

J. F. KELLER.
Seeders.

No. 153,345.

Patented July 21, 1874.

Fig. 1

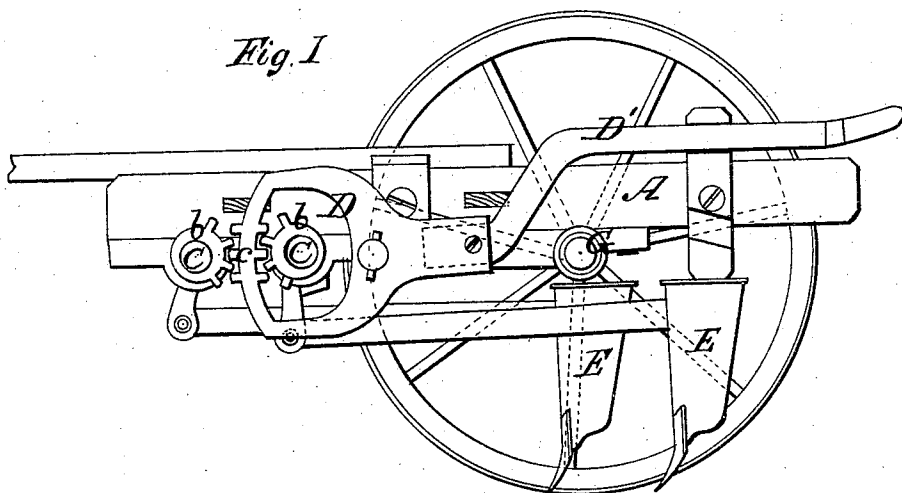


Fig. 2

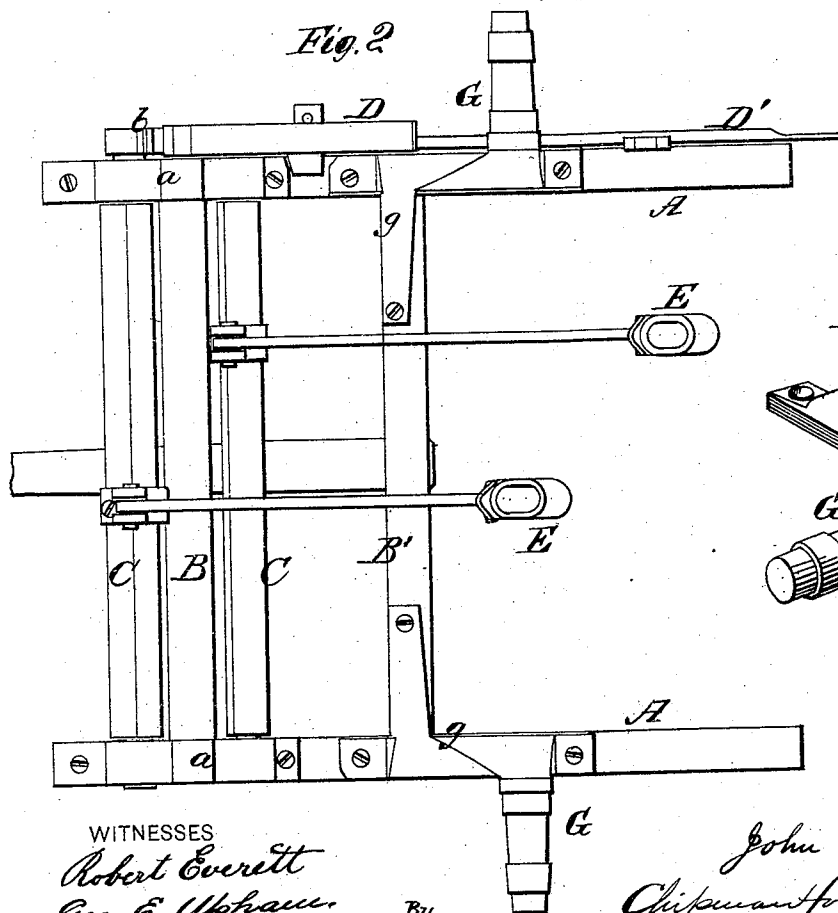
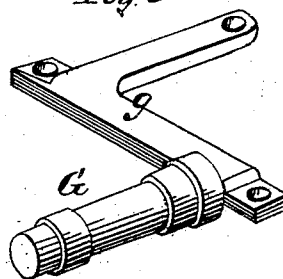


Fig. 3



WITNESSES

Robert Everett
Geo. E. Upham.

By

INVENTOR

John F. Keller
Chipman, Fox & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN F. KELLER, OF HAGERSTOWN, MARYLAND.

IMPROVEMENT IN SEEDERS.

Specification forming part of Letters Patent No. **153,345**, dated July 21, 1874; application filed March 14, 1874.

To all whom it may concern:

Be it known that I, JOHN F. KELLER, of Hagerstown, in the county of Washington and State of Maryland, have invented a new and valuable Improvement in Seeders; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side view. Fig. 2 is a bottom view. Fig. 3 is a view of the axle.

This invention has relation to that class of seeding-machines wherein vertical and longitudinal drill-teeth or tubular hoes are employed in gangs. My improvements consist, mainly, in so constructing the draft-frame and the axles for the transporting-wheels that the hoes or drill-teeth can be raised without interference with the axle or any cross-bar of the frame, said axles affording rigid braces for said frame, as will be hereinafter explained. It also consists in a novel device for adjusting the hoes into one or two lines, as I will now proceed to explain.

In the annexed drawing, A A designate two longitudinal bars, and B B' are two cross-bars, which constitute the frame for a seeding-machine. Near the front end of this frame, and supported by journal-boxes *a a*, which are bolted to the under sides of the bars A A, are two rocking bars, C C, which are arranged parallel to each other, and have toothed segments *b b* on their ends. These segments engage with a curved rack, *c*, which is formed on the looped end D of a vibrating lever, D'. By vibrating this lever, the bars C C can be rocked in opposite directions. E E designate the tubular drill-teeth or hoes, which are connected by means of their drag-bars to brack-

ets, which are secured to the rocking bars C C. The hoes are thus alternately attached to the said bars and allowed free vertical motion, so that they will accommodate themselves to the inequalities of the surface passed over.

By rocking the bars C C the hoes can all be adjusted in one line, or they can be adjusted in two lines, as fully explained in my Letters Patent No. 137,929.

G G are the axles on which the transporting-wheels are applied. These axles do not extend across the frame, but are constructed with L-shaped braces *g*, which are securely bolted to the under sides of the longitudinal bars A A and cross-bar B'. I thus firmly brace the frame, and at the same time I firmly secure the axles to it. The cross-bar B' is arranged so far in front of the axles G that the hoes are free to rise clear of the ground.

In machines of the kind herein named, the bar B' has been arranged so far in rear of the front cross-bar B that the hoes could not be properly raised. This objection I avoid by my improvement.

What I claim as new, and desire to secure by Letters Patent, is—

1. The axles G, constructed substantially as described, in combination with the bars A A B', and hoes E, as and for the purposes set forth.

2. In a seed-drill, the curved rack *c*, formed on the looped end D of lever D', in combination with the toothed segments *b b* on the rocking bars C C, substantially as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN F. KELLER.

Witnesses:

GEORGE E. UPHAM,
PHIL. C. MAST.