(No Model.)

2 Sheets—Sheet 1.

J. & T. H. NOXON.

SEEDING MACHINE.

No. 363,758. Patented May 24, 1887.

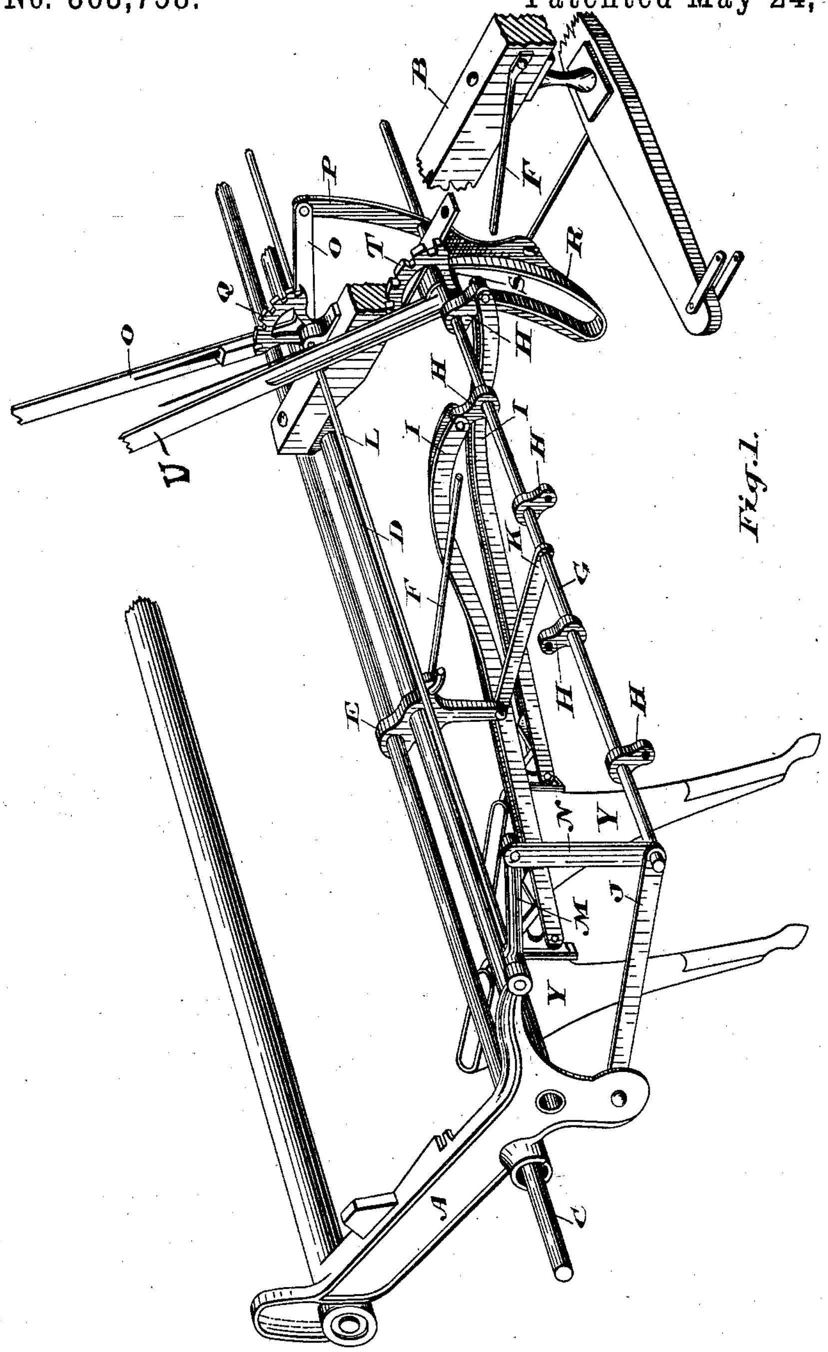

Fig. 1.

Witnesses.

F. B. Fetherstonhaugh

James L. Mayher

Inventors.

