C. F. SCATTERGOOD.

SEED COTTON GIN FEEDERS.

No. 182,860. Patented Oct. 3, 1876.

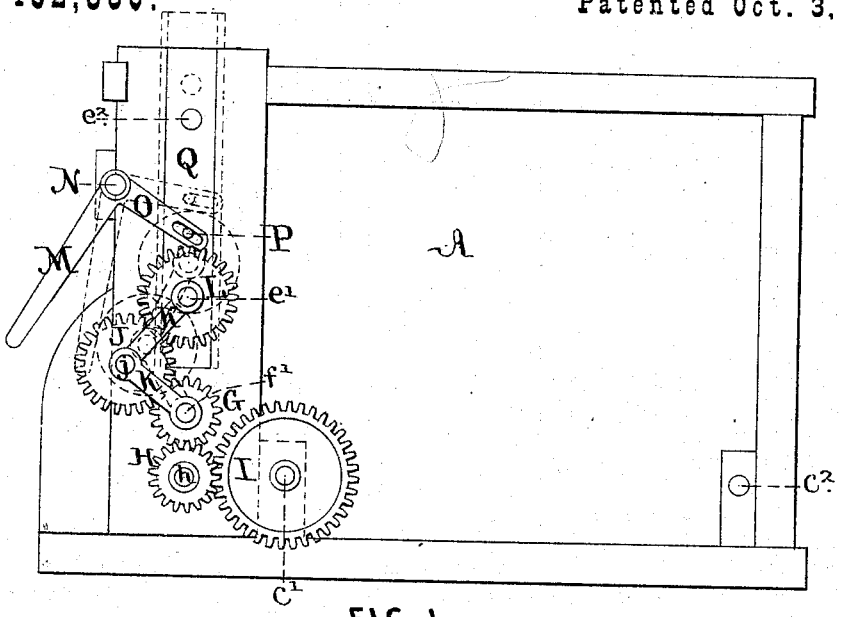

FIG. 1.

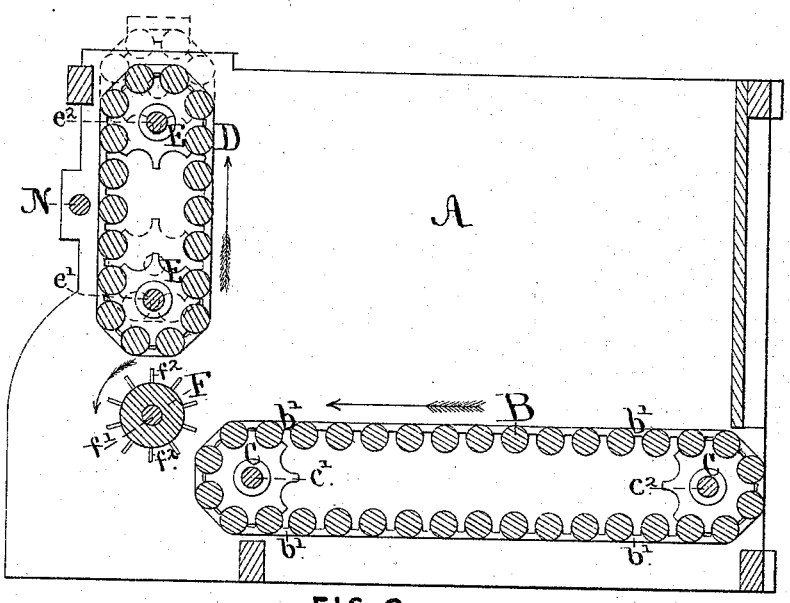

FIG. 2.

Witnesses.

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IMPROVEMENT IN SEED-COTTON GIN FEEDERS.

Specification forming part of Letters Patent No. **182,860**, dated October 3, 1876; application filed January 11, 1876.

To all whom it may concern:

Be it known that I, CHARLES F. SCATTERGOOD, of the city and county of Albany, and State of New York, have invented a new Automatic Seed-Cotton Feeder, Cleaner, and Separator, of which the following is a full and exact description, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a side elevation of my invention, and Fig. 2 a longitudinal section.

My invention consists of the devices, constructed and combined substantially in the manner herein shown and described, whereby the feeding of the seed-cotton to the cotton-gin will be effected automatically and uniformly, and by the same means the seed-cotton will be thoroughly cleaned from any adhering dirt or dust, and the locks of cotton so separated as to be presented to the action of the ginning-saws in a more perfect condition for the operation of the saws.

