(No Model.)

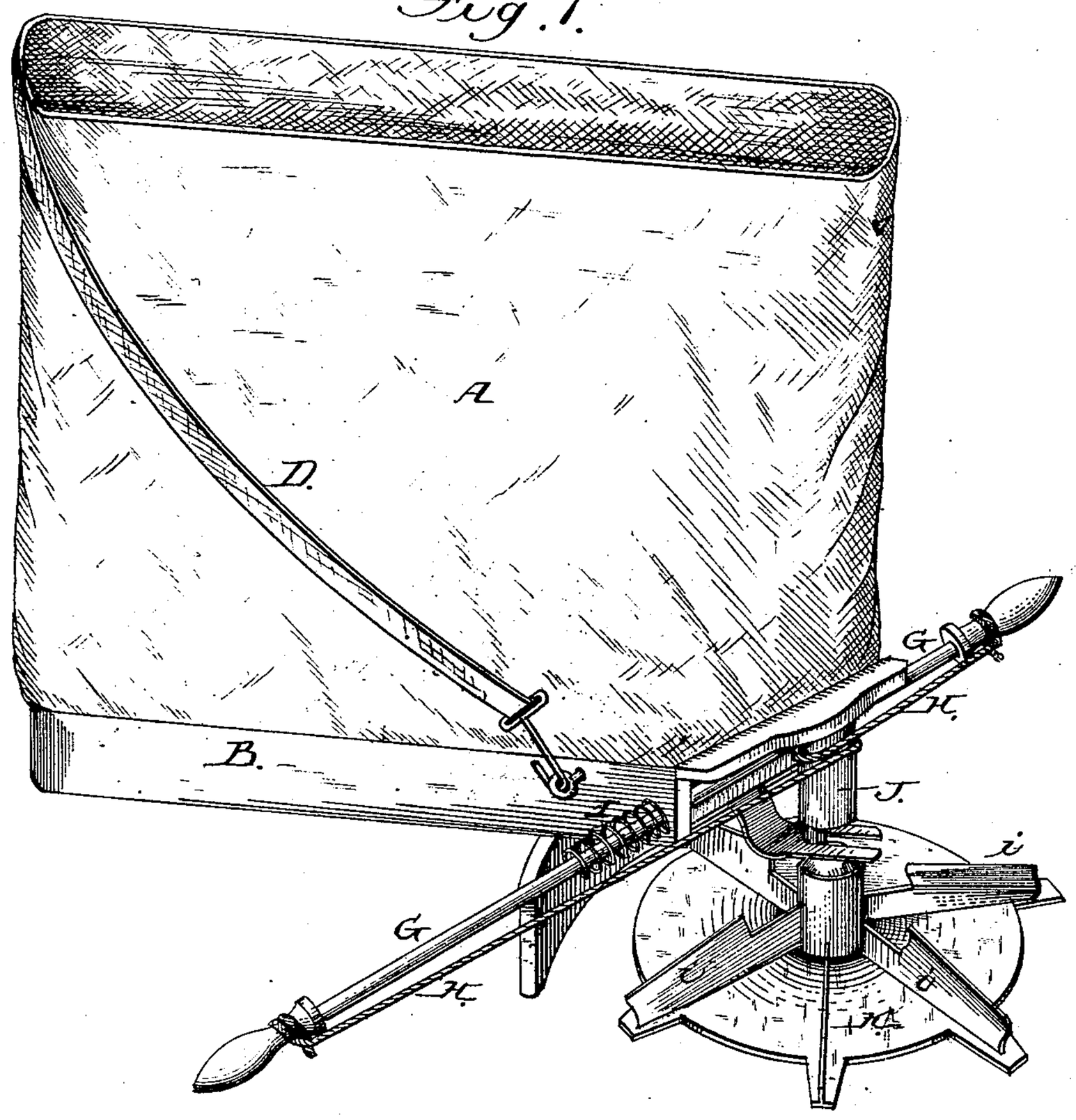
2 Sheets—Sheet 1.

S. S. SPEICHER.

Broadcast Sower.

No. 236,640. Patented Jan. 11, 1881.

Fig. 1.



Witnesses;
L. Walter Fowler,
R. K. Evans

Inventor;
Saml. S. Speicher
by A. H. Evans & Co
Attys

(No Model.)

2 Sheets—Sheet 2.

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No. 236,640. Patented Jan. 11, 1881.

Fig. 2.