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T. H. Noxon

by Donald C. Ridout & Co

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N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

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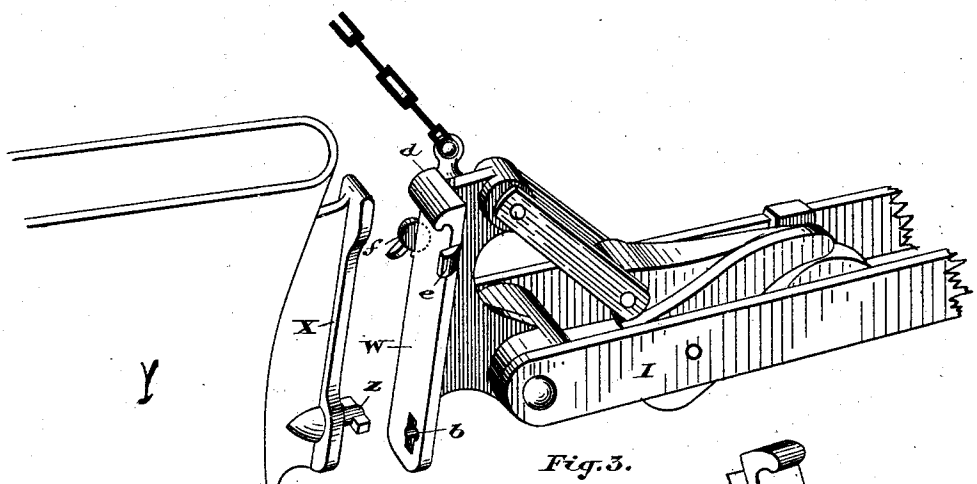

Fig. 3.

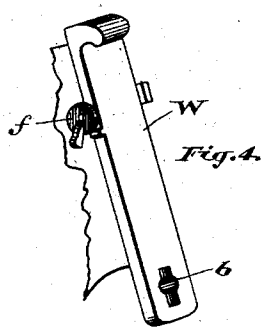

Fig. 4.

Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES NOXON AND THOMAS H. NOXON, OF INGERSOLL, ONTARIO, CANADA.

SEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 363,758, dated May 24, 1887.

Application filed November 25, 1885. Renewed December 23, 1886. Serial No. 222,422. (No model.)

To all whom it may concern:

Be it known that we, JAMES NOXON and THOMAS HENRY NOXON, both of the town of Ingersoll, in the county of Oxford, in the Province of Ontario, Canada, manufacturers of agricultural implements, have invented certain new and useful Improvements in Seeding-Machines, of which the following is a specification.

The object of the invention is, first, to devise simple mechanism by which the angle of all the hoes or teeth may be simultaneously altered, and by which they may also be made to form a zigzag or double-rank position, and, secondly, to provide simple means for connecting and disconnecting the hoes or cultivator-teeth to or from their drag-bars; and it consists, essentially, first, in connecting the drag-bars to a series of cranks set opposite to each other on a rod suspended upon arms pivoted to the frame of the machine, the said rod being provided with mechanism by which it can be raised or lowered for the purpose of angling the hoes or cultivator-teeth, and also with mechanism by which the said rod may be turned on its center for the purpose of altering the angle of the cranks attached to it, and thereby zigzag the hoes or cultivator-teeth as required, and, secondly, in forming on each hoe or cultivator-tooth a plate having a T-shaped projection formed on it to fit into a slot formed in a head or plate attached to the drag-bar, and provided with a lock for securing the hoe or cultivator-tooth when its projection has been inserted into the slot referred to, substantially as hereinafter more particularly explained.

Figure 1 is a perspective view, showing a portion of the machine exhibiting the angling and zigzag mechanism. Fig. 2 is an enlarged detail of the quadrant rack and block fixed to the drag-bar rod. Fig. 3 is an enlarged detail, showing the device for securing the hoe or cultivator-tooth to its drag-bar. Fig. 4 is a detail to show the lock for securing the hoe or cultivator-tooth when in position.

In Fig. 1 we show merely one side of the machine, extending from the side-frame A to the tongue B, the mechanism on the other side of the tongue being exactly the same as that exhibited in the drawings.

C is the ground-wheel axle suitably journaled in the frame A.

D is a rod, preferably made of gas-pipe, and extending from one frame, A, to the corresponding frame on the other side of the machine. This rod D is braced to the axle C by the bracket E, both the axle and the rod passing through suitable holes in the said bracket, as indicated, which bracket also provides means for securing the diagonal brace F, employed in laterally strengthening the tongue B.

G is a rod to which the cranks H are rigidly attached, as indicated, a drag-bar, I, being connected to each crank. The rod G is journaled at each end on an arm, J, which is pivoted upon the frame A, as shown. The rod G is further braced by an arm, K, pivoted at one end to the bracket E and at its other end to the rod G.

L is a rod extending across the machine and journaled at each end on the frame A. This rod has an arm, M, fixed at each end and connected to the rod G by a link, N.

O is a hand-lever rigidly fastened to the rod L, and connected, as shown, by the link P to the rod G.

