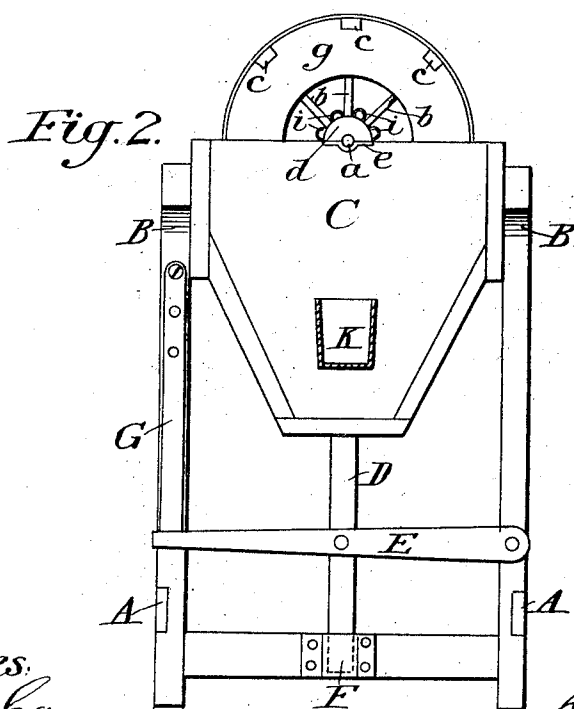
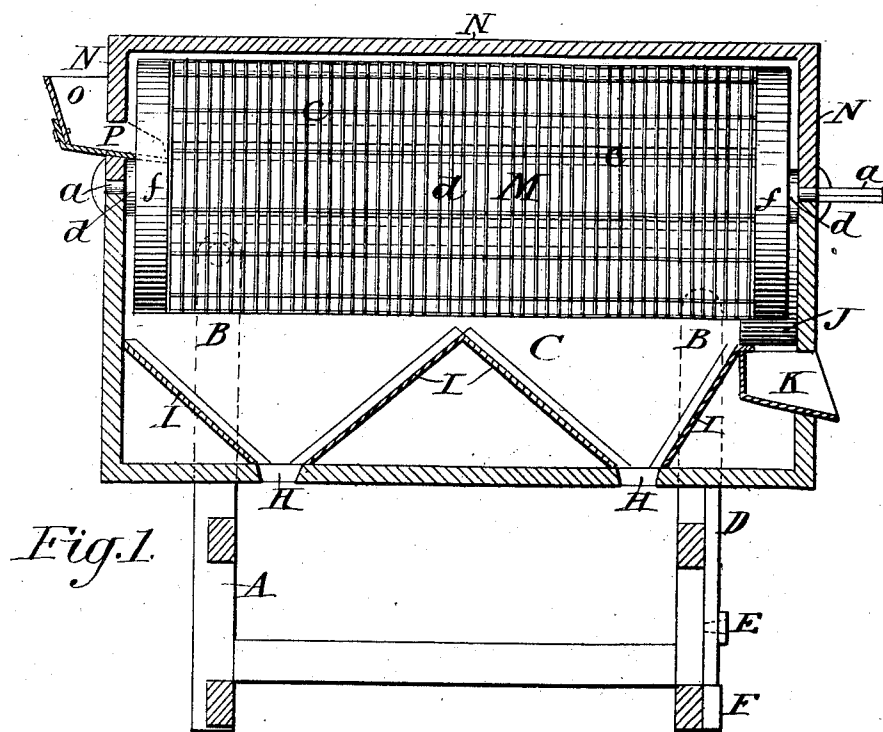


No. 81,951.

PATENTED SEPT. 8, 1868.

D. SHANNON & W. SPENCER.  
GRAIN SEPARATOR.



Witnesses:  
Cornelius Cox.  
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Atty.

# United States Patent Office.

DAVID SHANNON AND WILLIAM SPENCER, OF WINSLOW, INDIANA.

Letters Patent No. 81,951, dated September 8, 1868.

## IMPROVEMENT IN GRAIN-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 we, DAVID SHANNON and WILLIAM SPENCER, of Winslow, in the county of Pike, and in the State of Indiana, have invented certain new and useful Improvements in Grain-Separators; 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 our invention consists in the construction and general arrangement of a revolving screen, by which a greater amount of wheat can be cleaned in a given time than by any other now in use.

