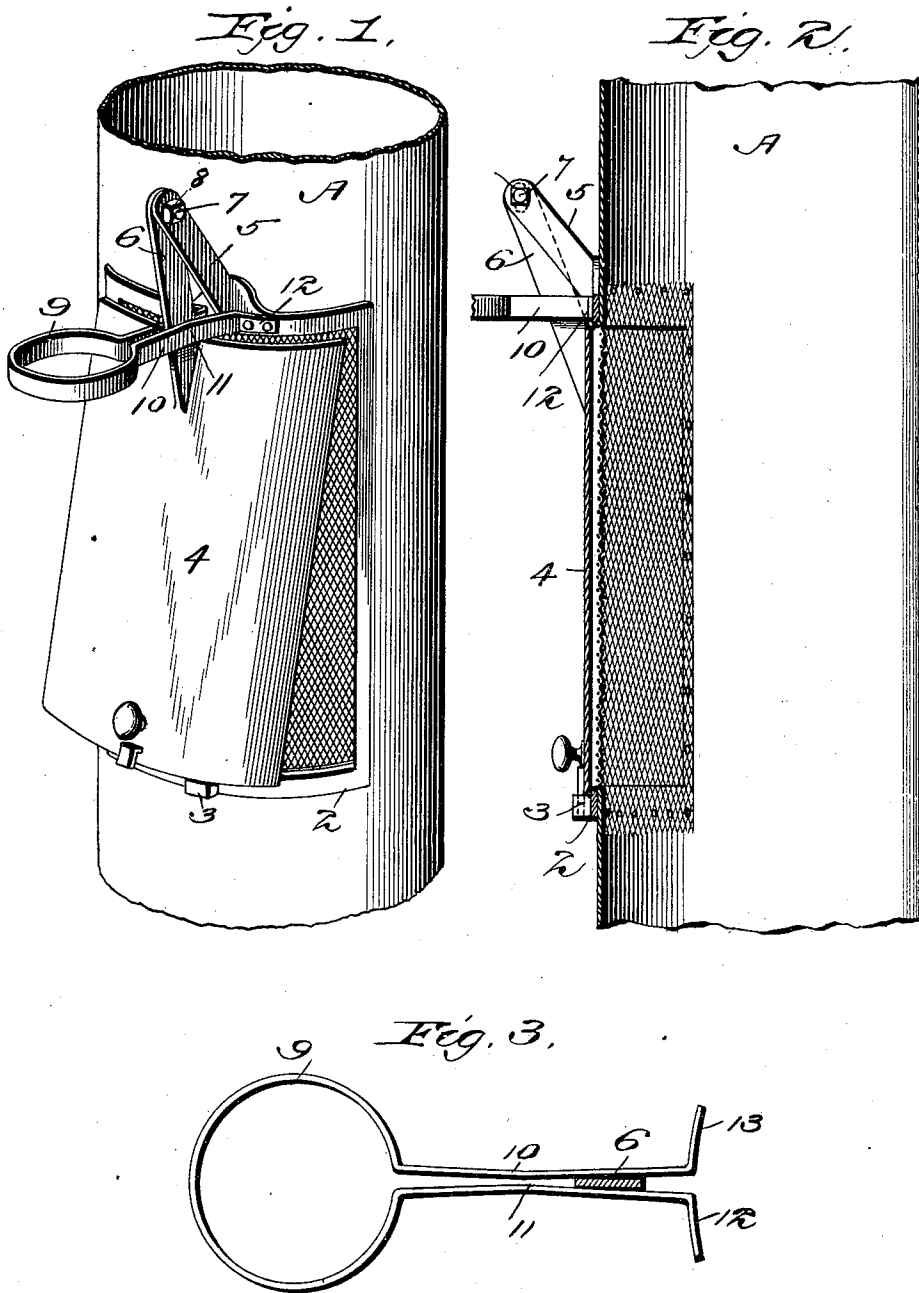


(No Model.)

H. L. FERRIS.
STOVEPIPE DAMPER.

No. 567,025.

Patented Sept. 1, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

HIRAM L. FERRIS, OF OSAGE CITY, KANSAS.

STOVEPIPE-DAMPER.

SPECIFICATION forming part of Letters Patent No. 567,025, dated September 1, 1896.

Application filed February 6, 1896. Serial No. 578,203. (No model.)

