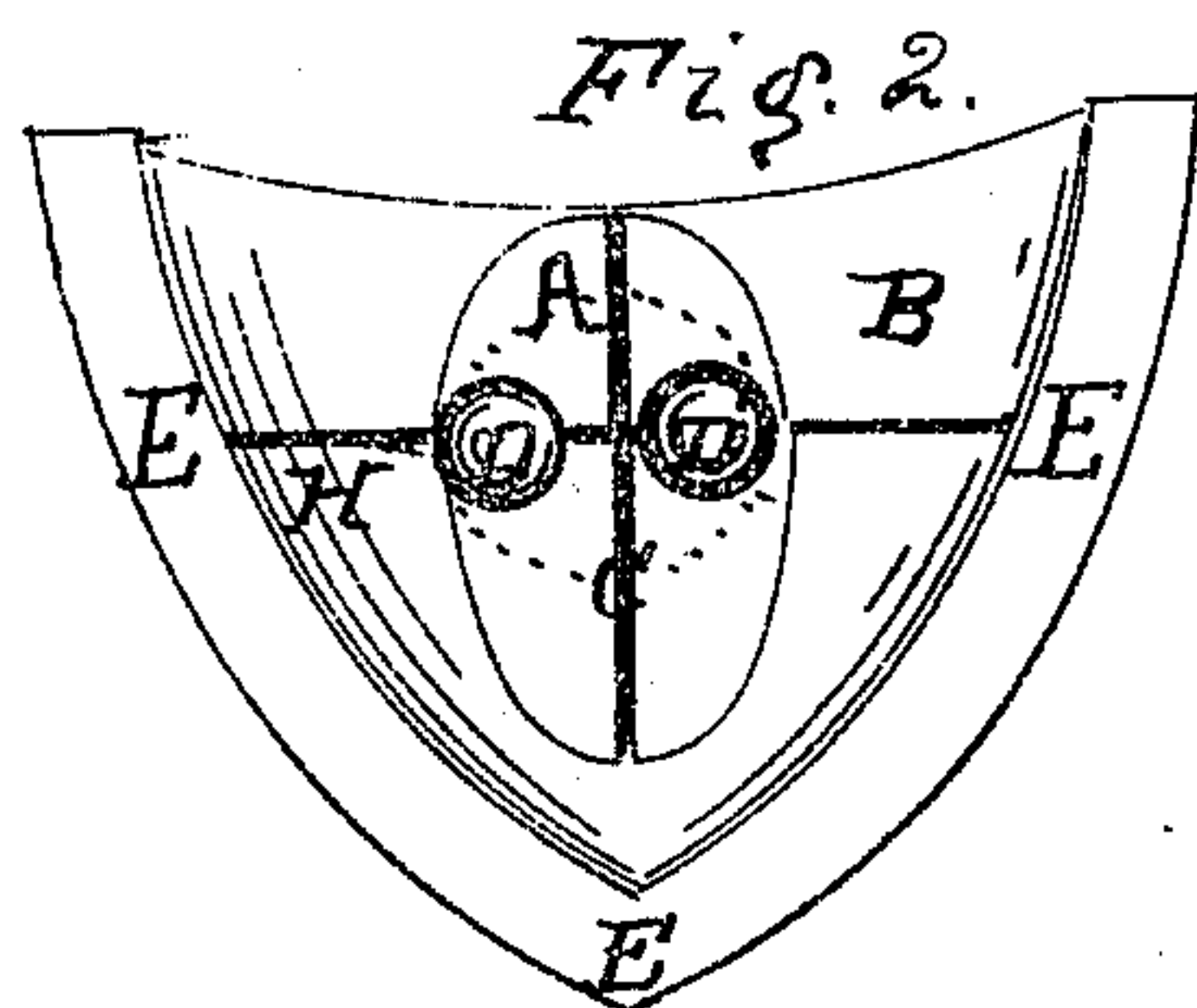
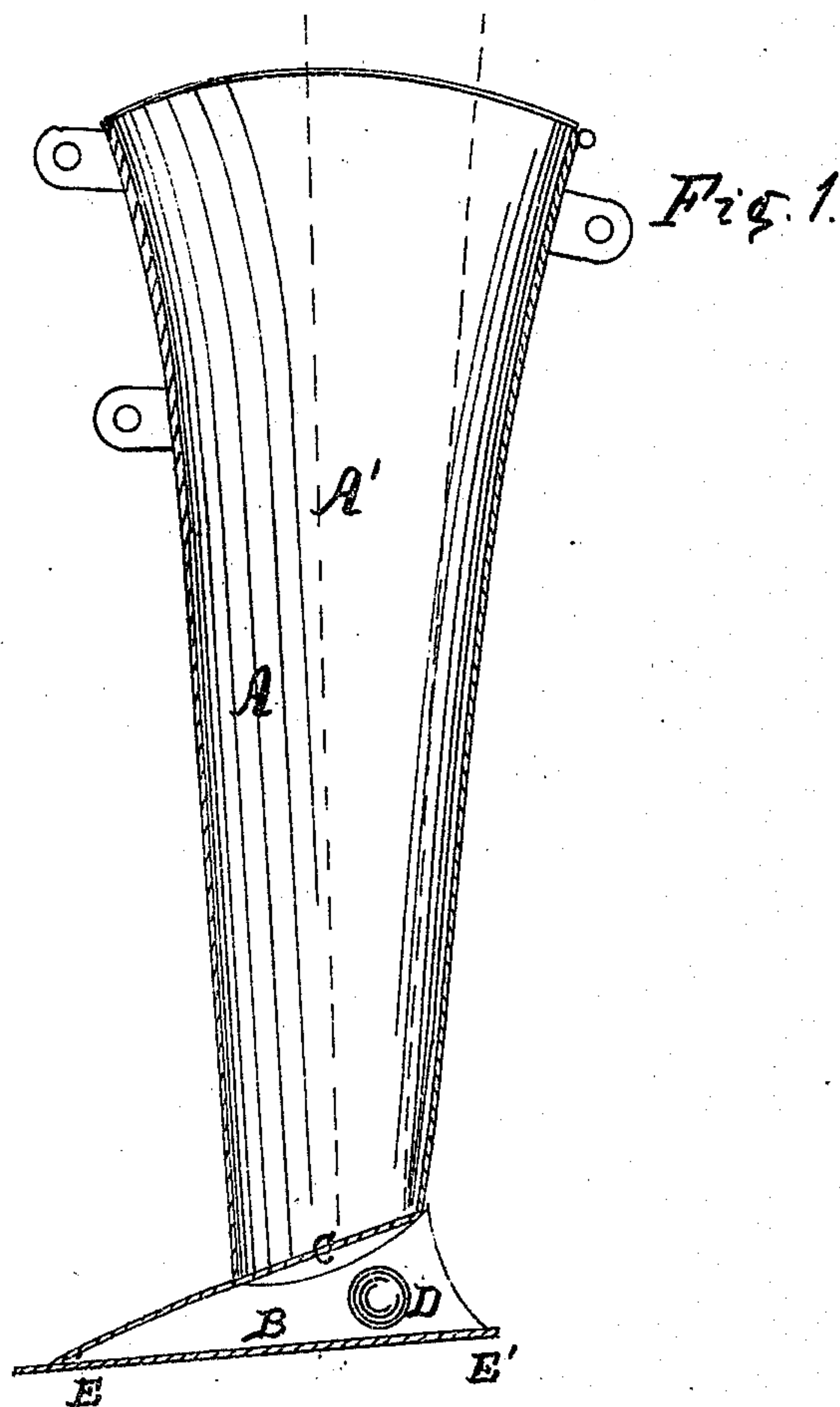


