

M. H. MANSFIELD.

Grain-Drill.

No. 29,801

Patented Aug. 28. 1860.

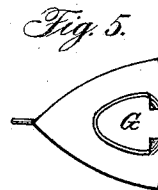
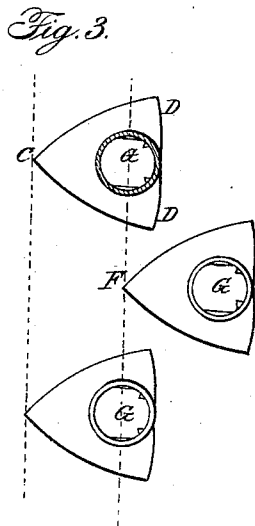
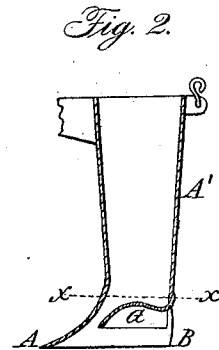
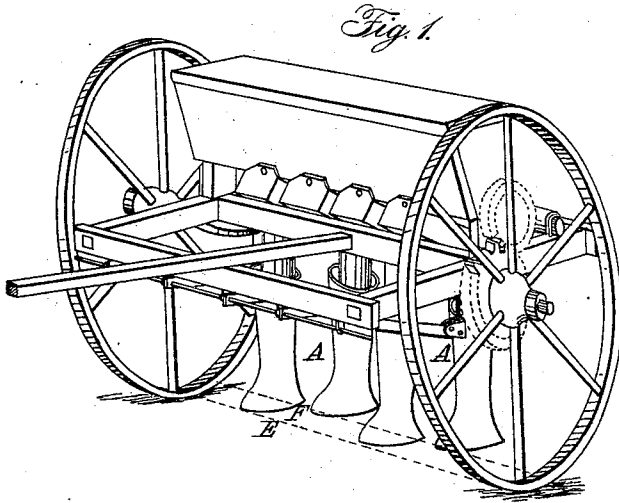
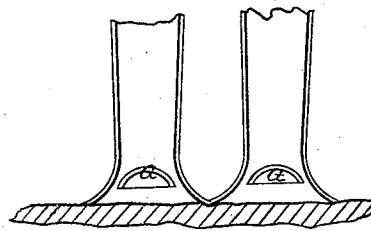


Fig. 6.



Witnesses:

J. W. Smith
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UNITED STATES PATENT OFFICE.

MARTIN H. MANSFIELD, OF ASHLAND, OHIO.

IMPROVEMENT IN SEEDING-MACHINES.

Specification forming part of Letters Patent No. 29,801, dated August 28, 1860.

To all whom it may concern:

Be it known that I, MARTIN H. MANSFIELD, of Ashland, in the county of Ashland and State of Ohio, have invented new and useful Improvements in Drill-Teeth for Seeding-Machines; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the drill or seeding-machine, and Figs. 2, 3, 4, and 5 are different views of the drill-teeth.

Like letters refer to like parts.

The nature of my invention relates to the especial arrangement of the teeth and the making of the deflectors, hereinafter described, of some elastic substance, for the purpose of scattering the seed broadcast, as hereinafter specified.

As my improvement relates entirely to the structure and arrangement of the teeth, it will be unnecessary to give any detailed description of the body of the machine, which may be constructed in the usual manner, and is represented in Fig. 1. Fig. 2 represents a vertical section of a tooth from the toe A to the heel B. In Fig. 2, C represents a cross-section of the tooth in the direction of the line X X. Fig. 5 represents the tooth viewed from beneath or in an inverted position. Figs. 4 and 6 will be explained hereinafter.

The upper portion of the spout A' above the line X X in Fig. 2 is simply a hollow cylinder, and below the line X X it expands in both directions laterally some six or eight inches, forming the wings D D. The blade extends forward about the same distance, forming the toe of the tooth, as seen at C in Fig. 3 and C in Fig. 5. The teeth are placed not in a line with each other, as is commonly the case, but alternately forward and back, as seen at E F in Figs. 1 and 3. In this manner the expanded blades or wings D D of the teeth overlap each other in their course. These blades are designed to level the ground for the reception of the seeds.

G in Figs. 2, 3, and 4 represents a convex deflector or cushion, which is placed and secured near the bottom of the tooth in the position shown in Fig. 2, and also in Fig. 6, which is a transverse vertical section of two teeth. It is clearly shown in this figure (6) that there is a clear space under the blades from D to D in Figs. 3 and 6. Now, if this convex plate G is covered with india-rubber cloth or other elastic substance which will cause the seeds to rebound, and the metallic plate will serve this purpose to a certain extent, it follows that if the grain or seeds are permitted to fall upon this convex deflector or cushion G that they will be distributed in all directions in a very uniform manner, and in consequence of the herein-described arrangement of the teeth, as shown at E F, the seeds will be distributed broadcast over the whole track of the machine and not in drills, as is the case in drilling-machines hitherto constructed.

I am aware that conical tubes have been used in drill-spouts for the purpose of distributing the seeds equally in the drill similar to those I have described, and that these are seen in the patents granted to R. and W. S. Gebby, February 12, 1856, and to Jacob Mumma, patented November, 20, 1849; but what distinguishes my improvement from others is the arrangement of the convex deflectors or cushions G in connection with the spout A', whereby I am enabled to sow seed broadcast. The wings D D of the teeth simply smooth the surface of the ground, and do not plow a furrow; but they remove all obstructions that would otherwise interfere with the distribution of the seed over the whole track of the machine.

What I claim as my improvement, and desire to secure by Letters Patent, is—

The herein-described special arrangement of the teeth and deflectors G, when these latter are composed of an elastic substance and operating substantially as set forth.

MARTIN H. MANSFIELD.

Witnesses:

J. W. SMITH,
A. C. SWINEFORD.