No. 813,188. PATENTED FEB. 20, 1906.

H. WHITHAM.

PIPE DAMPER.

APPLICATION FILED JULY 21, 1905.

Fig. 1.

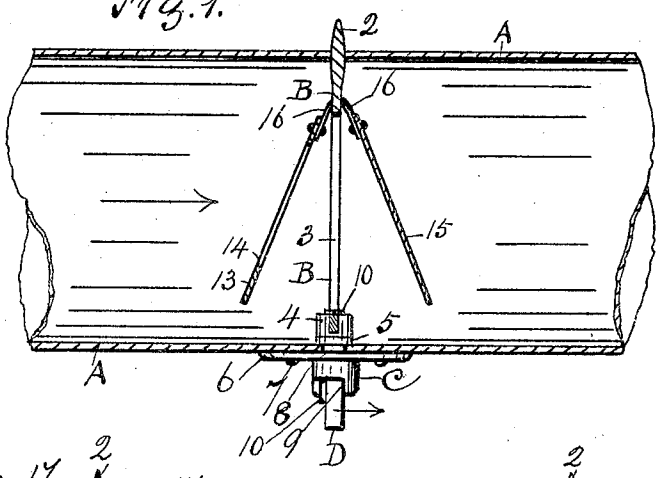


Fig. 2.

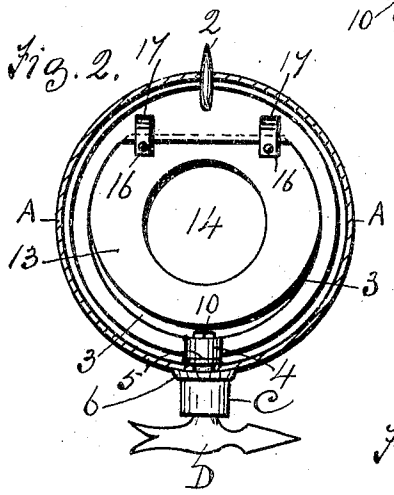


Fig. 3.

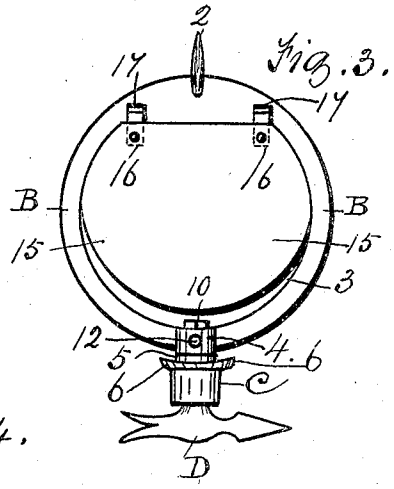
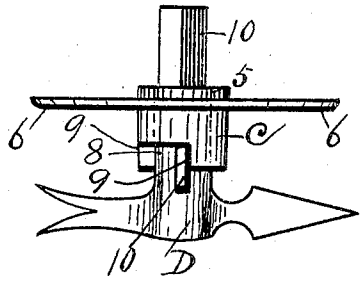


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

HUGH WHITHAM, OF HAMILTON, CANADA.

PIPE-DAMPER.

No. 813,188. Specification of Letters Patent. Patented Feb. 20, 1906.

Application filed July 21, 1905. Serial No. 270,625.

To all whom it may concern:

Be it known that I, HUGH WHITHAM, a subject of the King of Great Britain, and a resident of Hamilton, in the county of Wentworth and Province of Ontario, Canada, have invented new and useful Improvements in Pipe-Dampers, of which the following is a specification.

My invention relates to pipe-dampers in which a circular damper is adapted to be opened and partially closed in the pipe on its upper and lower pivotal centers when manipulated by a lower handle, also loosely-connected side wings suspended from an upper part of the damper proper and adapted to work automatically.

The objects of my invention are, first, to provide a damper specially adapted for stoves and furnaces with means to point out and to show the position of the damper; second, to provide a damper with automatically-working wings which will allow a certain volume of smoke to pass through when the damper is closed; third, to provide a damper that will automatically prevent the wind from blowing through the pipe in a direction opposite to that of the passage of the smoke and to afford facilities for operating the damper and showing the direction of the same. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of a pipe, showing the upper part of the damper in section and closed in the pipe and the suspended wings in section. The left-hand end of the pipe is the stove end. Fig. 2 is a sectional elevation of the pipe, showing the damper with the right-hand wing of Fig. 1 of the drawings removed. Fig. 3 is an end elevation of the damper from the right-hand end of Fig. 1 of the drawings. Fig. 4 is an enlarged elevation of the lower hub with plate and arrow-handle with vertical shank.

Similar letters refer to similar parts throughout the several views.

In the drawings, A is a pipe, and B is the damper proper, which has an upper pivotal pin 2, which extends through the pipe. The damper has a large central opening 3 and lower side hubs 4 and supporting-washer 5.

C is a lower hub secured to the under side of the pipe by means of its flange 6 and rivets 7 through the flange and pipe.

D is the arrow-handle, which has a vertical and round stem 8, which extends to the inner side of the pipe and continues square at 10 through the washer part 5 and the hub 4 and adapted to rotate the damper B one way and to the right from present position and only one-fourth of a circle. The hub C has a quarter of its circumference cut away, forming an opening 9, in which rotates the projecting web 10 of the stem 8, which allows the stem, together with the damper, to rotate and open said damper in the pipe. The arrow part of the handle always points to one outer edge of the damper and shows whether the same is open or closed. The square part of the stem 10 is secured to the hub 4 by a removable pin 12. The wing 13 has a central opening 14, and the wing 15 is closed or blank throughout. Both said wings are adapted to swing by gravity, and the upper parts are provided with straps 16, which extend through openings 17 in the damper-plate B and are secured to the wings.

The smoke from the stove or furnace proceeds as the arrow points in the pipe of Fig. 1 of the drawings. The wind of course proceeds from the opposite direction. The wings are shown in Fig. 1 of the drawings in normal position. Each wing is adapted to close against the damper B, according to the force of the smoke or the wind. When one wing is forced nearer to the damper B, the opposite wing is forced correspondingly farther away from the damper. The two wings always retain their relative position one with the other, but not with the damper, and always follow the course of the damper when manipulated by the handle D.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a pipe-damper, a pipe, a circular damper provided with a central opening, a vertical pin extending from the upper part of the damper and through the pipe, hubs on the lower part of the damper and diametrically opposite to the pin, a hub secured to the lower part of the pipe, an arrow-handle, a vertical stem on the handle adapted to rotate in said secured hub and secured in the hubs of the damper, means on the handle to allow one quarter-turn of the same and the damper automatic wings adapted to swing from the upper part of the damper and to retain relative position with respect to each other and one of said wings being provided with a central opening.

2. In a pipe-damper, a pipe, a circular damper provided with a central opening and adapted to rotate in the pipe, a hub secured to

the lower side of the pipe, and provided with a side opening, means on the upper part of the damper, and on the lower part of the damper to allow the same to rotate, an arrow-handle extending through said hub, means on the handle to engage the walls of the opening of the pipe-hub to stop at one quarter-turn, automatic side wings adapted to swing together from the upper part of the damper and independently of the damper, and one of said wings being provided with a central opening.

HUGH WHITHAM.

Witnesses:
JOHN H. HENDRY,
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