(No Model.) 2 Sheets—Sheet 1.

H. D. SPANGLER.

SEEDING MACHINE.

No. 304,367. Patented Sept. 2, 1884.

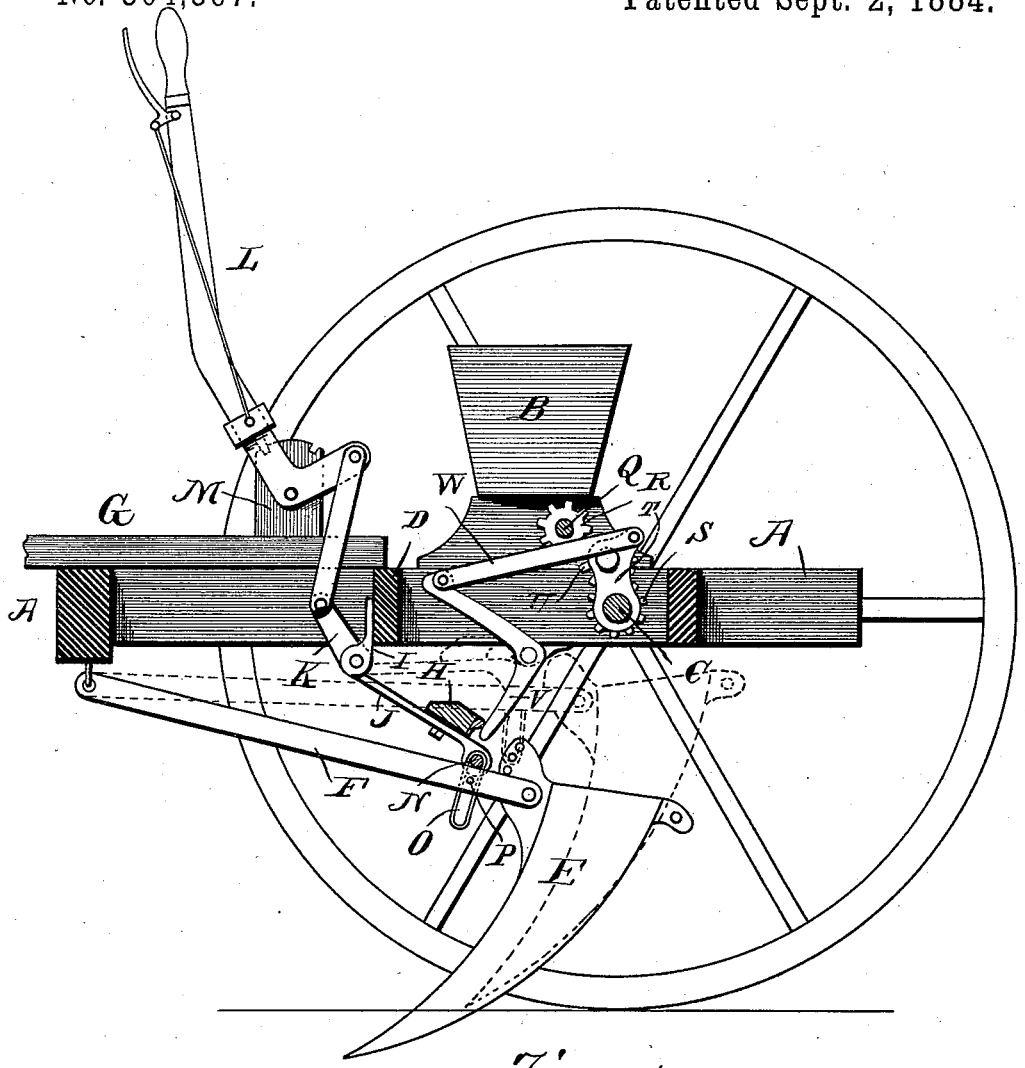

Fig 1

Witnesses,
John Lorenz
W. A. Seward.

Harrison D. Spangler
Inventor
by James N. See
Attorney

(No Model.) 2 Sheets—Sheet 2.

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SEEDING MACHINE.

