

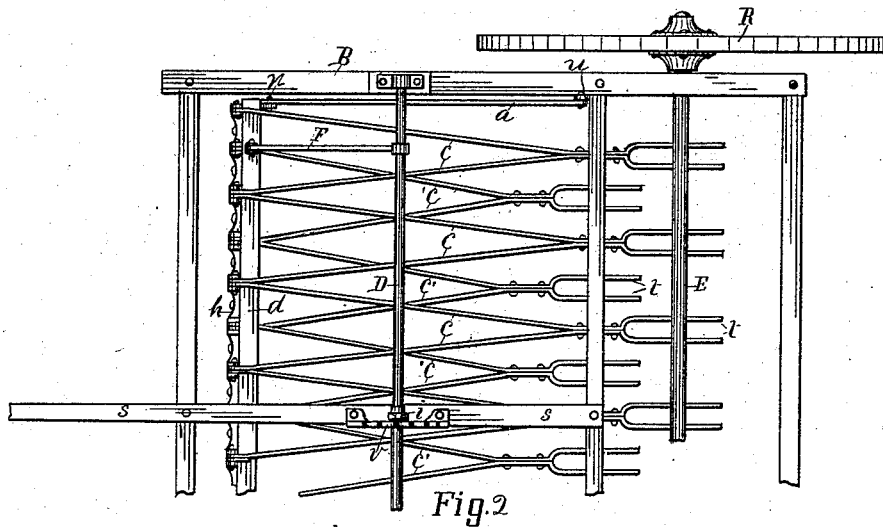
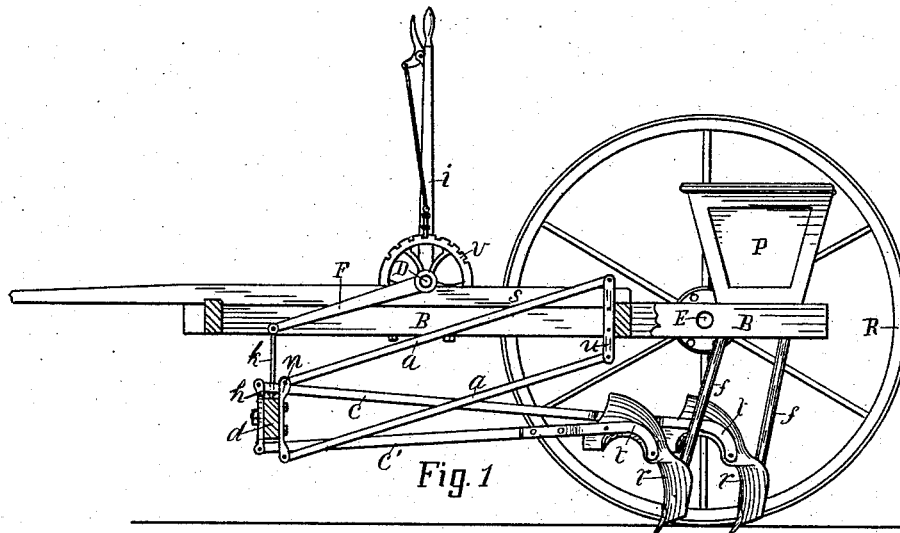
(No Model.)

A. D. ALEXANDER.

GRAIN DRILL.

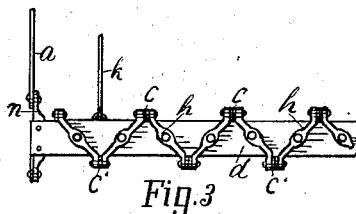
No. 307,160.

Patented Oct. 28, 1884.



Attest.

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Att'y.

UNITED STATES PATENT OFFICE.

ALBERT D. ALEXANDER, OF LAWTON, MICHIGAN.

GRAIN-DRILL.

SPECIFICATION forming part of Letters Patent No. 307,160, dated October 28, 1884.

Application filed July 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALBERT D. ALEXANDER, a citizen of the United States, residing at Lawton, county of Van Buren, State of Michigan, have invented a new and useful Grain-Drill, of which the following is a specification.

The object of my invention is to construct a grain-drill having certain means, substantially as hereinafter described, for tilting the teeth or shares in unison.

In the drawings, forming a part of this specification, Figure 1 is a side elevation with parts broken away and in section. Fig. 2 is a broken top view; and Fig. 3 a plan of a detached broken part.

A common form of frame is shown at B provided with an axle, E, wheels R, and grain-box P. A little more than one-half of the drill is here shown, Fig. 2, the parts at the left hand of the central tongue, S, being broken away, but which are like the parts at the right hand of said tongue in a complete device. The share-bars *c c'*, shares *r r'*, and grain-tubes *f f'* herein shown are the same as those shown in a former application by me filed July 11, 1884, Serial No. 137,418. While I prefer to use these specified parts in my drill, the present invention does not apply to them necessarily, as specifically constructed, farther than that the share-bars are pivotally connected at their forward ends. On each side of the frame B are parallel oblique bars *a a*, pivotally connected at their rear ends with the frame B by means of a rigidly-secured bar, *u*, on each side of said frame. The forward ends of the bars *a a* are pivotally connected with a vertically-playing beam, *d*, by means of a rigidly-secured bar, *n*, at each end of beam *d*. With the vertically-playing beam *d* the forward ends of the share-bars are pivotally connected, the upper ones, *c*, with the upper side of said beam, and the lower ones, *c'*, with the lower side. The means here shown for said pivotal connection are diagonal castings *h*, having a little space between their upper and lower contiguous ends, which extend a little beyond the beam *d*, in which spaces the bars *c c'* are pivoted, Fig. 3. By this means the oblique arms of the bars *c c'* cross each other in vertical view, Fig. 2, thus utilizing space and getting more bars and shares in a given width frame. The frame B is provided with a rocking bar, D, having bearings

in the side beams and tongue of said frame. 55 With the tongue is connected a ratchet-disk, *v*, and with the rocking bar D is rigidly connected a pawl-lever, *i*, the pawl thereof adapted to engage the ratchet. Lifting-levers F are rigidly secured to the rocking bar at each end 60 and are pivotally connected with the vertically-playing beam *d* by means of pivotally-connected rods *k*.

In the operation by swinging the pawl-lever forward or back the forward ends of the 65 share-bars *c c'* are raised or lowered, as the case may be, thus tilting all of the shares connected with the rear ends of said bars in unison, setting their working ends farther forward or rearward, according to the desire of the 70 operator in view of the condition of the soil.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a grain-drill, the vertically-playing 75 beam, in combination with pivotally-connecting share-bars, and means for raising and lowering said beam, whereby the shares are tilted in unison, substantially as set forth.

2. The combination, with the vertically- 80 playing beam, its oblique pivoted supporting-bars, a rocking bar provided with a pawl-lever and with the end lifting-levers, and the pivoted rods connecting the latter with said beam, of shared bars the forward ends there- 85 of pivotally connecting with the vertically-playing beam, substantially as set forth.

3. The pivotally-suspended vertically-playing beam provided with castings having spaces between their contiguous extended ends, in 90 combination with shared bars pivotally connecting with said castings in said spaces, and means for raising and lowering said beam, substantially as set forth.

4. A grain-drill consisting of a wheeled 95 frame, a grain-box, a vertically-playing beam, means for raising and lowering the same and locking it in given positions, share-bars pivotally connecting at their forward ends with said beam, and grain-tubes, all substantially 100 as set forth.

In testimony of the foregoing I have hereto subscribed my name in presence of two witnesses.

ALBERT D. ALEXANDER.

Witnesses:

HERBERT S. WILSON,
CHAS. T. CHASE.