(No Model.)

J. D. OTSTOT.

COVERER ATTACHMENT FOR SEEDING MACHINES.

No. 309,403. Patented Dec. 16, 1884.

Fig. 1.

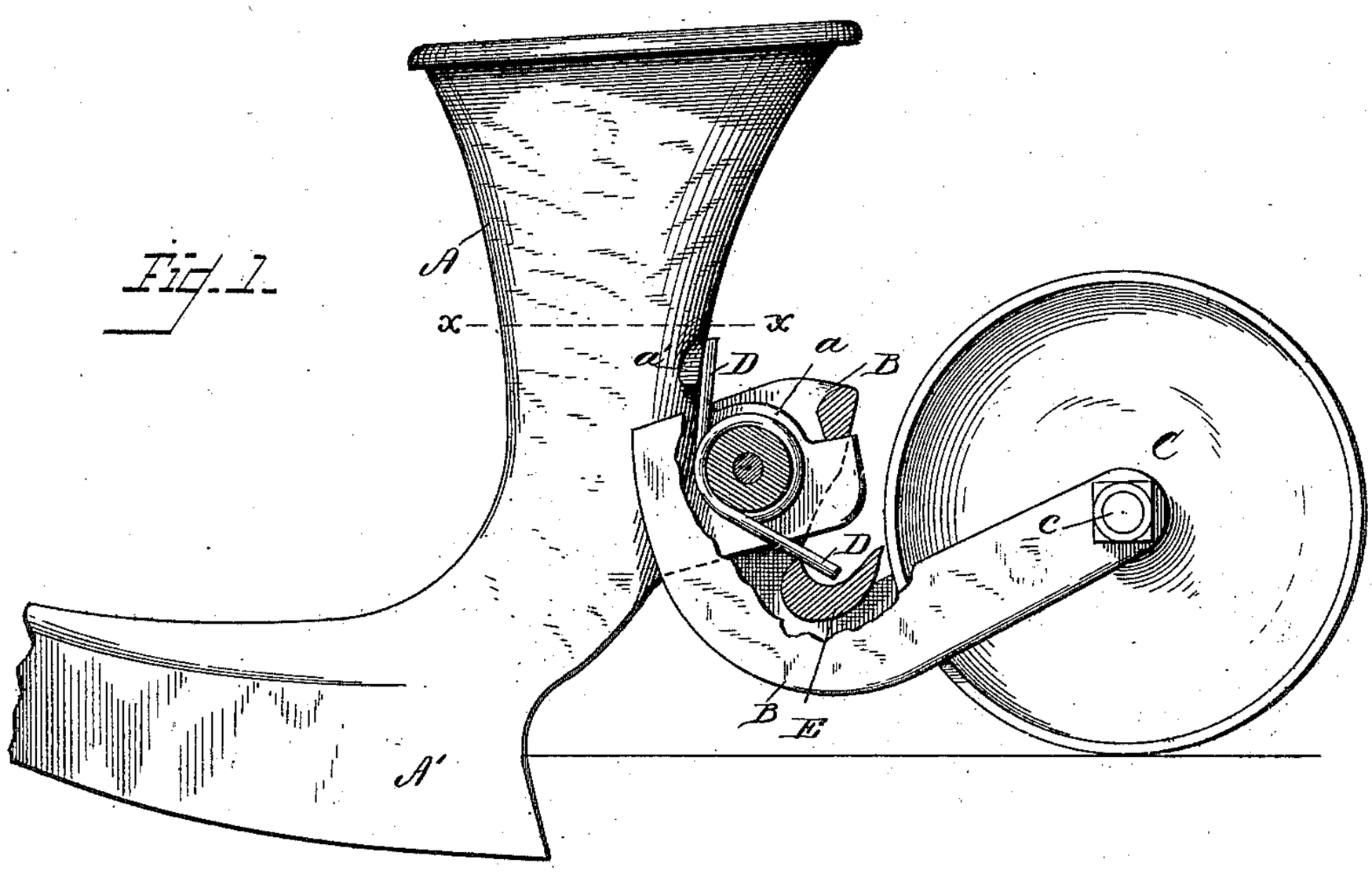


Fig. 2.

