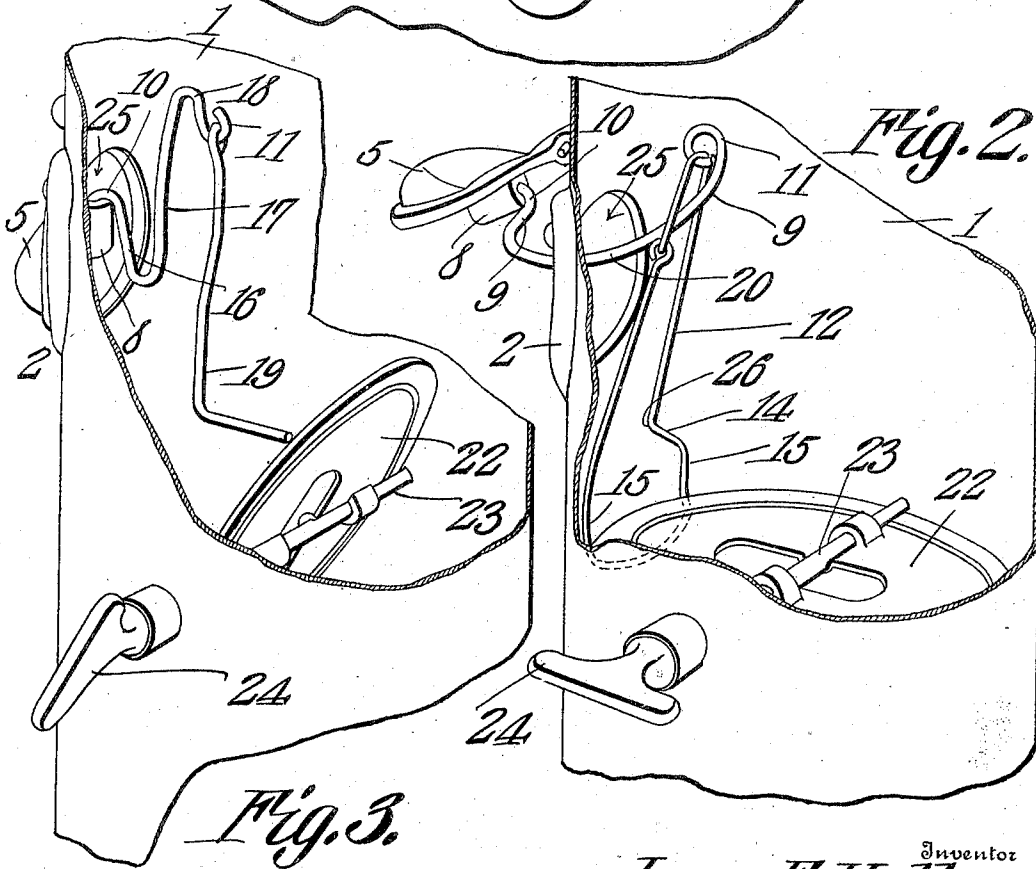
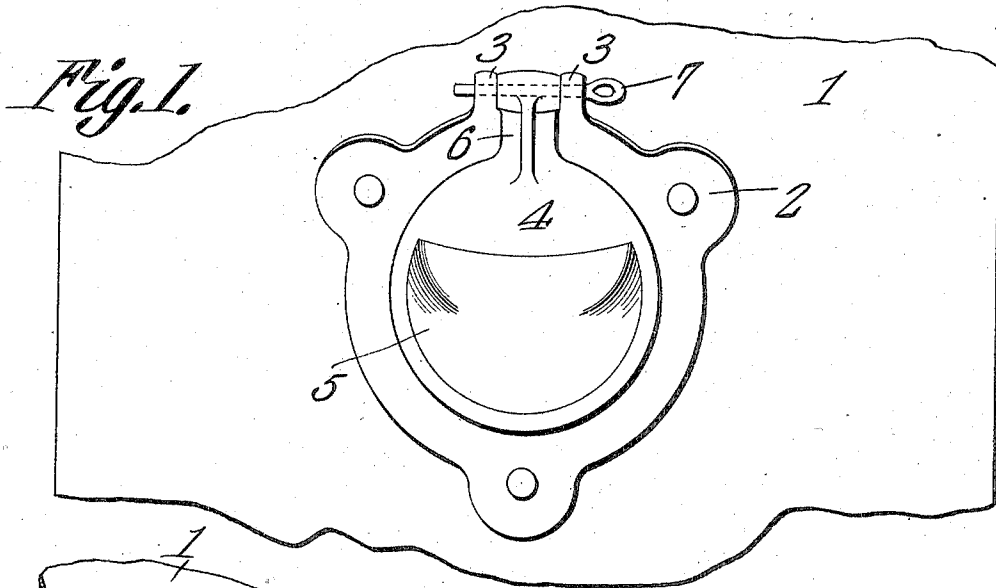


