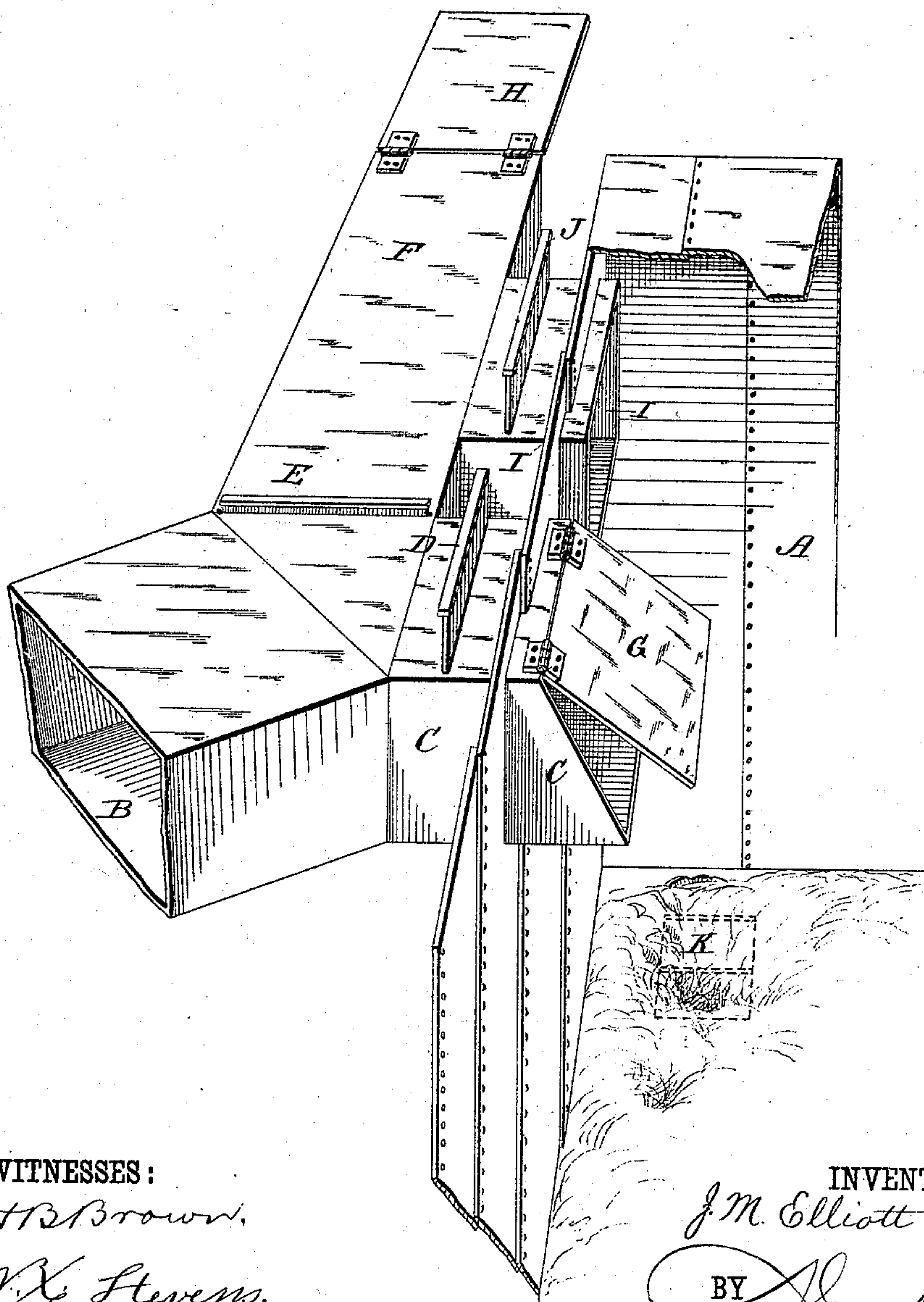


(No Model.)

J. M. ELLIOTT, Jr.
SAWDUST CONVEYER.

No. 271,822.

Patented Feb. 6, 1883.



