

(No Model.)

A. H. BLACKBURN.  
ATTACHMENT FOR CHIMNEYS, &c.

No. 535,663.

Patented Mar. 12, 1895.

Fig. 1.

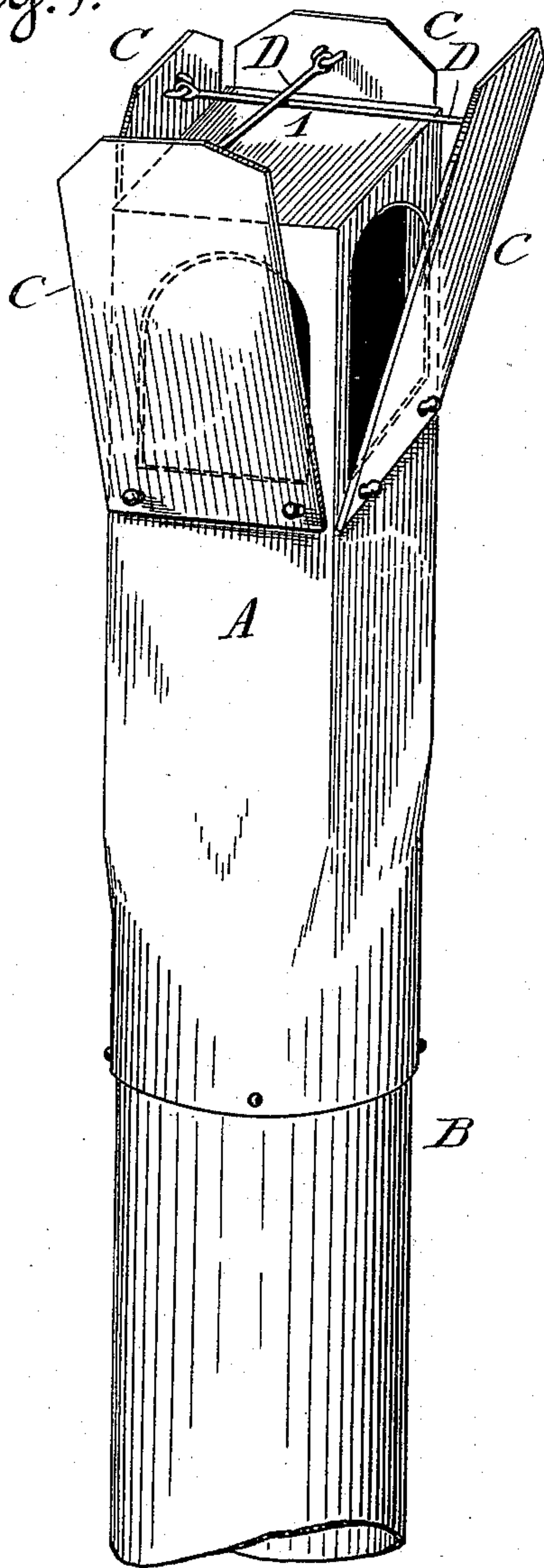


Fig. 2.

