

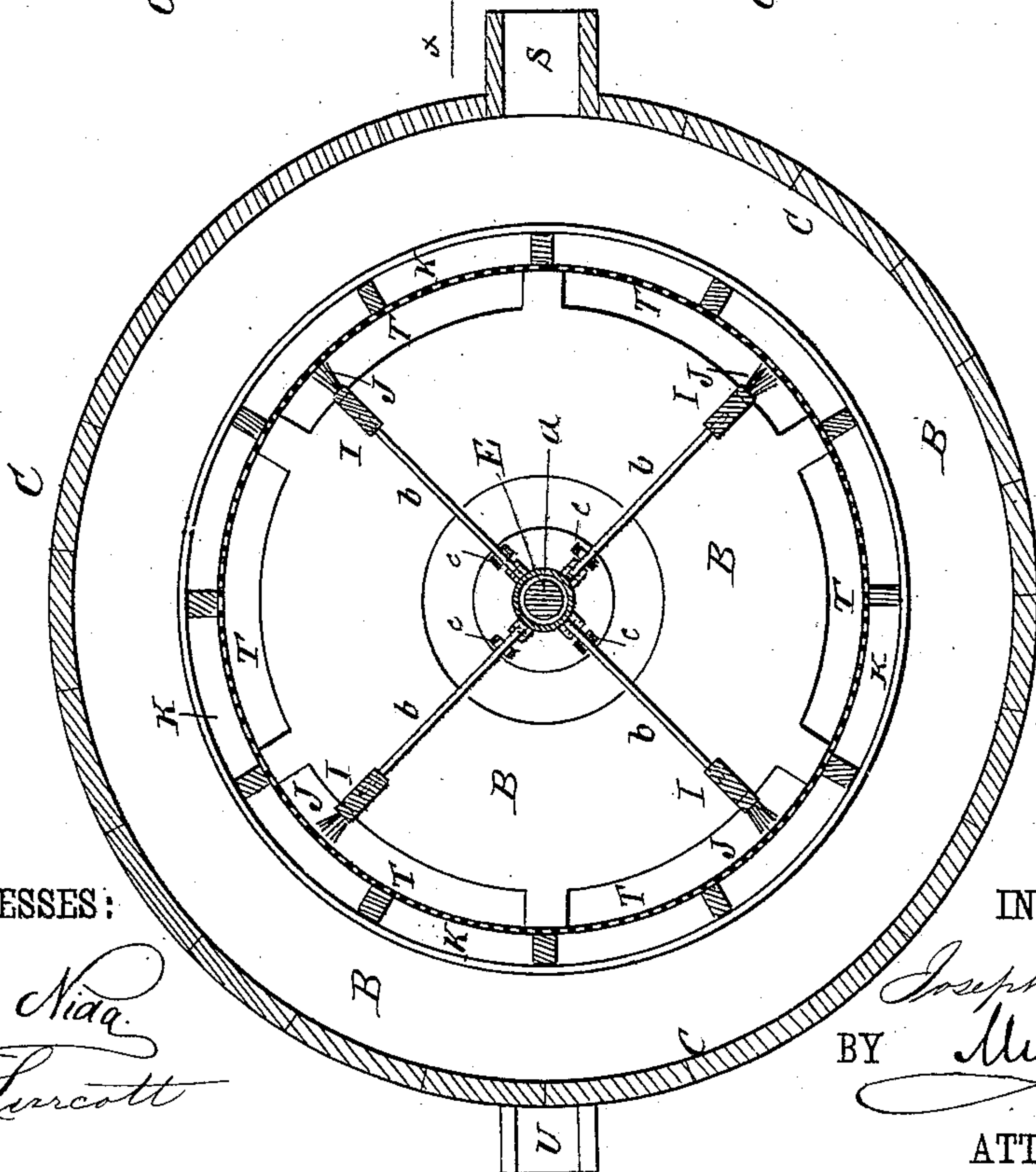
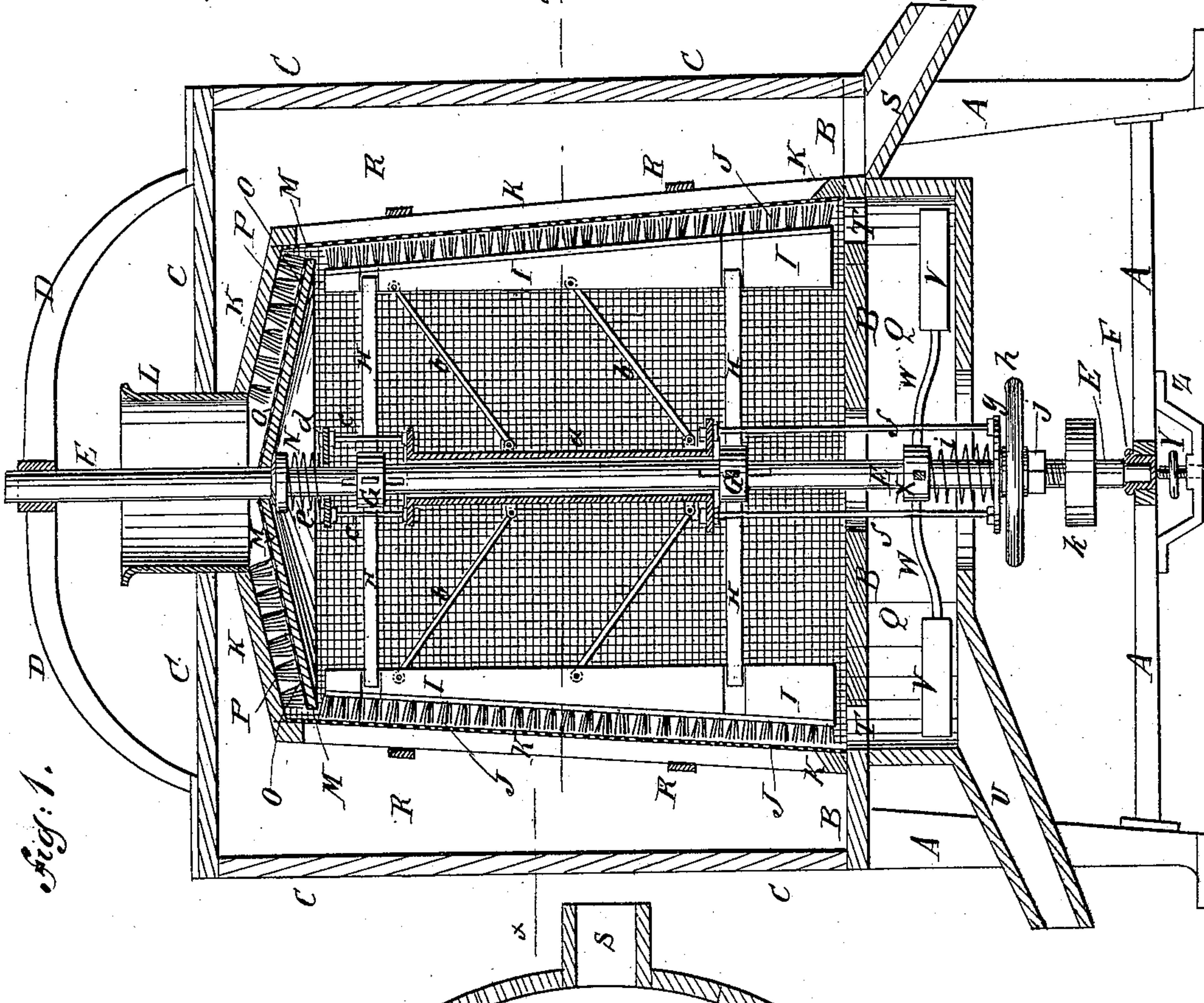
(No Model.)