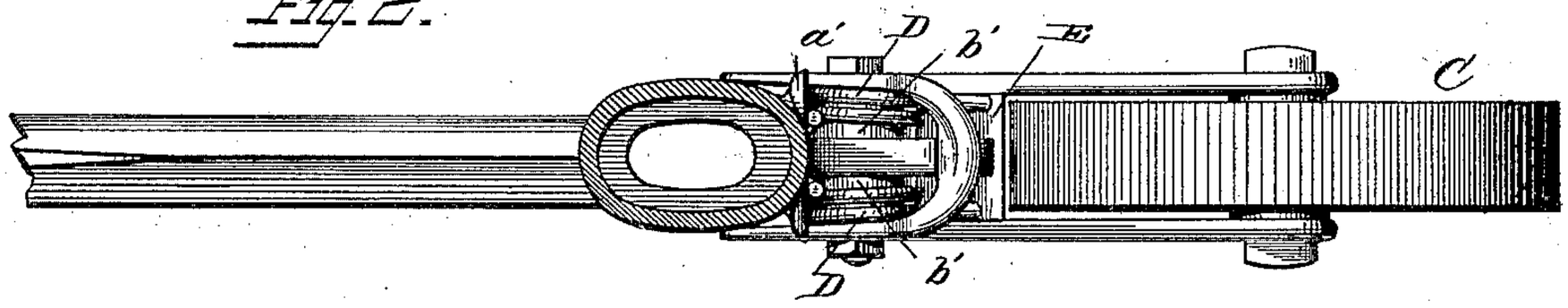
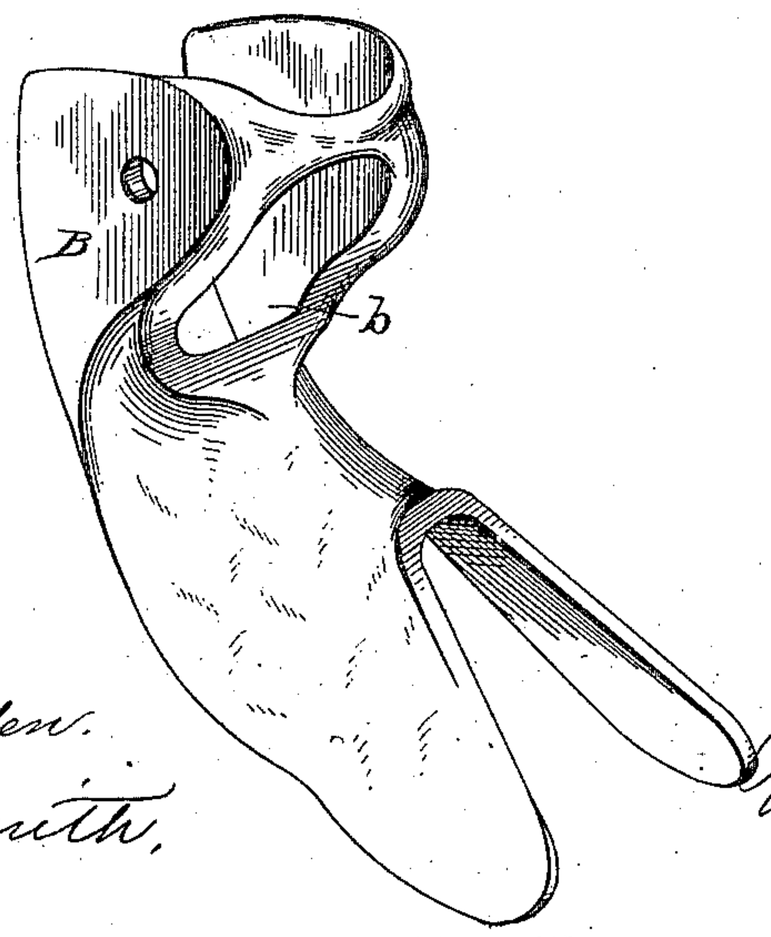


Fig. 3.



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UNITED STATES PATENT OFFICE.

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COVERER ATTACHMENT FOR SEEDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 309,403, dated December 16, 1884.

Application filed July 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. OTSTOT, of Springfield, county of Clark, and State of Ohio, have invented a new and useful Improvement in Coverer Attachments for Seeding-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to an improvement in coverer attachments to drill-teeth; and it consists in the combination, with the teeth or hoes of a grain-drill or seeding-machine, of a pivoted and yielding coverer attached thereto, and adapted to yield by means of a spring arranged in the relation thereto and acting in the manner hereinafter fully described, and illustrated in the drawings accompanying this application, in which—

Figure 1 is a side elevation of a drill-tooth with my improved coverer, partly in section, applied thereto. Fig. 2 is a plan view of the same, showing the drill-tube in section on the line *x x* of Fig. 1; and Fig. 3 shows a modification in the form of the coverer.

