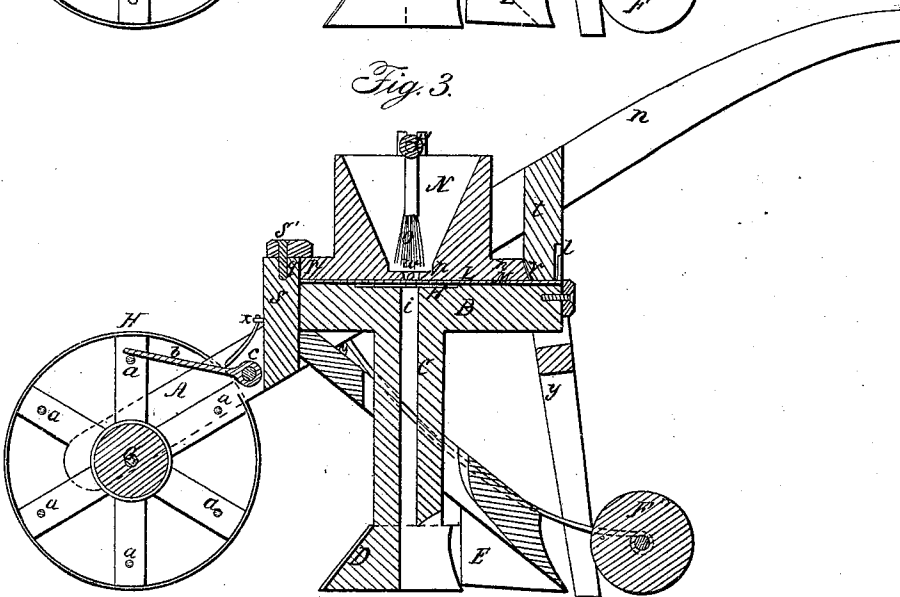
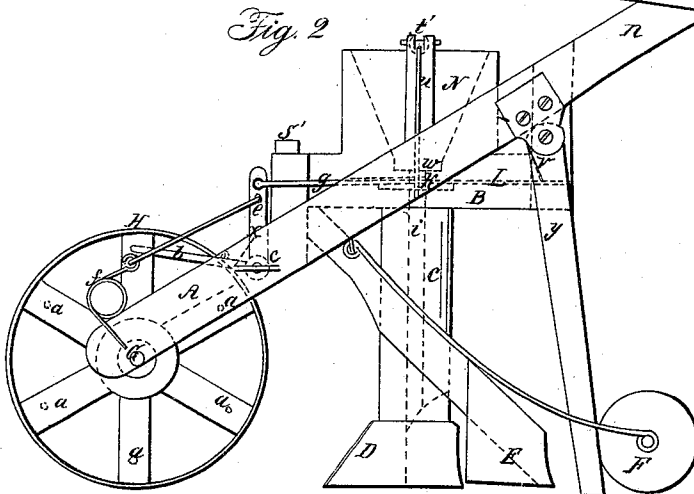
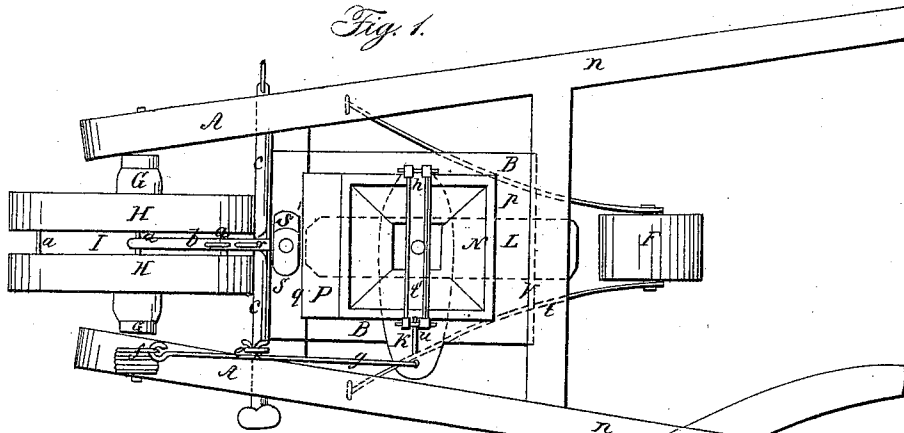


T. RUSSELL.
Seed Planter.

No. 19,953.

Patented Apr. 13, 1858.



UNITED STATES PATENT OFFICE.

THOMAS RUSSELL, OF WALDOBOROUGH, MAINE.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. 19,953, dated April 13, 1858.

To all whom it may concern:

Be it known that I, THOMAS RUSSELL, of Waldoborough, in the county of Lincoln and State of Maine, have invented an Improved Seed-Planter; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 is a top view of it; Fig. 2, a side elevation, and Fig. 3 a vertical and longitudinal section.

