May 8, 1928. 1,668,911

H. JOWETT

DAMPER

Filed April 18, 1927

Fig. 1.

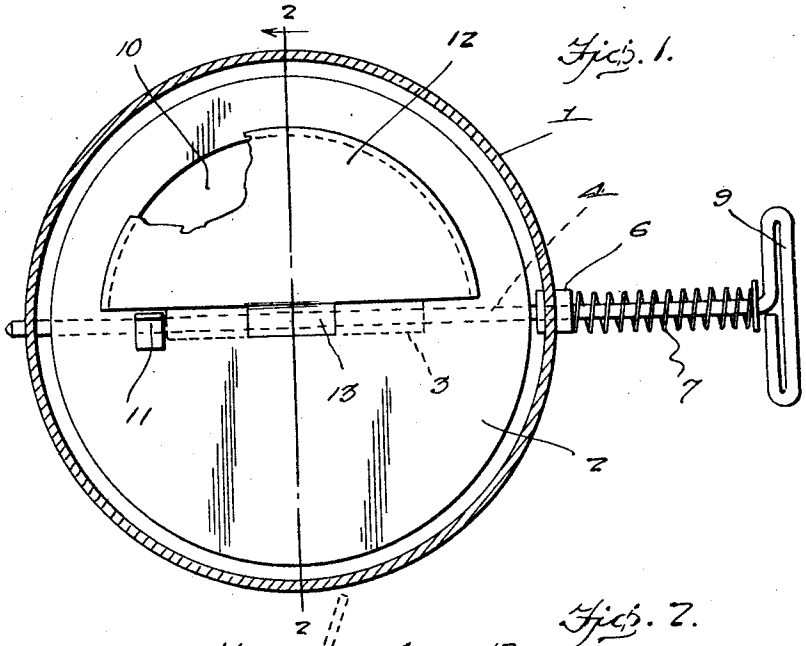


Fig. 2.

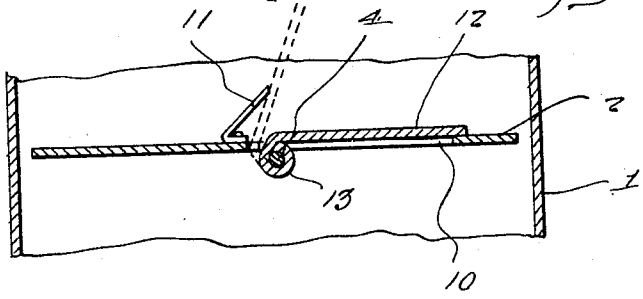
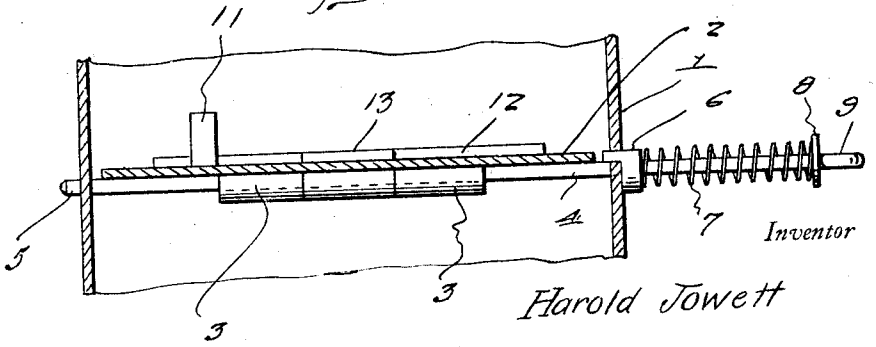


Fig. 3.



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UNITED STATES PATENT OFFICE.

HAROLD JOWETT, OF LA CROSSE, WISCONSIN.

DAMPER.

Application filed April 18, 1927. Serial No. 184,657.

This invention relates to an improved damper for use in connection with stove and furnace pipes.

My principal aim is to provide an exceptionally simple and inexpensive damper which is composed of a rotatably mounted main disk having an opening formed therein, and an independently and swingably mounted flap valve therefor.

My idea is to provide a damper of the foregoing construction wherein the flap valve is normally closed, but is capable of being lifted upwardly to particularly open position under action of pressure, built up beneath it. This, it is thought, will serve to conserve fuel, yet will allow a sufficient draft, and operate in a safe manner.

The particular details and their relative arrangement will become apparent from the following description and drawings.

In the drawings:—

Figure 1 is a horizontal section through a stove pipe showing the improved damper located therein.

Fig. 2 is a section taken approximately upon the plane of the line 2—2 of Fig. 1.

Fig. 3 is a section taken at right angles to Fig. 2.

Referring now in detail to the drawings, it will be seen that the reference character 1 designates the stove pipe which is of ordinary construction. The damper, as before indicated, comprises a disk 2 secured by knuckles 3 on its under side to the rotary rod 4. This rod has one end 5 extending through a bearing opening in the stove pipe and has its opposite end extending through and beyond a bushing 6. The bushing is formed with a tongue which extends through an opening formed in the stove pipe in order that it may be held against rotation.

Surrounding the extending portion of the rod is a coiled spring 7 which bears against the stop washer 8 located just inward of the hand grip 9. Obviously when the rod is rotated, the disk 2 is rotated with it. Incidentally, the disk is provided with a segmental opening 10 on one side of the rod, and on the opposite side it is provided with an upstanding stop 11 inclined in the manner shown better in Fig. 2.

The flap valve 12 is of segmental form to correspond with the shape of the opening 10 and it is of slightly greater size so as to extend over and beyond the edge of the opening and to effectively close the latter. Normally the valve is closed, and it will be noticed that it is provided with a central hinge knuckle 13 on one edge which surrounds the central portion of the rod 4. This allows the valve to be freely movable with respect to the disk 2.

With this arrangement, it is obvious that even though the damper, as a unit, is fully closed with the exception of the marginal space that exists between its marginal edge on the interior of the pipe, it is possible for the gases and particles of combustion to escape when a sufficient pressure is built up beneath the damper. For instance, when the pressure becomes sufficient, it raises the flap valve up sufficiently far to allow the gases to escape. As soon as the pressure is reduced, the valve closes by gravity. It is therefore obvious that with a damper of this construction, the fire in the fire pot will be more efficient and throw out more heat.

At the same time, there will be a saving of coal. It is believed that by considering the description in connection with the drawings, a clear understanding of the construction as well as the features and advantages of the invention will be had. In view of this, a more lengthy description is thought unnecessary.

Minor changes in the shape, size, and arrangement may be resorted to within the scope of the adjoined claim.

Having thus described my invention, what I claim as new is:—

A damper comprising a disk including a segmental opening, a pair of centrally disposed alined knuckles, a rod extending through and fixedly connected with said knuckles, said rod being adapted to be rockably mounted in a stove pipe, and including a handle, and the retaining spring, and a segmental flap valve rockably mounted on the central portion of said rod and adapted to cover said opening.

In testimony whereof I affix my signature.

HAROLD JOWETT.