To all whom it may concern:

Be it known that I, HIRAM L. FERRIS, a citizen of the United States, residing at Osage City, in the county of Osage and State of Kansas, have invented certain new and useful Improvements in Stovepipe-Dampers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to those stovepipe-dampers consisting of a hinged damper-lid and means for holding it in the various open and closed positions, and the objects sought to be accomplished are more perfect draft regulation, better ventilation, adaptability to all kinds of stovepipes, simplicity of construction, and cheapness of production.

Having these objects in view, the invention consists in certain improvements in the hinge connection between the damper-lid and the stovepipe and in improved means for holding the damper-lid in its various positions.

In the accompanying drawings, Figure 1 represents a perspective view of my complete invention as applied to an ordinary stovepipe and with the damper-lid open; Fig. 2, a side elevation thereof, showing the damper-lid closed; and Fig. 3, a detail view of the hinge and friction-spring.

A section of an ordinary stovepipe is shown at A. A suitable opening, preferably rectangular in shape, is made in the stovepipe, and is covered by wire-netting 1 to prevent any of the solid products of combustion from escaping into the room when the damper is open. A rectangular frame 2 is fitted to the opening in the stovepipe and carries the damper-lid and connections, being provided with a projecting lip or catch 3 at its bottom to hold the damper-lid closed, as will appear hereinafter.

The damper-lid 4 is of the usual construction and is connected to the frame 2 by my improved hinge connection, now to be described. This hinge consists of a hinge-leaf 5, connected to and projecting upwardly from the frame 2 at an angle of about forty-five

degrees to the horizontal, and a second hinge-leaf 6, connected at its lower end to the damper-lid. The two leaves are pivoted together at their upper ends by means of a bolt 7, connected to the leaf 5 and passing loosely through an elongated slot in the leaf 6, a suitable nut 8 being provided to hold the parts together. This construction permits the damper-lid to be lifted slightly and dropped into the catch 3 when it is to be held closed. It is also to be noted that the center of gravity of the damper-lid is situated at one side and away from the stovepipe. Consequently when the damper is released from its catch it immediately swings open and remains so until closed. It is of course necessary to regulate the amount of opening of the lid, and for this purpose I provide an improved friction-spring. This spring consists of a piece of spring wire or ribbon bent to form an open head 9 and neck 10, provided with a stricture 11 intermediate of its length. The friction-spring is placed astride the hinge-leaves, so that the movable one 6 operates within the open neck and head of the spring when the damper-lid is opened, this spring having its extremities 12 and 13 fastened to the frame 2. The neck of the spring is adapted to pinch or grasp the hinge-leaf, so that the damper may be held open to any desired extent. Let it be assumed that the damper-lid is closed. The damper may be opened by slightly raising the damper-lid so that it is freed from its catch. Its tendency to swing open is resisted by the action of the friction-spring, and the leaf 6, becoming wedged in the neck of the spring, holds the damper-lid open. As the damper-lid is opened still farther friction increases between the open neck and the leaf 6 until the stricture 11 is reached, when it is greatest. This stricture preferably lies in the center of gravity of the damper-lid, and consequently the tendency is for the damper to remain open when this point is reached. The damper-lid can be opened still farther if desired, but it reaches the limit of frictional action of the spring when it leaves the open neck and begins to enter the open head 9. This open head is provided so that the damper-lid may be opened very wide when cleaning and repairs are necessary. After the hinge-leaf has

passed the stricture 11 it is prevented from swinging closed of its own accord.

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

1. The combination with a stovepipe provided with a draft-opening, of a damper-lid for said draft-opening, a hinge-leaf pivotally connecting the damper-lid to the stovepipe, and a friction-spring having arms which bind upon the hinge-leaf, whereby the damper may be held in open position.

2. The combination with a stovepipe provided with a draft-opening, of a damper-lid for said draft-opening, a hinge-leaf pivotally connecting the damper-lid to the stovepipe, and a friction-spring having arms which

straddle the hinge-leaf and bind thereupon, whereby the damper-lid may be adjusted and held in open position.

3. The combination with a stovepipe provided with a draft-opening, of a damper-lid for said opening, a hinge-leaf pivotally connecting the damper-lid to the stovepipe, and spring-arms straddling the hinge-leaf and adapted to bind thereupon which converge from their extremities toward each other to form a contracted neck.

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

HIRAM L. FERRIS.

Witnesses:

L. G. WILSON,
S. L. ROBBINS.