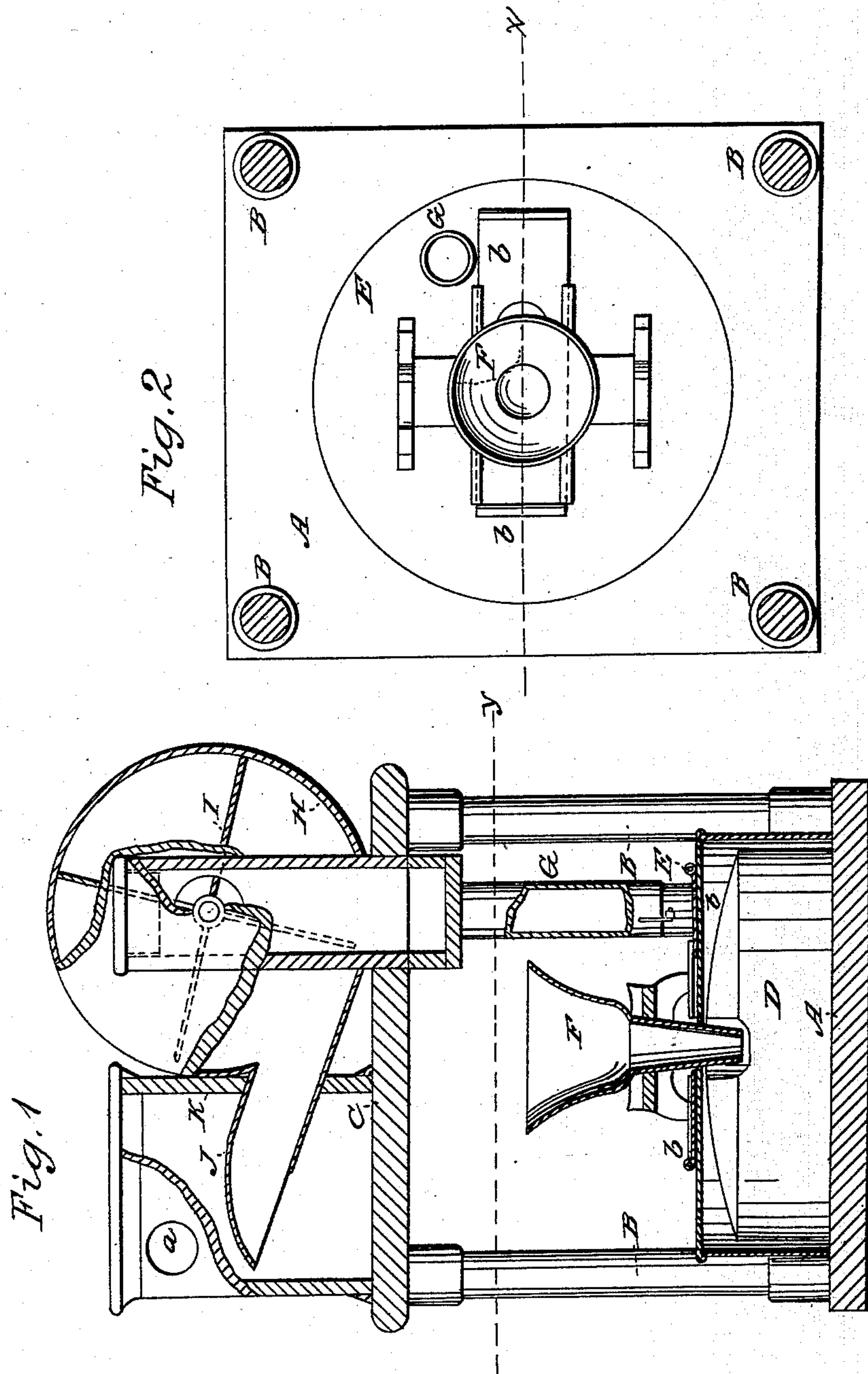


J. M. MILLER.
Feed Regulator.

No. 60,404.

Patented Dec. 11, 1866.



Witnesses:
W. B. Hoington
for A. Service

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IMPROVEMENT IN GRINDING-MILLS.

JOHN M. MILLER, OF HAMILTON, OHIO.

Letters Patent No. 60,404, dated December 11, 1866.

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, JOHN M. MILLER, of Hamilton, in the county of Butler, and State of Ohio, have invented a new and useful Improvement in Grinding-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical central section of this invention, the line *z z*, fig. 2, indicating the plane of the section.

Figure 2 is a longitudinal section of the same, taken in the plane indicated by the line *y y*, fig. 1.

Similar letters of reference indicate like parts.

This invention consists in the arrangement of a suction-blower in combination with the case inclosing the mill-stones of a grinding-mill, and with a suitable receiver, in such a manner that by the action of said suction-blower the dust, flour, vapor, and hot air created by the action of the grinders are removed and the grinders are enabled to work free and without danger of heating. Suitable slides in the case serve to regulate the power of the draught created by the suction-blower and the receiving-box, into which the dust, vapor, &c., are driven, is provided with an escape-opening for the wind.

A represents the lower floor of a mill, from which rise columns B, which support the upper floor, C. D is the runner, which is inclosed in the case E, and to which the material to be ground is fed through the hopper, F. From the case E rises a tube, G, which connects with the case H, which incloses the suction-blower I. By this arrangement the dust, vapor, and hot air created by the action of the runner are sucked up through the tube G, and they are discharged from the case H through the spout J into the receiving-box K. This box is placed in any convenient spot in the mill, and it is firmly closed, with the exception of an aperture *a* in the side or end through which the wind escapes. The case E is provided with a regulating-slide *b*, which serves to regulate the force of the suction. If this slide is open or partially open the effect of the suction-blower on the runner is diminished, but if said slide is completely closed the suction-blower acts with its full force on the air and dust contained in the case E, and the most powerful effect is produced. By this device all impurities can be removed from the case so as to prevent the same from lodging on the hoops or in the case, or in some other part of the apparatus; and, furthermore, the heating of the stones and the burning of the flour is prevented, the operation of bolting the flour is facilitated, and a better and more durable flour is produced than with grinding-mills of the ordinary construction. If desired, one and the same suction-blower can be connected with two or more pair of grinders, but in this case the size of the blower and the capacity of the receiving-box have to be increased accordingly.

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

The arrangement of the tube G, blower, case H, and receiving-box K, in combination with the case E provided with the regulating-slide *b*, operating substantially as and for the purpose described.

The above specification of my invention, signed by me this — day of —, 1866.

JOHN M. MILLER.

Witnesses:

JOHN BACHMANN,

AUG. SOELMER.