(No Model.)

J. NOXON.

SEEDING MACHINE.

No. 437,234. Patented Sept. 30, 1890.

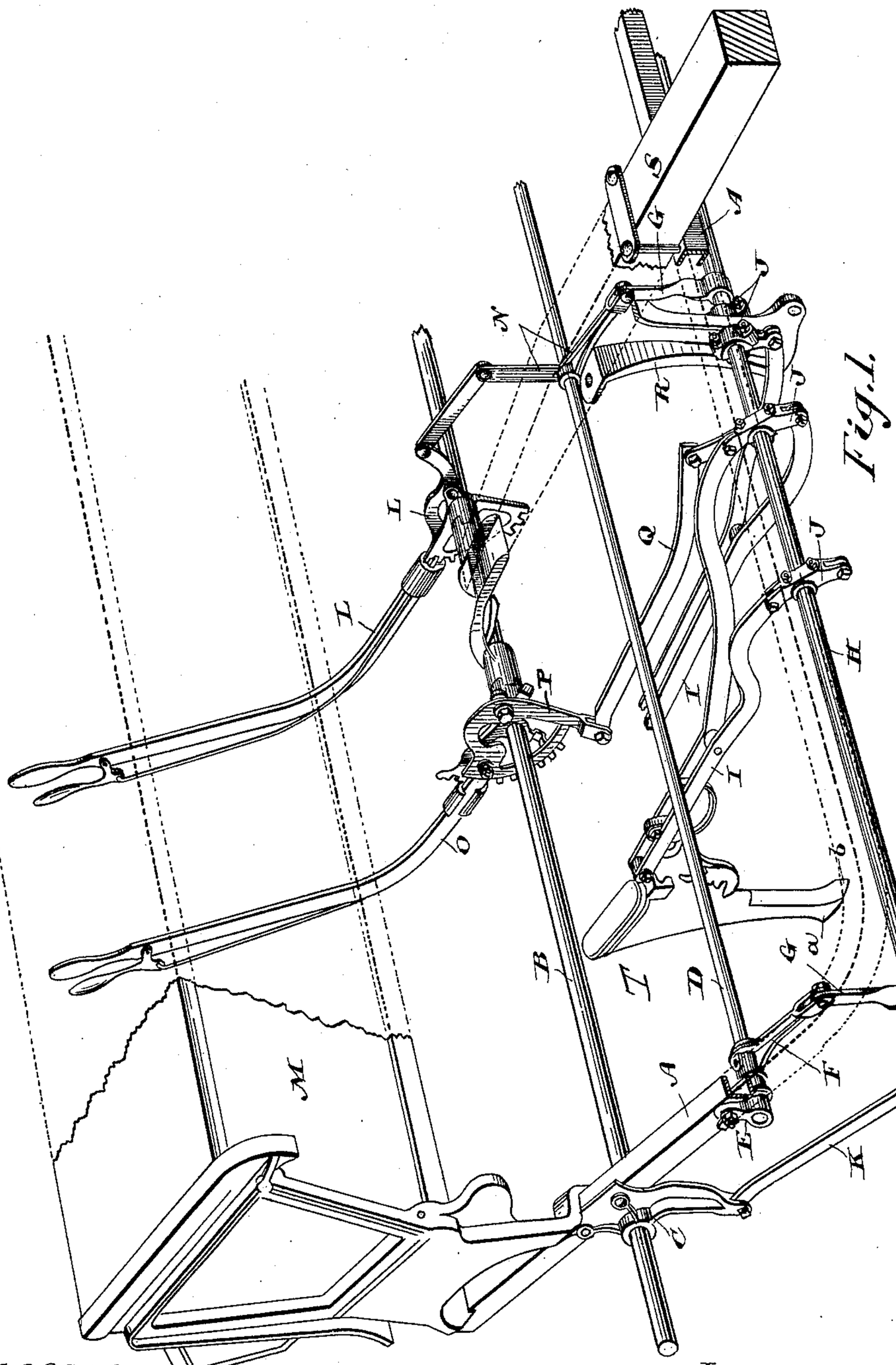

Fig. 1.

