

D. W. POWERS.

DAMPER.

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1,034,507.

Patented Aug. 6, 1912.

2 SHEETS-SHEET 2.

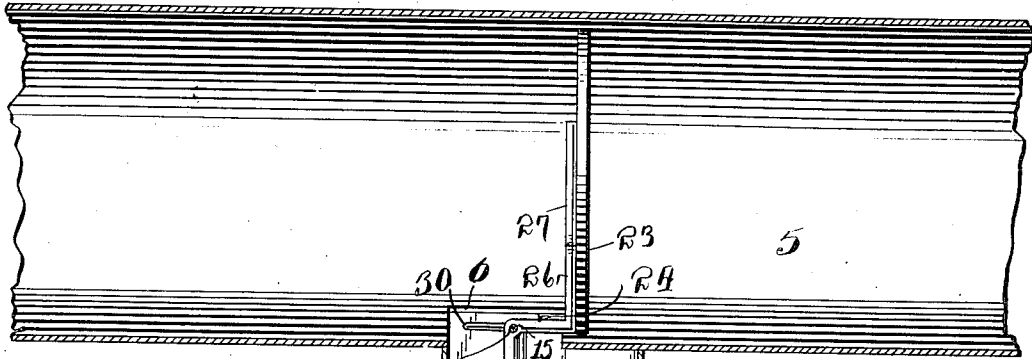


FIG. 1.

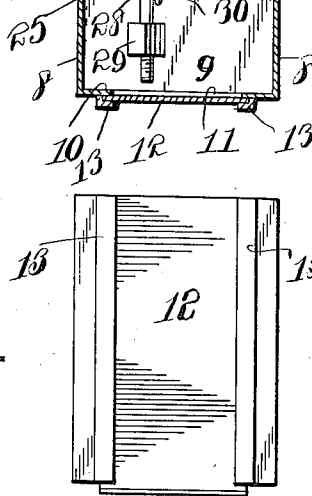
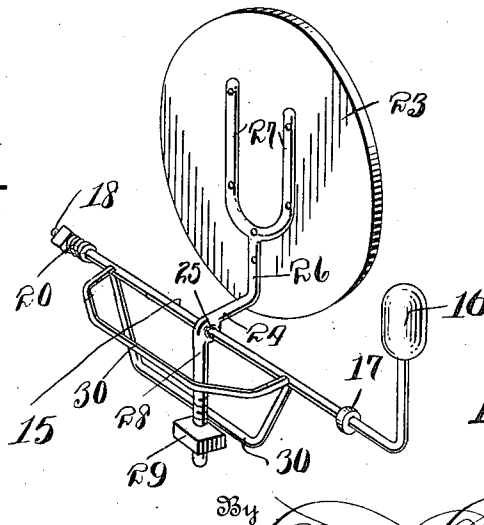


FIG. 2.

FIG. 3.



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DAMPER.

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To all whom it may concern:

Be it known that I, DAVID W. POWERS, a citizen of the United States, residing at Edgewood, in the county of Siskiyou, State of California, have invented certain new and useful Improvements in Dampers; and I do hereby 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.

This invention relates to an improvement in stove dampers, and has for its principal object to provide an automatic damper for controlling the draft through the pipe.

Another object of the invention is to provide a damper of the character described which is provided with a novel means for holding the damper in any adjusted positions.

A further object of the invention is to provide a damper of the class described which is movable independently of the holding means in a certain position of the latter, thereby permitting the draft through the pipe to be automatically regulated.

A still further object of the invention is to provide a damper for the purpose described which is composed of a minimum number of parts, is therefore simple in construction and is cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings: Figure 1 is a side elevation of a stove pipe section having my invention associated therewith, Fig. 2 is a horizontal sectional view taken through the construction shown in Fig. 1, Fig. 3 is a longitudinal vertical section of Fig. 1, Fig. 4 is a cross section taken on the line 4-4 of Fig. 1, Fig. 5 is a detail bottom plan view of the casing, and Fig. 6 is a perspective view of the damper and its operating means.

Like reference numerals designate corresponding parts in all the figures.