J. G. Vale.

Grain-Drill.

N^o 72127

Patented Dec. 10, 1867.



Witnesses
Mon. Shreiner
Samuel Albright

Inventor
Joseph G. Vale



JOSEPH G. VALE, OF CUMBERLAND COUNTY, PENNSYLVANIA.

Letters Patent No. 72,127, dated December 10, 1867.

IMPROVEMENT IN GRAIN-DRILLS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN :

Be it known that I, JOSEPH G. VALE, of the county of Cumberland, and State of Pennsylvania, have invented a new and useful Improvement in Grain-Drills; and I do hereby declare that the following is a full, clear, and accurate description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a bisecting lateral view, and

Figure 2 a perspective end view.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

I take the funnel A, within which works the ordinary leather or rubber stocking A'. To the lower end of the funnel A I join the quarti-elliptical shovel, consisting of two parts, B and E E', coming to a point at E. At the junction of the funnel A with the shovel part B, from a point in the centre of the rear to a point in the centre of the front, I extend the permanent rod C. At a right angle to C, and immediately under the mouth of the stocking A, in the shovel part B, I extend the permanent end H, on which I fasten at equal distances from the sides two exactly spherical balls of iron, D D'. The parts A and B are of cast iron; E is steel.

The grain falling through the stocking A' is divided by the rod C into two equal divergent scattering portions, which then striking the iron balls D and D', are completely spread over the space of ground opened by the expanded base of the shovel.

In the drills now in use the grain falls in one narrow furrow, unscattered, which I believe is a vast disadvantage to its proper growth and nourishment.

I claim as my invention, and desire to secure by Letters Patent of the United States—

The quarti-elliptical shovel B, with its base E E' coming to a point at E, the rod C, the rod H, with thereon the balls D and D', together with the funnel A, all constructed and operating in the manner and for the purpose described.

JOSEPH G. VALE.

Witnesses:

M. SHREINER,

SAMUEL ALBRIGHT.