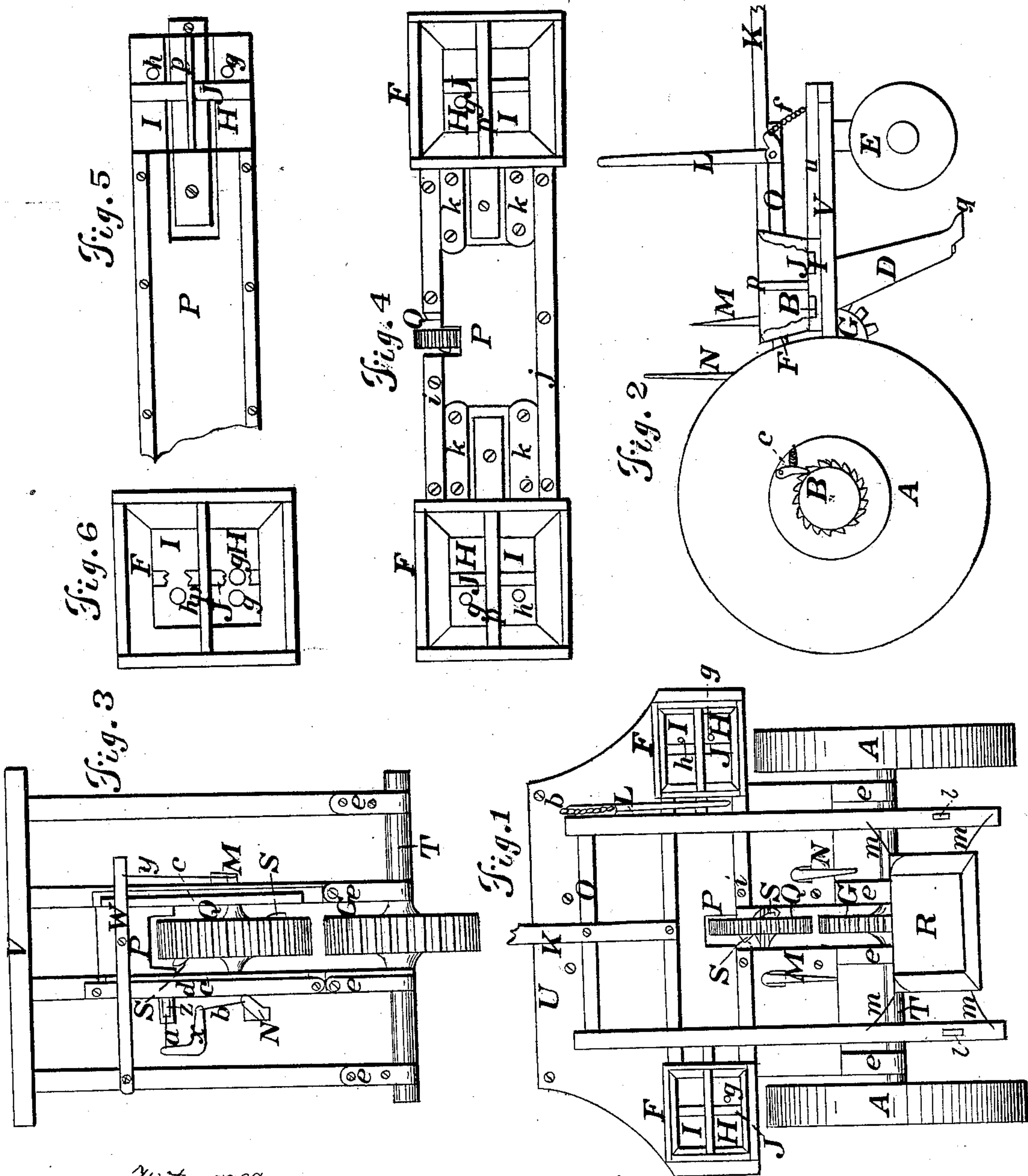


A. HAYS.
Grain Drill.

No 78,666.

Patented June 9, 1868.



Witnesses
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ASAHEL HAYS, OF GUY'S MILLS, PENNSYLVANIA.

Letters Patent No. 78,666, dated June 9, 1868.

IMPROVEMENT IN SEED-PLANTER.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, ASAHEL HAYS, of Guy's Mills, in the county of Crawford, and State of Pennsylvania, have invented a new and improved Seed-Planter; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, and the letters of reference marked thereon, the same forming a part of this specification.

Figure 1 is a top view;

Figure 2 is a side view, and

Figure 3 is a bottom view of my invention.