Referring to the drawings, 5 designates an ordinary pipe section having an opening

6 formed in the bottom thereof. Depending from the section is a casing 7 which includes side walls 8-8, end walls 9-9 and a bottom 10, the latter being disposed in spaced relation to the pipe section 5. A transversely disposed opening 11 is formed in the base 10 of the casing and a closure 12 for the opening is slidably mounted between flanges 13-13 carried by said base. Formed in the side walls 8 of the casing and in the same plane as the longitudinal edges 6^a-6^a of the opening 6 are openings 14-14, in which is mounted for rotation a transverse shaft 15, which is located intermediate the ends of the opening 6. The ends of the shaft 15 project beyond the opposite walls 8 of the casing, and one end thereof is bent at an angle and terminates in a handle 16. Fixedly mounted on the rod 15 and disposed between the handle 16 and the adjacent wall 8, and bearing against the latter, is a washer 17. The other end 18 of the rod is threaded and associated with said end is a nut 19. Disposed around the rod between the nut 19 and the adjacent wall 8 is a coil tension spring 20 which yieldingly holds the rod 15 in any adjusted position, yet permitting of the same to revolve.

Disposed within the section 5 and normally at one side of the opening 6 is a damper plate 23. A rod 24 of angle construction is provided at its angle with an opening 25 wherethrough passes the rod 15. It is to be noted by this construction that the rod 24 is journaled on the rod 15 to swing vertically. One arm 26 of this rod normally rests upon the bottom of the section 5 when the damper 23 is in its closed or upright position. This arm 26 is bent at right angles and terminates in a fork 27 which is attached to the damper 23 by rivets or other suitable fastening means. The other arm 28 of the angle arm, when the damper is in the position above described, passes downwardly through the opening 6 and into the casing 7. This arm is threaded, and engaged therewith is a weight 29, said weight being thereby capable of adjustment along said arm.

From the foregoing, it will be observed that the damper 23 is pivotally mounted upon the rod 15, and is normally held in its upper or closed position by means of the weight 29. When it is desired to have considerable draft, the weight 29 can be shifted upwardly along the arm 28. This will per-

mit of the draft passing through the pipe section to open the damper 23 to a more or less extent depending of course upon the position of the weight. It will also be observed in this connection that by means of this weight the amount of draft through the section can be easily regulated.

In order to positively lock the damper in either its open or closed position, I have provided a pair of substantially U-shaped arms 30—30 which respectively have their ends connected to the rod 15 by any suitable means. These arms 30 are disposed in planes at right angles to each other, and are both disposed below the pipe section 5 and on opposite sides of the arm 28. As will be observed from Fig. 2 of the drawings, one of the arms 30 is disposed in ground engagement against the arm 28, thereby positively holding the same against movement. Should it be desired to release the damper 23, the handle 16 is operated and the shaft 15 thereby rotated until the arms 30 are equi-distant from the arm 28. In this position the damper 23 can be automatically moved by the draft passing through the section. When it is desired to hold the member 23 in an open position, the rotation of the shaft 15 is continued until the opposite arm 30 engages the arm 28 and elevates the same.

From the foregoing, it will be seen that the damper may be locked against movement in either its open or closed position, or that the damper may be free to move when the locking means is disposed in a certain position.

What is claimed is:

1. The combination with a stove pipe section having an opening formed therein, of a casing connected to the section on opposite sides of the opening, a transverse rod journaled in the casing and extending across the opening of the section, a handle connect-

ed to one end of the rod and disposed exteriorly of the casing, a supporting arm fulcrumed on the rod and having its inner end disposed within the section, the outer end projecting through the opening and into the casing, a damper connected to said inner end, a weight connected to the outer end of the supporting arm for normally retaining the damper in a closed position, and means carried by the rod adapted in certain positions to lock the damper in either its open or closed position, and in its intermediate position to permit of free movement of said damper.

2. The combination with a stove pipe section having an opening formed therein, of a casing connected to the section on opposite sides of the casing, a transverse rod journaled in the casing and extending across the opening of the section, a handle connected to one end of the rod and disposed exteriorly of the casing, a supporting arm fulcrumed on the rod and having its inner end disposed within the section, the outer end projecting through the opening and into the casing, a damper connected to said inner end, a weight connected to the outer end of the supporting arm for normally retaining the damper in a closed position, and U-shaped arms respectively having their ends rigidly connected to the rod and disposed in planes at substantially right angles to each other, said U-shaped arms being both disposed below the pipe section and on opposite sides of the outer end of the damper carrying arm and to alternately lock the damper in its closed or open position upon rotation of the transverse rod.

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

DAVID W. POWERS.

Witnesses:

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