UNITED STATES PATENT OFFICE.

JAMES NOXON, OF WOODSTOCK, CANADA.

SEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 437,234, dated September 30, 1890.

Application filed November 22, 1889. Serial No. 331,250. (No model.)

To all whom it may concern:

Be it known that I, JAMES NOXON, manufacturer, of the town of Woodstock, in the county of Oxford, in the Province of Ontario, Canada, have invented a certain new and useful Improvement in Seeding-Machines, of which the following is a specification.

The object of the invention is to simplify and improve that portion of the machine connected with the drag-bar and operating mechanism; and it consists in the arrangement of parts hereinafter more particularly explained.

The figure of the drawing is a perspective view of that portion of the machine in which my improvements are involved.

A is the main frame of the machine, made of channel iron or steel, and connected to the axle B by the bracket C.

D is a rod journaled in suitable brackets E, fastened to the frame A, as indicated. Arms F are rigidly fastened to the rod D and pivotally connected to the lifting-links G, which are connected to and support the rod H, to which the drag-bars I are connected. The connections between the drag-bars I and the rod H are made by clips J, rigidly fastened to the rod H, and extending beyond the rod in such a manner that the drag-bars may be connected in pairs alternately on either side of the said rod H, so that the rolling of the said rod will, what is termed, "zigzag" the drag-bars and the hoes or teeth connected thereto. The ends of the rods H are connected to the bracket C (one of which is located on each side of the machine) by a bar K.

A lever L, preferably pivoted on the axle B, extends behind the seed-box M, and is connected, as indicated, to the bell-crank N, which is fixed to the rod D, and one of its arms F is connected to one of the lifting-links G, thereby connecting it to the rod H, as shown. A suitable toothed quadrant is arranged in connection with the lever L, so that when the lever is turned on its pivot it may be held in any desired position. By this lever the rod H may be raised or lowered, as required, from the rear of the machine. A similar lever O extends behind the seed-box M, and is likewise pivoted on the axle B. A crank P is formed on this lever, and is connected by the rod Q to one of the clips J, and through this connection the movement of the lever O will roll the rod H, and thus zigzag the hoes, as required, the whole operation being effected from the rear of the machine. A bracket R is attached to the bottom of the tongue S, and has a longitudinal opening in it, through which the rod H passes.

In order to prevent the longitudinal movement of the said rod H, I place one of the clips J on either side of the bracket R, so that they will abut against the said bracket and prevent the longitudinal movement mentioned.

It will be noticed that the heel *a* of the hoe T extends down on a level with the point *b* of the said hoe. This shape of hoe is important when used in connection with a machine constructed in accordance with my invention, as it will prevent the hoe from entering too far into the soil.

What I claim as my invention is—

1. The rod H, suspended by the links G from the arms F, which are attached to the rod D, the bars K, connecting the rod H to the bracket C, in combination with the lever L, extending behind the seed-box M and connected to the rod H, substantially as and for the purpose specified.

2. In a seeding-machine, the combination of a frame A, an axle B, the bracket C thereon, a bar K, having one end connected to the bracket, the rod H, connected to the other end of the bar and carrying the hoes T, a rod D, mounted in the frame and flexibly or pivotally connected with the rod carrying the hoes, and levers L N, connected to the rod for operating the hoes, substantially in the manner described.

3. In a seeding-machine, the combination of a frame A, a rod D, mounted therein, a rod H, connected flexibly to said rod, the hoes T, connected by drag-bars I to said rod H, a lever L, connected to the rod for tilting the same, and a lever O, connected to the drag-bars for adjusting the hoes, the said levers having suitable retaining devices for holding them in proper adjustment.

4. In a seeding-machine, the combination of the axle B, the lever L, mounted thereon and having retaining devices, the bell-crank lever N, connected to said lever, the rod D, connected to the rod H, carrying the drag-bars I, the hoes T, connected to the drag-bars and having the toe and heel in line, and the lever O, having the crank P connected to one of the drag-bars.

Woodstock, October 10, 1889.

JAMES NOXON.

In presence of—

JNO. P. WEBSTER,

T. HARRY WEBB.