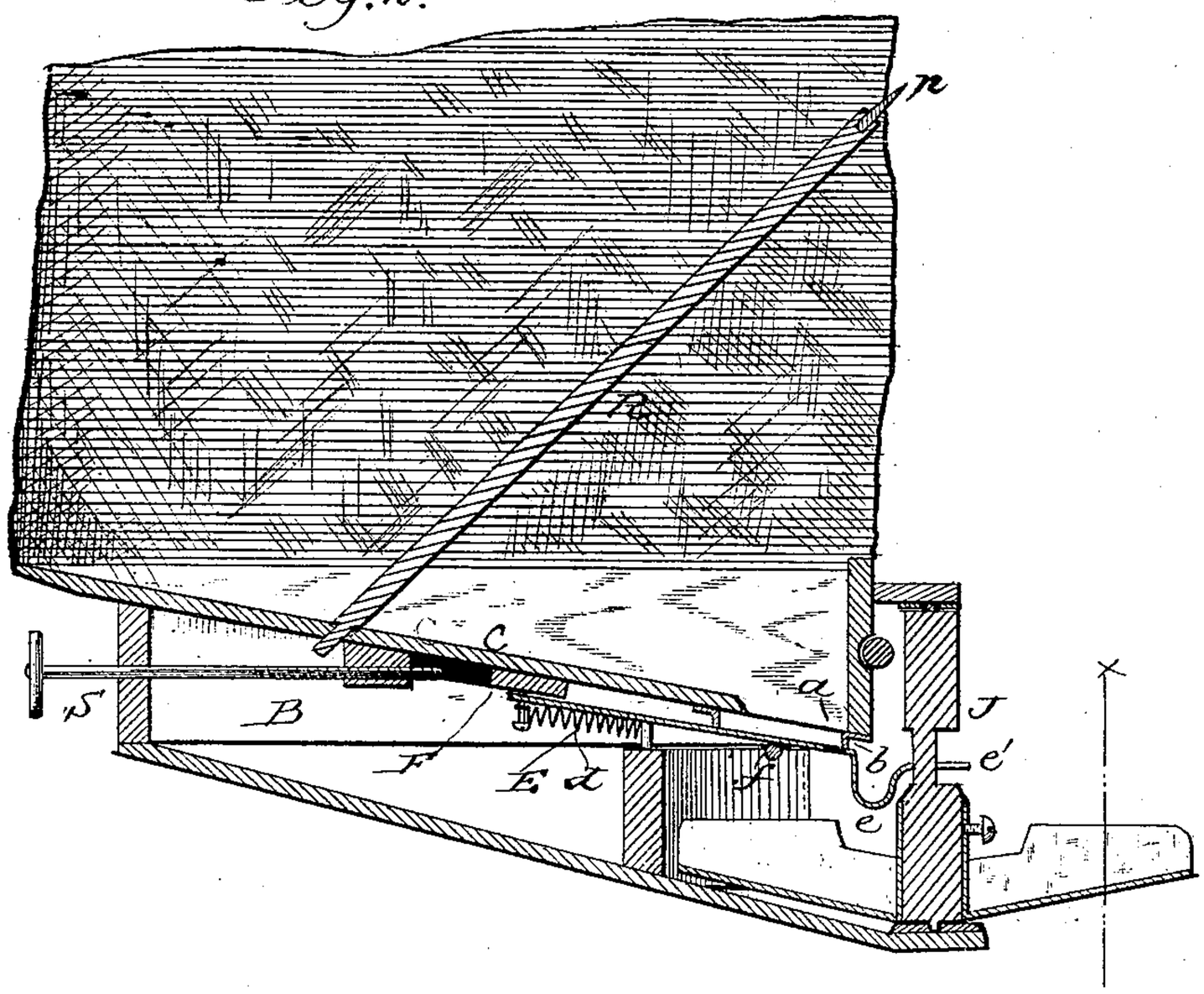


Fig. 3.

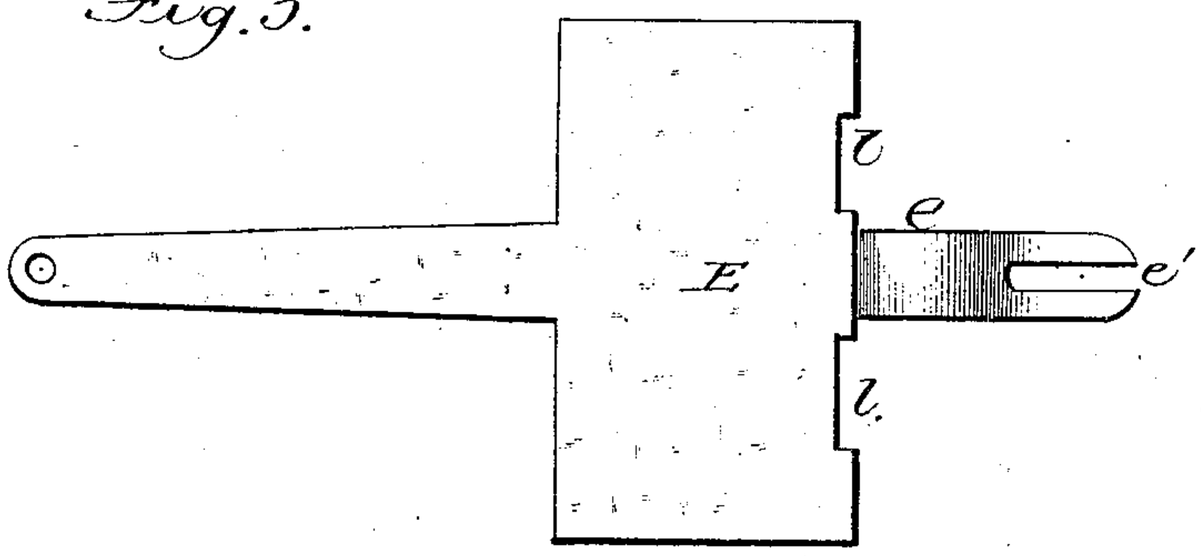
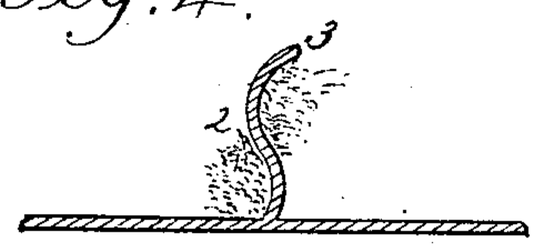


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL S. SPEICHER, OF URBANA, INDIANA.

