

S. B. GILLILAND.

COMBINED SEED-PLANTER, SULKY-HARROW AND CULTIVATOR.

No. 186,826.

Patented Jan. 30, 1877.

Fig. 1

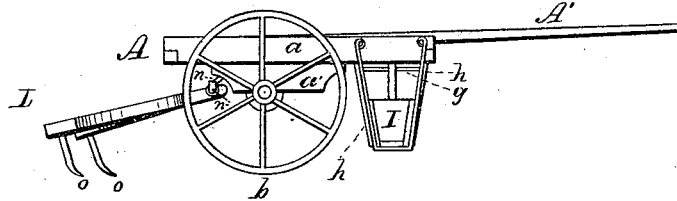


Fig. 3.

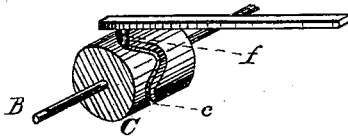


Fig. 4.

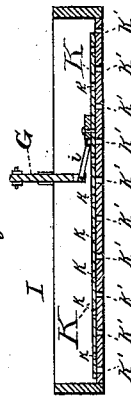
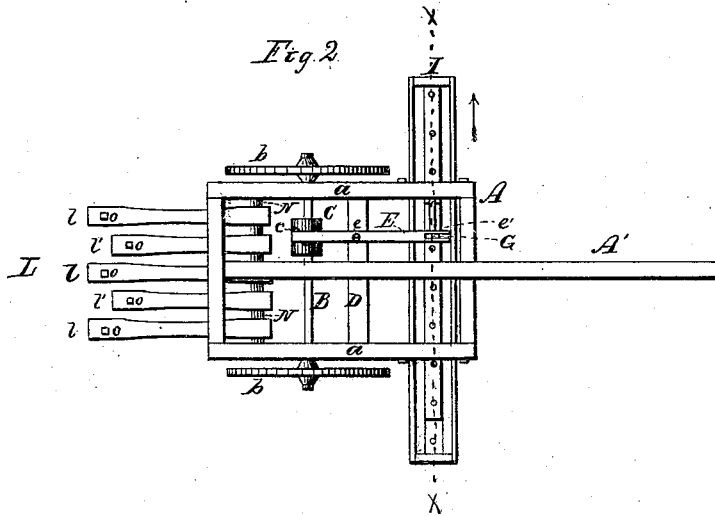


Fig. 2



WITNESSES

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# UNITED STATES PATENT OFFICE.

SAMUEL B. GILLILAND, OF SALISBURY, MISSOURI.

IMPROVEMENT IN COMBINED SEED-PLANTER, SULKY-HARROW, AND CULTIVATOR.

Specification forming part of Letters Patent No. **186,826**, dated January 30, 1877; application filed June 10, 1876.

*To all whom it may concern:*

Be it known that I, SAMUEL B. GILLILAND, of Salisbury, in the county of Chariton and State of Missouri, have invented certain new and useful Improvements in Combined Seed-Planter and Sulky-Harrow and Cultivator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a view in elevation of my invention. Fig. 2 is a plan view. Fig. 3 is a perspective view of grooved wheel on the axle of the drive-wheels and the lever for operating the slide of the seed-box. Fig. 4 is a sectional view of the seed-box, taken on dotted line *x x*, Fig. 2.

My invention relates to a machine which may be used for sowing small seed, such as timothy, wheat, millet, or Hungarian-grass seed, or for planting corn, and which may be readily adjusted for use simply as a sulky-harrow or cultivator.

A is the frame of the machine. A' is the tongue. To the under sides of the side timbers *a a* of the frame A are affixed blocks *a' a'*, in which are the bearings or boxes of the axle B of drive-wheels *b b*. Upon this axle B is arranged a wheel or short cylinder, C, in the surface of which, and extending entirely around it, is cut an endless serpentine groove, *c*. D is a cross-piece of the frame A. Upon this cross-piece is pivoted or fulcrumed, at *e*, a lever, E. From the rear end of this lever a pin, *f*, extends downward into the groove *c* in wheel C. The forward end of lever E is forked, as shown at *e'*, and embraces the upper end of a lever, G, which operates the slide of the seed-box. This lever G is pivoted on a rod, *g*, supported by two standards, *h h*, secured to the feed-box I. The lower end of lever G is jointed to a short link, *i*, which is pivoted to a slotted block, *v*, fastened to the slide K of the seed-box. This slide K is perforated with holes *k k k k*, and the bottom of the seed-box is perforated with holes *k' k' k' k'*. When the drive-wheels *b b* and axle B revolve, it

will be seen that the grooved wheel C, being rigidly secured to said axle, will revolve also, and, through the operation of groove *c* on pin *f*, the lever E is caused to vibrate, and its motion is communicated, through lever G, to slide K of seed-box I, so that the holes in the bottom of said seed-box are alternately opened and closed, as they are or are not in coincidence with the holes in the slide, which moves back and forth in direction of the arrows shown in the drawing. When the holes in the bottom of the seed-box are opened the seed which is placed in said box will fall through upon the ground, and be ready to be harrowed in by the harrow L, which I will now describe. This harrow, as I have already stated, may be used in conjunction with the seeding devices, or separately, or may be adjusted so as to be used as a cultivator for corn or similar plants. The arms *l' l' l' l'*, or beams, are of different lengths, *l l* being somewhat longer than *l' l'*. The rear end of each of these arms or beams is provided with a harrow or cultivator tooth, as shown at *o o o o*. The forward ends of these beams or arms are hung loosely upon a rod, N, which is supported by eyebolts *n n*, or other suitable supports, on the under sides of side timbers *a a* of frame A. The rod N is removable. It can be withdrawn from its supports by means of hook *n'* and the harrow-beams *l' l' l' l'*, or as many of them as desired may be removed. These beams or arms are kept a proper distance apart by blocks or wooden washers, which may be of any suitable size, and two or more of them used between two beams, if desired. By arranging the supports of rod N farther to the rear than is shown in the drawing, so that the drive-wheels will not be in the way of said rod, it may be made longer than is shown, so that a sufficient number of harrow-beams may be used to extend the harrow to as great a width as desired.

It will also be understood that I may make the seed-box of any length, so that I may sow timothy, wheat, millet, Hungarian-grass, or other small seed, or plant corn. In the latter case I would substitute a suitable slide for that shown.

In sowing small seed I use a wide harrow; but in corn planting or cultivating I adjust

the harrow for the purpose, so that a tooth thereof will strike on each side of each row.

The harrow arms or beams are made of sufficient weight to cause the teeth to penetrate the ground a proper distance, and may be extra weighted when necessary.

When I wish to use the machine simply as a sulky harrow or cultivator I remove the seed-box and the levers.

The operation of this machine has proven very satisfactory, and will be easily understood without further explanation.

I claim and desire to secure by Letters Patent—

The interchangeable seed-box I, suspended beneath the sulky-frame, in combination with the interchangeable reciprocating slide K, link *z*, vibrating lever G, pivoted at a point within the length of the seed-box, and adjustable coverer L, substantially as described.

In testimony that I claim the foregoing as my own invention I affix hereto my signature in presence of two witnesses.

SAMUEL B. GILLILAND.

Witnesses:

ELI WAYLAND,  
THEOB. NEWBOLD.