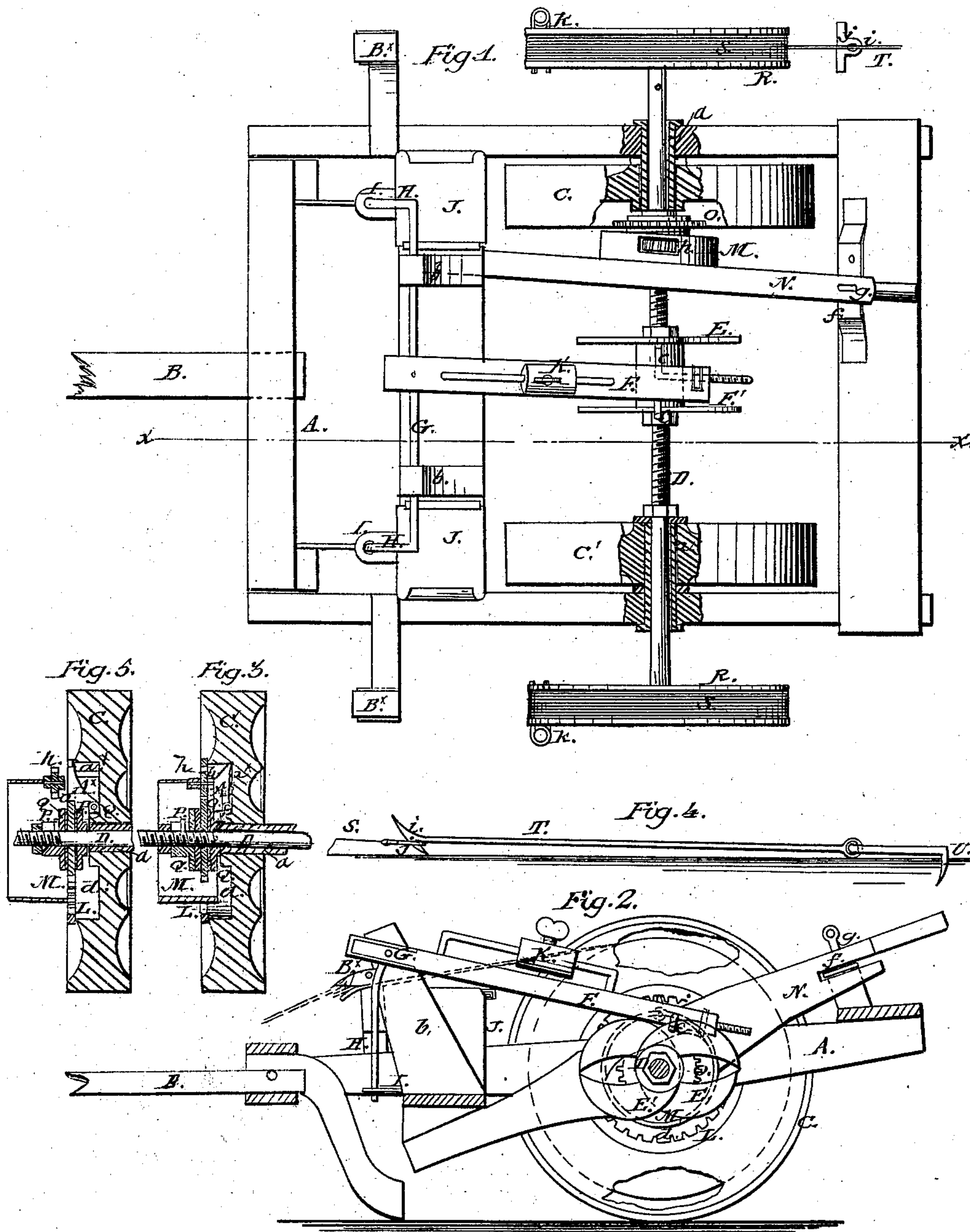


S. Y. Orr,
Corn Platter.

No. 91,961.

Patented June 29, 1869.



Witnesses:
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S. Y. ORR, OF MORNING SUN, IOWA, ASSIGNOR TO HIMSELF AND
J. M. VIRGIN, OF SAME PLACE.

Letters Patent No. 91,961, dated June 29, 1869; antedated June 22, 1869.

IMPROVEMENT IN CORN-PLANTERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, S. Y. ORR, of Morning Sun, in the county of Louisa, and State of Iowa, have invented a new and useful Improvement in Corn-Planters; 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 plan or top view of my invention.

Figure 2 is a side sectional view of the same, taken in the line *x x*, fig. 1.

Figure 3 is a detached central section of one of the wheels of the same, and gearing connected therewith.

Figure 4 is a detached view of an anchor and connecting-rod, and hook pertaining to the same.

Figure 5, same view as fig. 3, with the parts in a different position.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved corn-planter, of that class which is designed for planting in check-rows; and

It consists in a novel construction and arrangement of the same, as hereinafter fully shown and described, whereby the desired work may be performed in an expeditious manner.

In the accompanying sheet of drawings—

A represents the frame of the machine, which may be constructed in any proper manner, having a draught-pole, B, secured to its front end, and mounted on two wheels, C C', which are fitted loosely on their axle D, the latter being allowed to turn freely in bearings *a* in the frame, and the wheels C C' allowed to turn on the bearings. This will be fully understood by referring to fig. 1.

On the shaft or axle D there are secured two cams, E E', which are of S-form, (see fig. 2,) and are placed on the axle D in reversed position.