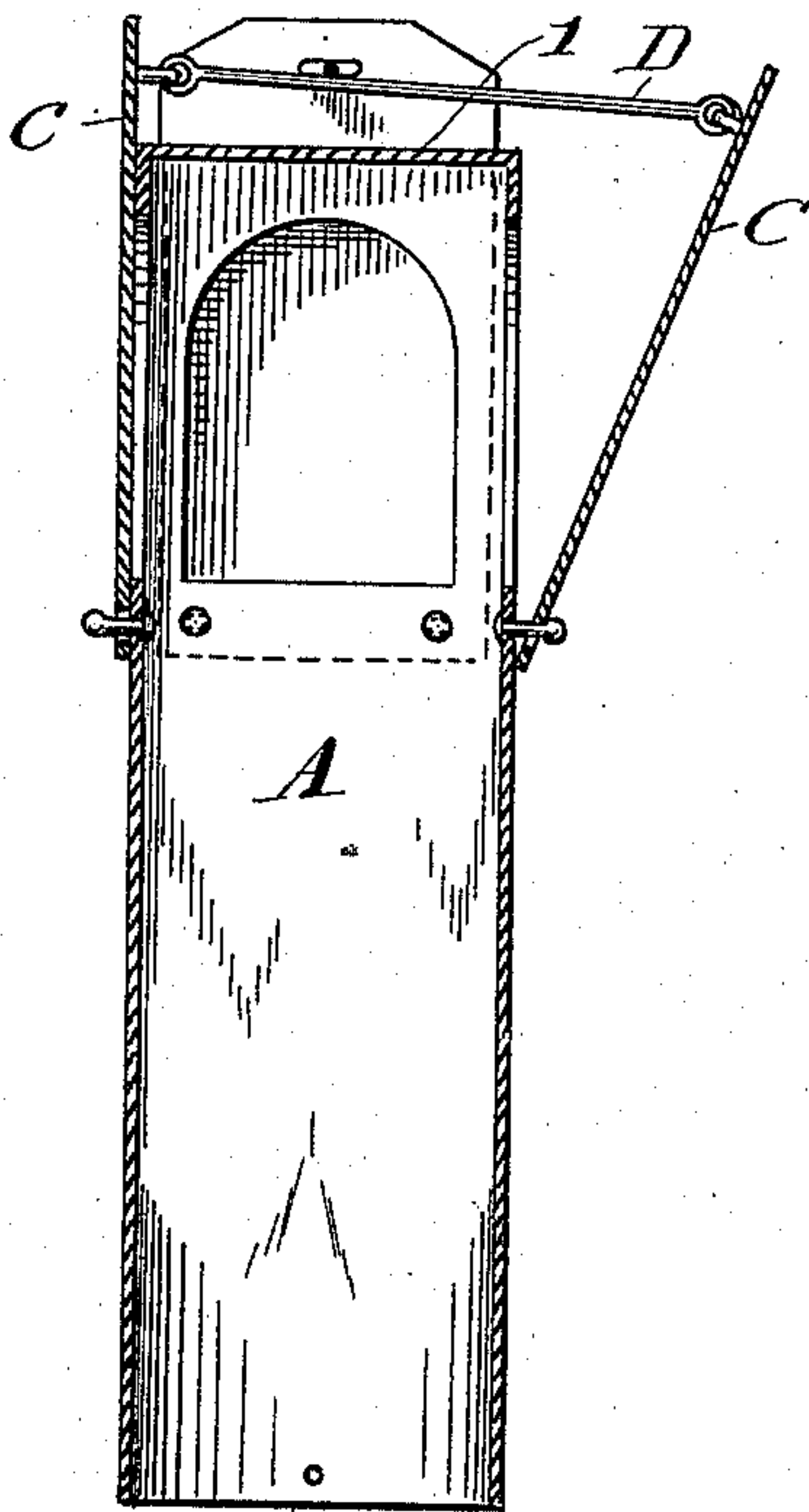
