

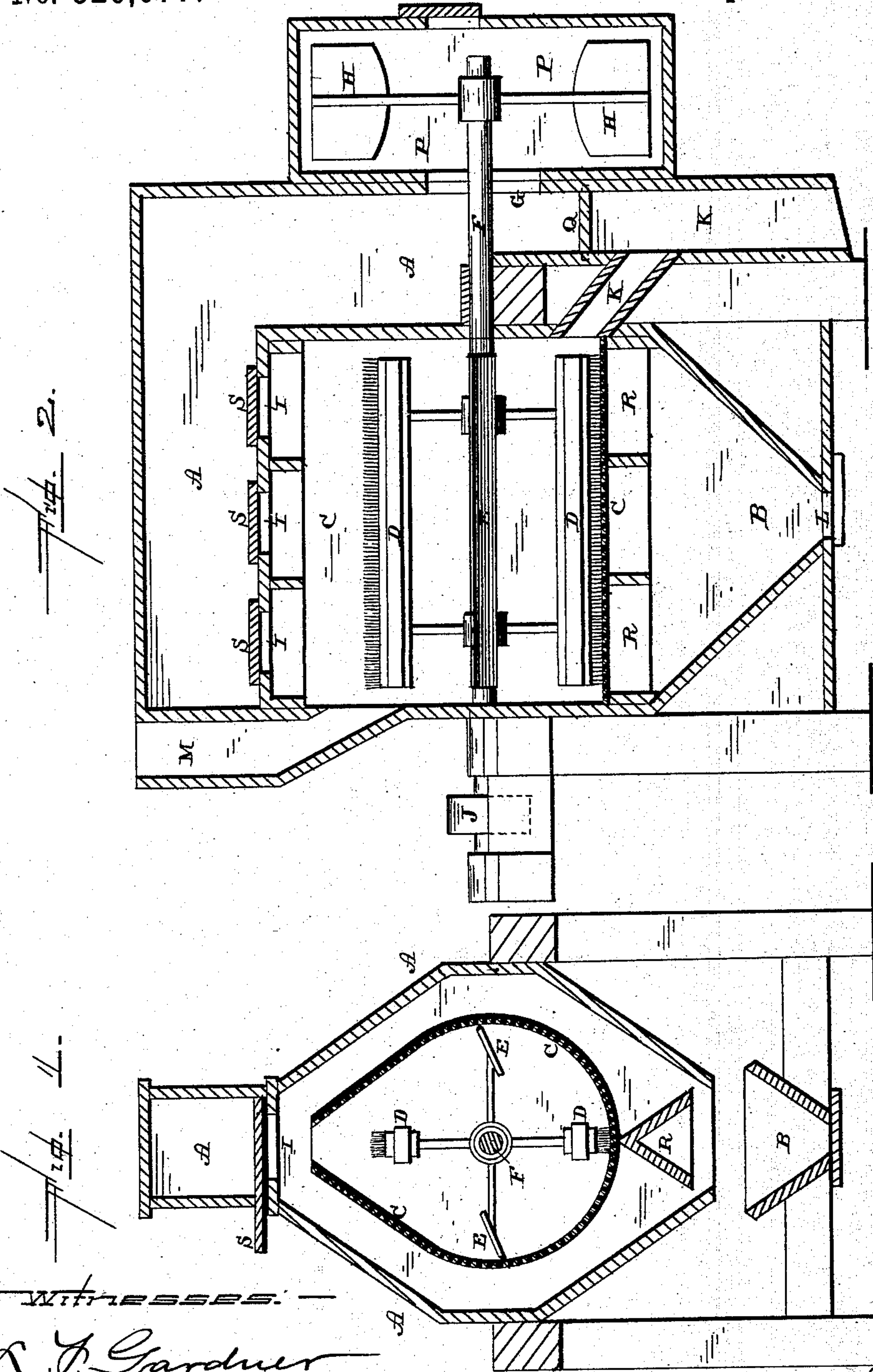
(No Model.)

A. N. WOLF.

SEPARATOR.

No. 326,077.

Patented Sept. 8, 1885.



WITNESSES:

R. F. Gardner  
L. L. Burket.

INVENTOR:  
A. N. Wolf  
per J. A. Lehmann, atty.



# UNITED STATES PATENT OFFICE.

ABRAHAM N. WOLF, OF ALLENTOWN, PENNSYLVANIA.

## SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 326,077, dated September 8, 1885.

Application filed May 12, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAHAM N. WOLF, of Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Separators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in separators for separating the dirt and germs from cracked wheat; and it consists in the arrangement and construction of parts, which will be more fully described and claimed hereinafter, whereby a simple and very efficient machine is produced.

The object of my invention is to provide a machine by means of which the dirt and germs of the berries can be extracted from the cracked wheat, and thus enable a better and finer grade of flour to be produced.

Figures 1 and 2 are vertical sections of a machine embodying my invention, taken at right angles to each other.

A represents a suitable frame, in which the separator-frame A is rigidly secured. This frame A may either be of the shape here shown or any other that may be preferred. Connected with this frame A at one end is the passage M, through which the cracked wheat passes into the frame A as it leaves the rollers or other mechanism by which it has been cracked, for the purpose of separating the germs of the berries and dirt which is in the creases from the cracked portions of the berries or wheat which is to be used in making flour. Inside of this frame A is placed the perforated stationary cylinder C, which may be made pear-shaped in cross-section, as here shown, or any other that may be preferred. This cylinder is open at its apex, so that the direct suction of the fan can be exerted upon the broken grain in the cylinder, and thus the light particles carried off without obstruction. The perforations in this cylinder are just large enough to allow the germs of the berries and the dirt to fall through in the receptacle B below without allowing any of the broken portions of the berries to pass through at the same time.

Passing through the frame A, the cylinder C, and the fan-box P is a horizontal shaft, F, which has secured to it a driving-pulley, J, the brushes D, wings E, and the suction-fan H. The brushes D are secured to the outer ends of the arms which project radially from the shaft, and which brushes serve to force the germs and dirt through the perforations in the cylinder, for the purpose of separating them from the cracked portions of the berries. The wings E, which are also secured to the arms which extend radially from the shaft, consist of flat plates which are placed at any suitable angle, and which serve to catch all the material which is in the cylinder and throw it outward against the sides of the cylinder, and to raise it upward and drop it back upon the bottom of the cylinder, for the purpose of separating the coarse and fine particles, and to enable the suction of the fan to catch all of the fine particles and draw them away. The broken portions of the berries, after passing the full length of the cylinder, are discharged through the spout K, as shown in Fig. 2. As these broken portions leave the inclined portion of the spout they are subjected to an upward draft from the fan H, for the purpose of drawing away any of the fine particles which may have passed through the cylinder.

In the upper portion of this spout K is placed a valve or slide, Q, for the purpose of regulating the force of the draft.

In the frame A, just under the cylinder C, is placed the inverted-V-shaped deflector R, which serves to contract the opening through the lower portion of the frame A, and thus increase the force of the draft at this point, for the purpose of drawing away any fine particles of dirt and dust which may have been forced through the cylinder by the brushes D. This upward draft catches the fine light particles of dirt and other impurities, and conveys them through the openings I, made in the upper portion of the frame A, to the fan H, from whence they are blown into the dust-room or other suitable place. The suction of the fan H is also exerted upon all of the particles in the cylinder C, not only while lying upon its bottom, but while dropping from the spout M, so as to remove the dirt and impurities and convey them to the dust-room.



The openings I in the frame are provided with suitable slides or valves, S, which serve to regulate the force of the draft from the fan.

By means of the construction above described  
5 all of the fine particles of dirt are separated from the broken berries and conveyed away to the dust-room. Being unfit for flour, they are turned into feed. The germs and smaller pieces of the broken berries pass through the  
10 perforations of the cylinder and drop into the receptacle B, whence they are carried to the rolls to be made into flour.

The seam-dirt and all other impurities are thus separated from the germs and broken  
15 pieces of the berries at the very earliest possible stage in the process of making flour—viz., immediately after the first break. By this means a finer and whiter flour is produced than can be done where this separation  
20 does not take place, as it is impossible to re-

move the dirt from the flour at the later stages of reduction after it is once ground fine and incorporated with the flour.

Having thus described my invention, I claim—

A separator composed of the frame A, provided with the air-passages I G, valves S Q, which control the passages and regulate the draft of the fan, the open-topped perforated cylinder, the shaft F, carrying brushes and  
30 wings and having the fan secured thereto, the discharge-spout K, and the fan-box, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ABRAHAM N. WOLF.

Witnesses:

J. FRED WEINSHEIMER,  
H. W. BEITEL.