F is a lever, the front end of which is secured on a shaft, G, having its bearings in uprights *b b*, on the front part of the frame A, said shaft having a crank-arm, H, at each end of it, the lower ends of which are engaged with seed-slides I I, fitted in the bottoms of the hoppers J J, on the frame A, and which distribute the seed by a reciprocating movement, the cam E or E' elevating the lever, as the machine is drawn along, and giving one movement to the slides I, the other or reverse movement being given by the gravity of the lever after the prominent portions of the cam leave it, this latter movement being rendered effectual by a weight, K, placed on the lever, and in such a manner that it may be adjusted longitudinally, to add, in a greater or less degree, to the efficiency of the dropping movement of the lever, as may be required.

The lever F is provided at each side, near its-rear end, with a short arm *c*.

The cams E E', act against these arms, one cam only acting at once, the lever F being shifted laterally, so that either cam may be made to act upon it as required.

The wheel C has a concentric toothed rim, L, attached to its inner side, and around a circular concentric opening, *d*, in the wheel.

M is a ring, which is attached to a lever, N, the front end of the latter being secured to the frame by a fulcrum-pin, at its front end, the rear part of said lever being fitted on a guide-plate, *f*, to which it may be secured at different points by a pin, *g*.

The ring M has a pinion, *h*, in it, which pinion, when the lever N is adjusted to the right, is thrown in gear with the toothed rim L of wheel C, and also with a wheel, O, on the axle D.

This wheel O is not firmly secured to the axle D, but is fitted loosely thereon, and is clamped between two disks P P, which disks are secured to the axle D, a rubber or elastic washer, Q, being interposed between the wheel and each of the disks, as shown in fig. 3.

By this arrangement it will be seen that the wheel O may slip on the axle if the latter resist in a certain degree the motion imparted to O.

A^x is a latch, secured near the axle in the circular concentric opening *d*, in the wheel C, which latch is pressed forward by a spring, *a^x*, (see figs. 3 and 5,) and engages with the toothed rim L and the wheel O, when the lever N is adjusted to the left, thus imparting to the axle D, through the medium of the wheel O, motion in the same direction as the wheel C.

When the lever N is adjusted to the right, the ring M presses back the latch A^x, disengaging it from the toothed rim L and wheel O, and allowing the pinion *h* to engage in its stead, thus imparting a reverse motion to the axle D, while the latch A^x, which is secured to the wheel C, is carried around on the edge of the ring M.

On each end of the axle D there is keyed a reel, R, having a fine wire, or cord, S, wound upon them.

T is a rod, having an anchor, V, attached to one end of it, and on the opposite end there is made a small hook, *i*, to catch into an eye, *j*, attached to the ends of the wires S.

B^x is a small eye, through which the wire must be placed, when being rewound upon the reels, in order to guide it properly upon the reel. It also serves to automatically unhook the wire from the small hook on the end of the rod T.

These wires and reels are for the purpose of turning the axle D, and operating the seed-distributing mechanism as the machine is drawn along.

To effect this result, it only requires that the anchor V, attached to the rod T, be always firmly planted in

the ground in a straight line or furrow, and as the machine is drawn over the field from said anchor, the wire S, which is attached to it, will unwind from its reel with a fixed tension, and turn the axle D.

After the machine is turned at the opposite side or end of the field, it is properly adjusted for a return, in the following manner, viz:

The lever N is moved to the right, so as to throw the pinion *h* of ring M in gear with the concentric toothed rim L and the wheel O; the axle D will then be turned in a reverse direction, and the wire S, which was previously unwound, wound upon its reel, and kept in the same tension in which it was unwound, owing to the axle D having a tendency to be turned quicker than the wheel C rotates, the wheel O slipping a little on its axle. This result is due to the difference in the dimensions of the gearings L *h* O.

When the machine is being drawn from place to place, the wires are retained on their reels by the staples *k*, shown in fig. 1.

These staples are also used to keep the wire or cord from uncoiling from the reel at the side or end of the field opposite the anchor or guide-furrow. The staples are placed over the wire or cord, and on the return allow the wire or cord to wind on the reel over the staples.

By this arrangement, corn may be planted evenly in check-rows, and very expeditiously.

The object of this invention is to secure, by use of a smooth wire or cord, wound around reels, a movement that is independent of the ground-wheels, and which depends on actual space, viz, the semi-circumference of the reels, for the spaces between the checks or rows.

I would remark that a guide-furrow may be used

at one side of the field, or through the centre of it. In this latter case, the wires S of the two reels would be used alternately.

Having thus described my invention,

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

1. The use or employment of a smooth wire, or cord, S, wound upon the reels R, in combination with the friction-disks P P, with rubber or elastic washers Q Q, and nut *y*, with the cams E E', or their mechanical equivalent, for the purpose of operating the seed-distributing mechanism, as the machine is drawn along, when constructed substantially as and for the purpose set forth.

2. The rod T, provided with the anchor V, and hook *i*, in connection with the eyes *j*, attached to the wires S, for the purpose of connecting the wires to the anchor V and rod T, when so constructed, that in combination with the small eye B^x, on the front end of the machine, the wire will be automatically unhooked from rod T, substantially as and for the purpose set forth.

3. The combination of the wires S, reels R, on axle D, cams E E', lever F, and seed-dropping mechanism, all arranged to operate substantially as and for the purpose set forth.

4. The toothed rim L, latch A^x, spring a^x, pinion *h*, in the ring M, attached to the lever N, and the wheel O, between friction-disks P P, on the axle D, all arranged to operate substantially as set forth, and for the purpose specified.

S. Y. ORR.

Witnesses:

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T. J. OCHILTREE.