In such drawings, A denotes the frame of the machine, it being made somewhat like that of a common wheelbarrow.

From a platform, B, of the frame a spout, C, descends and terminates in a furrow plow or opener, D, behind which are coverers E E and a roller, F, as in many other planting-machines.

In front of the furrow-opener, and on an axle or shaft, G, supported by the frame A, are two wheels, H H, they being arranged with a narrow space, I, between them, so that when the machine is in use they may not press on the ground directly in the extension of the path of the nose of the furrow-opener, but work on or close to the edges of such extension of the path. If a single wheel were employed in the middle of the axle G, it would roll on the earth, and so condense it directly in front of the furrow-opener as to increase the difficulty of opening the furrow. Again, should two wheels be employed and arranged at the extremities of the axle, as is the case in some planting-machines, the furrow-opener would be likely to be lifted or more or less elevated whenever one wheel meets any hill or obstruction. The advantages of my arrangement of the two wheels with respect to the furrow-opener will therefore be easily perceived. These wheels are connected by a series of lifters or cross-ties, *a a a*, placed at equal distances apart, as shown in Figs. 1 and 3, and besides this an arm, *b*, from a rocker-shaft, *c*, extends into the space I between the wheels, and is operated by the series of lifters *a a a* when the wheels are in revolution. By the extension of the arm *b* into the space I such arm, while in movement, tends to clear the said space from any dirt which may clog the same. From the shaft *c* another arm, *e*, extends upward, and

is connected to a spring, *f*, which is so applied to the frame A as to produce a motion of the shaft in reverse of that which is imparted to it by the wheels and their lifters. A rod, *g*, is jointed to the arm *e*, and also to the outer end of a lever-plate, K, which I term the "dropper." The fulcrum of the plate K is at its other end, or at *h*, (see Fig. 1.) wherein that part of the plate which is curved is represented in dotted lines. This part K has a reciprocating vibratory motion imparted to it by the action of the spring *f* and that of the lifters on the arm *b*. There is an opening, *i*, made through the dropper, as shown in Fig. 3, such opening being beneath a gage-slide, L, which is slid into a chamber or space, M, whose mouth or opening *l* is between the handles *n n* of the frame A, the same being so as to enable a person to remove the slide and insert another, as occasion may require, without the necessity of disturbing any of the rest of the mechanism. The gage-slide is furnished with a hole, *o*, for the reception of the seed, such hole being made of a size just sufficient to cause it to hold the amount of seed which it may be desirable to drop each time that the hole of the dropper may be brought directly underneath such gage-hole.

Over the gage-plate is a movable hopper, N, the same being so applied to the platform B as to be capable of being lifted off the same. The bottom board, *p*, of the hopper extends each way a short distance beyond the rest of the hopper, and projects into recesses *q r*, formed in cross-ties *s t* of the frame A, as seen in Figs. 1 and 3. When on the platform B the hopper is confined thereto by a turn-button, *s'*, applied as shown in Figs. 1 and 3.

Across the upper part of the hopper is a transverse shaft, *t'*, from the middle of which a brush, O, extends down into the hopper and rests on its bottom. A bent arm, *u*, projects down from the shaft *t'*, and extends through a hole made in the dropper K, and so that when the dropper is in motion on its fulcrum it shall cause the brush to have a reciprocating motion within the hopper, in order that it may not only sweep the bottom thereof, but shake or stir up the seeds when in the dropper, and thereby prevent them from packing together, so as to obstruct their free delivery into

the discharge-hole *w* of the hopper. The manner of connecting the brush-shaft with the dropper enables the two to be readily disconnected when it may be desirable to remove the hopper from its seat or platform.

By elevating the arm *b* above the path of rotation of the lifters and holding up said arm by a hook, *x*, the machine may be wheeled over the ground without any dropping of seed from the hopper taking place. The legs *y y* are applied to the frame *A* by hinges, so as to be capable of being turned up against the handles, preparatory to the machine being put in operation. In order to operate it, a person has only to lay hold of the handles and press the machine forward and the furrow-opener into the earth at the same time. This will put the wheels in motion, and they will cause the dropper and brush to be put in action, whereby the seeds will be dropped at regular intervals or distances in the furrow made by the plow or furrow-opener.

Having thus described my invention, what I claim is—

1. Arranging the arm *b'* of the rocker-shaft *c* so as to extend and operate in the space *I* between the wheels, as described, in order that such arm may serve to clear the said space between the wheels from earth which may adhere or be taken up therein.

2. In connection with a hopper made removable from the frame, as specified, applying the movable brush *O* to the dropper or valve *K* by means of an arm, *u*, extending down from the brush-shaft and into the dropper *K*, in manner as described, the same being for the purpose as specified.

In testimony whereof I have hereunto set my signature.

THOMAS RUSSELL.

Witnesses:

ISAAC REED,
OSCAR EATON.