Q is a notched quadrant fixed on top of the tongue B, and into which the spring-pawl of the hand-lever O engages. It will thus be seen that by moving the hand-lever O the rod G may be raised or lowered, as required, which movement will of course alter the angle of the hoes Y, causing them to take a heavier or lighter cut, according to the nature of the work required of them.

R is a guide-bracket fixed to the bottom of the tongue B, as shown.

S is a block fitting into the guide-bracket R, and attached to or forming part of the notched quadrant T. A hole in the center of the block S permits the free passage of the rod G, to which rod the hand-lever U is rigidly fastened immediately next to the notched quadrant T. The face *a* of the quadrant T butts against one side of the guide-bracket R, and a washer, V, fitting against the block S, butts against the other side of the guide-bracket R, so that the said block S is prevented from having any lateral motion; and as the hand-lever U, which is rigidly fastened to the rod G, butts against the quad-

rant T, the said rod is braced laterally. As the rod G passes freely through the hole in the block S, and is rigidly fastened to the hand-lever U, the rod G may be turned on its center by the hand-lever U, and in this way the throw of the cranks H are changed so as to move the hoes either into single or double rank, as required.

On reference to Figs. 3 and 4 our plan for connecting the hoe to the drag-bar will be understood.

W represents a head or plate attached to the drag-bar I, as indicated.

X is a corresponding head or plate fixed to the hoe Y.

Z is a T-shaped projection fixed to the plate X, and designed to slip into the slot *b*, made in the plate W. It will be noticed that in order to slip the projection Z into the slot *b*, the hoe Y must be turned at right angles to its normal position, when the T-shaped projection Z will pass through the slot *b*. On turning the hoe back into its normal position the T forms a lock for securing the bottom of the two plates W and X together. The top of this plate is secured by the plate X, fitting under the lip *d*, formed on the top of the plate W. A lug, *e*, on one side of the plate W prevents the plate X from passing it, while the eccentric stop *f*, when turned, as indicated in Fig. 3, will hold the plate X from turning back.

Although we prefer the T-shaped projection Z, it will of course be understood that an L shape would answer the same purpose.

What we claim as our invention is—

1. In a cultivator, a pivoted rod adjustably suspended from the frame and the drag-bars pivotally connected thereto, combined with mechanism by which the said rod is raised and lowered for angling the teeth and mechanism for turning the rod for zigzagging the same, substantially as specified.

2. A pivoted rod, G, adjustably suspended from the frame of the cultivator and having fixed to it the cranks H, to which the drag-bars I are connected, arms for pivotally connecting the rod G to the frame of the machine, in combination with mechanism arranged to raise and lower the rod G, substantially as and for the purpose specified.

3. The pivoted rod G, adjustably suspended from the frame of the cultivator and having fixed to it the cranks H, to which the drag-bars I are connected, the arms J and K for pivotally connecting the rod G to the frame of the machine, in combination with the rod L, having the hand-lever O, rigidly fastened to it and connected to the rod G by the arm M and link N, substantially as and for the purpose specified.

4. The rod L, provided with arms M, rigidly attached to it and connected by the links N to the pivoted rod G, adjustably suspended from the frame of the cultivator, in combination with the hand-lever O, rigidly fastened to the rod L and connected by the link P to the rod G, and the notched quadrant Q, fastened to the tongue B, and providing means for holding the hand-lever O, as specified.

5. The pivoted rod G, adjustably suspended from the frame of the cultivator and connected to the frame A by the pivoted arms J and to the drag-bars I by the cranks H, in combination with the hand-lever U, rigidly fastened to the rod G and arranged to engage with the notched quadrant T, held in the guide-bracket R by the block S, substantially as specified.

6. The combination, with the cultivator-tooth or hoe provided with the plate X, having locking-head, as Z, of the drag bar provided with a plate, W, having opening to receive said locking-head, and means for preventing lateral displacement of said plates, substantially as described.

7. The combination, with the hoe provided with plate X, having T-shaped projection, of the drag-bar having plate W, provided with opening *b* to receive said projection, a lip, *d*, lug *e*, and eccentric-stop *f*, substantially as and for the purpose specified.

JAMES NOXON.

Signed by the said James Noxon in the presence of—

JNO. W. SHAVER,
JNO. P. WEBSTER.

Ingersoll, November 9, 1885.

THOMAS H. NOXON.

Signed by the said Thomas Henry Noxon, in the presence of—

CHARLES C. BALDWIN,
J. M. JACKSON.

Toronto, November 16, 1885.