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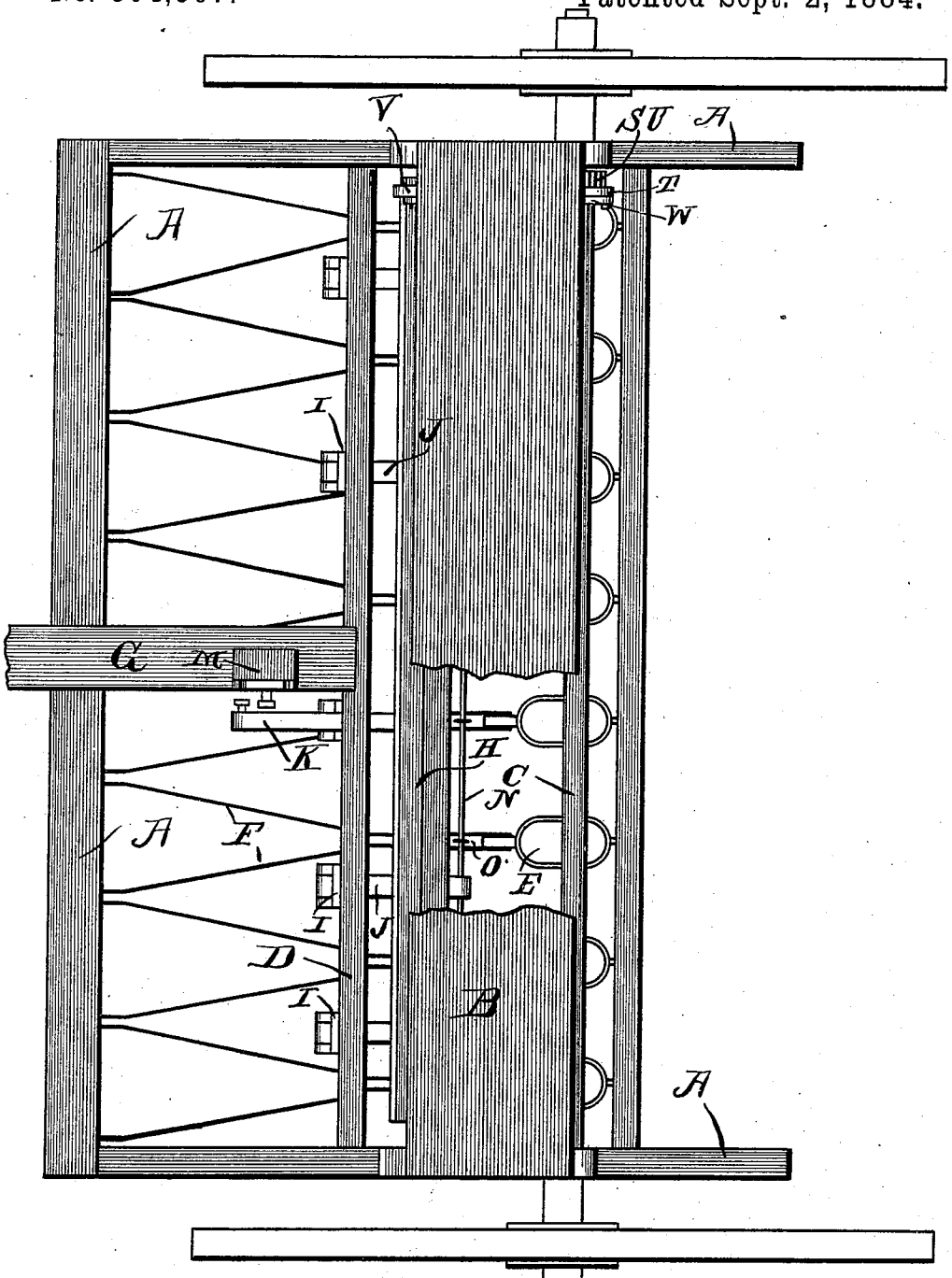

Witnesses:
John Lorenz
W. Dewart.

Fig. 2.

Inventor
Harvin D. Spangler
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UNITED STATES PATENT OFFICE.

