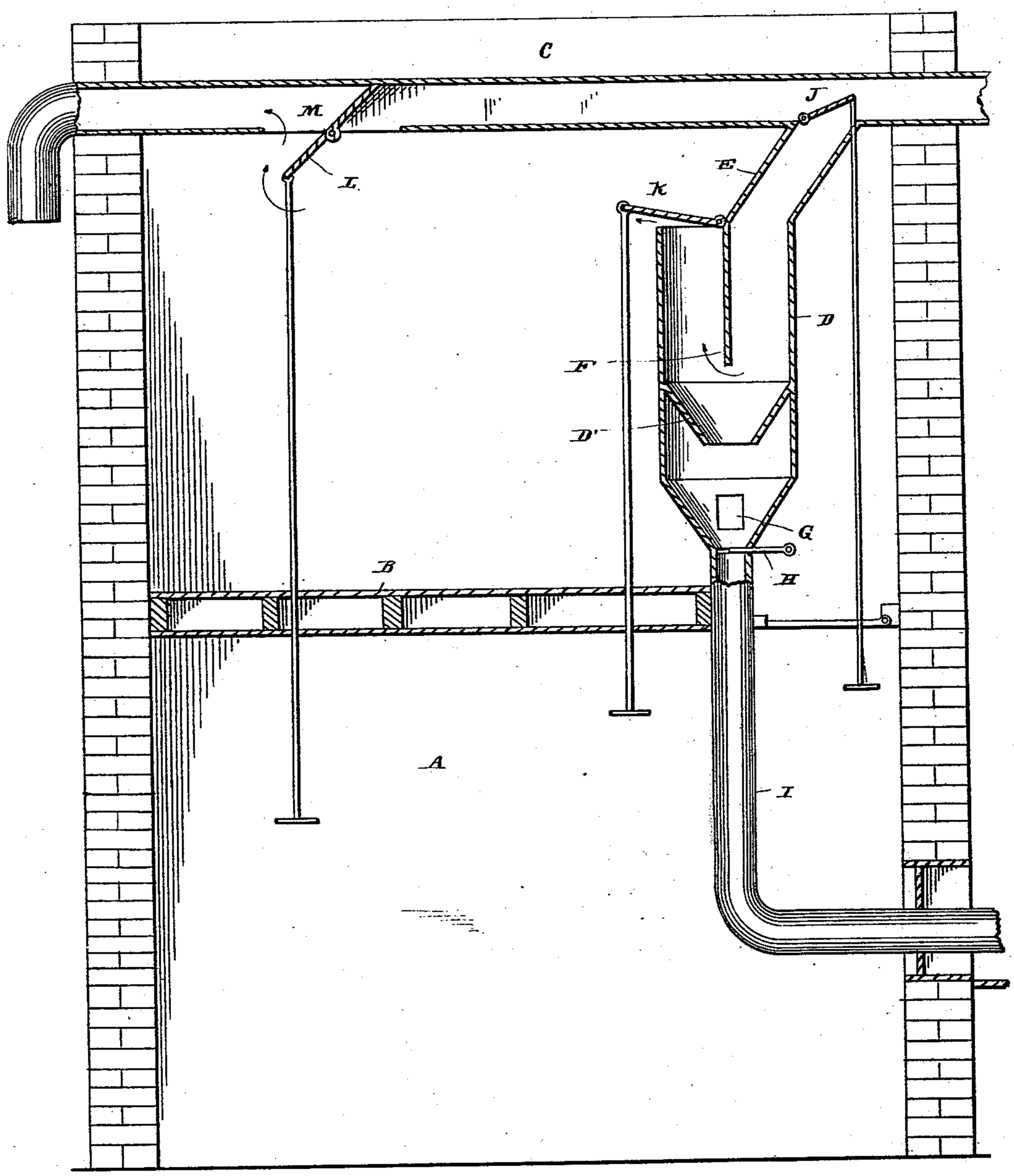
(No Model.)

H. C. BAER.

PNEUMATIC SHAVINGS AND DUST FEEDER.

No. 277,192. Patented May 8, 1883.

Fig. 1.



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PNEUMATIC SHAVINGS AND DUST FEEDER.

SPECIFICATION forming part of Letters Patent No. 277,192, dated May 8, 1883.