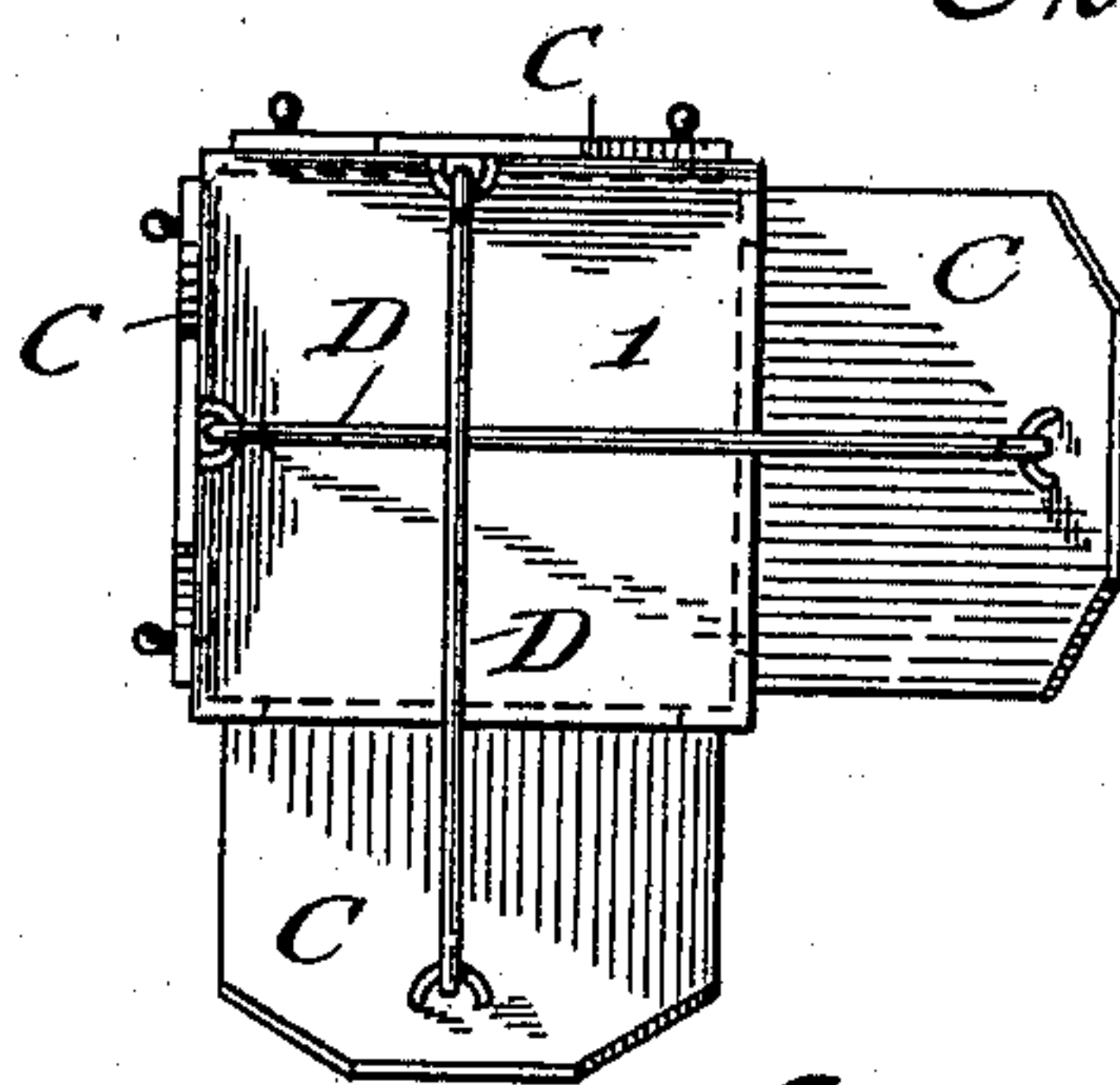


