G. E. HERRICK.

SEED-PLANTER.

No. 184,964. Patented Dec. 5, 1876.

Fig. 1

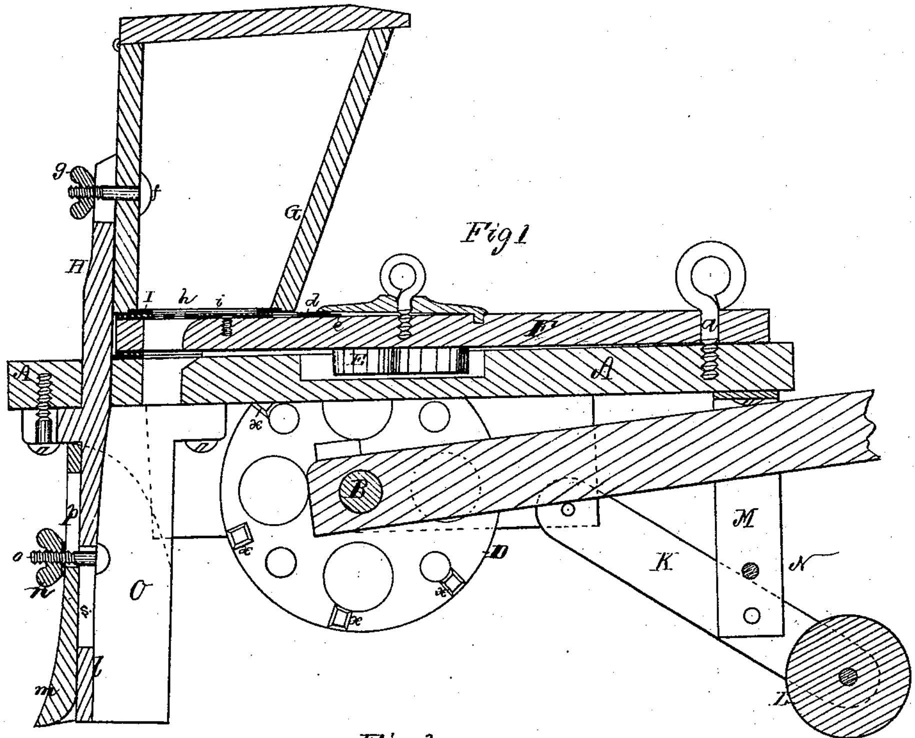


Fig. 2.

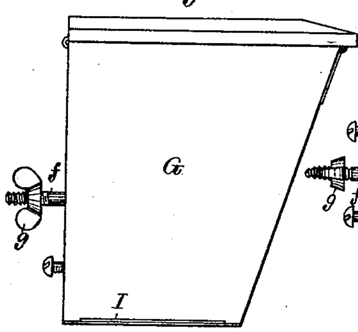


Fig. 3.

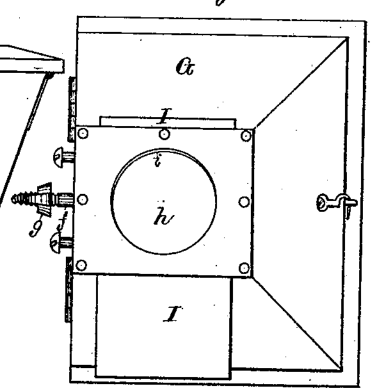


Fig. 4.

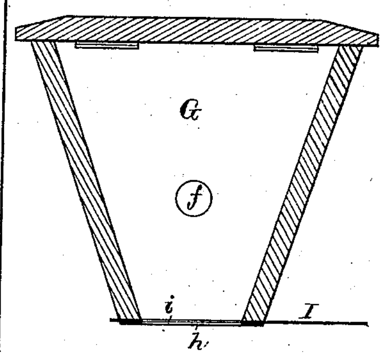
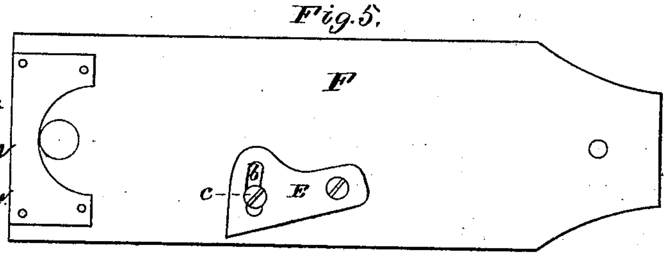


Fig. 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE E. HERRICK, OF LYNNFIELD CENTRE, MASSACHUSETTS.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. **184,964**, dated December 5, 1876; application filed May 22, 1875.

