(No Model.)

D. D. WILLIAMSON.

MARKER FOR LAWN TENNIS COURTS.

No. 285,092. Patented Sept. 18, 1883.

Fig. 1.

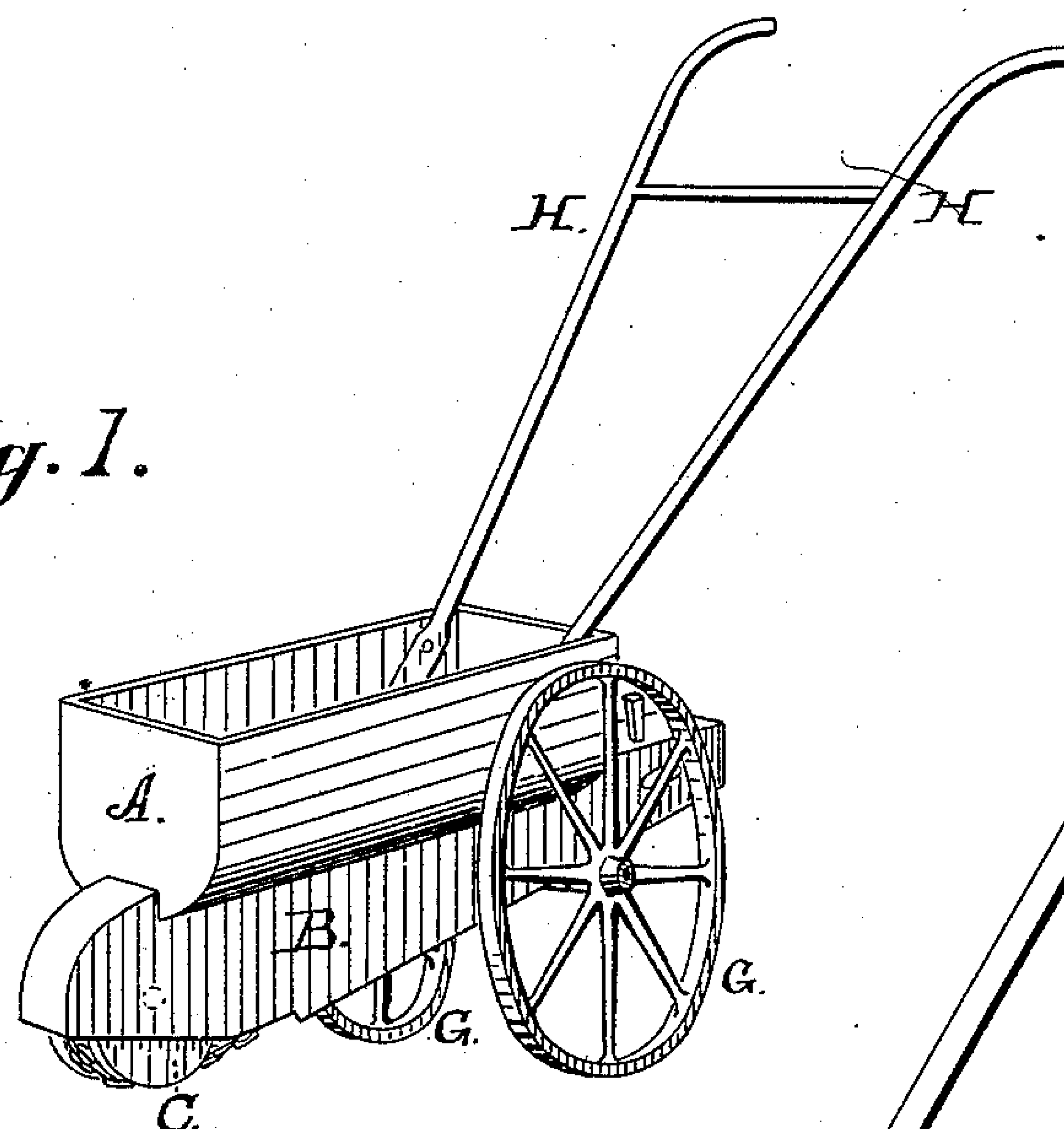
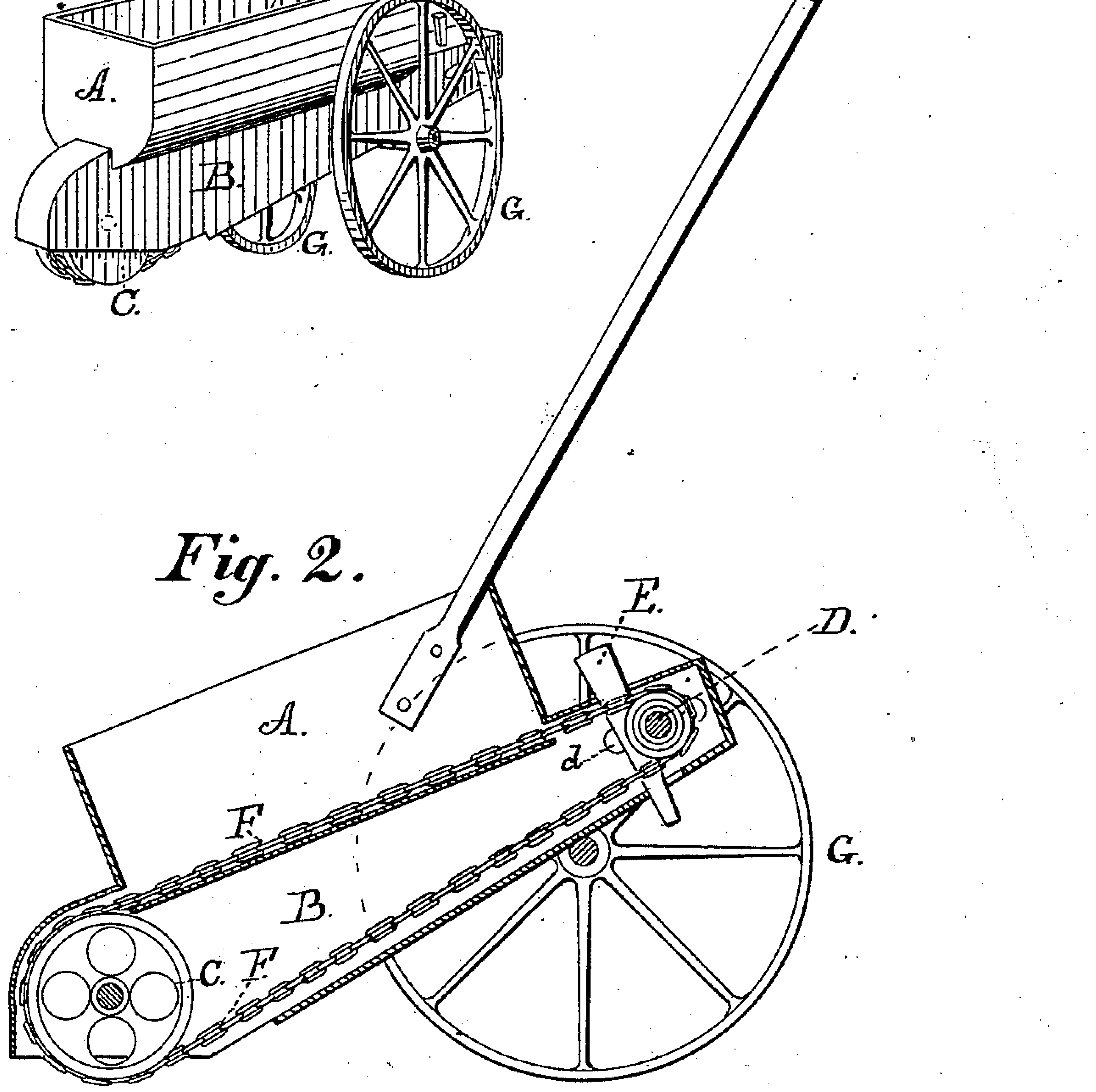


Fig. 2.



