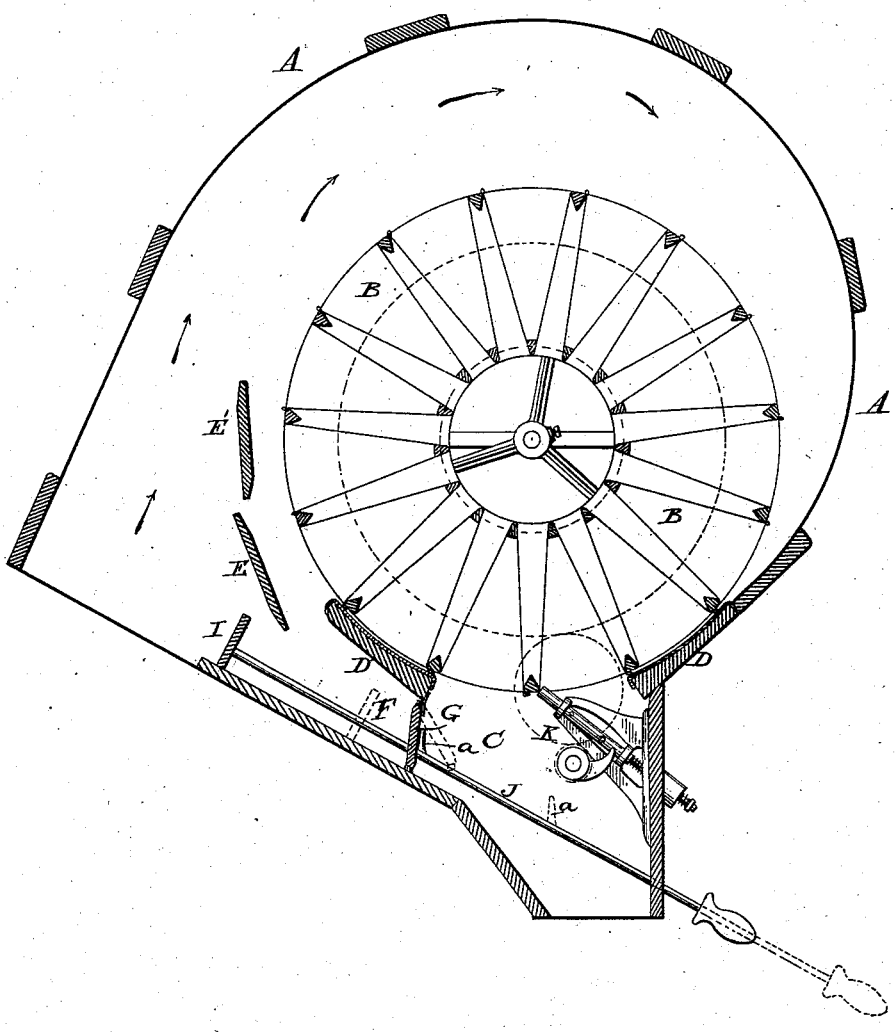
(No Model.)

C. M. HARDENBERGH.

DUST ARRESTER.

No. 261,449. Patented July 18, 1882.



Attest.

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DUST-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 261,449, dated July 18, 1882.

Application filed May 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, C. M. HARDENBERGH, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Dust-Arresters, of which the following is a specification.

This invention relates to that class of machines which are employed for the purpose of catching and retaining the fine flour and dust contained in a moving body of air discharged from middlings-purifiers, bolting-reels, and other machines employed in the manufacture of flour, commonly denominated "dust-arresters."

The improvements relate more particularly to that type of machines in which a revolving pervious cylinder or reel, into and through which the air is passed, leaving the flour on the outer surface, is combined with an eddy chamber or pocket located thereunder to receive the flour discharged from its surface; and it consists in combining therewith devices substantially such as hereinafter described, whereby the discharge of the fine flour which accumulates in the primary receiving-pocket may be effected quickly and positively into a receptacle without stopping the action of the machine.

The improvement is designed more especially for use upon the machine invented by me, and upon which an application for Letters Patent of the United States was filed on the 4th day of April, 1881, No. 29,955, and the drawing represents the devices applied thereto.

The drawing represents a vertical transverse section through the machine.

A represents the external casing; B, the revolving pervious cylinder, of star shape in cross-section, mounted within the casing and acting against air-arresting surfaces in its lower side. C represents the eddy-chamber or flour-receptacle, located in the bottom of the case, beneath the pervious cylinder.

D D represent the air-arresting surfaces against which the lower side of the cylinder revolves, and between which the flour is discharged from the surface of the cylinder into the chamber C.

E E′ represent air deflectors or guards, located in the mouth of the casing in advance of the cylinder, for the purpose of distributing or deflecting the inflowing current of air, in order to cause the same to pass through the pervious cylinder on all sides.

F represents the primary pocket or chamber, located between the main pocket or chamber C and the inlet-opening of the case, for the purpose of receiving such flour and dust as may be deposited by the air-current previous to its entering the cylinder. This pocket F is separated from the main receiving-pocket C by means of the hinged door or valve G, the opening of which permits the material to pass from the primary pocket F into the main receptacle C.

The parts above described are all of the same or substantially the same construction as those described in my original specification, to which reference is made for a more specific description thereof.

It will be understood that the current of air, which is ordinarily forced, but which may in some instances be drawn, through the apparatus by a fan or other suitable appliance, enters the mouth of the casing, and, encircling the cylinder therein, passes through the cloth or other pervious material and escapes through the end of the cylinder, leaving the flour upon its outer surface, the flour being discharged from said surface into the pocket C by means of the usual knocker, K.

In the original machine it was necessary, in order to discharge material from the primary pocket F, to stop the operation of the machine and gain access to its interior. In order to remedy this difficulty, I now mount in the lower part of the casing a sliding board or scraper, I, and attach thereto a rod or handle, J, extending downward or outward through the side of the casing, and provided within the casing with a lip or finger, *a*, designed to act against the valve G and hold the same in its closed position. During the ordinary action of the machine the parts remain in the position represented in the drawing, the scraper standing at an elevated point and the finger *a* resting against the valve G to hold the same closed. When it is required to discharge the contents of the pocket F the rod or handle J is drawn downward, whereby its finger is caused to release the valve G, and the scraper I at the same time is drawn downward, so as to force the accumulated material from the cham-

ber F into the chamber C. During this action the scraper I, passing beneath the guard E, will serve to limit or prevent the blast, which would otherwise occur, from the chamber F.

The present invention is restricted to those matters and things specifically claimed herein. The right is reserved to make any and all other features which may be shown and described herein the subject-matter of a separate application.

Having thus described my invention, what I claim is—

1. In combination with the pervious cylinder, its casing, and the two flour-receiving pockets, the rod provided with the scraper and the valve-operating device.

2. In combination with the casing and the two flour-receiving pockets, the intermediate valve, G, and means, substantially as described, extending to the exterior of the apparatus, for the purpose of operating said valve.

3. In combination with the pervious cylinder, the casing, and the two flour-receiving pockets, a scraper adapted and arranged, substantially as described, to discharge the flour from the upper into the lower pocket.

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Witnesses:
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