DRAKE,
WM. HAINES.