Figures 4, 5, and 6 are detached views of portions of the same.

In fig. 1, A A are the wheels, and T is the axle. Resting on this axle, and so fastened as not to obstruct the revolving of the same, are two arms, which, being tenoned into the frame O, at the points indicated by l l, reach down from the frame O in a diagonal manner, thereby forming a brace, as the pole K is attached to the framework O. On this framework, by means of the irons m m m m, rests the driver's seat, R. In fig. 3, which is, as before stated, a bottom view of my invention, will be seen the framework V. This frame, it will be seen from both figs. 1 and 3, is secured to the axle T by the iron plates e e e e, in such a manner as to allow the axle to revolve. The front end of this, it will be seen in fig. 2, is supported by the small wheel E. On the frame V is the platform U. On this platform, directly in front of the wheels A A, are the hoppers F F. In the middle of the axle T, directly under the seat R, is a gear-wheel, G, which works in connection with the gear-wheel Q, which is hung in the frame c c. This frame c c works in a groove in the frame V, and is held to place by the iron straps d d, seen in fig. 3. One of these straps is removed, showing the frame c c and the groove. This frame c c is moved in the groove by means of the lever M, the end of which is seen in fig. 3, as it comes through the platform U. Y is a rod connecting the lever M with the lever W, which is fastened to the frame c c. By this device the wheel Q can be thrown in connection with the wheel G, thereby putting my machine in gear. On the wheel Q are the cams S S. These are placed on the opposite sides of the rim of the wheel, and on opposite sides of the centre of the wheel. These cams can be increased in number, to suit the operator. These cams work upon and move the slide P to and from, as the wheel is revolved. The slide P is shown in fig. 4. The slide P is held to place by the guides i and j. k k k k are iron straps, which connect the slide P with the droppers I I and H H, which pass under the hoppers F F, and form a bottom to the same. The hoppers are divided into two-parts by a partition, p. The droppers H H form the bottoms to the back part of the hoppers F F, and I I form the bottom to the front half of the same. J J are pieces of wood or iron, which fit tightly on the droppers H H and I I, and pass across the middle of the same, the purpose of which is more fully explained hereafter.

Fig. 6 shows one of the hoppers F, with the partition p and the strip J broken, so as to show the operation of the droppers H and I. In the dropper H are two holes, g g, one of which is under the strip J, and the other is not. Under the one that is under the strip J is a hole through the platform U, which communicates with the dropping-tube D, seen in fig. 2. Supposing this portion of the hopper to be filled with grain, it will be seen that the hole g which is not covered with the strip J will be filled with grain. Now as the wheel revolves, and the cam S moves the slide P, the hole g will be brought from under the strip J, and the hole g, that is filled with grain, will be brought under the strip, and the grain will fall through the dropping-tube to the ground, into the furrow made by the plough-shaped point q of the dropping-tube D, and is then pressed down and covered up by the wheel A. The dropper I has only one hole, h, in it. This is for the purpose of dropping in every other hill. This arrangement is for pumpkin-seeds. This part of the hopper communicates with the dropping-tube D, the same as the other. This dropping-apparatus can all be worked by means of the lever N, the position of which can be seen in figs. 1, 2, and 3. In the latter figure the lower end of the lever N is shown.

b is a connecting-rod running to the lever X, and a is a rod joining the lever X with the block Z, which is attached to the slide P. So it will be seen that by moving the lever N the droppers will be operated. In figs. 1 and 2 are shown the lever L and the chain f. This lever is hung on the frame O, and the chain f is fastened to the lever and to the platform U. It will be seen that when the end of the pole K is fastened in the neck-

yoke of the harness, that if the lever L is brought down towards the driver, the machine will be raised up in front, so as to clear the ground. This is done for the purpose of turning the machine around.

On the side of the wheel A, in fig. 2, are seen a ratchet-wheel and pawl. The ratchet-wheel B is firmly secured to the axle T, while the pawl C is attached to the wheel A, which is free to turn on the axle. This is so arranged that if the machine is drawn forward the pawl catches in the ratchet-wheel, and the axle T is revolved, and the machine is operated; but if the machine be backed, the wheels A A are free to revolve, and the axle and the machine are not operated.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is as follows, to wit:

1. I claim the slide P and the droppers I I and H H, when operated as described for the purposes set forth.
2. I claim the whole seed-planter, when constructed as described for the purposes set forth.

ASAHEL HAYS.

Witnesses:

A. B. RICHMOND,

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