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DOUWE D. WILLIAMSON, OF NEW BRUNSWICK, NEW JERSEY.

MARKER FOR LAWN-TENNIS COURTS.

SPECIFICATION forming part of Letters Patent No. 285,092, dated September 18, 1883.

Application filed June 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, DOUWE D. WILLIAMSON, of New Brunswick, county of Middlesex, State of New Jersey, have invented a new and useful Improvement in Markers for Lawn-Tennis Courts, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it most nearly appertains to make and use the same, when taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view thereof. Fig. 2 is a longitudinal section.

Heretofore and before this my invention it has been found impracticable to mark lawn-tennis courts and other like places with dry powder or pulverized material with accuracy and dispatch.

This my invention consists of feeding to the surface traversed a dry powdered or pulverized material continuously in certain well-defined lines, in certain regulated quantities, the apparatus therefor, and the various combinations hereinafter specified and claimed.

The apparatus which I have found well adapted for the purpose of carrying out my invention is shown in the accompanying drawings, wherein the box or trough A is made of wood or metal, having a rounded or sloping bottom downward toward the center. Beneath the center of the box A is the case or shield B, arranged lengthwise of the box. Within the case B, at or near the front end thereof, is arranged the wheel or pulley C, having the bearings of its axle in the sides of the case B. Within the case B, at the other or opposite end thereof, is arranged the wheel or pulley D, having the bearings of its axle in the sides of the case B, the bearings of the axle of D being preferably in slots *d d*, so that the pulley D may be adjusted back and forth therein. This adjustment may be accomplished by wedge-shaped pins E, which pass through the top and bottom of the extension of the case B, and bear on one side against the case and on the other against the axle, and force it back and forth in the slots as the pins E may be driven in or withdrawn. The continuous belt or chain F passes about the pulleys C and D, which are arranged, as above described, in the case B, these pulleys being made with a slight groove on the periphery of each sufficiently deep to receive about half the thickness of the belt or chain F. The pulleys are so arranged in the case B that the belt or chain F, passing around under them, will pass over and nearly in contact with the bottom of the trough or box A. Holes are arranged at each end of the box A, so that the belt or chain may pass in and out of the box under the bottom. The case B is extended over the pulleys C and D and chain F, excepting for a short distance near the pulley C, so that powdered material on the chain F and pulleys may be protected from the wind. The box A and case B are mounted on an axle and the wheels G G, which wheels are free to revolve on the axle. The box has handles H attached to it, by which it may be pushed and guided. The box being mounted on the wheels G G, as shown, the pulley or wheel C, encircled by the chain F, rests upon the ground.

The mode of operation is as follows: The box A being filled or partially filled with powdered or granulated material, the operator takes hold of the handles H, bearing down upon them, raises the wheel C and chain F from the ground, moves the marker to any convenient place, when, raising his hands and the handles H, the chain F and wheel C are brought into contact with the ground, and by the friction or traction of the wheel C and chain on the ground the wheel revolves and the chain is drawn through the box A, carrying with it a certain amount of the powdered or granulated material in the box, and leaving it on the ground it comes in contact with, making a clean, sharply-defined line.

I am aware that many devices have been made for the feeding of liquid compounds in lines, and that rollers and valves have been used for that purpose, and do not wish to be understood as claiming any of these.

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

1. The method of feeding to the surface traversed a dry powder or pulverized material continuously in defined lines and in regulated quantities, substantially as specified and set forth.

2. The combination, in a marker, of a box, A, and endless belt passing over the bottom and through openings in the end thereof, and about wheels or pulleys so held in a case as

to bring the belt in contact with the ground, substantially as specified.

3. The combination, in a marker, of the positive-feed mechanism and inclosing-case B, substantially as specified and set forth.

4. The combination, in a marker, of a box, A, and endless belt passing over the bottom and through openings in the ends thereof, and about wheels or pulleys so held in a case as to bring the belt in contact with the surface traversed, and the inclosing-case B, substantially as specified and set forth.

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