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## ATTACHMENT FOR CHIMNEYS, &c.

SPECIFICATION forming part of Letters Patent No. 535,663, dated March 12, 1895.

Application filed October 16, 1894. Serial No. 526,048. (No model.)

*To all whom it may concern:*

Be it known that I, ALLEN H. BLACKBURN, a citizen of the United States, residing at Petaluma, in the county of Sonoma and State of California, have invented certain new and useful Improvements in Attachments for Chimneys, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to a device or attachment to be applied to the upper end of chimneys, smokestacks, &c., in order to prevent any down draft of air or back movement of smoke in the chimney, no matter what the direction of the wind may be, thus insuring a constant upward draft, and the proper escape of smoke.

My attachment, speaking generally, consists in a smoke box or chamber secured to the top of the chimney, pipe, or stack, having a closed top and four open sides through which the smoke escapes into the air. In connection with this chamber I provide shutters, one upon each side, hinged or pivoted to the wall of the chamber and extending above it, and I connect each pair of shutters by a rod of greater length than the diameter of the chamber, so that, when any shutter is closed, the opposite one will stand open at an angle to the vertical wall of the chamber.

My invention is fully illustrated in the accompanying drawings, in which—

Figure 1, is a perspective view of the whole attachment secured upon a round pipe or stack. Fig. 2, is a vertical section. Fig. 3, is a top plan view.

A, is a chamber or smoke box having a closed top 1, and open sides. The chamber is preferably made of sheet metal and in horizontal section or top plan is rectangular in shape. When it is intended to fit this chamber upon a round pipe or stack, like the pipe B, the lower end is formed into cylindrical shape in any suitable way, such as by hammering it round upon a cone shaped die or anvil. It is thus made to fit the upper end of the pipe, to which it is bolted or otherwise secured. The smoke rising through the chimney or pipe enters the chamber A, and escapes through one or more of its open sides. These open sides are closed by shutters C, adapted to fit closely against the outer walls of the

chamber, one upon each side, each shutter projecting above the top of the chamber, and being pivoted or hinged a little below the side opening in any suitable way, for instance as shown in the drawings. Each pair of shutters at opposite sides, and closing opposite openings, is connected by a rod D, the ends of which are jointed to the respective shutters. The length of these rods being greater than the diameter of the smoke box, one of the shutters will stand at an angle when the opposite shutter is closed; and the angular position of either of the shutters leaves the smoke free to escape freely through the opening in that side.

The rods D, may pass over the top of the chamber as shown in the drawings, or, as an equivalent construction can be carried across the interior of the box or chamber by passing such rods through its open sides.

The operation of the device is as follows: When the wind strikes any one of the shutters the latter is immediately closed, preventing the wind from entering the chamber and blowing down the chimney. This of course opens the opposite shutter maintaining the draft and permitting the smoke to escape. From whatever direction the wind may come it must act upon one or more of the shutters and thereby cut off its access to the open top of the chimney or stack. Even should it blow diagonally across, the same effect will be produced by the wind striking the inside of the shutters diagonally opposite and above the chamber and thereby opening them. Of course this would close the two shutters which are toward the wind by the positive pulls thus given the connecting rods.

It will be seen from this description that a chimney or pipe provided with an attachment of this character is automatically protected on all sides against the wind, while, at the same time, the draft is not impaired nor the free escape of smoke interfered with.

It must be understood that the shutters instead of being pivoted at the bottom and closing upward, may be pivoted above the openings in the smoke chamber, in which case they will be exposed to the wind and will operate in precisely the same manner as those before described. It may also be stated that instead of using the square smoke box here-



tofore described, I may provide the smoke  
stack or chimney with four elbows extending  
horizontally in different directions, and hav-  
ing the shutters pivoted in their open mouths  
5 and connected in pairs as before described.  
This construction is the exact equivalent of  
the one shown in the drawings, because, the  
theory of the invention is that the draft in a  
chimney or stack will be maintained and any  
10 back pressure of wind averted, by causing the  
wind to close a shutter of any character on  
the side from whence it blows and by that act  
to open another shutter on the opposite side  
to allow the draft to escape. Consequently I  
15 do not limit myself to the exact construction  
shown in the drawings.

Having described my invention, what I  
claim is—

An attachment for chimneys or smoke-  
stacks, consisting of a box or chamber hav- 20  
ing a closed top and open sides, a shutter piv-  
oted upon each open side and extending above  
the top of said chamber, and rods of greater  
length than the diameter of the chamber  
loosely connected to opposite shutters, where- 25  
by one shutter of a pair can be opened and  
the opposite shutter closed by either a push  
or a pull of the connecting rod, substantially  
as described.

In testimony whereof I have affixed my sig- 30  
nature, in presence of two witnesses, this 28th  
day of September, 1894.

ALLEN H. BLACKBURN.

Witnesses:

G. R. SKINNER,  
JOSEPH NAYLOR.