Application filed March 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. BAER, a citizen of the United States, residing at Massillon, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Pneumatic Shavings and Dust Feeders, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in pneumatic fuel-feeders; and it has for its object to provide means whereby the shavings and impalpable dust which accumulate in wood-working factories may be conveyed from any given point where they are collected, safely and economically, to the boiler-furnace, thereby providing for the consumption of the resulting waste products; and it consists, essentially, in the employment of an atmospheric blast or pressure in connection with mechanical means for receiving and conveying the shavings and dust to the furnace.

The accompanying drawing, forming a part of this specification, represents a vertical sectional view of a portion of a building and of my invention.

The letter A indicates a building of the ordinary or of any approved construction, the same being provided with a floor, B.

The letter C designates the discharge-pipe, which is adapted to extend from the place of collecting the shavings and dust to any suitable or convenient part of the building where it is desired to erect the feeder, and is also adapted to pass out and discharge into the open air. The manner of collecting the shavings and dust forming no part of my invention, it is not necessary to show the means of accomplishing the same. At the point of feeding the shavings into the pipe C a suitable blast-fan or blower is connected with said pipe, by which the shavings and dust are blown through it and discharged into the shavings-receiver and shavings-room, in the manner hereinafter pointed out.

The letter D indicates the shavings-receiver, the same consisting preferably of a cylindrically-shaped vessel in an upright position, and which is connected with the pipe C by a short section, E. The said receiver is provided with a partition, F, which serves to divide the escaping air from the descending current of air, shavings, and dust, and also with a conical flange, D′, which slightly arrests the descent of the shavings, &c. It is further provided with a man-hole, G, for the purpose of cleaning the same out should it become clogged, and with a cut-off valve, H, for regulating the flow of the fuel and to cut off any back action which might take place in the furnace.

The letter I refers to the feed-pipe, which extends from the lower end of the receiver through the furnace-doors and a proper distance into the furnace.

At the junction of the discharge-pipe and the pipe E is a valve, J, operated by a suitable rod or other means, which serves to open and close the communication between the discharge-pipe and the receiver. The valve K, which is also operated by a rod or other suitable means, is located at the top of the receiver, and is designed to regulate the size of the outlet of the escaping air or surplus blast.

At any suitable point in the shavings-room, which in the drawing is constituted by the space above the floor B, the pipe C is provided with a double valve, L, operated in any convenient manner—in the present instance by a rod—the said valve serving to direct the surplus shavings, dust, and blast which pass by the valve J into the shavings-room, the blast finally escaping through the aperture M. By throwing the valve L into a horizontal position the shavings and dust may be directed into the open air.

The operation of my invention, when taken in connection with the above, will be readily understood, and is as follows: The valve J is set to admit a sufficient quantity of the fuel into the receiver D, where it is concentrated and partially arrested by the flange D′, which concentration admits of the escape of the surplus blast in the direction of the arrow, the valve K being regulated to suit this object. The fuel passing down into and through the pipe I is finally discharged into the furnace, the cut-off valve H being opened for this purpose. When more of the waste products are being produced than can be consumed, the surplus is allowed to pass the valve J, and to dis-

charge into the shavings-room through the valve L, the surplus air in this instance escaping through the opening M.

It will be observed that by my improved machine a regulated quantity of fuel can be fed to the furnace, and all liability of danger resulting from any back action which may take place in the furnace is entirely avoided.

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

1. In a fuel-feeder, the combination of the discharge-pipe connected with suitable air-blast mechanism, and communicating with the shavings-room and the open air, and provided with the cut-off valves, adapted, respectively, to direct the shavings into the receiver, the shavings-room, or the open air, with the receiver having a dividing-partition, a retarding-flange, and air-discharge and regulating valves, substantially as shown and described.

2. In a fuel-feeder, the combination of the discharge-pipe connected with suitable air-blast mechanism, having cut-off valves, and adapted to extend through the walls of the building, across the shavings-room, and into the open air, with the receiver having a dividing-partition and a retarding-flange, and connected with said pipe and a feed-pipe running to the furnace, substantially as described.

3. In a fuel-feeder, the receiver connected with suitable feed devices, and provided with the retarding flange or partition, the air-discharge valve, and the regulating-valve, whereby the fuel is momentarily arrested, the surplus air allowed to escape, and the discharge regulated, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY C. BAER.

Witnesses:

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