E. McLANE.

Corn Separator.

No. 89,589. Patented May 4, 1869

Fig. 1.

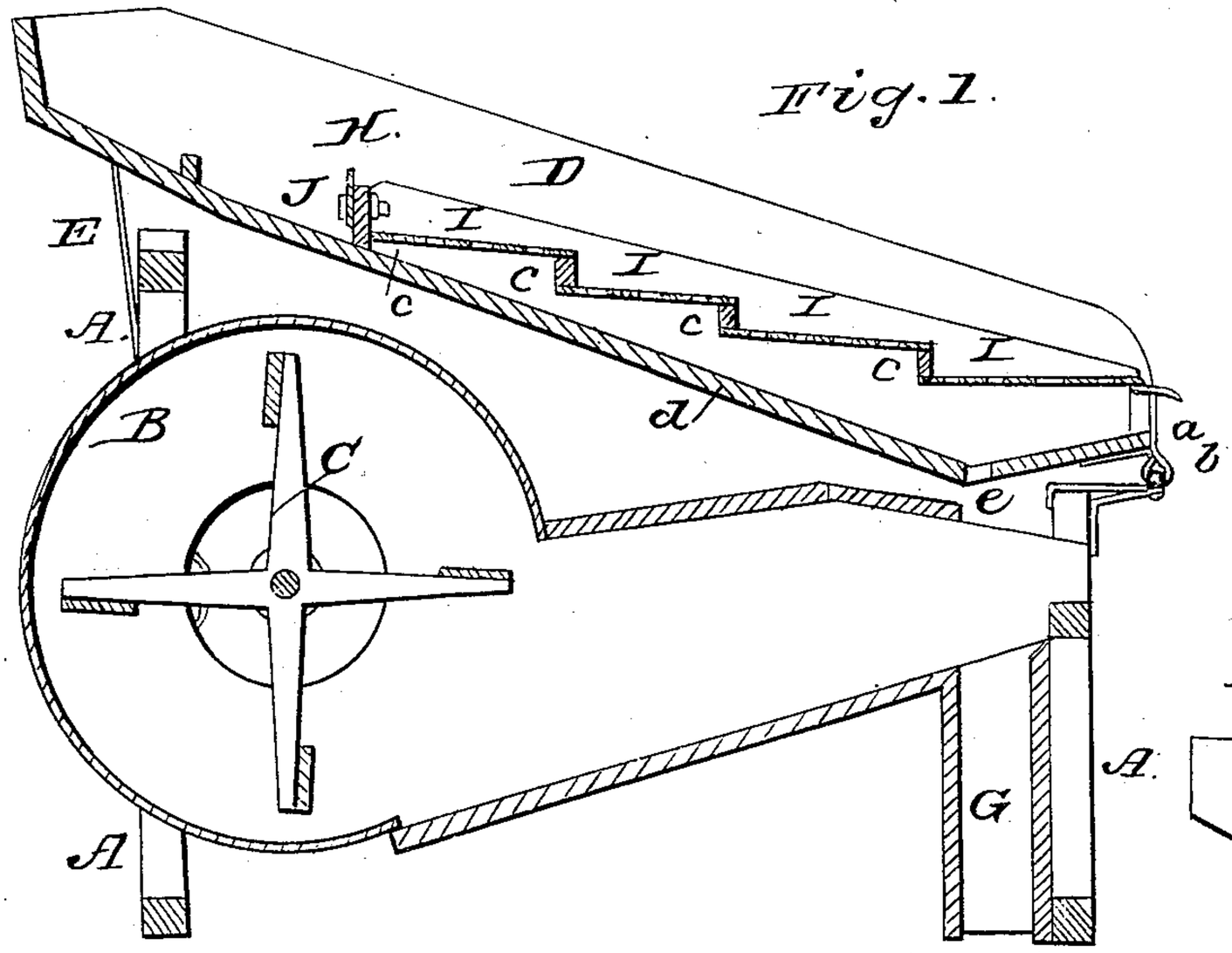


Fig. 3.