A represents one of the teeth of a grain-drill, which may be of any desired or preferred construction, and to which my improvement is adapted to be applied. The form of said tooth is immaterial as my improvement is applicable to any form of tooth.

The tooth illustrated in the drawings is of the hollow or tubular form, the grain being conducted through it to and deposited in the furrow, and being carried into the tube or tooth through a suitable flexible tube or pipe connecting with the distributer-hopper. The forward part of the tooth or hoe A is provided with a lower cutting-edge, A′, for the well-known purpose of opening a furrow in the soil, in which the grain is afterward deposited.

Upon the rear surface of tooth A, and at a suitable distance from the lower edge thereof, is cast or otherwise secured a lug or ear, *a*, of a size and form adapting it to receive my improved coverer, which will now be explained.

B represents an L-shaped casting or frame, the upper end of which is slotted or made hollow, as shown, for adapting it to embrace the lug *a* upon the tooth A. The casting B is left open at its forward edge, and provided with an opening, *b*, in its rear side or edge, which adapts the lug *a* to pass through the slot in the casting. The lug *a* is by preference provided with trunnions *b′ b′*, which extend outward laterally therefrom to the side walls of the slot in casting B. The casting B is hinged or pivoted to the said trunnions and lug by means of a through-bolt passing through a perforation in the side walls of the slot in the casting and through the lug *a* and trunnions *b′ b′* thereon. In this manner the casting is pivoted in rear of the tooth, and at its rear end it is bifurcated, as shown, to receive a coverer-wheel, C, which rotates in contact with the ground and revolves around a short shaft, *c*, connecting the arms of the forked end of the casting and passing through the center of the wheel C, serving as an axle for the latter. The form of this wheel C may be varied to suit the user; but that preferred and shown in the accompanying drawings is provided with a broad flat rim or periphery, in order that after the grain has been deposited in the furrow made by the tooth or hoe the said roller or wheel may follow and pack the earth gently and evenly over the grain. If preferred, the wheel C may be provided with a V-shaped groove in its periphery, or with a concavity formed therein, according to the wish of the user. The amount of pressure of wheel C upon the earth may be regulated and varied as desired by means of heavy or light spiral springs, now to be described, and the movement of the swinging frame limited by means of the shoulders formed by the slot in the rear face of the casting.

As above stated, the lug *a* of tooth A is provided with trunnions, and surrounding these trunnions on either side of lug *a* are spiral springs D D, the ends of which project outward from the trunnions and bear as to their upper ends against a flattened portion, *a′*, of tooth A, and as to their lower ends against the upper surface of the casting B, whereby the tendency is to depress the outer swinging end of the casting containing the coverer-wheel C, and thereby to aid the latter in packing the earth upon the grain.

For the purpose of keeping the working-surface of wheel C free from dirt or any earth which may cling to it and be picked up thereby, a scraper, E, is provided, cast upon or secured to the swinging casting or frame B just in advance of the wheel, and arranged with its working-edge in close proximity with the peripheral surface of roller or coverer-wheel C. In very dry soil it may be desirable to omit the coverer-wheel C and employ the swinging frame B as a drag-coverer, its downwardly-extending arms serving to drag or pull the earth into the furrow made by the furrow-forming tooth after the grain has fallen therein. Therefore I do not desire to be restricted to the employment of the coverer-wheel in connection with the hinged frame or drag.

Having now described my invention, I claim as new—

1. The combination, with the tooth of a grain-drill, of a lug or standard cast thereon and provided with trunnions, and a coverer pivoted thereto and held in place by a spring surrounding said trunnions, substantially as described.

2. The combination, with a drill-tooth, of a coverer pivoted thereto by means of a lug cast upon the said tooth, a coiled spring for holding the coverer to its work, substantially as described, and a transverse web on said coverer for limiting the downward throw thereof, substantially as specified.

3. The grain-coverer formed as described, with the upper end of its frame slotted, and provided with ears or lugs for the purpose of attaching it to the drill-tooth.

4. In a grain-drill, the pivoted frame or coverer provided at its upper end with perforated ears or lugs for attaching it to the drill-tooth, and a web or cross-bar connecting said ears and serving to limit the movement of the coverer, substantially as described.

5. In a grain-drill, the coverer-wheel carried by a pivoted frame or coverer, provided at its upper end with perforated ears or lugs for attaching it to the drill-tooth, and a web or cross-bar connecting said ears and serving to limit the movement of the coverer, substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN D. OTSTOT.

Witnesses:
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