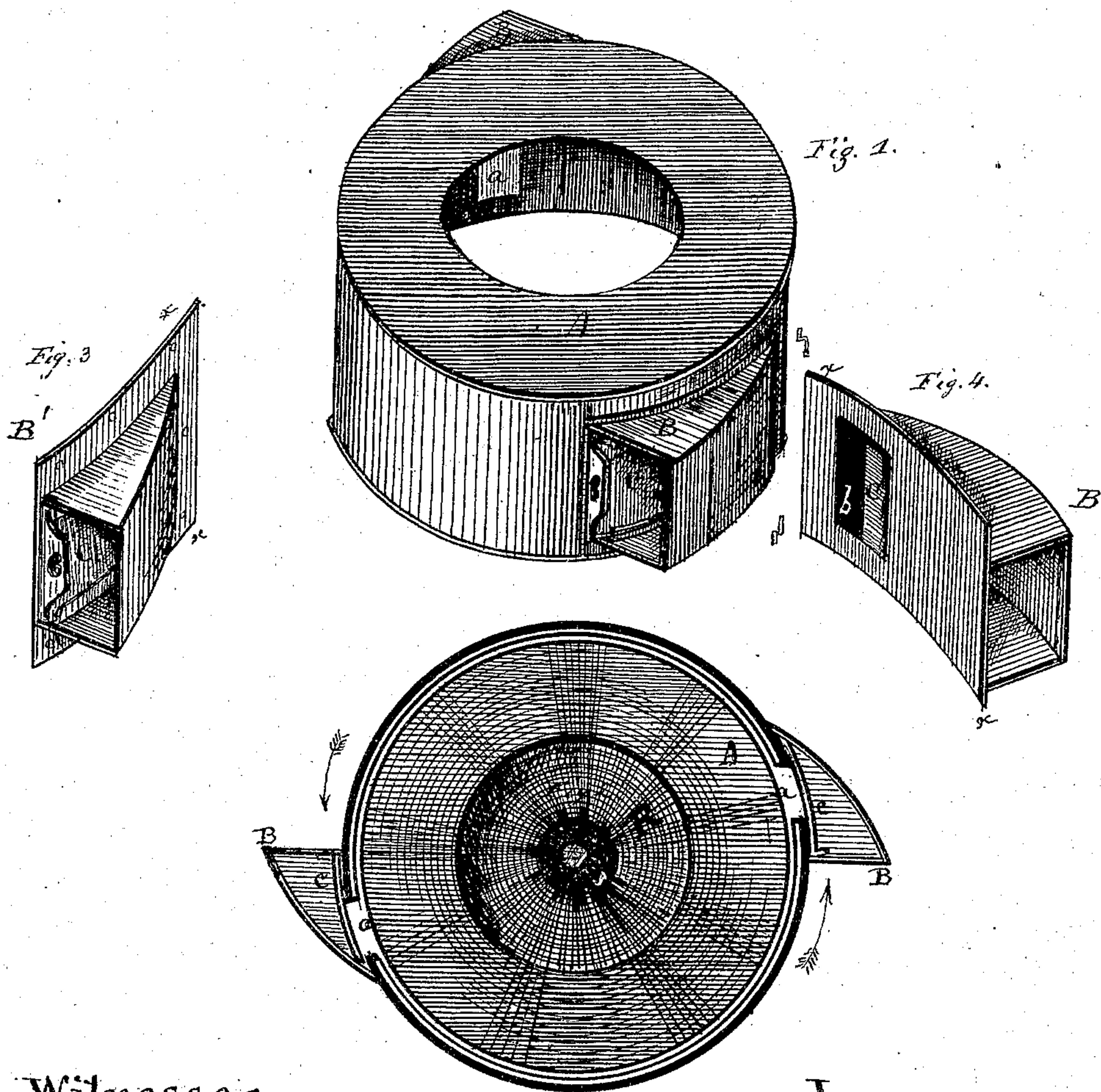


A. GRUBE.  
Ventilating Millstones.

No. 99,564.

Patented Feb. 8, 1870.



Witnesses.

Wm. B. Miles  
Jacob Stauffer

Inventor.

Amos Grube



# United States Patent Office.

AMOS GRUBE, OF WEST HEMPFIELD TOWNSHIP, PENNSYLVANIA.

*Letters Patent No. 99,564, dated February 8, 1870.*

## IMPROVEMENT IN VENTILATING MILLSTONES.

The Schedule referred to in these Letters Patent and making part of the same.

I, AMOS GRUBE, of West Hempfield township, in the county of Lancaster, in the State of Pennsylvania, have invented certain Improvements for Ventilating Millstones, of which the following is a specification.

The nature of my invention consists in providing graduated or adjustable openings through the hoop or case that covers the grinding-burrs or millstones, through side flues, for the admission of air to the runner, in order to prevent sweating and heating, or caking within the case, saving much waste, and also facilitating the bolting.

The drawings illustrate said improvement.

Figure 1 is a perspective view of the ordinary hoop or case A, with two side flues attached.

Figure 2 is a vertical view of the same.

Figures 3 and 4, the side flues, detached, shown on the outer side by B', fig. 3, and the inner side by fig. 4, B.

The inner plate, *x*, of the cuneated flues B, has a projecting flange, above and below, by which it may be bolted to the outer rim of the case, or slipped into grooved ways, adapted therefor, as shown.

This plate has an opening into the flue, to match, (when in place,) a similar opening, *a*, made through the hoop or case to the inside, a sliding valve or door, *c*, facing the plate on the inside of the flue, moving in curved ways, all of a radius to match the curve of the circumference of the hoop or outer rim of the case A.

The flues B B' are closed on the other three sides, widening from the rear union to an open mouth, of an oblong-square form in front, through which the air is drawn, in the direction of the arrows, by the rapid motion of the runner R, within the case.

The sliding gates or valves *c* can be adjusted so as to open the entire air-hole, or to close it altogether, and thereby regulate the ventilation to any desired amount. Two of these ventilating flues are only shown, but three or more can be attached in like manner, if desirable.

I am aware that side openings, with adjustable slide-doors on the outer rim of a case or curb, have been used, I therefore, do not claim such opening or slides, apart from the cuneated flue, nor when used in the manner and combined with a diaphragm and fan, as claimed in patent No. 72,744.

The open top answers the purpose effectually, while the cool air is drawn in on to the circumference of the stones, and carried with them, and discharged at the top, after performing its office.

Having fairly tested the side flues in my grist-mill, I find it a great saving, and of the greatest benefit. I would here remark, that the sliding flue, in itself, could adjust the air-passage, without the inner sliding valve, but when secured, by bolting on to the case, then the inner slide *c* would be required for adjusting the same.

What I claim, as my invention, is—

The construction and application of adjustable side flues B, in combination with the perforations or openings *b*, from the flue through the opening *a*, in the ordinary open-top case or curb A, for the purpose specified, substantially in the manner shown.

AMOS GRUBE.

Witnesses:

WM. B. WILEY,  
JACOB STAUFFER.