To all whom it may concern:

Be it known that I, GEORGE E. HERRICK, of Lynnfield Centre, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Seed-Planters; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a longitudinal section of a seed-planter provided with my invention; Fig. 2, a side elevation, Fig. 3 an under-side view, and Fig. 4 a transverse section, of the hopper. Fig. 5 is an under-side view of the agitator.

My invention consists, first, in the hopper, provided with or having a perforated slide to its bottom opening, in combination with the agitator and its perforated disks, for regulating the discharge of the seed; second, in the agitator, provided with an adjustable cam or tooth to co-operate with the cam-wheel in vibrating the agitator; third, in the furrow-opener, made in two parts, and arranged and connected as hereinafter explained; fourth, in perforated arms and a pin applied to the roller-frame, and to the platform provided with a furrow-opener, all being as hereinafter explained.

In such drawings, A denotes a platform, provided with an axle, B, being provided with two wheels. Such platform usually has a handle or tongue projecting from it at its rear end. On the axle is fixed a wheel, D, having a series of teeth or cams, *x*, projecting from one side of it, and arranged at equal distances apart, they being, during each revolution of the wheel, to act successively against a cam, E, fixed to the under side of the agitator F. The said cam, shaped as shown, is pivoted to the agitator, or turns on a screw, *a*, going through it, and screwed into the agitator, and said cam has a curved slot, *b*, in it to receive a clamp-screw, *c*, that screws into the agitator. By so making and applying the wiper, it may be adjusted nearer to or farther from the toothed or cam wheel, in order to cause it to vary the vibration of the agitator more or less, or for compensating for wear of the wiper, as such may take place. The agitator is rapidly vibrated one way by the cam-wheel and the wiper, and the other by a spring applied to the agitator in the usual way. The agitator is provided with perforated disks *d e*, and clamps therefor, like those shown in the Patent No. 66,236, granted to me July 2, 1867, such being to operate with a hopper, G, arranged over them, and fixed to the platform A by means not only of a forked post, H, projecting up therefrom, but by a clamp-screw, *f*, extended from the hopper, and furnished with a nut, *g*. To the opening *h* at the bottom of the hopper there is applied a slide-plate, I, having a hole, *i*, through it, corresponding in size with such opening *h*. The slide-plate, when drawn outward, closes the opening *i*, but when pushed in it uncovers the said opening. The purpose of the slide-plate is to enable the opening *i* to be closed preparatory to the removal of the hopper from the platform for the purpose of emptying such hopper of seed. In rear of the axle the platform has pivoted to it a frame, K, carrying a roller, L. Two arms, M M, each perforated with a series of holes, extend down from the platform and through the frame K, there being passed through such arms a pin, N, to rest on the frame K. The pin and wires, acting in connection with the roller and its frame, cause the furrow-opener O, while forming a furrow, to make it of equal depth below the surface of the ground passed over by the wheels. Such depth may be varied by changing the rod to a higher or lower position on the arms.

The furrow-opener I construct in two parts, *l m*, the upper one, *l*, being fastened to the platform, and extended down from it, and provided with a vertical slot, S, to receive the clamp-screw O. The lower one laps on the upper, and is held to it by a clamp-nut, *n*, and screw *o*, the latter being projected from the fixed post *l*, and through a slot, *p*, made in the portion *m*. The bolt also goes through a slot, *x*, made in the fixed part *l*, as shown. These two slots are better than a single slot, as they enable the movable part of the furrow-opener to be raised up, so as to have its bottom even with that of the fixed part, as shown. By so constructing the furrow-opener its lower part can be adjusted to cut to differ-

ent depths into the earth, as occasion may require.

I claim in the said seed-planter—

1. The hopper G, provided with the perforated bottom and the closing-slide I thereto, removable with the hopper, in combination with the agitator F and its perforated disks *d e*, as described, for regulating the discharge of the seed.

2. The combination of the agitator F with the adjustable cam E, as described, to operate with the cam-wheel D, as specified.

GEORGE E. HERRICK.

Witnesses:
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