L. E. HALL.
STOVEPIPE VENTILATOR.
APPLICATION FILED MAR. 9, 1909.

947,816.

Patented Feb. 1, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

LEON E. HALL, OF NORTH SPRINGFIELD, VERMONT.

STOVEPIPE-VENTILATOR.

947,816.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed March 9, 1909. Serial No. 482,244.

To all whom it may concern:

Be it known that I, LEON E. HALL, a citizen of the United States, residing at North Springfield, in the county of Windsor and State of Vermont, have invented a new and useful Stovepipe-Ventilator, of which the following is a specification.

By way of explanation, I will state that when wood is burned in a stove of ordinary construction, the air within the stove and in its flues being rarefied to a considerable degree, a sort of destructive distillation of the wood takes place, resulting in the formation of creosote in the pipe. If the wood happens to be somewhat moist, steam will be formed, which, condensing in the pipe, will run down through the interstices between the pipe sections, carrying with it any products of combustion which may be lodged in the pipe.

The hereinbefore described process is to a large degree impeded when the damper in the pipe is wide open, and progresses with increasing facility as the damper approaches a closed position.

It is the object of this invention to provide a side draft of novel and improved construction, leading from the room into the pipe, and to provide novel means whereby this side draft may be moved to an open position upon the closing of the damper in the pipe, and be moved to a closed position upon the opening of the said damper.

With these and other objects in view, as will hereinafter more fully appear, the invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in that portion of this instrument wherein patentable novelty is claimed for certain distinctive and peculiar features of the device, it being understood that, within the scope of what hereinafter is thus claimed, divers changes in the form, proportion, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings:—Figure 1 shows my invention in front elevation; Fig. 2 is a perspective thereof, the side draft in the pipe being swung open; Fig. 3 is a

modified form of the invention, the side draft being in a closed position.

In the accompanying drawings, the smoke flue or section of stove pipe is denoted by the numeral 1, and this pipe is provided in its side with an aperture 25. Mounted upon the exterior of the pipe is a plate 2, having an aperture substantially coextensive with the aperture 25 in the pipe. The plate 2 is provided upon its upper edge with outstanding ears 3, spaced apart, between which is mounted the neck 6 of a flap valve 4, designed to cover the apertures in the plate and the pipe, the said flap valve being thickened centrally, as denoted by the numeral 5, in order to give it added weight, that it may move quickly downward to close the apertures in the plate and the pipe. The neck 6 of the valve and the ears 3 are provided with aligned apertures, through which is passed a cotter-pin 7 or like device, upon which the flap valve 4 is pivoted.

Referring to Figs. 2 and 3, it will be seen that the flap valve 4 is provided upon its inner face with a socket 8, designed to receive one end of an arm which projects into the interior of the pipe. This arm is sharply down-bent, as denoted by the numeral 9, to pinch and to engage the socket at 10, whereby the arm may be securely assembled with the socket. Beyond the down-bent portion 9 the arm is sharply up-bent and inwardly convexed, as denoted by the numeral 20, terminating at its top in an eye 11, from which hangs, freely pendent, a hook-shaped element.

