M. SIMMONS.

Corn Planter.

No. 23,403. Patented Mar. 29. 1859.

Fig. 4.

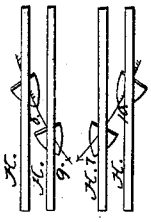


Fig. 6.

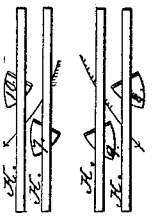


Fig. 2.

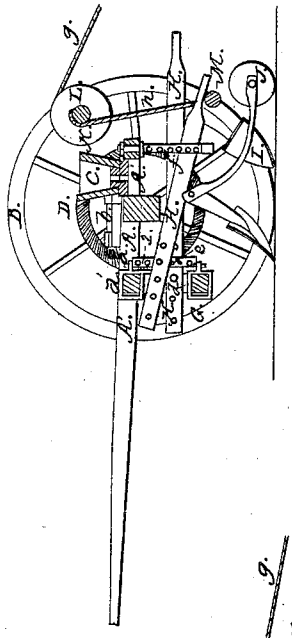


Fig. 3.

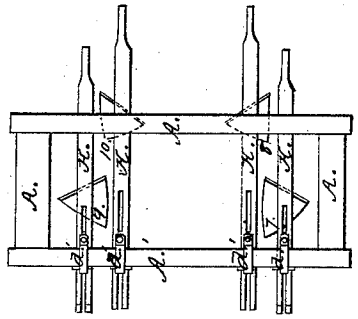
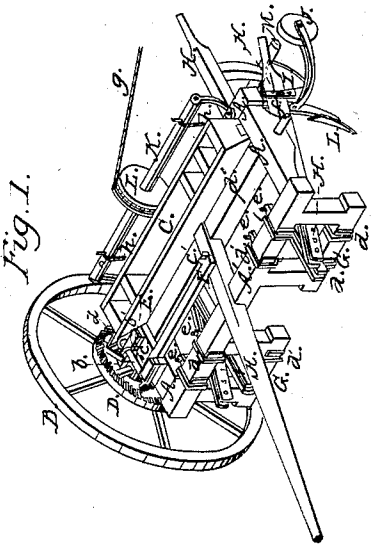


Fig. 1.



Witnesses:

H. B. Langston

E. C. Edwards

Inventor:

M. Simmons.

UNITED STATES PATENT OFFICE.

MICHAEL SIMMONS, OF IRA, ILLINOIS.

IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. **23,403**, dated March 29, 1859.

To all whom it may concern:

Be it known that I, MICHAEL SIMMONS, of Ira, in the county of Jo Daviess and State of Illinois, have invented certain new and useful Improvements in Seeding-Machines; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the machine. Fig. 2 represents a vertical section through the machine. Fig. 3 represents a top plan of the frame, with the opening and covering shoes arranged thereon for seeding. Figs. 4 and 5 represent a portion of the frame, with the same shoes or hoes arranged thereon for cultivating the rows of corn, or whatever may be planted by the machine.

Similar letters of reference, where they occur in the several figures, denote like parts of the machine in all of them.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A represents a quadrangular frame supported on a pair of wheels, B, one only being seen in the drawings. On this frame A, toward its rear portion, is placed the seed-hopper C, which has a slide vibrating through its bottom part, provided with suitable cells for receiving and carrying to the delivery-opening such charges of grain as may be desirable to drop in planting.

On the wheel B there is a cogged wheel, D, which has its teeth or cogs eccentrically formed thereon for a purpose that will be presently described. This cogged wheel D turns a pinion, *a*, on the shaft *b*, being hung to a block, E, that is pivoted at *c* to the main frame. F is a lever attached to the block E for the purpose of swinging the spur-pinion *a* into and out of gear with the cog-wheel D, a pin, *c'*, holding it when in gear.

