

POLLOCK & SENER.

Grain Drill.

No. 30,348

Patented Oct. 9, 1860.

Fig. 2.

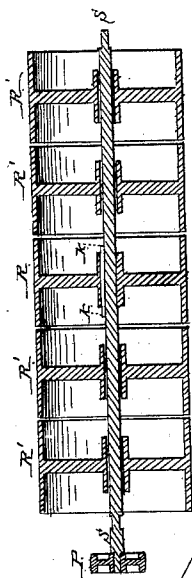


Fig. 1.

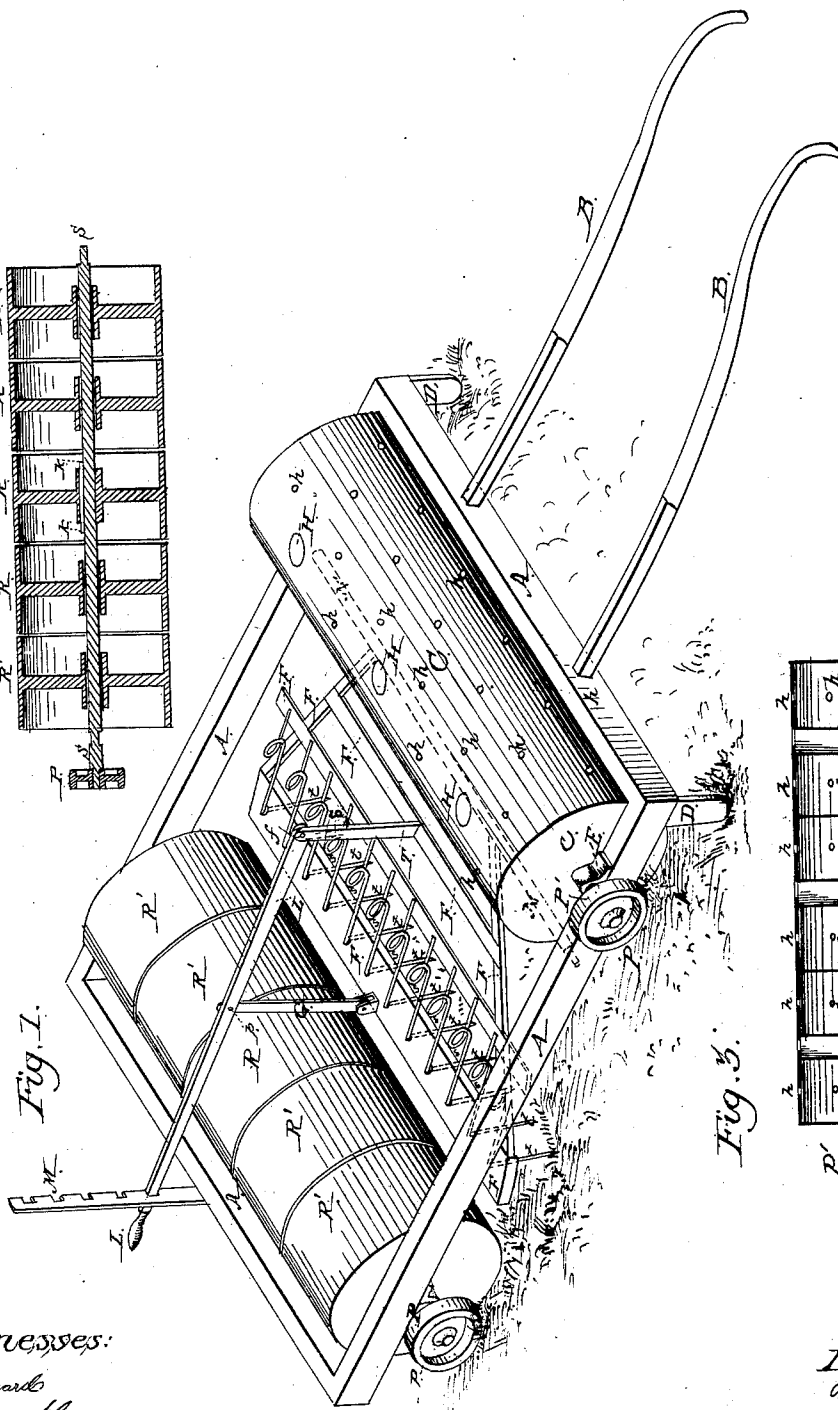
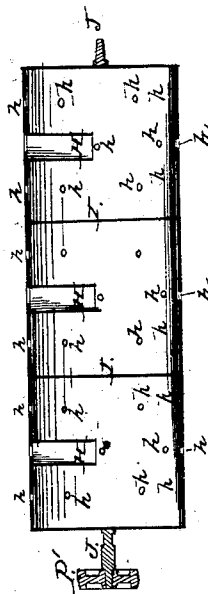


Fig. 3.