HARRISON D. SPANGLER, OF RUSHVILLE, INDIANA, ASSIGNOR TO NORRIS & BROTHER, OF SAME PLACE.

SEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 304,367, dated September 2, 1884.

Application filed November 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, HARRISON D. SPANGLER, of Rushville, Rush county, Indiana, have invented certain new and useful Improvements in Seeding-Machines, of which the following is a specification.

This invention pertains to that class of seeding-machines in which a series of seeding-hoes is dragged beneath a wheeled vehicle; and it relates particularly to improved mechanism for raising and lowering these hoes, and simultaneously stopping and starting the flow of seed, as hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a vertical section of a seeding-machine embodying my improvements, and Fig. 2 is a plan of the same with parts broken away.

In the drawings, A represents the framing of a seeding-machine, B the seed-box, C the axle, D the longitudinal cross-piece of the frame forward of the seed-box, E the seed-hoes, F the drag-bars, and G the tongue, all constructed as usual.

H represents a movable bar, situated over the rear ends of the drag-bars; I, several hinge castings secured to the cross-piece D; J, hinge-pieces pivoted in said hinge-casting, and secured to the bar H, which may thus rise and fall in an arc; K, a lever formed by a forward extension of one of the hinge-pieces J, which is located at about the longitudinal center of the machine; L, a hand-lever linked to the lever K, as shown; M, a pivot-support for the hand-lever L, secured to the tongue of the machine; N, a rod arranged parallel to the bar H, and attached to said bar by means of rearward extensions of the hinge-pieces J, which form eyes encircling the rod, as clearly shown in the drawings; O, a series of long links, hung upon the rod, and each engaging a drag-bar; P, pins in the drag-bars for permitting of the engagement of the links; Q, the usual seed-box shaft; R, the gear upon the same; S, the usual axle-gear; T, the usual tumbler; U, the usual idle-gear carried by the tumbler, and adapted to connect the gears R and S; V, a double-ended curved lever pivoted to the side of the machine-framing, and adapted to be engaged (each end alternately) by the striking portion of the bar H as it is raised and lowered; W, a link connecting the lever V with the tumbler.

With the parts in the position as shown by Fig. 1, the seed-hoes are unsupported, and their drag-bars are pressed upon by the rod N, which forms a pressure-rod having a certain degree of elasticity between its supporting-eyes. By this means a downward pressure is given to the seed-hoes, and this pressure may be controlled by the hand-lever in an obvious manner. A rearward motion of the hand-lever will lift the rod N, and by means of the links O lift the seed-hoes out of the ground where the hand-lever detent may support them. As the bar H rises, it strikes the upper end of the curved lever V, pushing it rearward, and disengages the idle-gear and stops the seeding in an obvious manner, and when the bar H is lowered it pushes the lower end of the lever V rearward, and throws the idle-gear into engagement. The bar H is intended merely as a stiffener for the hinge-and-rod structure, and any portion of the hinge-and-rod structure arranged to suitably engage the lever V will serve the purpose of the bar as a means for actuating the lever V.

I claim as my invention—

1. In a seeding-machine, the combination of a machine-frame, a series of seed-hoes and drag-bars, a longitudinal pressure-rod arranged above the drag-bars and hinged to the machine-frame, as shown, links connecting the drag-bars with the rod, and a hand-lever arranged to raise and lower the rod, substantially as and for the purpose specified.

2. In a seeding-machine, the combination of the machine-frame, the seed-hoes, and drag-bars, the rod and links, and hinges I J, the levers K L, and the bar H, secured to the hinge-pieces J, parallel with the rod, substantially as and for the purpose specified.

3. In a seeding-machine, the combination of a machine-frame, a series of hoes and drag-bars, a longitudinal pressure-rod arranged above the rear end of the drag-bars, and hinged to the frame, levers for raising and lowering the same, links connecting the rod with the drag-bars, an axle-gear, a seed-box gear, a tumbler carrying an idle-gear, and a double-ended lever linked to the tumbler and adapted to be engaged by a striking-piece connected with the pressure-rod, substantially as and for the purpose specified.

HARRISON D. SPANGLER.

Witnesses:

JOHN Q. THOMAS,

A. L. COOK.