

(No Model.)

H. W. WILSON.
STOVEPIPE DAMPER.

No. 527,573.

Patented Oct. 16, 1894.

Fig. 1.

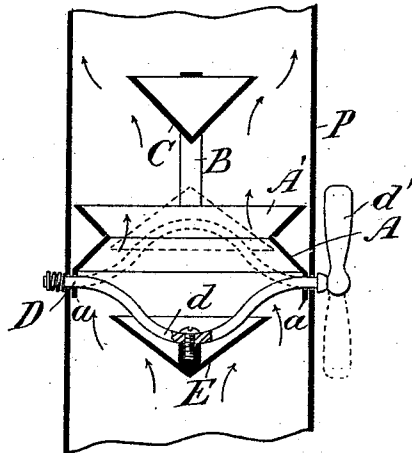
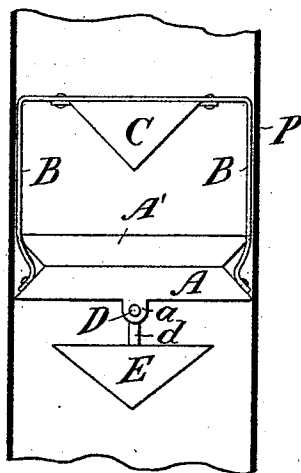


Fig. 2.



Witnesses:

Chas. Kaley.
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UNITED STATES PATENT OFFICE.

HOUGHTON W. WILSON, OF KINGSTON, CANADA.

STOVEPIPE-DAMPER.

SPECIFICATION forming part of Letters Patent No. 527,573, dated October 16, 1894.

Application filed April 2, 1894. Serial No. 506,081. (No model.) Patented in Canada April 8, 1893, No. 42,512.

To all whom it may concern:

Be it known that I, HOUGHTON W. WILSON, of Kingston, in the county of Frontenac and Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Stovepipe-Dampers, (for which I have obtained patent of the Dominion of Canada, No. 42,512, dated April 8, 1893;) and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part hereof.

My invention, which will be hereinafter fully set forth and claimed, relates to dampers for stove pipes, smoke stacks and the like.

The object of my invention is a damper for stove pipes, smoke stacks and the like, that will deflect the hot gases and other products of combustion against the interior surface of the stove pipe or flue and thus, while controlling the draft, will also utilize the heat more effectively and economize fuel.

Figure 1 is a vertical transverse section of my improved damper, shown in position in a stove pipe, open, the dotted line showing it closed. Fig. 2 is an elevation of the same, taken at a right angle to Fig. 1.

A ring, A A', fitting the interior of the stove pipe, P, freely, projects inwardly so as to contract the area of the pipe and is provided with two lugs, a, opposite each other, each having an eye through which the damper axle passes, by which it is supported in the pipe or flue and which rotates in it. The lower surface of said ring is preferably beveled upward and inward, so as to make an angle with the pipe or flue and form a conical contraction of the same. The upper part, A', which may be made in a separate piece for convenience of manufacture, is beveled the reverse way, to prevent the formation of a flat shelf or pocket upon which soot might accumulate. A bail B, having its ends secured to opposite sides transversely to and midway between the two lugs a of said ring—preferably to the lower part if made in two halves—and the upper portion of its sides bent out to the diameter of the stove pipe, so as to afford the ring a lateral support, carries on its transverse upper portion, and some distance above said ring, a deflector, C, having its lower surface curved or beveled off

from the center upwardly into conical shape and being of a less diameter than the central opening or throat in the ring A A'.

D is the axle which passes transversely through the pipe and the lugs a, supporting the latter with the ring in the pipe, and capable of turning in them both. Its central portion is curved, so as to form a crank d, to which an upwardly and outwardly deflecting conical or segmental disk E, somewhat smaller than the opening or throat in the ring A A', is attached, which forms the valve or damper proper. The curve forming the crank d is a gradual one, so that it can be passed through the holes or eyes in the pipe and lugs, but may be substituted by a straight axle with an arm secured to it at a right angle, and the throw of the crank or arm is made equal to the distance of the axle from the upper edge of the bottom ring A or the throat of the whole ring A A'. A key or handle, d', is provided at one end of the axle by which the latter may be turned. It is weighted to balance the disk E and crank d.

When the axle is turned down, as shown in the drawings, the gases and other products of combustion strike the deflecting surface of the disk E, directing the current outwardly against the oblique surface of the ring A. This again directs it toward the center of the pipe, where, higher up, it strikes the deflector C, which again directs the current outwardly. The current is thus well broken up and directed outward toward the heating surface of the pipe. When the axle D is turned up, as shown in Fig. 1 in dotted lines, the disk E stops up the opening or throat of the ring A, just sufficient space being left to prevent an airtight joint and still allowing a small portion of the gases to pass.

I claim as my invention—

In a stove and smoke pipe damper, the combination of a stationary ring contracting the passageway of the pipe, provided with two lugs on its lower edge and having its lower surface beveled upwardly and inwardly to form a deflecting face and its upper surface beveled outwardly and upwardly to prevent the formation of a pocket or shelf, a deflector some distance above and smaller than the throat of the ring above recited, a bail secured to said ring transversely to the lugs and

holding said deflector on a wide spreading
top, an axle curved to form a crank in the
center passing through and having its ends
bear and rotate in the stove pipe or flue and
5 the lugs of the ring which latter it supports
and being provided with balanced handle at
one end and a deflecting disk somewhat
smaller than the throat of the ring secured

to the crank of said axle, substantially as set
forth. 10

In testimony whereof I have signed in the
presence of the undersigned witnesses.

HOUGHTON W. WILSON.

Witnesses:

C. H. OTTO,

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