J. W. WILSON.

BRAN DUSTER.

No. 323,247.

Patented July 28, 1885.



WITNESSES:

*Chas. Nida*  
*Chas. Lurcott*

INVENTOR:

*Joseph W. Wilson*  
BY *Munn & Co*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JOSEPH W. WILSON, OF BROOKVILLE, KANSAS.

## BRAN-DUSTER.

SPECIFICATION forming part of Letters Patent No. 323,247, dated July 28, 1885.

Application filed September 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH W. WILSON, of Brookville, in the county of Saline and State of Kansas, have invented new and useful Improvements in Bran-Dusters, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional side elevation of one of my improved bran-dusters. Fig. 2 is a sectional plan view of the same taken through the broken line *x x*, Fig. 1.

The object of this invention is to improve the construction of the bran-dusters for which Letters Patent No. 302,077 were issued to me July 15, 1884, in such a manner as to make them more effective in operation.

The invention consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

A represents the base-frame of the machine, to the top of which is attached the bottom B of the casing C.

To the top of the casing C is attached an arched spider, D, in the center of which is formed a bearing for the upper end of the shaft E. The lower end of the shaft E revolves in a step, F, in the center of the cross-bars of the base-frame A.

To the shaft E are secured collars G by set-screws or other suitable means, which collars are provided with radial arms H. The outer ends of the arms H are forked to enter grooves in the opposite sides of the wings or fans I, so that the said wings will be supported by the said arms.

To the outer edges of the wings I are attached brushes J, which, as the shaft E revolves, sweep around the inner surface of the upright bolt K, attached to the bottom B, and rub the flour off the bran as the said bran is passing down through the machine. The bolt K and the wings I have a slight upward taper, as shown in Fig. 1.

