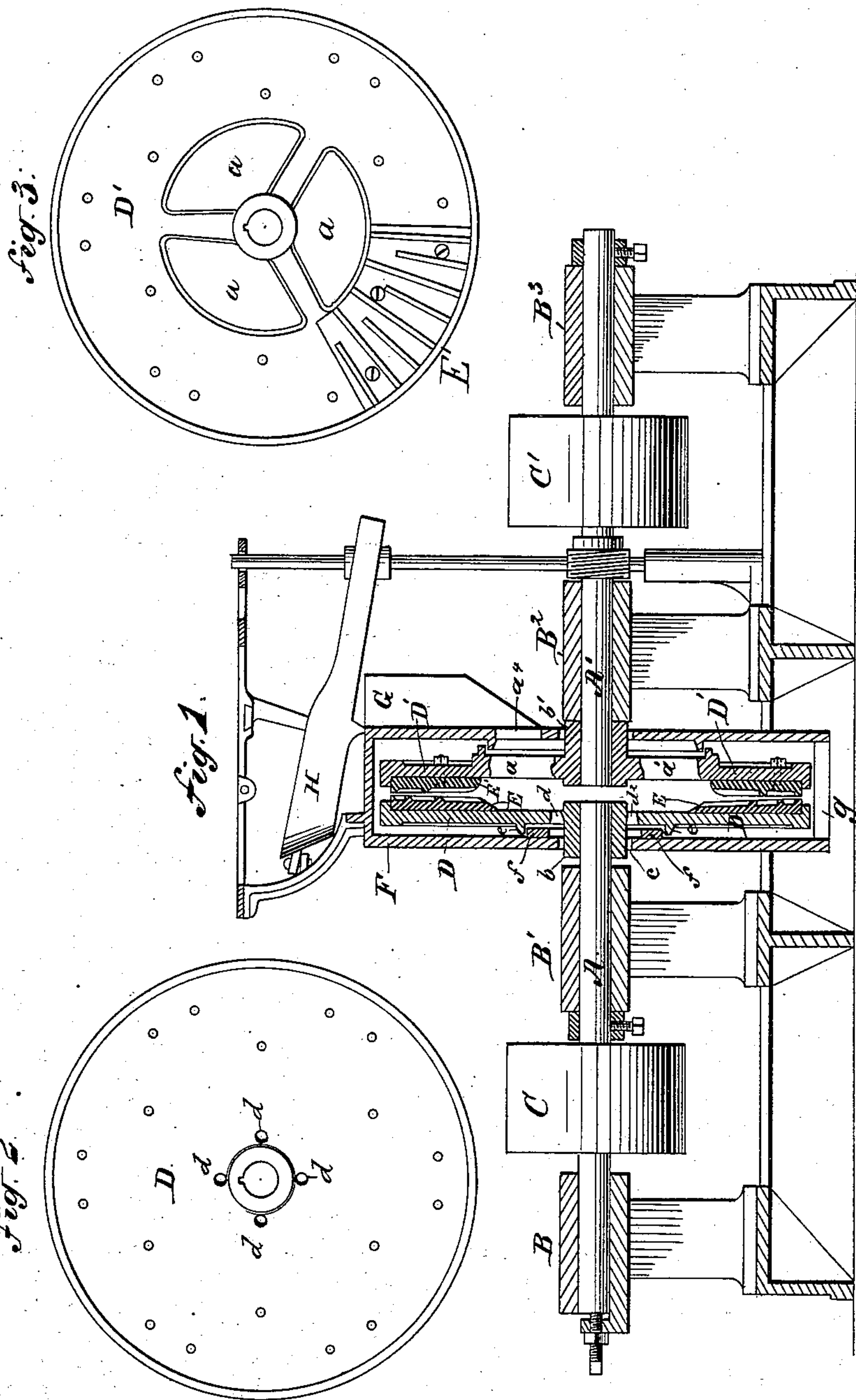


(No Model.)

M. C. COGSWELL.
GRINDING MILL.

No. 324,363.

Patented Aug. 18, 1885.



Witnesses:

Henry Eubling
W. W. Vermilyea

Inventor

Mortimer C. Cogswell
by J. P. Fitch
his atty

UNITED STATES PATENT OFFICE.

MORTIMER C. COGSWELL, OF NEW YORK, N. Y.

GRINDING-MILL.

SPECIFICATION forming part of Letters Patent No. 324,363, dated August 18, 1885.

Application filed August 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, MORTIMER C. COGSWELL, of the city of New York, in the county and State of New York, and a citizen of the United States of America, have invented an Improvement in Grinding-Mills, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same, in which—

Figure 1 is a vertical central longitudinal section of a grinding-mill containing my invention, and Figs. 2 and 3 are face views of the grinding-disks forming a part of said mill.

A and A' are two horizontal shafts mounted in line with each other to rotate in suitable bearing-boxes, B B' B² B³, supported on standards resting on a suitable bed plate or frame. Each shaft is provided with a driving-pulley, C C'. On the inner ends of the said shafts are fixed the grinding-disks D D'. These disks are inclosed in a case, F, within which they may freely revolve, said case being provided with a central opening, a^t, for the introduction of grain and air into the mill through a large central opening, a, in the disk D'. The channeled or ribbed grinding-surfaces may, if preferred, be formed on separate plates, E, secured to the said disks in any suitable way.

G is a spout for conducting the grain from a shoe, H, to the opening a^t in the case F. The air as well as the grain passes through this opening and the opening a in the disk D into the space between the disks.

In the operation of a grinding-mill thus constructed I have found that a difficulty is experienced in preventing the escape from the case F of dust or flour through the opening c, which necessarily exists between the hub b of the disk D and the edge of the opening in said case, through which passes and in which rotates the said hub. It is impracticable, or at least very difficult, to make the joint between the case and the hub at this aperture so tight

as to prevent the passage of air through it, the air of course under the circumstances carrying with it more or less of dust or flour; and this dust or flour is thrown immediately upon the shaft A, and finds its way more or less into the bearing or journal box B', and occasions heating of the shaft in that bearing, as well as loss of flour. To obviate this difficulty, I make a small opening, d, one or more, through one of the grinding-disks D, near its hub, through which the air that would in the absence of such opening or openings be forced out through the opening c is, by the centrifugal action of the revolving disks, drawn into the space between them. I find that these openings d completely prevent the escape of flour and dust from the case F through the space c.

I do not intend here to claim, broadly, in a grinding-mill, the combination of two inclosed opposing grinding-disks made to rotate in opposite directions, provided on their opposing surfaces with radial projecting ribs, reserving said broader claim for a separate application which it is my intention to make.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a grinding-mill, the combination, with an inclosing-casing provided with an opening for the introduction of grain to the mill, of two separate shafts rotating in opposite directions and opposing grinding-disks D D', mounted thereon, one of said disks being provided with an opening for the introduction of grain, and the other having an opening near its center for the admission of air into the space between the disks, as and for the purpose specified.

MORTIMER C. COGSWELL.

Witnesses:

A. G. N. VERMILYA,
D. PALMER HERRICK.