In order to enable others skilled in the art to make and use our invention, we 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 section, and

Figure 2 an end view.

A represents a frame, of suitable dimensions, which is provided with arms, B B, extending upwards at each corner.

Between the two rear arms, the box C is pivoted, and extends forward between the front arms, where it rests on a centre bar, D. Said bar is pivoted in the centre of the lever E, and its lower end runs in a metal socket, F, on the lower end of the frame, and the lever itself is pivoted in one end on one of the front arms, and is suspended by means of a strap, G, on the other, so that by this means the front end of the box may be raised or lowered at pleasure.

The adjusting of the front end of the box C may be accomplished in any other manner, answering the same purpose, if desired.

The box C is made of wood, with the upper part of its sides square, and the lower part slanting inwards, so that the bottom is narrower than the top, as shown in fig. 2.

This bottom is provided with two holes, H H, and so arranged with metal plates, I I, slanting inwards to the edges of said holes, that they form two hoppers or funnels, as shown in fig. 1.

The front end of said box is also provided on its inner side with a circular rim, J, extending from the top of each side of the box downward, and at its lowest point, which is on a level with the top of the plates I I, it is provided with a spout, K, which extends out through and beyond the end of the box.

The cylinder d, which extends longitudinally from end to end in the box C, is provided with journals, a a, which have their bearings in grooves in the centre of the upper edges of the ends of said box, and these grooves are lined with metal plates, e e.

The journal on the front end of the box extends beyond the same, and is provided with suitable gearing for turning the cylinder at any rate of speed desired.

This cylinder is provided near each end with a suitable number of rods, b b, which form, so to say, the spokes of a wheel, of which the cylinder is the hub, and which rods serve to support the connecting-bars c c, which are secured to said rods, and run parallel with the cylinder.

On and over these bars, wire netting is placed in such a manner as to form a drum, M, in which the grain is separated from all chaff, &c.

The edges of the wire netting are provided with metal rims, f f, to secure the same, and of such size as to allow the drum to revolve freely, but tolerably close to the ends of the box, and at the front end close to the circular rim J already described.

The front end of the drum is open, but the rear end is partially closed by means of an annular disk, g, which fits close to the metal rim f, and leaves a space open in the centre of said disk between it and the end of the cylinder d. This end of said cylinder is provided with a series of bent wires, i i, the use of which will be hereinafter described.

The holes in the wire netting may be of any shape desired, and of any size, but so arranged that they will

allow the cheat and cockle to pass through, and fall down through the first hole in the bottom of the box, and the small grain to fall down through the second hole. Also, so that the merchantable No. 1 grain cannot pass through, but is carried forward and out through the spout K in the front end of the box.

The machine is completely housed or covered by means of a cover, N, which is arranged in any manner desired, but so as to allow the drum free motion inside.

The rear end of said cover is provided with a stationary hopper, O, in which the grain is poured, and with a spout, P, passing through a hole in the same, which spout encloses the bottom of the hopper, and is hinged or pivoted on the rear side of the same.

The hopper O and spout P are so arranged on the rear end of the cover that, when the cover is put on the machine, the front end of the spout will extend into the open space between the annular disk *g* and the cylinder *d* resting on the bent wires *i i* on the end of said cylinder.

By this means, when the drum revolves, these wires will shake the spout, and feed the grain from the hopper into the drum, thus becoming in a manner self-feeding.

If it is not desired to have a cover on the machines, end pieces must be placed on the box, the rear one to hold or support the hopper and spout, and the front one to close the open front end of the drum, so that the grain may not fall out except in its proper place.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the cylindrical drum M, case C, with inclined planes I, openings H, lever E, strap G, and bar D, all substantially as herein set forth.

2. The lever E, pivoted at one end, and suspended at the other by means of a strap, G, in combination with the pivoted centre bar D, when operating for the purpose of giving proper pitch to the box C, substantially as and for the purposes herein set forth.

3. The bent wires *i i*, on the end of the cylinder *d*, when acting in combination with the spout P, to feed the grain from the hopper O into the drum M, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing, we have hereunto set our hands and seals, this 6th day of June, 1868.

DAVID SHANNON. [L. s.]  
WILLIAM SPENCER. [L. s.]

Witnesses:

ELIJAH LUCAS,  
GEORGE BEE.