The bran is fed into the machine through a spout, L, secured in an opening in the center of the top of the casing C, and through which the shaft E passes. As the bran enters through

the spout L it is received and distributed by a conical plate, M, through an opening, in the center of which the shaft E passes, and which rests upon and is secured to a collar or shoulder, N, attached to or formed upon the said shaft E, so that the said distributing-plate will be carried around by and with the said shaft in its revolution. The distributing-plate M, upon its upper side, is faced with coarse wire-gauze, O, and to the lower side of the top of the casing C is attached a brush, P, so that any lumps of bran that enter the machine will be broken in pieces between the wire-gauze O and the brush P, and will thus be prevented from injuring the fine wire-gauze of the bolt K. As the bran passes down from the outer edge of the distributing-plate M it is held out against the bolt K by the pressure of air drawn into the central part of the bolt by the fans or wings I through the central openings in the bottom B and in the bottom of the bran-chamber Q, and the flour is rubbed from it by the brushes J. The flour passes through the bolt K into the flour-chamber R, and is forced out through the spout S by the mechanism described in Letters Patent No. 302,077, or by other suitable mechanism. The bran escapes through curved slots T in the bottom B, at the inner side of the lower end of the bolt K, into the bran-chamber Q, and is forced thence into the spout U by the scrapers V, attached to the outer ends of arms W, the inner ends of which are attached to a collar, X, secured to the shaft E so that the said scrapers will be operated by the revolution of the said shaft.

The distributing-plate M is adjusted closer to or farther from the brush P by means of a hand-screw, Y, placed in a screw-hole in a stirrup, Z, attached to the cross-bars of the base-frame A, the forward end of the said screw resting against the bottom of the step F, in which the lower end of the shaft E revolves.

Upon the middle part of the shaft E is placed a sleeve, *a*, to which are hinged the lower ends of the inclined rods *b*, the upper ends of which are hinged to the inner edges of the fans or wings I.

To the flanged upper end of the sleeve *a* are attached the lower ends of rods *c*, which are



slotted or forked to receive the upper radial arms H, and are attached at their upper ends to an annular plate, *d*, placed upon the shaft E. Upon the annular plate *d* rests the lower  
5 end of a spiral spring, *e*, the upper end of which rests against the collar N.

To the flanged lower end of the sleeve *a* are attached the upper ends of rods *f*, which are slotted or forked to receive the lower radial  
10 arms H, and are attached at their lower ends to an annular plate, *g*, placed upon the hub of the hand-nut *h*, and held down upon the said nut by the spiral spring *i*, placed upon the shaft E, with its lower end resting upon  
15 the said annular plate *g*, and with its upper end resting against the collar X.

The hand-nut *h* is screwed upon a screw-thread formed upon the shaft E, and is held from working down by a lock-nut, *j*, also  
20 screwed upon the said screw-thread, and turned up against the said hand-nut *h*.

With this construction when the hand-nut *h* is screwed up the sleeve *a* will be raised, causing the rods *b* to force the wings I and  
25 brushes J outward, and when the hand-nut *h* is screwed down the sleeve *a* will be forced downward by the action of the springs *e i*, and the wings I and brushes J will be drawn inward.

The part of the shaft E below the hand-nut *h* and lock-nut *j* is made smaller, so that said nuts can be passed to and from the screw-thread over the said part of the shaft. To  
30 the shaft E, below its screw-thread, is attached a pulley, *k*, to receive a belt for driving the machine from any convenient power.

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

40 1. In a bran-duster of the character described, the combination, with the top of the bolt K, having a feed-opening and provided with the brushes P on its under surface, of the rotating distributing-plate M, having a wire-  
45 gauze facing contacting with the brushes sub-

stantially as herein shown and described, whereby lumps of bran will be broken and the material evenly fed to the bolt, as set forth.

2. In a bran-duster, the combination, with the bolt K, provided with the brushes P on  
50 the under surface of its top, and the feed-opening L, of the vertically-adjustable shaft E, the distributing-plate M secured thereon, and the adjustable wings I on said shaft below the distributing-plate, provided with brushes J, sub-  
55 stantially as herein shown and described.

3. In a bran-duster, the combination, with the shaft E, the loose sleeve *a* on said shaft, brush-wings I, and the inclined rods *b*, connecting the wings to the sleeve, of the plate *g*  
60 on the shaft E beneath the frame, rods *f*, connecting said plate with the sleeve *a*, and the hand-nut *h*, below and in contact with the plate *g*, whereby the said hand-nut may be operated from the outside of the machine to adjust the  
65 wings, substantially as herein shown and described.

4. In a bran-duster, the combination, with the shaft E and the fan G H I, having movable wings, of the inclined rods *b*, the sleeve  
70 *a*, the rods and annular plates *c d* and *f g*, the hand-nut *h*, and the spiral springs *e i*, substantially as herein shown and described, whereby the said wings and their attached brushes will be drawn inward when the said hand-nut is  
75 screwed downward, as set forth.

5. In a bran-duster, the combination, with the bolt K, the shaft E, and the fan G H I, of the casing C, provided with the bottom B, having central opening and provided with curved  
80 slots T at the inner side of the lower end of the said bolt, substantially as herein shown and described, whereby air will be drawn into the central part of the bolt, and the bran will escape at the lower end of the said bolt, as set  
85 forth.

JOSEPH W. WILSON.

Witnesses:

F. COBB,

W. H. BISHOP.