The hook, as shown in Fig. 2, may be said to comprise a U-shaped part 12, the arms of which are out-bent as denoted by the numeral 14, and thence carried downward, as shown at 15, in a plane substantially parallel to the plane of the portion 12. The portion of the hook which unites the parts 15 is inwardly bent substantially parallel to the portion 14, as shown in dotted line in Fig. 2.

The damper may be of any form, and is denoted conventionally by the numeral 22, the said damper being pivotally supported in the usual manner upon the transverse element 23, the same being provided beyond the walls of the pipe and upon the exterior thereof, with a thumb-piece 24, whereby the damper is rotated.

In Fig. 2 the flap valve is shown swung into an open position, but it will be seen that when the flap valve moves to a closed

position, the eye 11 will move toward the wall of the pipe, the hook which is pendent from the arm, fulcruming upon the pipe at 26, the point where the portion 12 of the hook unites with the portion 14 thereof. By curving the arm as denoted by the numeral 20, the said arm is made to clear the wall of the pipe as the flap valve swings open, and this curvature at 20 further causes the hook to lie relatively close to the pipe when the flap valve 5 is closed. It is obvious, that as the damper 22 is swung to a closed position it will engage the lower extremity of the hook which connects the portions 15, causing the said hook to move downward, whereby the flap valve 5 will be raised to an open position, and, upon the other hand, when the damper 22 is swung to an open position, the hook will be freed from the periphery of the damper, the weight of the flap valve 4 causing it to descend and to close the opening 25 in the pipe.

It is to be understood that the shape of the arm and of the hook which is pendent therefrom may be varied through a wide range. To illustrate the possible diversity in the form of these members, I have shown in Fig. 3 a slightly modified construction. In the form there shown the arm is sharply down-bent, as denoted by the numeral 16, after leaving the socket, and thence is carried upward, as denoted by the numeral 17, the inner extremity of the hook being down-bent at 18, and terminating in the eye 11, upon which is swung the hook 19, which, in this case, is given a simple right angle bend. In the form shown in Fig. 3, the arm is bent to engage the socket 8 at 10, as was done in the form shown in Fig. 2. The particular bend given to the arm in Fig. 3 causes it to clear the walls of the pipe as effectively as does the curvature given to the arm shown in Fig. 2, and, in both cases, the curvature of the arm, combined with the shape of the hook, causes the flap valve readily to be actuated into an open position upon the rotation of the damper 22.

Either of the hooked elements which are

shown in Figs. 2 and 3, are adapted to be wedged between the periphery of the damper and the wall of the pipe, when the damper is swung into the closed position shown in Fig. 2. By this construction, the weight of the flap valve is not likely to become operative to swing the damper, accidentally, into an open position within the pipe, since the hooked element is so firmly wedged between the periphery of the damper and the wall of the pipe as to make such accidental displacement of the parts impossible.

The foregoing device, although simple in construction, is thoroughly effective to bring about the end sought and to fulfil the objects of the invention.

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

1. In a device of the class described, a pipe having a lateral opening; a damper journaled for rotation within the pipe; a flap valve mounted upon the pipe and arranged to close the opening therein; an arm projecting from the flap valve into the pipe; a hook pendent from the arm and engageable by the periphery of the damper; the hook being arranged to be wedged between the periphery of the damper and the wall of the pipe.

2. In a device of the class described, a pipe having a lateral opening; a damper journaled for rotation within the pipe; a flap valve mounted upon the pipe and arranged to close the opening therein, the said flap valve being provided with a socket; an arm mounted in the socket and bent upon itself to engage the socket; a hook pendent from the arm and engageable by the periphery of the damper; the hook being arranged to be wedged between the periphery of the damper and the wall of the pipe.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LEON E. HALL.

Witnesses:

GEORGE D. WOOD,
MYRON E. PARKER.