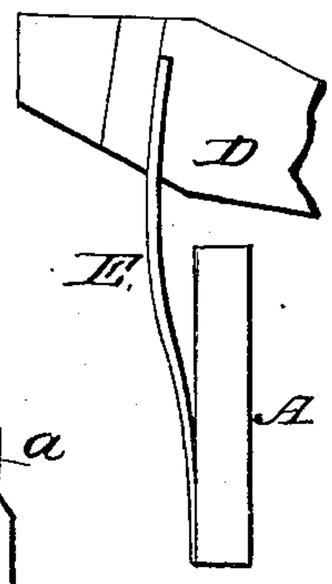


Fig. 2

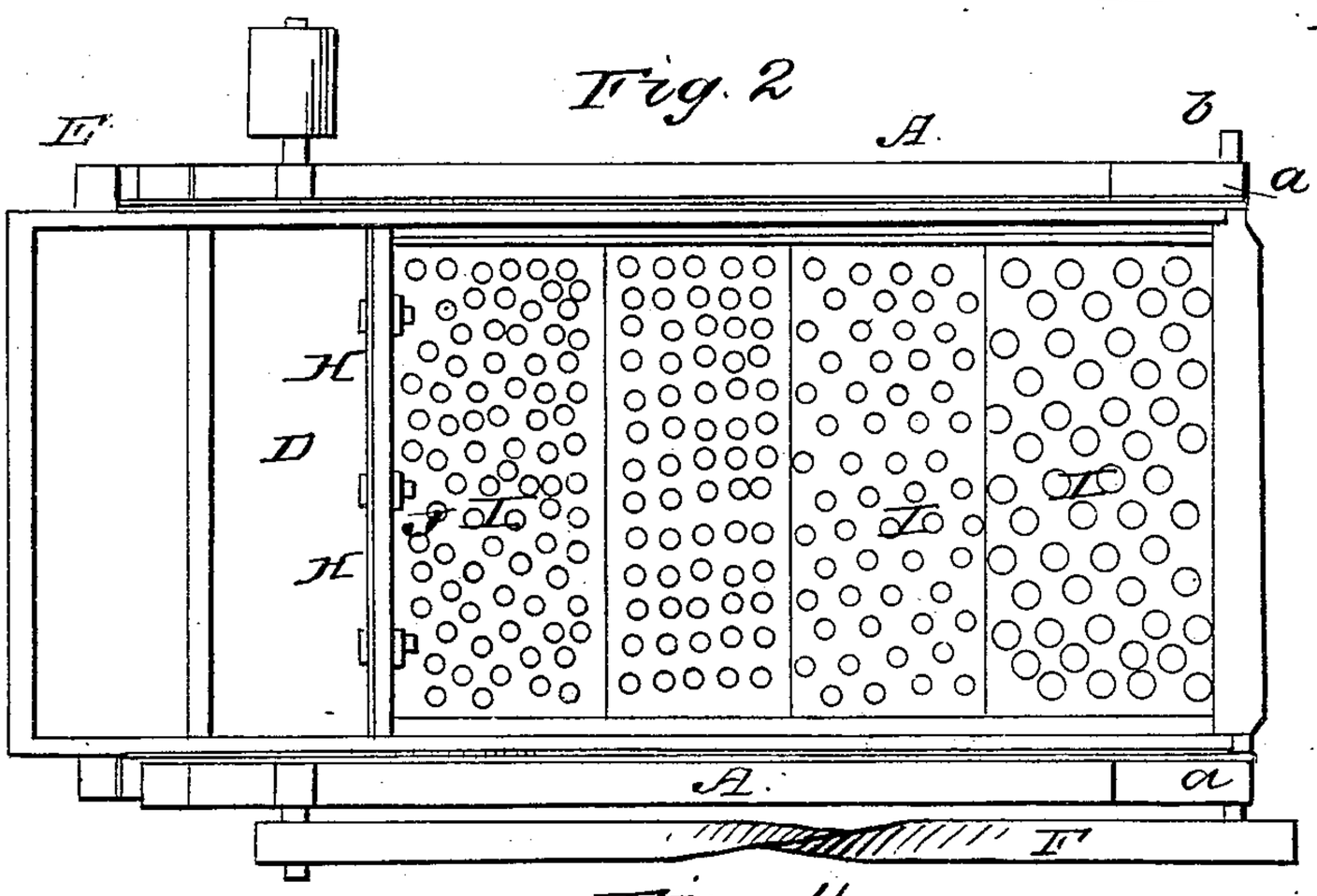
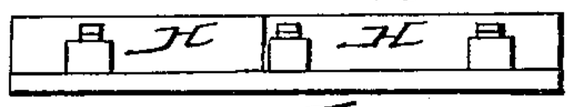