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# UNITED STATES PATENT OFFICE.

WM. G. POLLOCK AND J. W. SENER, OF FREDERICKSBURG, VIRGINIA.

## IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. 30,348, dated October 9, 1860.

*To all whom it may concern:*

Be it known that we, WILLIAM G. POLLOCK and JOSEPH W. SENER, of Fredericksburg, in the county of Spottsylvania and State of Virginia, have invented certain new and useful Improvements in Seed-Planters; and we do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is an isometrical view of our improved seed-planter. Fig. 2 is a vertical longitudinal section of the pressure-roller, and Fig. 3 is a similar section of the seeding-cylinder.

The same part is marked by the same letter of reference wherever it occurs.

The nature of our invention consists in the arrangement and combination, in a suitable frame, of the revolving seeding-cylinder C, adjustable rake-frame F, spring rake-teeth *t*, and compound pressure-roller R, constructed and operated substantially as hereinafter more particularly described.

To enable others to make and use our improved seed-planter, we will proceed to describe its construction and operation with reference to the drawings, in which A marks the frame of the implement; B, the shafts by which it is drawn, and which are rigidly attached to the frame A, so that when the horse is attached the front end of the machine will be considerably above the level of the ground.

D marks the feet, which support the front end of the frame when the implement is not in use and keep the cylinder C from coming in contact with the ground.

C marks the seeding-cylinder, the interior construction of which will appear from an inspection of Fig. 3. This cylinder turns in bearings E, on the side rails of the frame, on gudgeons J. A pulley, P', is attached to the end of one of the gudgeons, as shown, and is turned by a band from pulley P. The cylinder is perforated with numerous small holes, *h*, and is fed through tubes H, which extend down into it a distance equal to half the diameter of the cylinder. (See Fig. 3.)

I marks partitions in the cylinder, any number of which may be used, their object being to prevent the seed from running to either end of the cylinder when planting uneven ground. Six divisions will usually be sufficient.

Turning in bearings in the side rails of the frame is rock-shaft N, (shown in dotted lines in Fig. 1,) to which is attached the vibrating rake-frame F, having vertical vibration about the shaft N. From the forward cross-rail of this frame rises standard T, to which, at *f*, the arm or lever L is attached. To this arm is fastened, at *p*, arm G, the lower end of which is attached to the rear cross-rail of frame F. The rear end of arm L is held in notches in a rack, M, attached to the rear rail of frame A. This arm L is part of the same system as frame F, and may, as connected with that frame, be called a "lever," having its fulcrum at the line N N.

To the middle rail of frame F are attached springs *s*, which press upon the tops of the rake-teeth *t*, which fit loosely in holes in the rear rail of frame F.

Hung in suitable bearings on the side rails of the frame is shaft S, on which are placed the pressure-rollers R R'. The central roller, R, is fixed to shaft S by the key *k*, (see Fig. 2,) while the side rollers, R', rotate freely upon it. On the end of shaft S is a pulley, P, from which a band is passed to pulley P' on the end of the shaft of the seeding-cylinder C.

The operation of our seed-planter is as follows: As the implement is drawn forward the roller R revolves and causes the shaft S and pulley P attached at its end to rotate. This pulley, by means of a band, (not represented in the drawings,) imparts motion to the pulley P' and to the seeding-cylinder, to which that pulley is attached. This cylinder, being supplied with seed through the tubes H, distributes them evenly over the surface of the ground through the small holes *h*, with which its sides are studded. The seeds thus sown are raked in by the teeth *t*, any one of which can rise on meeting an obstacle, and which may be made to penetrate much or little by fastening lever L in the upper or lower notches of rack M, thus raising or lowering frame F. The rollers R R' follow and press the earth about the seeds, completing the operation.

The object of fixing the middle roller upon the shaft S is that it may impart rotation to the shaft, while the side rollers, R', are loose in order that the shaft may not be rotated while the implement is turning, thus saving seed that would otherwise be wasted. When the horse is detached the feet D support the front rail

and preserve the seeding-cylinder from contact with the ground.

A hopper (not shown) may be placed above the cylinder C and used to contain a supply of seed, which can be fed to the cylinder by means of apertures in the bottom of the hopper controlled by a slide operated either automatically or by hand.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The vibrating adjustable rake-frame F, constructed, arranged, and operating as described.

2. In combination with a seed-planter, fixing the central pressure-roller to the shaft S, while the side rollers are loose upon it, in the manner and for the purpose set forth.

3. The combination and arrangement of the cylinder C, frame F, and pressure-rollers R R', in the manner set forth and shown, when used in a seed-planting machine.

The abovespecification signed and witnessed.

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Witnesses:

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