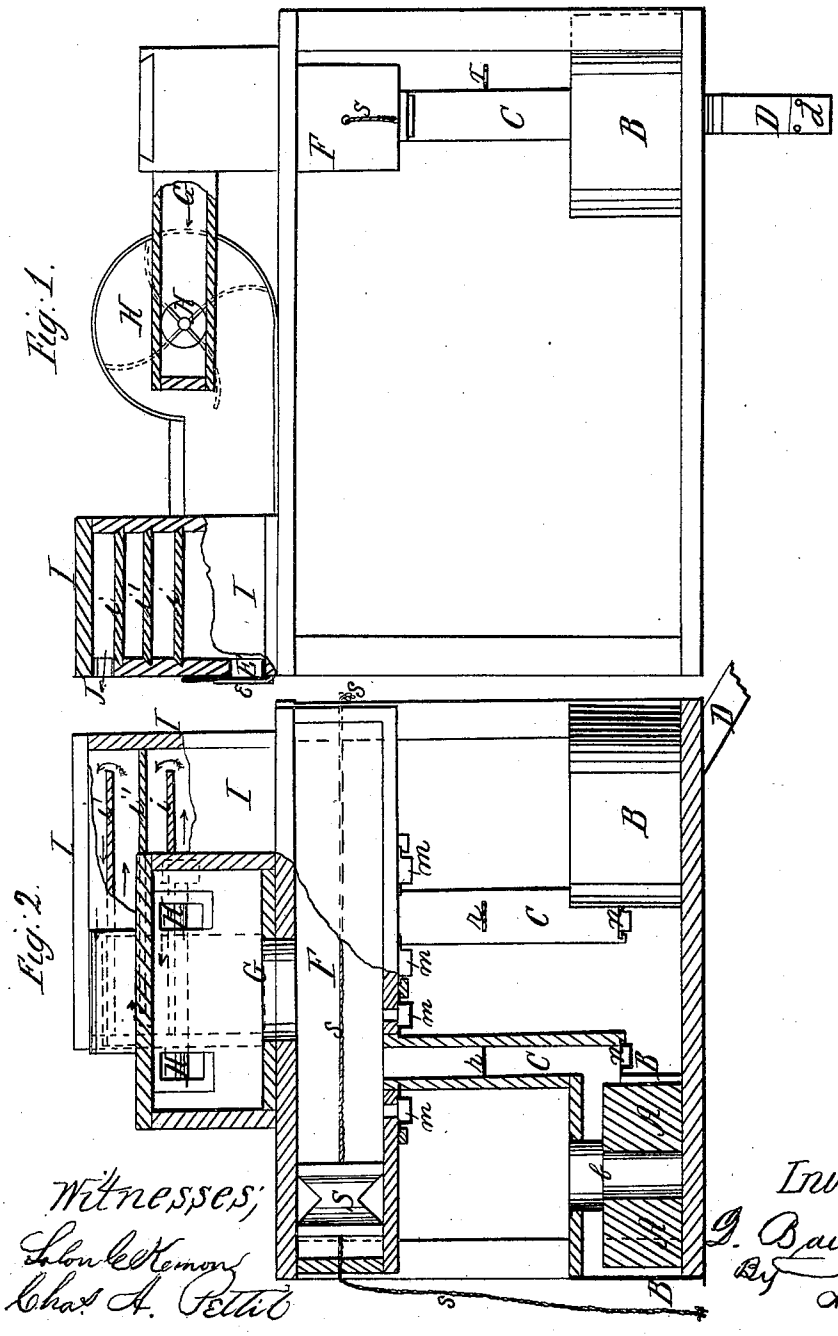
D. Baird.

Millstone Exhaust.

No. 76,992. Patented Apr. 21, 1868.



Witnesses;
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United States Patent Office.

DAVID BAIRD, OF BLOODY RUN, PENNSYLVANIA.

Letters Patent No. 76,972, *dated April* 21, 1868.

MILLSTONE-EXHAUST.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, DAVID BAIRD, of Bloody Run, in the county of Bedford, and State of Pennsylvania, have invented a new and improved Exhaust for Millstones; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side elevation.

Figure 2 is an end view, representing a portion in elevation and a portion in section.

The present invention is an improvement upon the apparatus for which Letters Patent of the United States were granted to this applicant, December 3, 1867. The improvement consists in providing means for saving any dust or fine flour which may occasionally be taken up by the exhaust, and for carrying off the condensed steam and moisture.

In the drawings, A A represent the runners; B B, the hoops; C C, the exhaust-pipes; D D, the discharge-spouts, having a valve, *d*, at their lower end; F, a chamber, into which the exhaust-pipes discharge the air, moisture, and dust drawn through them from around the stones; G is a single pipe or passage, leading from chamber F to the fan; H, the fan; I, a chamber, into which the fan throws the air, &c., drawn from the stones; E, an escape-pipe, closed by a valve, *e*, directly in front of the fan, through which, when the valve is open, the fan blows all the air that it draws from the stones; and J is a pipe, through which, when the valve *e* is closed, said air escapes after passing through the chamber I.

When the air around the stones is so dry that it takes up the fine flour and carries it through the exhaust-pipes C C, I close the valve *e*, and cause the fan to pass said air through the chamber I. This chamber is provided with a large number of shelves, *i i i*, on one side, interlocking with another series, *i' i' i'*, on the other side, so that the air in traversing the chamber has to pass back and forth in a zigzag course between the shelves, and will deposit upon them all the flour that it carries. They may afterwards be withdrawn and the flour removed. They may be made in this form of troughs, or broad flat pans, if desired. When the air does not carry off the flour with it in the manner described, the valve *e* may be opened and the air blown off through it. This will ordinarily be the manner of working the device, and the occasions when the chamber I will be used will be exceptional.

In order to drain away the condensed moisture that may be deposited in the exhaust-pipes or chambers, I construct a set of cups or depressions, *m m*, in the floor of chamber F, and another, *n n*, at the bottom of flues C C, into which such condensed moisture will flow, and by which it may be collected, and removed at suitable times. I also use a sliding scraper, S, in the chamber F, drawing it back and forth along the floor of the chamber by means of a cord, *s s*, in order to scrape the moisture along the floor and force it to run into the cups *m m*.

In a mill thus constructed, the air enters the hoop at the eye, *b*, and passes down the eye, thence through the furrows to the skirt, thence up the exhaust-pipes C C to chamber F, and thence through fan H to the open air by means of pipe E or J, as the case may be.

r r are valves, which close the exhaust-pipes C C during the operation of gathering the condensed moisture of chamber F into the receivers *m m*.

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

1. In an exhaust for millstones, I claim the separator I, when constructed with horizontal interlocking shelves, *i i''*, arranged substantially as and for the purpose set forth.

2. Collecting the condensed moisture that may be deposited in the exhaust, or in any of the air-chambers or passages, by means of a set of cups or receivers, *m m*, *n n*.

To the above specification of my invention I have signed my hand, this 22d day of February, 1868.

DAVID BAIRD.

Witnesses:

CHAS. A. PETTIT,

SOLON C. KEMON.