WITNESSES:

H. B. Brown,
W. H. Stevens,

INVENTOR:

J. M. Elliott Jr.

BY

Samuel L.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES M. ELLIOTT, JR., OF GADSDEN, ALABAMA.

SAWDUST-CONVEYER.

SPECIFICATION forming part of Letters Patent No. 271,822, dated February 6, 1883.

Application filed October 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, J. M. ELLIOTT, Jr., a citizen of the United States, residing at Gadsden, in the county of Etowah and State of Alabama, have invented a new and useful Safety Attachment to Exhaust-Blowers, of which the following is a specification.

My invention relates to that class of blowers used to exhaust sawdust and shavings from wood-working mills and the light waste produced in other manufactories or mills; and it has for its object to deliver such waste products in a close room or receptacle, and to prevent the spreading of fire through mills by means of the dust-conductors, such dust being always very liable to take fire, and sometimes spontaneously.

To this end it consists in the construction and combination of parts forming the dust-flue, valves or gates, and receptacle hereinafter described and set forth, reference being had to the accompanying drawing, which is a perspective view showing my invention.

A represents the room in which the dust and refuse matter are deposited, usually made of sheet-iron, a portion of the roof and walls being broken away in the drawing.

My invention does not relate to the blower or to the receiving-flues thereof. Therefore no especial description of them will be herein given.

B represents the broken end of the entrance-flue of my invention, which is the exhaust-flue of the blower, receiving the refuse therefrom and conveying it by means of flue C into the dust-room A when the sliding gate D is open. When gates D and J are closed and gate E is open the refuse will be driven into another room or outdoors through flue F to furnace constructed for burning refuse.

G is a lid fitted to rest closely upon the end of flue C within the dust-room. This lid is hinged at its upper edge to swing freely, and the end of the flue is cut a little angling to receive the lid in its downward motion before it attains a vertical position, in order that the lid may have a natural tendency to close the flue tightly, and form thereby an automatic valve, closing by external pressure,

but free to give way from pressure within the flue.

I is an exit branch leading from the dust-room to the main exit flue F, supplied with a sliding gate, J.

H is an automatic valve on the end of the main flue, similar to valve G in construction and action.

To operate the device, gate D is opened and gate E is closed. Then the pressure from the fan will drive a current of air carrying the refuse matter into flue B, and through branch C, under valve G, into the dust-chamber A. This chamber being perfectly tight, the air will not continue to enter it unless an outlet is provided. For this purpose the branch flue I is opened by raising gate J. The inlet C and outlet I enter the room A through a slide-partition very near the top, in order that the dust may have ample opportunity to settle from the current of air and not be drawn out thereby through outlet I. If the dust takes fire, it cannot burn into the flue C against the blast of air, and that being all that keeps valve G raised, as soon as the current is by any means stopped the valve closes.

As a further measure of safety, the gates D and J will be closed from outside of room A as soon as fire is discovered, thus wholly confining it, and in a few minutes smothering it out. As the gates D and J are mere vertical slides of sheet-iron fitted in vertical grooves in the sides of the flues to completely cut off the air-passage, they may be supported, when open, by any simple device connected by a cord to any point in the establishment, so as to be closed by pulling the cord.

The dust-room will be located above the floor of the fire-room, and provided with a sliding door, K, in its bottom, through which shavings may be allowed to fall to be used for fuel. When the door K is open valves D and J should be closed to prevent the current of air blowing through and scattering shavings.

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

1. The combination, with the tight dust-room A and entrance-flue C B, connecting with the discharge-opening of an exhaust-

blower, of the exit-flue I, to permit the escape of air, as specified, with door K, where dust is taken from room to be used for fuel purposes.

- 5 2. The combination, with the main flue B, of the branch flue C, leading into the dust-room A, the exit-flue F, leading outdoors or to an-

other dust-room, the branch flue I, the automatic valves G H, and the gates D E J, as and for the purpose specified.

JAMES M. ELLIOTT, JR.

Witnesses:

M. L. FOSTER,

RICHD. B. SCOTT.