The object of the oblique or eccentrically-cut teeth or cogs on the wheel D is that the pinion-shaft *b* may be placed above the center of the wheel D, and on the frame. If these cogs were cut radially, as is universally the case in bevel-gearing, the shaft *b* would have to cross the center of the wheel D, and this would bring it below the frame and in a very inconvenient position for operating the seed-slide, which it does by a simple crank, *d*, at its rear end; and, besides, I get a position for the shaft *b* on top of and parallel with the main frame by such a wheel as that shown at D, an ordinary bevel-wheel not admitting of such an arrangement.

To the front cross-bar, A', of the main frame are attached or suspended the two bars G G, which are parallel to the cross-bar, and these bars have upon them slides *d' d' d' d'*, which can be moved along upon said bars to any desired point. To these slides are attached vertical bars *e*, having a series of holes, 1, 2, 3, 4, &c., as seen in Fig. 2. To these bars *e* are connected, at any adjusted height, the front ends of the beams H H H H, and at such width or distance from each other as may be desired for the special work to be done, said beams being connected by a pin passing through one of their adjusting-holes and one of the holes in *e*, and so that they may play on said pin.

To the rear cross-piece of the frame A are connected adjustable hangers *f*, also furnished with a series of adjusting holes, and through these hangers pass the after portions of the beams H. The machine as represented in the drawings is arranged for planting corn, and there are two beams H to each dropping device, each beam carrying a shovel, I, the one in advance for opening the furrow for the seed, and the other one, behind and to one side of it, for covering the furrow after the seed are dropped therein; and a roller, J, may follow the coverer to press down the earth over the planted grain.

It will be observed that both the opening and covering shovels stand oblique to the line of the furrows, though facing each other, as it were, in pairs. The object of so placing these shovels will be hereinafter more fully explained.

On the rear of the frame there is hung a shaft, K, on which there is a pulley-wheel, L, and around this pulley-wheel passes or is wound a cord, *g*. To the shaft K is suspended, by cords or chains *h*, a bar, M, which is underneath the beams H, and long enough to catch all the beams when it is raised up, so that the operator, who walks behind the machine, by drawing upon the cord *g*, can instantly raise up all the beams and bring the shovels above any intervening obstacle.

In Fig. 3 a top plan of the frame and of the opening and covering shovels is seen as they are used in planting and covering grains in furrows, drills, or hills; and when the plants want cultivating I do it with the same machine, not by adding to or taking away anything from the machine as a planter, but simply by the construction of my shovels, and a transposition of them from one to the other side of the machine; and by way of illustration I shall call the shovels in Fig. 3, respectively, 7 8 9 10. Then, if it be desirable to cultivate and throw the earth toward the plants, I leave 7 and 9 as they are in planting and transpose 8 and 10, which leaves them as shown in Fig. 4; but if I cultivate the plants and want to throw the earth away from them I leave 8 and 10 as in planting and transpose 7 and 9, as shown in Fig. 5, which effects the object, and I thus by the same machine, and by the same devices which open and close two furrows in planting, cultivate a single row of plants by either throwing the earth toward or from the plants, as I please. The shifting of the beams is done in a moment, as it is only necessary to draw a pin to take them out, and they fit in any of the hangers or bars, being slotted to straddle those *e*. These beams, too, have two adjustments, a vertical and horizontal one, so as to take a greater or less depth, or a wider or narrower furrow.

I am aware that a combined seeder and cultivator has been used, but not having such capabilities as mine, for mine is either, for the time being, and without taking away or adding to the machine, while the others are both at the same time, or else restricted in their operation.

What I claim is—

1. The use of the eccentrically-cut gear-wheel D, so as to enable me to get my pinion *a* and pinion-shaft *b* on top of the frame and above the center of the wheel that drives it, substantially as described.

2. The arrangement of the beams H, with their skewed shovels and adjustable connections, so that they may be transposed from side to side of the machine at pleasure, in the manner and for the purpose herein set forth and explained.

M. SIMMONS.

Witnesses:
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