As shown in the drawing, A is the framing of box of the machine, having its two sides and a portion of the rear end made closed; B, an endless apron, placed in a horizontal position near the bottom of the feeding-box. It is formed of bars or slats of any suitable shape, secured at each end in the links b', and so arranged as to leave sufficient space between the bars to permit the dirt discharged from the cotton to pass through; C, tumblers secured to the shafts c^1 and c^2, the horns of which pass between the links b' of the endless apron B for the purpose of imparting motion thereto; D, an endless apron, placed in a vertical position near the front of the feeding-box. It is constructed in the same manner as the apron B, and receives its motion from the tumblers E, secured to the shafts e^1 and e^2. F, a feeding-roller, secured to the shaft f^1, and provided with the teeth f^2, projecting radially therefrom, and arranged spirally around its entire length. Its center is arranged about in line vertically with the shafts e^1 and e^2, and horizontally about on the plane of the upper side of the apron B. On the end of the shaft f^2, outside of the box of the machine, a gear-wheel, G, is secured, which engages into the gear-wheel H, revolving on the stud h, and engaging in the large gear-wheel I, secured to the shaft c^1, for driving the apron B at a reduced rate of speed. J, a gear-wheel revolving on the pin j in the links K. By means of these links the wheel J is held in gear with the wheel G and the wheel L secured to the shaft e^1, for driving the apron D. M, a hand-lever, secured to the shaft N, running across the front of the machine, and provided at each end with a slotted arm, O, into which the studs P engage. These studs are fixed in the slides Q, in which the shafts e^1 and e^2 have their bearings.

The feeding-box, when in use, should have its front part placed over the hopper of a cotton-gin, and a supply of seed-cotton thrown into it. Motion is given to the feeding-roller F, in the direction indicated by the curved arrow in Fig. 2, which, by means of the system of gear-wheels hereinbefore described, drives the endless aprons B and D in the directions indicated by their respective arrows, the endless apron B moving the mass of seed-cotton forward toward the feeding-roller F, the teeth f^2 of which enter the locks of cotton, and in passing them forward toward the discharge-orifice, thereby bringing them in contact with the lower end of the apron D, which is moved in a contrary direction, the locks become loosened up and separated, so that when discharged into the hopper of the cotton-gin they are presented to the ginning-saws in such condition that the cotton is caught by the teeth of the saws more readily than when fed to the gin in a more compact state. While the mass of cotton on the apron B moves forward toward the feeding-roller F, the apron D, which travels at a slightly-higher speed than the apron B, in moving in the direction indicated, carries the superabundant quantity, that cannot pass through the discharge-opening, upward, thereby preventing the feeder from becoming clogged, and tumbling and agitating the whole mass, so that any dirt or dust that may have been adhering to the cotton is shaken therefrom, and in falling upon the apron B, which receives a shaking tremulous motion from the action of its driving-tumblers, and which is increased by the tumbling that the seed-cotton undergoes, the dirt is sifted out and discharged through the openings in the apron. By means of the hand-lever M the slides Q may be raised

or depressed, carrying the apron D farther from or nearer the feeding-roller F, the links K yielding to these changes, as indicated by the dotted lines in Fig. 1, and keeping the wheels G, J, and L properly in gear. By thus changing the distance between the lower end of the apron D and feeding-roller F, the quantity of cotton discharged from the opening can be regulated as required.

Heretofore cotton-feeding attachments have been constructed in which a single endless apron has been used in a horizontal position, and made of canvas, both with and without transverse slats attached thereto; but such an apron, being unprovided with openings, prevents the sifting of the dirt falling from the cotton, and, lacking the vertical apron, they fail to agitate the mass of seed-cotton in the manner herein described.

While I preferably construct the endless aprons of my feeding device in the manner herein described, I do not confine myself to such a construction, as I am aware that aprons having openings therein for the purpose herein specified may be made in many ways. Among others, those made of wire, with suitable meshes formed therein for sifting the dirt from the cotton, may be named. Nor do I confine myself to placing the endless apron D in a vertical position, as the same effect may be produced by it when placed in an inclined position.

I claim as my invention—

1. The endless apron D, in combination with the feeding-roller F and box A, as and for the purpose specified.

2. The combination, with the endless apron B and feeding-roller F, of the endless apron D and box A, as and for the purpose specified.

3. The combination of the endless aprons B and D and feeding-roller F, with the discharge-opening of the feeding-box A, as and for the purpose specified.

4. The combination of the endless aprons B and D and the feeding-roller F with the gear-wheels G, H, I, J, and L, as and for the purpose specified.

5. The combination of the endless apron D with the slides Q, as and for the purpose specified.

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