(No Model.)

J. H. DOHERTY.

STOVE PIPE DAMPER.

No. 323,568. Patented Aug. 4, 1885.

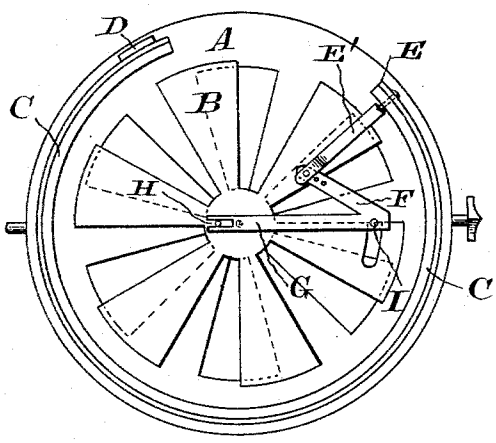


FIG. 1.

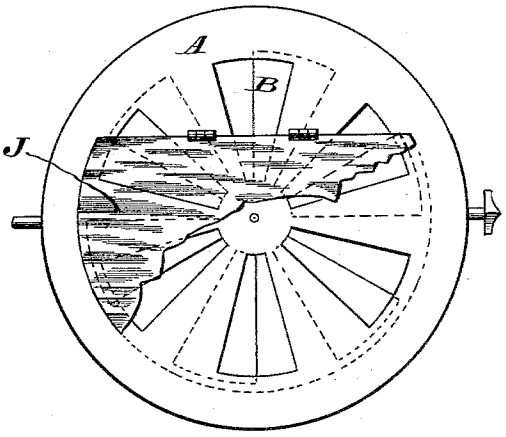


FIG. 2.

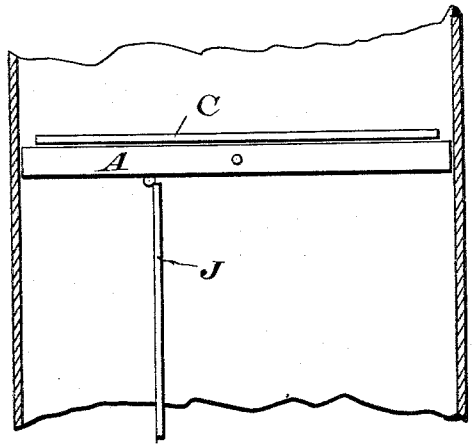


FIG. 3.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN H. DOHERTY, OF SAN FRANCISCO, CALIFORNIA.

STOVE-PIPE DAMPER.

SPECIFICATION forming part of Letters Patent No. 323,568, dated August 4, 1885.

Application filed December 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. DOHERTY, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented a new and useful Improvement in Stove-Pipe Dampers, of which the following is a specification.

The object of my invention is to provide a means whereby the spaces or perforations of a damper plate will be opened and closed automatically, and at the same time to combine with an automatic stove-pipe damper an ordinary damper-plate to be operated independently of the automatic plate, and in the usual way. I accomplish this object by the means illustrated in the accompanying drawings, in which—

Figure 1 is a top view of my improved stove-pipe damper. Fig. 2 is a bottom view showing the hinged flap partly broken away. Fig. 3 is a vertical section through the stove-pipe, showing the damper in side elevation.

Similar letters of reference are used to indicate like parts throughout the several figures.

A represents a pivoted base-plate provided with radial openings, and B is a plate formed with radial arms to fit over the openings in the plate A. The plate B is pivoted to the plate A centrally, so that it will move on its pivot and open or close the radial openings in the plate A in the same manner as that of a hot-air or other register.

Surrounding the plate B is a metallic ring, C, which is connected to the plate A at one point—namely, at D—and this ring extends partially around the plate, as shown. The ring C is composed of some metal capable of rapid expansion and contraction by changes in temperature, and copper, brass, zinc, or other metal may be employed. Copper, however, is preferable.

To the free end of the ring E is connected an arm, E′, which in turn connects with a lever-arm, F, which latter is curved at its outer end, and may be provided with take-up holes.

From the lever-arm F extends backward or downward, according to the horizontal or vertical position of the damper, as the case may be, an arm, G, with its lower end split to receive a projecting pin, H, placed eccentric to the pivotal pin which holds the two plates together. This system of levers is pivoted to the plate B at I I, as shown.

In operation, when the free end E of the expansible ring is connected to the lever E′, and expansion or contraction of the ring takes place, it will raise up or depress the levers connected with the register-plate B, and expose or cover up the openings in the plate A, in accordance with the degrees of heat which operate upon the metal of the expansible ring.

In order to combine the ordinary damper with my automatic damper, I employ a disk or flap, J, with its upper edge or side removed, and this is hinged to the back and under side of the plate A, so that when the damper is in a horizontal position in the stove-pipe this plate J will fall down by its gravity and hang in that position until the position of the whole damper is changed to a vertical or edgewise position, when the plate will fall or swing down against the plate A, as shown in plan in Fig. 2, and shut off the draft irrespective of the automatic plate or register, leaving a passage, however, above the truncated portion for the escape of gases through the register-openings in the plate A.

It should here be observed that this hinged plate will also serve to keep the damper free from soot that has accumulated thereon by impact or striking against the damper-plate when assuming its flatwise position over the said damper-plate.

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

In combination with a stove-pipe damper or ventilating device capable of being opened and closed in an automatic manner by means of an expansible ring surrounding the movable plate of such damper, and connected thereto by suitable arms and levers, the hinged flap or plate J, adapted to fall by gravity upon or against the plate A at the rear portion or side thereof, and act in the capacity of an ordinary stove-pipe damper, constructed and arranged to operate substantially in the manner as herein set forth and specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

JOHN H. DOHERTY. [L. S.]

Witnesses:
WILMER BRADFORD,
CHAS. E. KELLY.