Fig. 4.



Witnesses

Comelius Cox

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United States Patent Office.

E. McLANE, OF YOUNG AMERICA, ILLINOIS.

Letters Patent No. 89,589, *dated May* 4, 1869.

IMPROVEMENT IN CORN-SEPARATORS.

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, E. McLANE, of Young America, in the county of Warren, and in the State of Illinois, have invented certain new and useful Improvements in Corn-Separator; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the construction and general arrangement of a "corn separator," but more particularly in arranging the gang of riddles in the form of a stair-step and in a device for spreading the grain even over the riddles.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal vertical section;

Figure 2 is a plan view;

Figure 3 shows the mode of suspending or supporting the rear end of the shoe; and

Figure 4 is a side view of the device for spreading the grain evenly over the riddles.

A represents the frame of the separator.

B is the fan-box or drum, in which the fan C is placed.

The shoe D having an inclined bottom, is supported above the drum B, at the rear end of the frame A, by spring-bars E E attached to the rear end of the frame, and to the sides of the shoe near its rear end, which allows a backward and forward movement of the shoe.

The front end of the shoe D, is supported by metal loops *a a*, encircling two cranks on a shaft *b*, which is placed in suitable supports at the front end of the frame A.

The shaft *b*, is at one end provided with a pulley, which by a belt, F, is connected with the fan-shaft.

The necessary motion of the shoe is thus communicated from said fan-shaft.

Inside of the shoe, D, is placed a series of riddles, I I, the front ends of which rest on cross-slats, *c c*, secured at proper distances to the sides of the shoe. The riddles form, so to say, a kind of stair-step arrangement, as seen in fiig. 1, so that the corn which fails to pass through the first riddle falls down on the second, and so on to the last, thus giving more chance for fully separating the corn than in any separator heretofore used.

The corn after passing through the riddles I I, falls down on the inclined bottom *d*, and passes out through the aperture *e*, when it falls through the mouth of the fan-box, and out through the spout G.

As soon as it leaves the aperture *e*, the blast from the fan C acts upon it, removing all dust and light chaff that may have passed with it through the riddles.

At the top of the upper riddle are placed two metal bars H H, secured to a wooden cross-bar, J, by bolts which pass through elongated slots in the said metal bars, so that they may be adjusted to any height desired above the cross-bar J.

The corn being dropped in above the bars H H, it passes over the same on to the riddles, the bars thus serving as a kind of regulator to evenly distribute the corn over the riddles.

Having thus fully described my invention,

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

1. The arrangement of the frame A, spring-bars E E, shoe D, loops *a a*, and crank-shaft *b*, all substantially as and for the purposes herein set forth.

2. The shoe D, provided with cross-bars *c c*, and riddles I I, placed so as to form stair-steps, substantially as shown and described.

3. In combination with the shoe D, and riddles I I, the adjustable bars H H, substantially as specified.

In testimony that I claim the foregoing, I have hereunto set my hand, this 10th day of February, 1869.

E. McLANE.

Witnesses:

E. M. PAINE,

E. W. ALLEN.