BROADCAST SOWER.

SPECIFICATION forming part of Letters Patent No. 236,640, dated January 11, 1881.

Application filed June 11, 1880. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL S. SPEICHER, of Urbana, in the county of Wabash and State of Indiana, have invented certain Improvements in Hand Broadcast Seed-Sowers; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved sower. Fig. 2 is a longitudinal sectional view of the same. Figs. 3 and 4 are details to be referred to.

My invention relates to that class of hand broadcast sowers wherein the grain is fed from a receptacle through a feed-opening by means of a vibrating plate and falls on a revolving wheel provided with wings to strike the grain and scatter it.

Heretofore in this class of sowers the vibrating feed-plate has been placed directly against the bottom of the grain-receptacle, thereby making a broad contact-surface, which rendered the machine liable to be easily choked by chaff or bits of straw, and its successful operation was impaired by the lodgment of grit or dirt between the vibrating plate and the bottom of the grain-receptacle. The distributing-wings, also, were so constructed that the grain was provided with no detent to force it to leave the distributing-plate radially, and much of it would rise nearly vertically and drop at the feet of the operator.

The object of my invention is to provide a sower in which these difficulties named shall be obviated; and my invention consists, first, in providing the feed-opening with a thin projecting metallic rim combined with a vibrating feed-plate resting thereon; secondly, in constructing the distributing-wings in a double-reverse-curve outline in cross-section; and, thirdly, in certain details of construction, as hereinafter more specifically described and claimed.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is the textile-fabric bag to contain the grain, having the rigid section B, provided with a diagonal bottom, C, in which is the feed-opening *a*. Surrounding feed-opening *a* is a downwardly-projecting thin metallic lip or rim, *b*, and bearing against this lip is the reciprocating feed-plate E, provided with a retracting-spring, *d*, a forwardly-projecting downwardly-curved tongue, *e*, having a bifurcated end, *e'*, and a hand-lever, F, said lever F being common to this class of machines. To avoid as much friction as possible, plate E rests upon a round transverse bar, *f*, arranged directly beneath it.

The well-known reciprocating rod G, cord H, springs I, and eccentric spindle J are applied for operating the distributing-wheel K, which bears the distributing-wings *i i*. These distributing-wings I construct with longitudinal reversed curves, as illustrated in cross-section, Fig. 4, so that they detain the grain, prevent it rising over the wings, and, by checking its upward movement, force it to leave the distributing-wheel radially. As the wings rise from the distributing-plate they curve to a point, 2, (see Fig. 4,) and from thence to their upper edges, 3, they curve in the opposite direction. As the distributing-wheel revolves in one direction the curve in the wing up to point 2 serves as a detent to the grain, and as the wheel revolves in the opposite direction the curve from point 2 to point 3 serves a similar purpose.

The bifurcated tongue *e* joins plate E at right angles, and, passing down, is curved and rises to the point where it is extended into the bifurcated end *e'*. By this construction the tongue is prevented from arresting the passage of straw or chaff through the feed-opening, and thereby choking the machine.

The forward edge of plate E is provided with extended shallow recesses *l l*, which assist, as plate E vibrates, by means of eccentric spindle J, in clearing the feed-opening of any short straw or chaff which might interrupt the feed.

Through the rear of the rigid section B passes a set-screw, S, by which the position of plate E is controlled and the width of the feed-opening determined.

Heretofore it has been customary to provide the forward end of rigid section B with a fixed vertical standard to sustain the textile-fabric grain-receptacle A.

In my improved machine I provide a removable rod, R, fitting into a socket in the bottom C, and provided with a point, *p*, to engage with the textile fabric near the upper edge of the receptacle A. By this device I decrease the weight of the machine and materially reduce the space of packing for shipping.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hand broadcast seed-sower, the vibrating feed-plate E, in combination with the downwardly-projecting thin lip or rim *b*, surrounding the feed-opening from the grain-receptacle, substantially as described.

2. The distributing-plate K, in combination with the reversed curved wings *i i*, substantially as set forth.

3. In a seed-sower, a vibrating plate, E, provided with the tongue *e*, bent at right angles, as shown, curved upward and outward, and terminating in bifurcated end *e'*, to engage the eccentric spindle J, as described.

4. The removable sustaining-rod R, in combination with the grain-receptacle of a seed-sower, substantially as and for the purpose set forth.

SAM. S. SPEICHER.

Attest:
R. K. EVANS,
WM. F. MORSELL.