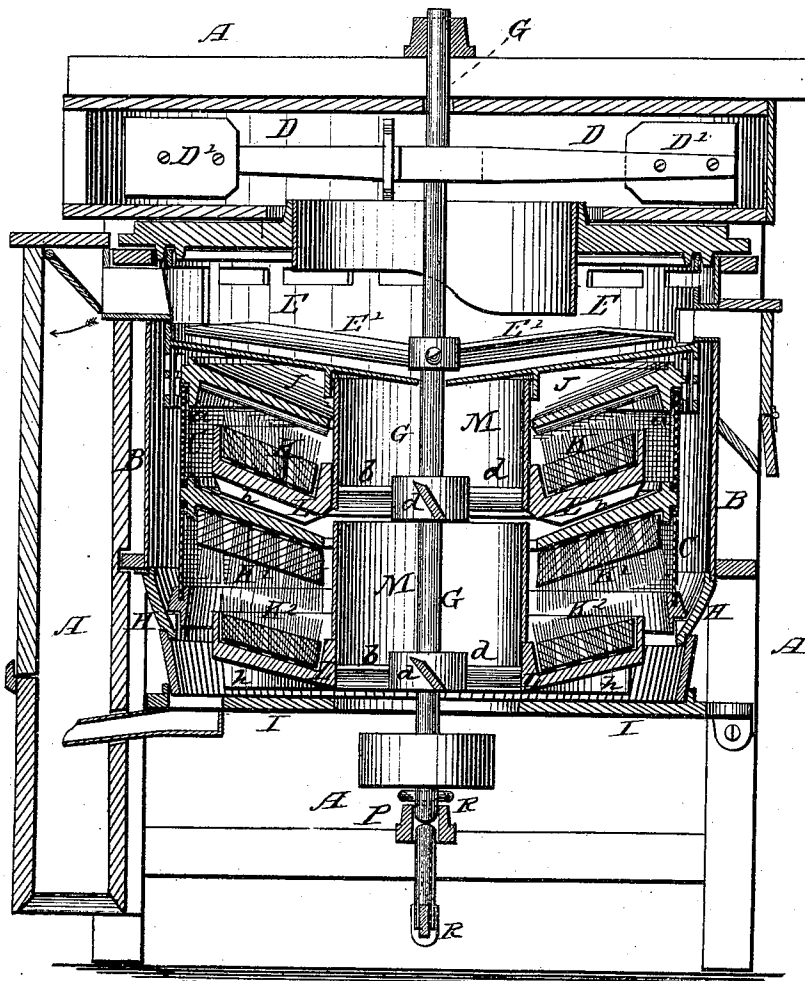


H. A. BARNARD.
BRUSH GRAIN-SCOURER.

No. 175,406.

Patented March 28, 1876.



WITNESSES:

P. C. Dutcher.

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INVENTOR:

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per. J. H. Alexander

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HEMAN A. BARNARD, OF MOLINE, ILLINOIS.

IMPROVEMENT IN BRUSH GRAIN-SCOURERS.

Specification forming part of Letters Patent No. **175,406**, dated March 28, 1876; application filed December 20, 1875.

To all whom it may concern:

Be it known that I, HEMAN A. BARNARD, of the city of Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Brush-Scourers; and I 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, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a grain-scourer, as will be hereinafter more fully set forth.

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 drawing, which represents a vertical section of my machine.

A represents the frame of the machine, in which is fastened the outer case or jacket B, extended upward above the scouring-case C, to form the chamber E, and on top of the same is the fan-drum D. Within the drum D is the fan D', and within the chamber E is the scraper E', both attached to the vertical shaft G. H is the separating-trunk, and I the bottom plate of the machine. These parts are all constructed and arranged substantially in the same manner as described in a former patent granted to me October 28, 1873, and reissued March 17, 1874. Under the bottom of the chamber E is secured a dish-shaped stationary circular scouring-plate, J, having an open center, and having its lower side fluted or ribbed for scouring purposes, and the upper side smooth, to act as a spout to spout the grain to the inner side of the brush K underneath, thus serving the double purpose of a spout and a scouring-plate. Around the outside edge of the scouring-plate J is a downwardly-projecting rim or flange, a, for the grain to strike against and prevent the wearing out of the upright ventilated scouring-case C. The revolving brush K is secured to the shaft G by means of a spider, L, and is inclined or concave to correspond with the shape of the scouring-plate J. Below

this brush, and secured to the scouring-case, is a stationary brush, K¹, pointing downward, and below the same is another revolving brush, K², also secured, by means of a spider, L, to the central shaft G. In the centers of the brushes are openings b for ventilation, and through the same passes a central pipe or projection, M, to prevent the grain from passing into said opening, which would cause it to go down through the machine without being scoured.

The upwardly-inclined face of the top brush K prevents the grain from passing out over its face too quickly in consequence of its velocity, thus holding the grain between the face of the brush and the lower side of the scouring-plate J long enough to be properly scoured. After the grain has passed from over the upper brush K it is passed between the stationary brush K¹ and revolving brush K² and scoured.

The spiders L, which connect the revolving brushes to the central shaft, are constructed with their arms d part way out from the center set, at an angle so as to draw air up through it, and the remaining part of the way out the spaces between the arms are closed to protect the under side of the brush from the action of the wheat. On the under side of each spider L are projections h, arranged radially, for the double purpose of beaters and fan-wings. The lower end of the vertical shaft G rests in a step on a bridge-tree, P, adjusted by set-screws R, as shown.

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

1. The stationary disk-shaped scouring-plate J, provided with ribs on its under side which radiate from its central opening to the periphery, in combination with the revolving brush K, arranged with respect to the inclined face of the scouring-plate, substantially as and for the purposes herein set forth.

2. The central pipe or projection M, in combination with the opening b of the revolving brush, for the purposes herein set forth.

3. The combination of the stationary brush K¹, arranged with its bristles projecting downward, and the revolving brush K², arranged

with its bristles projecting upward, so that the brushes will operate against each other, for the purposes set forth.

4. The combination, with the upright shaft and revolving brush of a grain-scouring machine, of the spider L, constructed, as described, with the inner ends of its arms set at an angle, and the spaces between the outer ends filled, substantially as and for the purposes herein set forth.

5. The projections *h*, formed on the under side of the spider L, for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HEMAN A. BARNARD.

Witnesses:

J. SILAS LEAS,
W. J. WELLS.